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# XXII SIM Conference 2025

## *The Marketing-Innovation Nexus: Past Insights for Future Challenges*

Università degli Studi di Napoli "Parthenope"
Dipartimento di Studi Aziendali e Quantitativi
10-12 settembre 2025

**PROCEEDINGS**

**Editors:** Maria Rosaria Napolitano, Michele Simoni, Paola Signori, Tindara Abbate

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# XXII SIM Conference 2025

## The Marketing-Innovation Nexus:

## Past Insights for Future Challenges

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# Introduzione alla Conferenza

La Società Italiana Marketing (SIM) rappresenta, dal 2002, la principale comunità accademica italiana dedicata allo sviluppo e alla diffusione degli studi di marketing. La SIM promuove la collaborazione scientifica tra studiosi, istituzioni e imprese, favorendo il dialogo interdisciplinare e il trasferimento di conoscenze verso il sistema economico e sociale. Attraverso conferenze, pubblicazioni e gruppi di ricerca, la SIM contribuisce alla crescita culturale e metodologica del marketing come disciplina e come pratica manageriale.

La SIM Conference é la conferenza annuale della Società Italiana Marketing e rappresenta il più importante momento di incontro della comunità scientifica nazionale nell'area del marketing. Ogni anno, studiosi, ricercatori e professionisti si confrontano sui temi emergenti della disciplina, condividendo evidenze empiriche, prospettive teoriche e implicazioni manageriali. La conferenza offre un contesto stimolante per il dibattito accademico, la creazione di reti collaborative e lo sviluppo di progettualità di ricerca.

La XXII edizione svoltasi nel 2025 è stata dedicata al rapporto tra marketing e innovazione, un legame che ha profondamente influenzato l'evoluzione dei mercati e delle strategie aziendali. Il tema *"The Marketing-Innovation Nexus. Past Insights for Future Challenges"* ha invitato a riflettere su come le intuizioni del passato possano guidare la gestione di sfide future caratterizzate da trasformazioni tecnologiche, digitalizzazione, sostenibilità e nuovi modelli di consumo. L'obiettivo era favorire un dialogo critico capace di integrare le radici storiche della disciplina con i più recenti sviluppi concettuali e applicativi, in modo da delineare scenari di ricerca e pratiche manageriali orientate all'innovazione responsabile e al valore per la società.

Il Presidente SIM, Prof. Daniele Dalli, afferma:

*"Ci siamo specializzati sia lato ricerca che lato professione nel cercare di prevedere e anticipare il futuro. Abbiamo pensato che il marketing fosse lo strumento per capire dove andare e, a volte, ci siamo dimenticati di guardare nello specchietto retrovisore. Il marketing può essere la chiave di lettura che tiene insieme queste due dimensioni: la necessità di innovare e di muoversi verso il futuro, e l'importanza della direzione da cui veniamo per non perdere autenticità, credibilità e identità." -*

Il Prof. Michele Simoni, Co-chair della XXII SIM Conference, aggiunge:

*"Il nesso tra marketing e innovazione si manifesta in un interplay continuo tra tradizione e futuro. La comunità della Società Italiana Marketing si distingue per energia, rigore e spirito di collaborazione: ogni Conference è un'occasione stimolante e piacevole di confronto e crescita."*

Conclude la Prof. ssa Maria Rosaria Napolitano, Co-chair della XXII SIM Conference*:*

*"Nell'heritage delle organizzazioni risiede la genesi del futuro. Valorizzare il passato e le radici consente di leggere il presente e progettare l'avvenire. L'edizione 2025 conferma lo slancio della comunità SIM, con ampia partecipazione di studiosi, imprese e ospiti internazionali."*

# Introduction to the Conference

Founded in 2002, the Italian Marketing Society (SIM) is the leading academic community in Italy dedicated to the advancement and dissemination of marketing studies. SIM promotes scientific collaboration among scholars, institutions, and businesses, fostering interdisciplinary dialogue and the transfer of knowledge to the economic and social system. Through conferences, publications, and research groups, the Society contributes to the cultural and methodological development of marketing as both an academic discipline and a managerial practice.

The SIM Conference is the Italian Marketing Society annual gathering and represents the most important event for the national academic community in the field of marketing. Each year, scholars, researchers, and professionals come together to discuss emerging issues in the discipline, sharing empirical evidence, theoretical perspectives, and managerial implications. The conference provides a stimulating environment for academic debate, the creation of collaborative networks, and the development of research projects.

The XXII edition, held in 2025, was dedicated to the relationship between marketing and innovation, a nexus that has profoundly shaped the evolution of markets and business strategies. The theme *"The Marketing–Innovation Nexus: Past Insights for Future Challenges"* invited participants to reflect on how insights from the past can guide the management of future challenges, shaped by technological transformation, digitalization, sustainability, and new consumption models. The goal was to foster a critical dialogue that integrates the historical foundations of the discipline with its most recent conceptual and managerial developments, aiming to outline research paths and practices that promote responsible innovation and societal value.

Professor Daniele Dalli, President of the SIM, notes:

*"We have specialized, both in research and in professional practice, in trying to foresee and anticipate the future. We believed that marketing was the tool to understand where to go and, at times, we forgot to look in the rear-view mirror. Marketing can be the interpretive key that holds these two dimensions together: the need to innovate and move toward the future, and the importance of the direction we come from, so as not to lose authenticity, credibility, and identity."*

Professor Michele Simoni, Co-chair of the XXII SIM Conference, adds:

*"The nexus between marketing and innovation emerges in a continuous interplay between tradition and the future. The community of the Italian Marketing Society stands out for its energy, rigor, and collaborative spirit: every Conference is an inspiring and enjoyable opportunity for dialogue and growth."*

Professor Maria Rosaria Napolitano, also Co-chair of the XXII SIM Conference, concludes:

*"Within the heritage of organizations lies the genesis of the future. Enhancing the past and one's roots allows us to interpret the present and shape what is yet to come. The 2025 edition confirms the momentum of the SIM community, with broad participation from scholars, companies, and international guests*

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## Ringraziamenti

La Società Italiana Marketing ringrazia l'Università degli Studi di Napoli "Parthenope" per l'ospitalità, le istituzioni locali per il sostegno, e gli sponsor e partner che hanno contribuito alla realizzazione della Conference 2025, con una menzione speciale per i membri del Consiglio di Presidenza SIM e dei gruppi di lavoro che si sono impegnati per la realizzazione di questo importante evento. Un grande grazie va a tutti gli studiosi e ai professionisti che, con la loro partecipazione attiva, mantengono viva la missione SIM: costruire conoscenza e promuovere innovazione nel marketing.

## Acknowledgements

The Italian Marketing Society (SIM) extends its gratitude to the University of Naples "Parthenope" for hosting the event, to the local institutions for their support, and to all sponsors and partners who contributed to the realization of the 2025 Conference. A special thank-you goes to all scholars and professionals whose participation keeps the SIM mission alive: fostering knowledge creation and promoting innovation in marketing.

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# Track 1
# International Marketing

Coordinators: Barbara Francioni & Giada Mainolfi

L'organizzazione e gestione delle attività di marketing in una dimensione internazionale vedono uno spazio di azione che può portare, da un lato, ad enfatizzare la replicazione all'estero delle pratiche sviluppate nell'ambito dei confini nazionali, a prescindere dall'esistenza di differenze di contesto tra paese di origine e di destinazione, che potrebbero, tuttavia, richiedere degli adattamenti; dall'altro a focalizzare l'attenzione sulla gestione su scala internazionale della diversità ambientale attraverso approcci differenziati in ogni singolo contesto-paese. Questo spazio può dare luogo ad una pluralità di strategie, in capo a grandi multinazionali, piuttosto che piccole e medie imprese esportatrici. Temi rilevanti riguardano, ad esempio, le modalità di entrata nei mercati internazionali, la gestione dei canali e della comunicazione internazionale, l'international branding, il ruolo della cultura per le decisioni di marketing internazionale, la country image a il country of origin effect, l'impatto delle tecnologie digitali sul marketing internazionale, la gestione delle relazioni aziendali in chiave internazionale.

In questi ambiti, si promuove un approccio interdisciplinare, che incoraggia lavori che presentano una visione olistica del fenomeno del marketing internazionale e che indagano sulle interdipendenze tra il marketing e le altre attività aziendali (corporate strategy, operations, R&D, etc.).

La sezione di Marketing Internazionale si prefigge di sviluppare questo temi promuovendone gli studi in Italia e all'estero. A questo fine, vuole essere sede del confronto tra i migliori paper nell'ambito del convegno nazionale, motore di iniziative di ricerca e didattiche che coinvolgono più sedi, ma anche favorire sinergie tra ricerca e imprese per lo sviluppo del marketing nell'ambito di un contesto internazionale.

International marketing operates between two approaches: replicating domestic practices abroad, even when contextual differences may call for adaptation, and tailoring strategies to the specific conditions of each country. This range enables diverse strategic choices for both multinationals and SMEs, touching on themes such as market entry modes, international channels and communication, branding, cultural influences, country image and country-of-origin effects, digital technologies, and the management of global business relationships.

The section promotes an interdisciplinary and holistic view of international marketing, examining its links with other corporate functions. It aims to advance research in Italy and abroad, provide a venue for high-quality scholarly discussion, encourage multi-institutional initiatives, and foster collaboration between academia and industry in the international marketing field.

# Cross-Cultural Perspectives On Generative Ai-Driven Brand Activist Messages: A Comparative Thematic Analysis Of The United States, Sweden, And Italy

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## Abstract

In an era where consumers increasingly demand authenticity from brands, the emergence of Generative Artificial Intelligence (GAI) in activist communication poses new challenges. This study explores cross-cultural perceptions of GAI-generated brand activist messages through a qualitative thematic analysis involving 38 participants from Italy, Sweden, and the United States. It examines how different national contexts shape expectations of authenticity, emotional resonance, transparency, and responsibility in AI-generated communication. Findings reveal five key themes: authenticity and consistency, the role of human agency, transparency and accountability, limited empathy, and context-specific appropriateness. While AI was broadly accepted as a supportive tool, participants emphasized that credible activism still requires human presence: a deliberate, value-driven commitment rooted in authentic beliefs, along with the ability to feel, express, and respond to complex emotions, which AI tools are evidently unable to replicate. GAI was seen as more appropriate for environmental causes, perceived as data-driven, than for social justice issues demanding personal understanding and a human voice. Cultural differences shaped these views: Italians focused on sincerity and alignment with brand values, Swedes adopted a practical approach, assessing functional relevance and transparency, and US respondents evaluated whether activism matched the brand's business and offerings. Despite these differences, shared skepticism emerged toward fully AI-authored activism lacking human oversight and emotional credibility. This study contributes to branding and communication research by highlighting the sociocultural filters through which GAIgenerated activism is interpreted. It calls for hybrid, culturally sensitive strategies that preserve human authenticity while leveraging technological innovation in cause-related messaging.

*Keywords: Brand Activism, Generative Artificial Intelligence (GAI), Brand Communications, AI-generated content (AICG), Thematic analysis, Cross-cultural study*

## 1. Introduction

In recent years, brand activism has emerged as a contemporary corporate and marketing communication strategy (Kotler & Sarkar, 2018). Unlike traditional corporate social responsibility, which often centers on risk mitigation and compliance, brand activism entails companies taking a public stand on contentious social, political, or environmental issues

(Vredenburg et al., 2020). This approach reflects a broader shift toward purpose-driven branding, where organizations align themselves with causes that resonate with consumer values in order to build deeper emotional connections and longterm loyalty (Hajdas & Kleczek, 2021). In doing so, brands become active participants in public discourse, influencing societal norms and expectations.

This rise of brand activism reflects a growing consumer expectation: audiences demand concrete action over declared values and reject superficial "greenwashing" or "wokewashing" that lack authenticity or substance (Mirzaei et al., 2022).

As consumers increasingly expect activist brands to demonstrate authenticity not only through their actions but also in how they communicate their values, this demand now risks colliding with a major technological shift. Generative Artificial Intelligence (GAI) is transforming the way brand messages are conceived and delivered, automating the creation of content that was once crafted by humans. Companies can now generate complex campaign materials, including texts, visuals, and multimedia, automatically and at scale, using tools such as ChatGPT, DALL·E, and Midjourney (De Cicco et al., 2025).

The rise of GAI presents a new paradox for brand activism: while audiences expect activist campaigns to convey personal commitment, emotional connection, and genuine values, brands may increasingly rely on automated systems that lack the human depth as well as the moral and emotional resonance typically associated with authentic activist messaging. This introduces important tensions: although GAI offers efficiency, creativity, and cost savings, it may also raise concerns about perceived authenticity, especially in domains that require emotional or moral engagement (Brüns & Meißner, 2024).

To date, there is a surprising lack of research exploring how GAI-generated content is perceived when used in brand activism. While a growing number of studies have examined consumer responses to AI-generated content (AIGC) in marketing (De Cicco et al., 2025; Song et al., 2024; Arango et al., 2023), none have focused on the emotionally and ethically charged context of activist communication, where authenticity, empathy, and trust are not just desirable but essential. This represents a critical gap, especially as more brands begin to experiment with GAI to scale up their value-driven messaging.

Another important aspect that has been largely overlooked in the literature is that understanding consumer perceptions of GAI content by activist brands requires acknowledging that cultural context can shape how brand activism and emerging technologies like GAI are interpreted.

To address this gap, the present study explores aspects such as consumers' perceptions of authenticity, emotional resonance, and ethical expectations in response to GAIgenerated activist campaigns.

The study adopts a qualitative approach and a cross-cultural perspective by comparing Italy, the United States, and Sweden. These nations differ in their levels of cultural tightness-looseness, that is the extent to which societies enforce social norms and tolerate deviations (Gelfand et al., 2011), which may help explain varying degrees of openness to disruptive innovation and to brands that adopt unconventional or valuedriven stances.

In sum, this exploratory research investigates i) how AI-generated activist campaigns are perceived by individuals and (ii) how cultural context shapes responses to such communication, offering timely insights for brands operating within an increasingly technological and purpose-driven landscape.

## 2. Literature background and conceptual framework

In an increasingly polarized and socially conscious marketplace, brands face growing pressure to take public stances on sociopolitical issues. This form of engagement, known as brand activism, represents both a powerful strategic tool and a potential reputational minefield (Kotler & Sarkar, 2018). Research conducted to date on this topic has established that brands perceived as genuinely engaged in activism, and whose actions align with their historical mission and business practices, are more likely to gain consumer legitimacy. In contrast, when activism is perceived as a reactive marketing tactic or lacks substantive commitment, it is often regarded as inauthentic (Vredenburg et al., 2020).

A cornerstone of effective brand activism is perceived authenticity, defined as the extent to which consumers believe that a brand's activist messaging genuinely reflects its core values and practices (Dwivedi & McDonald, 2018). Authenticity is not a decorative feature, but a prerequisite for credibility and impact. When absent, activism risks being perceived as opportunistic and merely performative, potentially provoking backlash and eroding consumer trust (Key et al., 2023). Authentic brand activism demands deep alignment between a brand's values, its internal culture, and its public messaging. Empirical evidence underscores that authenticity enhances brand trust, particularly when consumers perceive alignment between the brand's stance and their own values (Nguyen et al., 2023). This effect is amplified when the brand's messages are seen as transparent, emotionally attuned, and consistent across platforms such as social media, advertising, and corporate behavior (Chu et al., 2023).

The need for a deeper comprehension of this dynamic emerges when examining how authenticity is perceived and negotiated. Consumers are far from passive recipients; they actively assess not only the content of a brand's message but also the way it is conveyed, paying close attention to whether the brand listens and responds in a meaningful way. Moral clarity, openness to dialogue, shared empathy, and the ability to address complex and potentially controversial topics without appearing self-serving are essential to this process (Sibai et al., 2021).

The heightened vigilance of today's audiences requires brands to ensure strong internal coherence before engaging in activist communication, in order to avoid the risks and repercussions of lacking genuine commitment to the values they publicly endorse (Ahmad et al., 2024). When audiences detect such dissonance, the reputational fallout can be severe (Francioni et al., 2025).

Authenticity must be cultivated at every level of the organization, as without this holistic integration, activist messages are unlikely to persuade or endure (Ahmad et al., 2024). Rather than being a static attribute, authenticity should be understood as a dynamic construct shaped by consumers' ongoing interpretation of a brand's values, actions, and communications. It is formed through a continuous evaluation of cues that go beyond the message itself (Mathur & Nayak, 2025).

Among the various cues considered by consumers, the authorship of content has gained relevance in the era of GAI. Emerging research indicates that GAI content is often perceived differently compared to content created by humans, with implications for authenticity judgments that are not uniformly positive (Arango et al., 2023). Studies demonstrate that audiences tend to judge content more harshly when it is attributed to GAI rather than a human, highlighting that AI-driven messages, even when factually correct or stylistically effective, can elicit discomfort or distrust if they are not accompanied by signals of human sensibility and oversight (e.g. De Cicco et al. 2025). As brands explore GAI-driven campaigns, attracted by their potential for efficiency, personalization, and scalability, they

also encounter a new challenge: preserving authenticity when the 'communicator' is no longer human (Brüns & Meißner, 2024). While GAI content may be widely accepted in contexts that are informational or functional, its application in emotionally or morally significant messaging creates a delicate balance between efficiency and credibility (Kirk & Givi, 2025; Arango et al., 2023). Consumers often perceive messages authored by humans as more emotionally resonant, morally grounded, and trustworthy (Kirk & Givi, 2025). These qualities are particularly important in the context of activist communication, where sincerity and ethical awareness are essential to establishing credibility. When the source of a message is understood to be an algorithm rather than a human being, doubts about the message's authenticity may emerge. This skepticism becomes especially pronounced when GAI content is perceived as emotionally flat and lacking in contextual sensitivity (Garcia, 2024).

Consumers critically assess the alignment between a brand's activist messaging and its broader values (Vredenburg et al., 2020; Sibai et al., 2021), paying particular attention to the perceived authenticity and depth of commitment in how such messages are delivered. Considering recent literature on brand activism and consumer responses to GAI-generated content, this raises a pressing challenge: as brands increasingly rely on GAI technologies to communicate, questions arise as to whether this reliance may compromise perceived authenticity, and how any resulting decline in credibility and trust could be mitigated (Spálová, 2023).

The integration of GAI into brand communication has brought renewed attention to how authenticity is perceived, highlighting the influence not only of message content but also of the cultural context in which it is received.

Previous studies show that GAI-generated messages are perceived differently across distinct cultural settings, for example, between Western and East Asian countries (Wu et al., 2020), suggesting that such evaluations are culturally specific rather than universal. These differences are particularly relevant when GAI is used in emotionally and ethically sensitive areas such as activist communication. Examining how audiences from different cultural backgrounds respond to GAI activist messages is therefore a necessary step in assessing whether this type of communication supports or undermines the perceived legitimacy of brand activism.

This exploratory study examines three countries: the United States, which plays a central role in both technological innovation and public discourse on activism, and Italy and Sweden, two member states of the European Union that, despite their geographical proximity and shared European political framework, exhibit significant differences in their approaches to social issues and in the acceptance and adoption of AI. These national differences in cultural orientation and technological adoption provide a relevant foundation for understanding how GAI activist messages may be received differently across contexts.

Sweden is characterized by high levels of societal trust, proactive governmental policies on AI, and strong openness toward innovation (AI Commission, 2024). Italy, by contrast, adopts a more cautious stance toward technology, with AI uptake still limited among both citizens and businesses. A significant portion of the population faces difficulties with basic digital skills, and the country records the lowest percentage of ICT graduates in the European Union (European Commission, 2024). These factors contribute to the slow integration of AI into everyday life. The adoption of AI technologies remains limited among Italian companies, reflecting broader societal skepticism and relatively low levels of digital literacy (Eunews, 2025). By contrast, the United States holds a distinctive position in the global AI landscape, characterized by technological leadership and the early, widespread adoption of AI applications (Microsoft, 2025). US consumers are highly exposed to AI-powered services and tend to feel comfortable with technological innovation. However, their perception of AI

remains context-dependent, with more favorable attitudes emerging when applications are perceived to enhance efficiency and personalization (Pew Research Center, 2023). This comparison allows the study to explore how cultural factors influence the perception of messages created through GAI and intended to communicate meaningful brand values. It provides an important initial contribution to understanding whether GAI supports brands in conveying activist messages that resonate with audiences or, conversely, generates a sense of detachment and skepticism.

The research also investigates whether the reception of such messages varies according to the thematic focus of the campaign, such as social, political, or environmental issues, and how this may affect perceptions of authenticity and emotional engagement.

This line of inquiry offers significant contributions from both theoretical and managerial perspectives. From a theoretical standpoint, it deepens the current understanding of the relationship between GAI and value-driven communication in culturally diverse contexts. From a managerial perspective, it provides timely insights for brands aiming to engage in activist communication while preserving perceived authenticity and supports more informed decision-making when using AI in emotionally sensitive campaigns.

## 3. Methodology

In an increasingly polarized and socially conscious marketplace, brands face growing pressure to take public stances on sociopolitical issues. This form of engagement, known as brand activism, represents both a powerful strategic tool and a potential reputational minefield (Kotler & Sarkar, 2018). Research conducted to date on this topic has established that brands perceived as genuinely engaged in activism, and whose actions align with their historical mission and business practices, are more likely to gain consumer legitimacy. In contrast, when activism is perceived as a reactive marketing tactic or lacks substantive commitment, it is often regarded as inauthentic (Vredenburg et al., 2020).

A cornerstone of effective brand activism is perceived authenticity, defined as the extent to which consumers believe that a brand's activist messaging genuinely reflects its core values and practices (Dwivedi & McDonald, 2018). Authenticity is not a decorative feature, but a prerequisite for credibility and impact. When absent, activism risks being perceived as opportunistic and merely performative, potentially provoking backlash and eroding consumer trust (Key et al., 2023). Authentic brand activism demands deep alignment between a brand's values, its internal culture, and its public messaging. Empirical evidence underscores that authenticity enhances brand trust, particularly when consumers perceive alignment between the brand's stance and their own values (Nguyen et al., 2023). This effect is amplified when the brand's messages are seen as transparent, emotionally attuned, and consistent across platforms such as social media, advertising, and corporate behavior (Chu et al., 2023).

The need for a deeper comprehension of this dynamic emerges when examining how authenticity is perceived and negotiated. Consumers are far from passive recipients; they actively assess not only the content of a brand's message but also the way it is conveyed, paying close attention to whether the brand listens and responds in a meaningful way. Moral clarity, openness to dialogue, shared empathy, and the ability to address complex and potentially controversial topics without appearing self-serving are essential to this process (Sibai et al., 2021).

The heightened vigilance of today's audiences requires brands to ensure strong internal coherence before engaging in activist communication, in order to avoid the risks and repercussions of lacking genuine commitment to the values they publicly endorse (Ahmad et

al., 2024). When audiences detect such dissonance, the reputational fallout can be severe (Francioni et al., 2025).

Authenticity must be cultivated at every level of the organization, as without this holistic integration, activist messages are unlikely to persuade or endure (Ahmad et al., 2024). Rather than being a static attribute, authenticity should be understood as a dynamic construct shaped by consumers' ongoing interpretation of a brand's values, actions, and communications. It is formed through a continuous evaluation of cues that go beyond the message itself (Mathur & Nayak, 2025).

Among the various cues considered by consumers, the authorship of content has gained relevance in the era of GAI. Emerging research indicates that GAI content is often perceived differently compared to content created by humans, with implications for authenticity judgments that are not uniformly positive (Arango et al., 2023). Studies demonstrate that audiences tend to judge content more harshly when it is attributed to GAI rather than a human, highlighting that AI-driven messages, even when factually correct or stylistically effective, can elicit discomfort or distrust if they are not accompanied by signals of human sensibility and oversight (e.g. De Cicco et al. 2025). As brands explore GAI-driven campaigns, attracted by their potential for efficiency, personalization, and scalability, they also encounter a new challenge: preserving authenticity when the 'communicator' is no longer human (Brüns & Meißner, 2024). While GAI content may be widely accepted in contexts that are informational or functional, its application in emotionally or morally significant messaging creates a delicate balance between efficiency and credibility (Kirk & Givi, 2025; Arango et al., 2023). Consumers often perceive messages authored by humans as more emotionally resonant, morally grounded, and trustworthy (Kirk & Givi, 2025). These qualities are particularly important in the context of activist communication, where sincerity and ethical awareness are essential to establishing credibility. When the source of a message is understood to be an algorithm rather than a human being, doubts about the message's authenticity may emerge. This skepticism becomes especially pronounced when GAI content is perceived as emotionally flat and lacking in contextual sensitivity (Garcia, 2024).

Consumers critically assess the alignment between a brand's activist messaging and its broader values (Vredenburg et al., 2020; Sibai et al., 2021), paying particular attention to the perceived authenticity and depth of commitment in how such messages are delivered. Considering recent literature on brand activism and consumer responses to GAI-generated content, this raises a pressing challenge: as brands increasingly rely on GAI technologies to communicate, questions arise as to whether this reliance may compromise perceived authenticity, and how any resulting decline in credibility and trust could be mitigated (Spálová, 2023).

The integration of GAI into brand communication has brought renewed attention to how authenticity is perceived, highlighting the influence not only of message content but also of the cultural context in which it is received.

Previous studies show that GAI-generated messages are perceived differently across distinct cultural settings, for example, between Western and East Asian countries (Wu et al., 2020), suggesting that such evaluations are culturally specific rather than universal. These differences are particularly relevant when GAI is used in emotionally and ethically sensitive areas such as activist communication. Examining how audiences from different cultural backgrounds respond to GAI activist messages is therefore a necessary step in assessing whether this type of communication supports or undermines the perceived legitimacy of brand activism.

This exploratory study examines three countries: the United States, which plays a central role in both technological innovation and public discourse on activism, and Italy and Sweden, two member states of the European Union that, despite their geographical proximity and shared European political framework, exhibit significant differences in their approaches to social issues and in the acceptance and adoption of AI. These national differences in cultural orientation and technological adoption provide a relevant foundation for understanding how GAI activist messages may be received differently across contexts.

Sweden is characterized by high levels of societal trust, proactive governmental policies on AI, and strong openness toward innovation (AI Commission, 2024). Italy, by contrast, adopts a more cautious stance toward technology, with AI uptake still limited among both citizens and businesses. A significant portion of the population faces difficulties with basic digital skills, and the country records the lowest percentage of ICT graduates in the European Union (European Commission, 2024). These factors contribute to the slow integration of AI into everyday life. The adoption of AI technologies remains limited among Italian companies, reflecting broader societal skepticism and relatively low levels of digital literacy (Eunews, 2025). By contrast, the United States holds a distinctive position in the global AI landscape, characterized by technological leadership and the early, widespread adoption of AI applications (Microsoft, 2025). US consumers are highly exposed to AI-powered services and tend to feel comfortable with technological innovation. However, their perception of AI remains context-dependent, with more favorable attitudes emerging when applications are perceived to enhance efficiency and personalization (Pew Research Center, 2023). This comparison allows the study to explore how cultural factors influence the perception of messages created through GAI and intended to communicate meaningful brand values. It provides an important initial contribution to understanding whether GAI supports brands in conveying activist messages that resonate with audiences or, conversely, generates a sense of detachment and skepticism.

The research also investigates whether the reception of such messages varies according to the thematic focus of the campaign, such as social, political, or environmental issues, and how this may affect perceptions of authenticity and emotional engagement.

This line of inquiry offers significant contributions from both theoretical and managerial perspectives. From a theoretical standpoint, it deepens the current understanding of the relationship between GAI and value-driven communication in culturally diverse contexts. From a managerial perspective, it provides timely insights for brands aiming to engage in activist communication while preserving perceived authenticity and supports more informed decision-making when using AI in emotionally sensitive campaigns.

## 4. Results and discussions

### 4.1 Sample Description

This section presents a general overview of the socio-demographic characteristics and attitudinal dispositions of the participants involved in the study. These insights help contextualize the explorative analysis by highlighting potential underlying factors that may shape participants' evaluations of AI-generated brand activism. The preliminary results serve as a foundation for the deeper, culturally based insights explored through the thematic analysis.

Specifically, the Italian sample showed a higher average age (38 years) compared to the Swedish (29.5 years) and USA (29 years) participants. This age difference may have influenced the perspectives expressed, particularly in terms of ethical reflection maturity and exposure to long-term environmental and social narratives.

In terms of gender distribution, the Italian and Swedish samples were predominantly female (9F/4M and 8F/5M, respectively), whereas the U.S. sample skewed slightly male (7M/3F, with 2 unspecified genders).

After assessing the demographic characteristics, respondents were asked to report their attentiveness to social and environmental issues, as well as their general attitude toward AI. When evaluating environmental and social awareness, Italians reported the highest levels of both social (M = 5.85) and environmental attentiveness (M = 5.15). These results indicate a particularly strong sensitivity to issues related to social justice and environmental responsibility. The U.S. sample followed with slightly lower but comparable scores (Social M = 5.3, Environmental M = 5.0). Swedish respondents scored marginally lower (both around M = 4.9). Although slightly lower, these scores still exceed the midpoint of the scale, indicating that Swedish respondents demonstrate a considerable, though relatively less pronounced, attentiveness to social and environmental concerns.

When asked about their attitude toward AI, all three groups expressed a stance of cautious optimism. Among the Italian respondents, 7 described their attitude toward AI as "fairly favorable" and 3 as "very favorable." A similar pattern was observed among the Swedish participants, with 6 moderately and 4 strongly supportive. Among the U.S. participants, 10 expressed a "fairly favorable" attitude.

However, when it came to GAI in content creation, neutrality dominated: Italians (n = 8) and U.S. participants (n = 10) showed a majority of neutral positions, while Swedes displayed a balanced mix of neutrality (n = 6), positivity (n = 3), and criticism (n = 4). The observed differences across national samples, particularly in social and environmental sensitivity and considerations, and openness to AI, provide important cultural and perceptual lenses through which subsequent themes are interpreted.

### 4.2 Thematic analysis: an interpretation through cultural tightness-looseness

Five major themes emerged from the thematic analysis, offering insight into the ways GAI-driven activist messages are interpreted across cultural contexts.

To enrich the interpretation of the qualitative data, the thematic findings were mapped against the average tightness-looseness scores of each country. According to the scores from the present sample, Sweden (M = 4.2) represents the least tight cultural context, followed by Italy (M = 4.7), which occupies an intermediate position between the two nations. The United States, with an average score of 5.0, reflects the tightest cultural environment among the three nations in the sample. This comparison provides additional insight into how cultural expectations and normative clarity may help contextualize participants' responses to AI-driven activist communication.

When interpreting the results of the cultural tightness-looseness scale, some interesting variations emerge when compared to the general patterns outlined in Gelfand et al. (2011). While these comparisons should be made with due caution, they offer useful points of reflection. In the case of Sweden, a direct comparison is not possible, as the country was not included in the original cross-national dataset. Nevertheless, considering existing evidence from other Nordic countries included in their study, the relatively lower levels of perceived tightness observed in our Swedish sample may point to a slightly different pattern than initially assumed. For Italy, the findings appear broadly consistent with previous classifications that position the country as moderately tight. The United States presents an interesting case. Whereas prior studies have typically characterized it as one of the loosest cultures (e.g., Gelfand et al., 2011), our findings indicate a somewhat higher level of perceived tightness compared to Italy. This shift in the relative positioning between the two countries

may reflect changing cultural perceptions or context-specific factors influencing respondents' interpretation.

Overall, although our findings are not radically divergent from those of Gelfand et al. (2011), some variations in the relative ranking of countries are observable. These differences highlight the importance of considering both temporal and contextual influences when interpreting cross-cultural data and suggest that perceptions of cultural tightness-looseness may be more fluid than previously assumed. The following sections explore the main emerging themes.

*Theme #1: Authenticity and consistency in activist branding*

The first identified theme concerns how people perceive brands engaged in activism and highlights that perceived authenticity depends on the alignment between a brand's public messages and its concrete actions. Participants across all countries expressed distrust toward what they described as "performative" activism, indicating communication efforts that promote socially relevant causes without being backed by real, consistent actions. When evaluating AI-generated activist messages, respondents looked for specific evidence of consistency: for example, whether a brand that promotes gender equality also demonstrates inclusive hiring practices or shares progress on measurable diversity goals. Authenticity, in this sense, was judged not by the sophistication of the message but by whether the company "practiced what it preached" in visible, traceable ways.

Interestingly, the interpretative lens of authenticity varied across cultures. In Italy, authenticity was mainly defined in terms of alignment between declared values and actual behavior, especially on ethical and moral grounds. Participants underscored the necessity of value alignment: "If it supports a cause, I want to see consistency in its daily choices: how it produces, who it works with, how it treats people. (…) Most importantly, when it shows the results of what it says (completed projects, measurable impact, tangible change) only then do I feel there is sincere commitment and not just marketing" (IT2).

While the Swedish participants demonstrated a trend broadly aligned with that of the Italian respondents, nuanced distinctions were observed. In Sweden, participants judged brand activism not only by what companies claimed in their messages within a single market, but also by whether those claims were supported by consistent actions across different markets. For example, one respondent criticized Nike for changing its logo to support Pride in countries where such support is widely accepted, but not doing so in more conservative regions like the Middle East: "Nike, for example, changes their logo on social media in countries where Pride is accepted, but not in places like the Middle East" (SE3). This inconsistency led the participant to question the sincerity of the company's values. Rather than seeing the support as genuine, the respondent interpreted it as a calculated business move, tailored to local expectations rather than reflecting a true commitment to the cause.

U.S. participants appeared to adopt a more pragmatic approach to authenticity. They evaluated authenticity based on the alignment between a brand's core business and the cause it promotes, questioning whether the company's products or services had any meaningful connection to the issue raised by the campaign. As one participant noted: "I genuinely believe a brand if I see their message being aligned in its products. If their products have nothing to do with the cause, I have a hard time believing them. For instance, I would find it difficult to fully believe if a shoe company is trying to make a social statement because their line of business has nothing to do with it" (USA7).

The findings strengthen the results of Vredenburg et al. (2020) and Dwivedi & McDonald (2018) by showing that cultural background influences the type of alignment consumers expect between a brand's values, messages, and tangible practices.

Participants expected companies to act in ways that were visibly consistent with the values they publicly endorsed. Italian respondents, reflecting moderately tight cultural norms, emphasized the importance of sincerity and personal commitment behind a brand's advocacy. Rather than simply reacting to contradictions, they questioned whether a brand truly believed in the cause it promoted. Swedish participants, from the loosest cultural context of the study, were somewhat more flexible, yet still critical of brands that appeared to tailor their messages based on where they operated.

*Theme #2: The role of human agency in AI-driven messages*

Participants consistently indicated that human involvement is essential in creating activist messages. While AI was generally accepted as a helpful support tool, respondents believed it could not replace human empathy, real-life experience, and the sense of genuine concern that a human communicator brings when addressing these issues.

Respondents emphasized that human involvement remains indispensable in campaigns addressing morally or emotionally charged topics.

In Italy, this concern emerged with an affective emphasis: "I believe that a message created by generative AI can evoke emotion and convey empathy, but only if there is genuine human guidance and sensitivity behind it. AI can help find the right words, but authenticity comes from the intentions of those who use it. If a team that truly believes in the cause uses AI as a tool and not as a shortcut, then the engagement can be genuine. Otherwise, it risks coming across as cold or artificial" (IT1). Swedish respondents adopted a pragmatic stance: "It depends on what the model is trained on. Models nowadays are getting increasingly good at conveying more "human" sounding messages, most likely because the models are trained on materials that have empathetic or emotional content, or content that displays human behavior. In that sense, if the model is trained with content related to the activist cause, especially containing emotionally charged topics, I could see it producing content that people would respond and relate to (although it might of course still need editing)" (SE2). U.S. participants highlighted embodiment and lived values: "I think that AI is capable of making good reasoning when inclusion, diversity etc. topics are concerned - so I am pretty sure it would do a good job at supporting human creativity and even reducing bias or discrimination, if properly used" (USA5) and "Especially with such prevalent issues, it is important that human ideas and visions are at the forefront of such initiatives" (USA8).

These distinctions support prior observations that AI's credibility is often conditional on visible human oversight and authorship (Kirk & Givi, 2025). Across all three countries, respondents rejected the idea that AI could fully replace human input in activist messaging. Yet their reasons diverged in culturally meaningful ways. U.S. participants grounded their views in the value of authentic human representation. Italians emphasized the importance of emotional "credibility" and the need for messages to reflect a real sense of care and responsibility. In contrast, Swedish participants were open to the use of AI as a supporting tool but did not accept it as a full-fledged communicator. The relatively loose Swedish cultural context may allow for greater technological mediation, provided that human intention and oversight remain evident.

*Theme #3: Transparency and technological accountability*

Transparency was a non-negotiable condition for activist communication. Participants from all three countries expected brands to clearly disclose the use of GAI. Italian participants, in particular, saw openness about the creation process as a key factor in building trust: "Transparency about how the campaign was created makes a difference" (IT1). In Sweden, transparency was tied to informed consumer rights through clear labeling: "Be transparent in the making of campaigns, maybe if there's a stamp/certification that clarifies transparency?" (SE9). In the USA, participants stressed that knowing whether a campaign was created using AI affects how much they trust it. Disclosure was seen as essential to prevent misunderstandings and preserve brand credibility: "Discovering that an activist campaign was created using AI might raise doubts, especially if transparency is lacking… its credibility could decrease significantly" (US12).

This mirrors the growing demand for algorithmic transparency in the AI ethics literature (Brüns & Meißner, 2024) and reaffirms that perceived openness significantly shapes trust.

Tightness may help explain the different ways transparency was understood across countries. Swedish participants, representing the least tight group in the sample, viewed it more pragmatically, as a functional requirement for making informed consumer choices. They found the omission problematic, but not necessarily a dealbreaker. Italian participants, from a moderately tight cultural context, saw transparency as a matter of ethical respect. In the United States, which represents the tightest cultural context in this study, hidden AI involvement was perceived as manipulative, and transparency was framed as a non-negotiable principle tied to individual rights.

*Theme #4: The limits of AI-generated empathy*

Another recurring theme was the limited emotional and empathetic authenticity of AI. While some participants acknowledged that AI can trigger emotional reactions, they emphasized that genuine empathy comes from human involvement, particularly from people who understand the issue, believe in the cause, and take responsibility for the message. Italian respondents, for instance, highlighted that meaningful communication should be shaped by human values and guided by real-world experience rather than automated tools: "Using AI ethically and responsibly, for a brand running activist campaigns, means always starting from a vision and human values. Actions should be designed, guided, and overseen by people who deeply understand the cause and genuinely want to make a difference. AI can be a useful tool, but it should never replace critical thinking, empathy, and human responsibility" (IT2).

Swedish participants recognized that, with the right instructions, AI can produce messages that feel emotionally engaging, highlighting a practical, tool-based approach to communication: "With correct prompting the message can be emotional and empathetic enough, for sure." (SE8). U.S. participants were skeptical about emotional simulation: "(…) because I think that any campaign trying to capture people's hearts and draw concern has to be created by real people who would genuinely be concerned and actually be on the receiving end of that campaign. Otherwise, it's like asking a boy to empathize with a girl: they can to an extent, but will never be able to truly understand the other's feelings and experiences" (USA11).

Although some participants acknowledged that GAI can create emotionally engaging messages, they doubted its ability to express true empathy. Authentic emotion was seen as inherently human.

The results align with the findings of Garcia (2024) and Arango et al. (2023), showing that emotionally charged AI-generated content raises doubts about the message's sincerity and the brand's intentions. In this study, participants expressed skepticism when emotional and

ethical appeals appeared disconnected from human experience, reinforcing how cultural background can influence whether AI-driven empathy is seen as convincing or strongly artificial.

Notably, all participants expressed doubts about AI's capacity to convey genuine empathy, though with varying degrees of skepticism. U.S. and Italian respondents were more categorical, rejecting AI-generated emotional appeals. Swedish participants, consistent with a more flexible cultural outlook, were more open to the idea that AI could generate emotional content, provided its use was transparent, such as indicating that AI was involved, and limited to supporting rather than replacing authentic human voices and narratives.

*Theme #5: Context-specific appropriateness: environmental vs. social causes*

Participants drew a clear distinction between environmental and social issues in terms of AI's perceived suitability.

Italians highlighted the importance of lived experience in social issues "For me, there's a difference between topics: for environmental issues, AI use may be more acceptable, as it often involves data, forecasts, and technical messages. But when it comes to social issues like rights or inclusion, I believe it's essential that the message at least partly comes from real human experiences, not just generated ones" (IT1). Swedes viewed AI as a data-processing support for ecological causes: "Some AI content might evoke a good response on environmental causes but showing possible future scenarios, which could be an efficient form of communicating, but couldn't those scenarios be created by an artist instead? AI bots also use a lot of energy which makes it contradict environmental marketing, but I guess I could see the point of creating striking images to make a point. For social issues I find it more difficult to accept. Social issues revolve around how we think and act towards other humans and putting AI into that somehow removes the whole point of how we are all a part of the human experience. (…) It's a fine line to thread." (SE4). U.S. participants made a distinction between types of causes: they saw AI as suitable for environmental topics grounded in scientific facts and data visualization. However, when it came to social causes—such as those involving personal stories, discrimination, or the representation of marginalized groups—they believed that messages needed to come from people with direct, lived experience. In these cases, relying solely on AI risked producing messages that felt emotionally disconnected or lacked credibility: "For environmental topics, which are often supported by data and scientific evidence, AI can help structure clear, informative messages that raise awareness. However, when it comes to social causes involving lived experiences, identity, or justice, a purely AI-generated voice risks sounding detached or artificial" (USA4).

This theme underscores that participants did not perceive GAI as equally suitable across all activist domains and communications. Rather than being seen as a neutral tool, the acceptability of AI was shaped by the type of cause it supported and the cultural expectations surrounding that cause. In line with Spálová (2023), these perceptions reflect how AI's role in public discourse is contextually built and shaped by cultural values, norms, and the symbolic perception of the topic. Participants were more open to AI use in environmental messaging, often associated with data and efficiency, while social causes, which deal with human experience, vulnerability, or marginalization, were seen as requiring a human voice.

AI was deemed more acceptable for environmental messaging, especially when datadriven, and less appropriate for social justice topics, which require empathy, presence, and moral voice. U.S. and Italian participants were particularly vocal about the inadequacy of AI in representing complex human struggles. Swedish respondents, while similarly cautious, were more pragmatic, suggesting that AI's appropriateness depends on the campaign's objective and design.

For a clearer overview, the main themes are summarized in Table 1.

| Theme | Description | Key findings |
|---|---|---|
| **Authenticity and consistency in activist branding** | The theme focuses on how participants assess the credibility of a brand's activist communication based on the match between what a brand says and what it does. Participants paid close attention to whether companies show genuine support for causes through real actions, not just words. | Respondents from all countries expressed skepticism toward companies that adopt activist messaging without backing it up with consistent and actual behavior. Italians often evaluated credibility through ethical behavior and long-term commitment. Swedish participants were concerned with inconsistencies between external messaging and internal practices. U.S. participants focused more on how visible misalignment could damage brand reputation and reduce trust. |
| **The role of human agency in AI-driven messages** | The theme explores people's opinions about the importance of human involvement in creating activist messages. While many accepted AI as a tool, they insisted that only humans can share real experiences and connect emotionally with audiences. | Participants saw human involvement as essential when communicating about sensitive or emotional topics. Italians emphasized that only humans can fully understand and speak about social issues. Swedes were open to using AI, but only under human supervision. Participants from the USA highlighted the importance of human contribution to make messages feel sincere and grounded in lived experience. |
| **Transparency and technological accountability** | The theme addresses the expectation that brands clearly communicate when they use GAI in activist campaigns. Participants viewed honesty about AI use as a sign of respect and a way to build trust. | Across countries, participants believed brands should always reveal if AI was used in campaign development.<br>Italians linked transparency to a sense of responsibility and consumer trust. Swedish respondents supported clear labeling to allow people to make informed decisions.<br>U.S. participants felt that not |

| | | |
|---|---|---|
| | | disclosing AI use could be seen as a dishonest behavior, especially if the campaign dealt with serious social issues. |
| **The limits of AIgenerated empathy** | The theme looks at how participants viewed AI's ability to express emotions in activist communication. While AI might imitate emotional and empathetic language, many felt it lacks the human experience needed to express real empathy. | Italians believed that real empathy comes from people who understand a cause through personal involvement and real-life experiences. Swedes pointed out that AI can sometimes create emotional messages, but only when guided by people who understand the topic well. U.S. participants were more critical, saying AI lacks the capacity to understand emotions or lived struggles, making its messages feel artificial or disconnected to reality. |
| **Context-specific appropriateness: environmental vs. social causes** | The theme highlights how participants judged the use of AI based on the type of cause. AI was seen as more acceptable for environmental topics, which often involve data and analysis, but less suitable for social issues that require emotional sensitivity. | Italians said AI may help with environmental topics but cannot replace the human touch in social justice messages. Swedes accepted AI for technical and environmental communication but were hesitant about its use in messages involving human identity and relationships. U.S. participants consistently emphasized that campaigns dealing with inequality or lived experience must be led by people, not algorithms. |

**Table 1**: Findings from the thematic analysis (author's own elaboration).

## 5. Implications and final remarks

The present study contributes to the growing body of literature on branding and ethical communication by providing a cross-cultural perspective on how GAI is perceived when employed in brand activist messaging. Through thematic analysis of 38 qualitative responses from Italy, Sweden, and the United States, five thematic clusters emerged: authenticity and consistency, human agency in AI-driven messages, transparency and accountability, limited empathy, and contextual appropriateness of AI across causes. These themes collectively

reveal how audiences interpret AI-generated brand activist campaigns not only through a technological lens, but also within deeply human, moral, and cultural frames.

One key implication of the study is that people do not judge authenticity based solely on what the brand claims about itself. Instead, they assess whether the brand's use of AI in activist campaigns feels genuine and whether it meets their cultural expectations about sincerity, human involvement, and consistency between words and actions. Consumers from all three countries showed increasing sensitivity to inconsistencies between what a brand claims and how it behaves, particularly when activism is communicated via artificial systems. While Italian participants focused on whether brands acted consistently with the values they promoted, often questioning if AI use showed real commitment or just a marketing tactic, U.S. respondents evaluated whether the activist message was meaningfully connected to the brand's core business and products. Swedish participants, meanwhile, paid attention to whether brands applied the same activist messages across different markets or adapted them to fit local expectations, an inconsistency that affected how genuine they perceived the communication to be.

Another fundamental implication is that while GAI can simulate affective tone or creative output, respondents across cultures maintained that human presence, lived experience, and ethical deliberation are central to credible and emotionally resonant activism. This aligns with broader critiques of "technological solutionism" (Morozov, 2013), suggesting that efficiency or innovation alone cannot replace the depth of meaning, storytelling, and emotional understanding that human communicators bring. Brands that entirely rely on AI for sensitive or socially related messages risk creating content that feels impersonal and disconnected from their audiences. In discussing empathy, the responses challenge the capacity of AI to serve as a meaningful communicator of emotional narratives. While some participants acknowledged AI's ability to generate persuasive or affective content, the majority emphasized that real empathy requires human vulnerability, intentionality, and context-awareness. The emotional intelligence of activism must be grounded in experience. In this regard, GAI is seen as a tool that can enhance or support messages created by humans, but not replace them. For marketers, this suggests the importance of combining AI with human input, allowing AI to assist in content creation while people ensure that messages remain meaningful and anchored in real experiences.

Moreover, transparency emerged as a widely shared expectation, with respondents calling for clear disclosure of when and how AI is used in activist content generation. This concern extended beyond compliance with regulations and consumer rights; it also involved enabling individuals to trace the origin and intent of a message, thereby enhancing transparency in both source and purpose. Participants expressed a desire to know whether AI is involved, as this helps them better assess the credibility and intentions behind a campaign. From a managerial perspective, this suggests that brands should explicitly disclose the use of AI within their communication strategies, particularly when addressing politically or emotionally sensitive issues.

Lastly, the study underscored the importance of matching the type of cause to the communication tool. AI was seen as more suitable for environmental campaigns, where its strengths in data processing and forecasting offer clear advantages, and less appropriate for social justice issues, which require moral sensitivity, historical awareness, and human experience. The findings suggest that cause typology influences not only perceived appropriateness, but also emotional resonance and credibility. This has important implications for strategic segmentation and message design: while GAI may be effectively embraced in campaigns related to climate efficiency or sustainability, it should be applied more cautiously in domains that demand moral engagement and identity affirmation.

The debate around AI is no longer limited to its capabilities but extends to how it should be used in contexts where brand communication involves social values and moral dilemmas.

## Bibliografia


Ahmad, F., Guzmán, F., & Al-Emran, M. (2024). Brand activism and the consequence of woke washing. Journal of Business Research, 170, 114362.

AI Commission. (2024). The AI Commission's Roadmap for Sweden. Swedish Government Official Reports. Retrieved from https://www.sou.gov.se/globalassets/the-ai-commissions-roadmap-for-sweden.pdf.

Arango, L., Singaraju, S. P., & Niininen, O. (2023). Consumer responses to AI-generated charitable giving ads. Journal of Advertising, 52(4), 486-503.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101.

Brüns, J. D., & Meißner, M. (2024). Do you create your content yourself? Using generative artificial intelligence for social media content creation diminishes perceived brand authenticity. Journal of Retailing and Consumer Services, 79, 103790.

Castelo, N., Bos, M. W., & Lehmann, D. R. (2019). Task-dependent algorithm aversion. Journal of Marketing Research, 56(5), 809-825.

Chu, S. C., Kim, H., & Kim, Y. (2023). When brands get real: the role of authenticity and electronic word ofmouth in shaping consumer response to brands taking a stand. International Journal of Advertising, 42(6), 10371064.

Daif, R., & Elsayed, K. (2025). Tourist citizenship behaviours towards international restaurants' political stances: a MAXQDA analysis of political consumerism. Current Issues in Tourism, 28(3), 346-352.

De Cicco, R., Francioni, B., Curina, I., & Cioppi, M. (2025). AI, human or a blend? How the educational content creator influences consumer engagement and brand-related outcomes. Journal of Services Marketing, 39(10), 52-70.

Dwivedi, A., & McDonald, R. (2018). Building brand authenticity in fast-moving consumer goods via consumer perceptions of brand marketing communications. European Journal of Marketing, 52(7/8), 1387-1411.

Eunews (2025). EU warns Italy on innovation: Underdeveloped system, consider incentives. Retrieved from https://www.eunews.it/en/2025/06/16/eu-warns-italy-on-innovation-underdeveloped-system-considerincentives/.

European Commission (2024). Digital Decade Report 2024 – Italy. Brussels: European Commission.

Francioni, B., De Cicco, R., Curina, I., & Cioppi, M. (2025). The strength of stance: The impact of brand activism on resistance to negative information, purchasing, and premium paying intents across different types of failures. Journal of Retailing and Consumer Services, 82, 104102.

Garcia, M. B. (2024). The paradox of artificial creativity: Challenges and opportunities of generative AI artistry. Creativity Research Journal, 1-14.

Gelfand, M. J., Raver, J. L., Nishii, L., Leslie, L. M., Lun, J., Lim, B. C., ... & Yamaguchi, S. (2011). Differences between tight and loose cultures: A 33-nation study. Science, 332(6033), 1100-1104.

Guest, G., MacQueen, K. M., & Namey, E. E. (2012). Introduction to applied thematic analysis. Applied Thematic Analysis, 3 (20), 1–21.

Hajdas, M., & Kłeczek, R. (2021). The real purpose of purpose-driven branding: consumer empowerment and social transformations. Journal of Brand Management, 28, 359-373.

Key, T. M., Keel, A. L., Czaplewski, A. J., & Olson, E. M. (2023). Brand activism change agents: strategic storytelling for impact and authenticity. Journal of strategic marketing, 31(7), 1339-1355.

Kirk, C. P., & Givi, J. (2025). The AI-authorship effect: Understanding authenticity, moral disgust, and consumer responses to AI-generated marketing communications. Journal of Business Research, 186, 114984.

Kotler, P., & Sarkar, C. (2018). Brand Activism: From Purpose to Action. Idea Bite Press.

Kuckartz, U., & Rädiker, S. (2023). Using software for innovative integration in mixed methods research: Joint displays, insights and inferences with MAXQDA. The Sage Handbook of Mixed Methods Research Design, 315.

Longoni, C., & Cian, L. (2022). Artificial intelligence in utilitarian vs. hedonic contexts: The "wordofmachine" effect. Journal of Marketing, 86(1), 91-108.

Mathur, S., & Nayak, J. K. (2025). The way to authenticity is grounded–role of marketing communication cues in driving authenticity perceptions. International Journal of Retail & Distribution Management, 53(6), 522536.

Microsoft (2025). The golden opportunity for American AI. Retrieved from https://blogs.microsoft.com/onthe-issues/2025/01/03/the-golden-opportunity-for-american-ai/.

Mirzaei, A., Wilkie, D. C., & Siuki, H. (2022). Woke brand activism authenticity or the lack of it. Journal of Business Research, 139, 1-12.

Morozov, E. (2013). To save everything, click here: The folly of technological solutionism. PublicAffairs.

Napoli, J., Dickinson, S. J., Beverland, M. B., & Farrelly, F. (2014). Measuring consumer-based brand authenticity. Journal of Business Research, 67(6), 1090-1098.

Nguyen, D. T., Le, D. H. A., Truong, L. G., Truong, N. G., & Vu, V. V. (2023). The effect of Generation Z's perceptions of brand activism on brand loyalty: evidence from Vietnam. Asia Pacific Journal of Marketing and Logistics, 35(6), 1494-1512.

Pew Research Center (2023, November 21). What the data says about Americans' views of artificial intelligence. Retrieved from https://www.pewresearch.org/short-reads/2023/11/21/what-the-data-says-about- americans-views-of-artificial-intelligence/?utm_source=chatgpt.com.

Potter, W. J., & Levine Donnerstein, D. (1999). Rethinking validity and reliability in content analysis.

Schmitt, B. (2020). Speciesism: An obstacle to AI and robot adoption. Marketing Letters, 31(1), 3-6.

Sibai, O., Mimoun, L., & Boukis, A. (2021). Authenticating brand activism: Negotiating the boundaries of free speech to make a change. Psychology & Marketing, 38(10), 1651-1669.

Song, M., Chen, H., Wang, Y., & Duan, Y. (2024). Can AI fully replace human designers? Matching effects between declared creator types and advertising appeals on tourists' visit intentions. Journal of Destination Marketing & Management, 32, 100892.

Vredenburg, J., Kapitan, S., Spry, A., & Kemper, J. A. (2020). Brands taking a stand: Authentic brand activism or woke washing?. Journal of Public Policy & Marketing, 39(4), 444-460.

Woolf, N., & Silver, C. (2017). Qualitative analysis using MAXQDA: The five-level QDATM method. Routledge.

Spálová, T. L. L. (2023). Social activism of brands in the age of artificial intelligence (AI). Marketing Identity, 298.

Wu, Y., Mou, Y., Li, Z., & Xu, K. (2020). Investigating American and Chinese subjects' explicit and implicit perceptions of AI-generated artistic work. Computers in Human Behavior, 104, 106186.

# Come Adattare il Linguistic Frame nei Messaggi Attivisti dei Brand: una Prospettiva Culturale

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## Abstract

Negli ultimi anni i brand globali hanno intensificato l'adozione di strategie di brand activism, utilizzandole come strumento per esprimere il proprio impegno nei confronti di questioni sociali. Questo studio indaga come il framing linguistico influenzi l'engagement degli utenti nei confronti dei contenuti attivisti su Instagram, basandosi sulla teoria del framing (Entman, 1993) e sulle sue applicazioni nell'attivismo digitale (Wagner et al., 2017; Mendelson et al., 2024). Attraverso un'analisi del contenuto di 314 post pubblicati da MAC Cosmetics negli Stati Uniti, in India e in Messico tra il 2022 e il 2024, esploriamo la relazione tra esplicità del messaggio e interazione del pubblico. I post sono stati codificati secondo le quattro funzioni del framing di Entman - definizione del problema, diagnosi causale, valutazione morale e suggerimento di soluzioni - e analizzati in base all'engagement rate. I risultati indicano che i messaggi espliciti, in particolare quelli che identificano le cause dei problemi sociali, generano un engagement superiore rispetto ai messaggi non espliciti. Al contrario, i messaggi focalizzati sulle soluzioni tendono a ricevere un engagement minore. Lo studio evidenzia inoltre variazioni interculturali: il framing esplicito è più efficace in India, mentre ha un impatto minore in Messico e negli Stati Uniti. I risultati sottolineano il ruolo strategico del linguaggio nel brand activism e l'importanza della sensibilità culturale nella comunicazione globale. Combinando la teoria del framing con una prospettiva cross-culturale, lo studio offre spunti teorici e indicazioni pratiche per i brand che vogliono comunicare valori attivisti in modo efficace.

*Keywords: framing theory, brand activism, engagement sui social media, comunicazione interculturale.*

## 1. Introduzione

Il legame tra imprese e società è oggi al centro di trasformazioni profonde. In questo contesto, il brand activism - definito come "gli sforzi aziendali volti a promuovere, ostacolare o guidare riforme sociali, politiche, economiche e/o ambientali con l'obiettivo di migliorare la società" (Sarkar & Kotler, 2018; Cammarota et al., 2023) - si è affermato come un tema centrale nel dibattito accademico e manageriale. La crescente rilevanza del fenomeno emerge dal numero sempre maggiore di imprese che scelgono di assumere posizioni pubbliche su temi sociali. Giganti globali come Google, Facebook e Nike hanno lanciato campagne contro la discriminazione razziale sostenendo movimenti come "Black Lives Matter", mentre brand come Gucci e Stella Artois hanno affrontato il tema della disuguaglianza di genere, rendendo visibile il loro impegno sociale. (Shukla et al., 2025).

I profondi cambiamenti sociali e ambientali del XXI secolo hanno spinto le imprese ad adattarsi a scenari in continua evoluzione, assumendo talvolta un ruolo di leadership

nell'affrontare queste sfide (Cammarota et al., 2023). Tuttavia, questo orientamento non deriva sempre da un autentico risveglio etico. Spesso le aziende rispondono piuttosto alle crescenti aspettative dei consumatori, che richiedono prese di posizione chiare e pubbliche su temi critici come il razzismo (Grier & Crockett, 2024), le disuguaglianze e l'inclusione (Kipnis et al., 2021), riconoscendo nei brand una capacità d'azione talvolta percepita come più efficace di quella delle istituzioni (Bhagwat et al., 2020). Di conseguenza, le aziende sono sempre più chiamate a riflettere i valori dei propri clienti e a sostenere attivamente convinzioni condivise. Studi recenti confermano questa tendenza: ad esempio, Rimmer (2022) evidenzia che il 90% dei millennials preferirebbe acquistare da un brand impegnato nel supporto di una causa sociale (Shukla et al., 2025). In questo scenario, le aziende non possono più mantenere una posizione neutrale di fronte a questioni sociali polarizzanti, e l'attivismo diventa una componente fondamentale della comunicazione aziendale (Sarkar & Kotler, 2018; Vredenburg et al., 2020).

Le piattaforme social rappresentano un canale privilegiato per la diffusione di contenuti attivisti (Volpe et al., 2023; Vredenburg et al., 2020). Le campagne sui social media non comprendono solo immagini e video, ma anche contenuti testuali ricchi di significato, fondamentali per catturare l'attenzione e stimolare l'interazione degli utenti (Deng et al., 2021). Quando questi contenuti riguardano tematiche sensibili come diritti civili, giustizia sociale o cambiamenti climatici, le scelte linguistiche dei brand assumono un'importanza strategica, influenzando profondamente il modo in cui il pubblico interpreta e reagisce al messaggio (Gong et al., 2025).

Analizzare le modalità con cui i brand comunicano le proprie posizioni è dunque cruciale, poiché la forma e la struttura del messaggio incidono sulla percezione, sull'interpretazione e sulle risposte emotive del pubblico (Grappi et al., 2024). In questo contesto, la teoria del framing offre un quadro teorico efficace per valutare l'impatto comunicativo, mostrando come la selezione e l'enfasi di specifici contenuti possano orientare atteggiamenti e comportamenti. Studi empirici confermano tale dinamica: ad esempio, Florence et al. (2022) dimostrano, nel social marketing, che diverse strategie di framing – basate su guadagno o perdita – influenzano significativamente le scelte sostenibili e le risposte attitudinali. Più nello specifico, Xie, Wei e Chen (2024) evidenziano che, nell'ambito del brand activism, il modo in cui i messaggi vengono "incorniciati" - in particolare attraverso appelli basati sulla speranza o sulla frustrazione - può influenzare le reazioni emotive e le intenzioni d'acquisto dei consumatori. La teoria del framing, introdotta da Goffman (1974) e successivamente sviluppata da Entman (1993) nel campo dei media e della comunicazione, spiega come i messaggi selezionino, enfatizzino e organizzino determinati aspetti della realtà, guidando così l'interpretazione pubblica. Secondo Entman (1993), il framing implica quattro funzioni principali: definire un problema, diagnosticarne le cause, formulare giudizi morali e proporre soluzioni. Questo quadro teorico è stato applicato con successo in diversi ambiti, dalla pubblicità e comunicazione aziendale (Maher & Schmidt, 2025) alla responsabilità sociale d'impresa (Melchiades Soares, 2023), dalla comunicazione sanitaria (Lee et al., 2024) fino al brand activism (Zhou et al., 2023).

Nonostante l'attenzione crescente dedicata al tema, la ricerca presenta ancora alcune lacune riguardo al ruolo delle strategie linguistiche nel generare engagement dei consumatori. La maggior parte degli studi si è concentrata sull'uso del linguaggio come strumento per mitigare le reazioni negative (Gong et al., 2025) o sull'impatto di specifici elementi dei messaggi attivisti - come le parole trigger - nel generare risposte avverse (Pöyry & Laaksonen, 2022). Rimane però poco esplorato come la struttura linguistica dei messaggi attivisti sui social media influenzi l'engagement e come tali dinamiche varino in contesti culturali differenti.

Il presente studio mira a colmare tali lacune analizzando la comunicazione attivista di MAC Cosmetics, brand noto per la sua identità inclusiva, attraverso un confronto tra tre mercati culturalmente distinti: Stati Uniti, India e Messico. L'analisi si concentra sul contenuto testuale dei post attivisti, classificandone il framing in base al grado di esplicità linguistica (esplicito vs. non esplicito), al fine di indagare come tali strategie influenzino l'engagement degli utenti nei diversi contesti geografici e culturali.

Le domande di ricerca principali sono:

- RQ1: In che modo differenti strategie linguistiche (esplicite vs. non esplicite) influenzano l'engagement degli utenti con i messaggi di brand activism su Instagram?

- RQ2: L'efficacia di queste strategie linguistiche nel generare engagement varia in base al contesto culturale (Stati Uniti, India, Messico)?

Per rispondere a tali quesiti, è stata condotta un'analisi quantitativa di 314 post pubblicati da MAC Cosmetics tra il 2022 e il 2024 nei tre mercati di riferimento. I contenuti testuali sono stati codificati secondo le quattro funzioni del framing di Entman (1993) e successivamente classificati in base al livello di esplicità linguistica. I dati sono stati analizzati mediante t-test di Welch per il confronto delle medie tra gruppi e regressioni OLS per valutare l'impatto delle variabili linguistiche e culturali sull'engagement rate, seguendo le linee guida metodologiche di Hair et al. (2019).

Questo studio apporta tre principali contributi alla letteratura sul brand activism. In primo luogo, fornisce evidenze empiriche sul ruolo delle strategie linguistiche - esplicite e non esplicite - nell'influenzare l'engagement con i contenuti attivisti su Instagram. In secondo luogo, introduce una prospettiva comparativa di tipo crossculturale, analizzando le risposte dei consumatori in tre mercati distinti. Infine, integra la teoria del framing con un approccio linguistico-pragmatico, offrendo anche implicazioni manageriali utili alla costruzione di messaggi attivisti culturalmente sensibili in contesti globali.

## 2. Contesto Teorico

### 2.1 Il linguaggio come determinante dell'engagement dei consumatori

Il linguaggio impiegato nella comunicazione attivista dei brand riveste un ruolo centrale nel modellare le risposte dei consumatori, influenzandone in particolare la percezione di autenticità e il livello di engagement (Gong et al., 2025). Studi precedenti hanno evidenziato come i consumatori valutino il brand activism non solo in base ai temi trattati, ma anche secondo il modo in cui le aziende articolano i propri messaggi, tenendo conto del contesto socio-culturale del mercato di riferimento (Livas et al., 2023; Vredenburg et al., 2020; Mukherjee & Althuizen, 2020).

I messaggi formulati con un linguaggio chiaro, trasparente e orientato al problema sono generalmente percepiti come più autentici e affidabili, favorendo così la fiducia del pubblico e aumentando la ricettività (Cammarota et al., 2024). In questa prospettiva, definiamo linguaggio esplicito quei messaggi chiaramente allineati ai valori del brand e supportati da giustificazioni trasparenti. Questa definizione si avvicina al concetto di linguaggio razionalizzato proposto da Gong et al. (2025), ovvero una comunicazione finalizzata a giustificare il coinvolgimento del brand in questioni sociopolitiche; tuttavia, la nostra operazionalizzazione è più ampia. Il linguaggio esplicito, così concepito, comprende le giustificazioni razionalizzate ma pone anche l'accento sulla trasparenza comunicativa, sulla chiarezza morale e sull'allineamento ai valori in senso più generale.

Al contrario, definiamo linguaggio non esplicito la comunicazione del brand caratterizzata da sottospecificazione retorica, opacità strategica o struttura argomentativa incompleta, ad esempio con omissione della diagnosi causale o della valutazione morale. Questo costrutto si sovrappone parzialmente alla nozione di linguaggio evasivo di Gong et al. (2025), che indica una comunicazione finalizzata a oscurare o minimizzare l'impegno del brand nelle attività di Corporate Sociopolitical Activism (CSA). Sebbene concettualmente correlato, il termine non esplicito è qui utilizzato in senso più ampio, includendo tutti i messaggi sottospecificati, compresi quelli "evasivi".

La seguente tabella sintetizza le principali distinzioni tra questi due costrutti:

| **Tipo di linguaggio** | **Definizione operativa** |
|---|---|
| Linguaggio razionalizzato (Gong et al., 2025) | Comunicazione aziendale che tenta di razionalizzare l'impegno nel CSA. |
| Linguaggio evasivo (Gong et al., 2025) | Comunicazione aziendale che tenta di evitare il collegamento con il CSA. |
| Linguaggio esplicito (definito in questo studio) | Linguaggio chiaramente articolato, trasparente e allineato ai valori che include tutte e quattro le funzioni di framing proposte da Entman (1993). |
| Linguaggio non esplicito (definito in questo studio) | Comunicazione caratterizzata da bassa chiarezza e struttura retorica incompleta (ad esempio mancanza<br><br>della diagnosi causale o del framing della soluzione).<br><br>Mancano uno o più elementi di framing di Entman. |

**Tabella 1:** Confronto delle categorie linguistiche (Fonte: elaborazione dell'autore)

Basandosi sulla Signaling Theory (Spence, 1973; Connelly et al., 2011), i messaggi dei brand fungono da segnali strategici volti a ridurre l'asimmetria informativa e a comunicare l'intento dell'azienda. In questo contesto, i messaggi espliciti trasmettono un autentico impegno del brand verso una causa, incrementando la credibilità percepita e la fiducia da parte dei consumatori. Secondo l'Elaboration likelihood Model (ELM) (Petty & Cacioppo, 1986), questo tipo di linguaggio tende ad attivare la central route processing, portando il pubblico a valutare attentamente la qualità delle argomentazioni e la coerenza dei valori espressi. Messaggi chiari e coerenti rafforzano la percezione di allineamento tra brand e causa, aumentando l'autenticità percepita (Trimble & Rifon, 2006; Napoli et al., 2016). Al contrario, il linguaggio non esplicito, caratterizzato da mancanza di chiarezza e giustificazione, può generare scetticismo e ridurre la fiducia, alimentando percezioni di opportunismo (Vo et al., 2025). Tali messaggi tendono ad attivare la peripheral route processing, basandosi su segnali superficiali come immagini o appelli emotivi, risultando meno efficaci nel generare un engagement sostenibile nel tempo (Petty & Wegener, 1999).

Il quadro teorico trova ulteriore supporto in Mangiò et al. (2023), che introducono il concetto di social pathos come strategia retorica nella comunicazione dei brand "woke".

I loro risultati evidenziano che narrazioni emotivamente e moralmente cariche possono aumentare l'engagement, superando positivamente le aspettative del pubblico. Tuttavia, se tali messaggi risultano disallineati dai valori del brand o dal contesto, possono generare backlash o polarizzazione.

L'engagement - tipicamente misurato attraverso like, commenti e condivisioni - risulta positivamente correlato alla percezione di autenticità dei messaggi attivisti, soprattutto in contesti sociopolitici in cui la congruenza morale e la trasparenza comunicativa sono particolarmente valorizzate (Vredenburg et al., 2020; Mukherjee & Althuizen, 2020). Inoltre, studi recenti indicano che la percezione di autenticità media la relazione tra chiarezza del messaggio e comportamento (Kothari et al., 2025).

Sulla base di queste premesse teoriche, si propone la seguente ipotesi:

• H1: I post che utilizzano un linguaggio esplicito genereranno un engagement più elevato rispetto a quelli che impiegano un linguaggio non esplicito.

### 2.2 Chiarezza causale e framing: un fattore chiave dell'engagement

La teoria del framing fornisce un quadro concettuale utile per comprendere come i messaggi attivisti influenzino l'engagement attraverso specifiche strutture linguistiche. Tra le quattro funzioni principali delineate da Entman (1993) - definizione del problema, attribuzione causale, valutazione morale e suggerimento di soluzioni - quella causale è particolarmente rilevante per il brand activism, poiché aiuta il pubblico a comprendere perché un problema sociale è emerso e perché un brand prende posizione.

Nonostante la sua rilevanza, la dimensione causale è spesso trascurata nella comunicazione aziendale, la quale tende a concentrarsi sulla narrazione del posizionamento morale del brand o sulla proposta di soluzioni. Tuttavia, attribuire cause chiare a un problema sociale è fondamentale per costruire una narrazione coerente, capace di giustificare l'impegno dell'azienda agli occhi del pubblico. Evidenze empiriche recenti sottolineano l'importanza della chiarezza causale: Muraro et al. (2023) mostrano che, nel contesto del digital consumer activism, l'engagement degli utenti è sostenuto in modo più efficace da frame orientati alle cause, che enfatizzano motivi sistemici o morali alla base di un problema. Studi precedenti indicano inoltre che l'inclusione di spiegazioni causali aumenta sia la chiarezza che la rilevanza percepita del messaggio, favorendo un'elaborazione cognitiva più profonda da parte del pubblico (Wood & Eagly, 1981; Slater & Rouner, 2006). Questo elemento risulta particolarmente cruciale nel brand activism, dove gli stakeholder analizzano attentamente le narrative aziendali alla ricerca di giustificazioni coerenti e credibili (Vredenburg et al., 2020).

Il valore del framing causale trova ulteriore supporto nella Attribution Theory di Weiner (1985), secondo cui gli individui valutano il comportamento altrui sulla base delle cause percepite, utilizzando queste valutazioni per inferire motivazioni e sincerità. Applicata alla comunicazione aziendale, la teoria suggerisce che, quando le spiegazioni causali sono percepite come interne, stabili e controllabili, i consumatori tendono a interpretare la posizione del brand come autentica, generando un engagement positivo. Al contrario, messaggi attivisti vaghi o privi di chiarezza causale possono risultare opportunistici o superficiali, minando la fiducia e riducendo l'interazione del pubblico con il contenuto. Sulla base di queste premesse teoriche, formuliamo la seguente ipotesi:

• H2: I post che includono una spiegazione causale genereranno un engagement più elevato.

### 2.3 Contesto culturale come moderatore dell'efficacia dei messaggi attivisti

L'efficacia del linguaggio attivista può variare significativamente tra contesti culturali, in particolare rispetto alle aspettative di chiarezza comunicativa e allineamento morale. Secondo le dimensioni culturali di Hofstede, l'evitamento dell'incertezza (UA) indica il grado in cui gli individui si sentono minacciati da situazioni incerte (Hofstede, 2001). Basandosi su questo

modello, il Messico registra un alto livello di UA (82), indicando una preferenza per comunicazioni strutturate ed esplicite, mentre India (40) e Stati Uniti (46) sono generalmente considerate culture a basso UA, più tolleranti verso l'ambiguità.

Tuttavia, la sola considerazione dell'UA non è sufficiente a spiegare pienamente le risposte del pubblico ai messaggi attivisti. I quadri culturali sono complessi e multidimensionali, e le preferenze sui messaggi spesso riflettono logiche normative e relazionali più profonde. Ad esempio, sebbene l'India registri un basso livello di UA, è anche una società altamente collettivista (Hofstede, 2001; House et al., 2002) con un forte orientamento al gruppo (il cosiddetto "embeddedness", Schwartz, 1994; Schwartz, 2012) e marcata enfasi sull'integrità morale. In tali contesti, il pubblico può apprezzare un linguaggio chiaro ed esplicito non tanto per ridurre l'incertezza, quanto per valutare l'allineamento del brand con norme etiche condivise. Secondo questo quadro, l'efficacia di un messaggio dipende dalla sua congruenza con le aspettative morali radicate culturalmente, in particolare dal grado in cui la comunicazione riflette valori di responsabilità, legittimità e rispetto all'interno della cultura di riferimento. Quando il messaggio del brand è coerente con queste norme, si favorisce una connessione più forte con il pubblico, aumentando persuasione ed engagement. Al contrario, messaggi non allineati alle norme culturali risultano meno efficaci, indipendentemente dalla loro chiarezza.

Questo effetto moderatore può essere ulteriormente compreso attraverso l'Elaboration Likelihood Model (ELM) (Petty & Cacioppo, 1986), che distingue due vie per la persuasione: la central route, che implica un'elaborazione cognitiva attenta e approfondita del contenuto, e la peripheral route, basata su segnali superficiali. I messaggi percepiti come autentici, trasparenti e moralmente congruenti - cioè che mostrano un alto grado di allineamento morale-culturale - tendono a coinvolgere il pubblico attraverso la central route, generando un engagement più elevato. Al contrario, messaggi vaghi o culturalmente incongruenti stimolano principalmente l'elaborazione periferica, riducendone l'impatto. Ricerche recenti su autenticità del brand e wokewashing supportano questa interpretazione. Vredenburg et al. (2020), ad esempio, mostrano che i messaggi attivisti percepiti come moralmente sinceri e coerenti con i valori della comunità ottengono maggiore supporto e engagement da parte dei consumatori.

Nel complesso, questi quadri teorici suggeriscono che, sebbene l'evitamento dell'incertezza offra una prospettiva utile, è l'orientamento culturale più ampio - in termini di giustificazione morale, collettivismo e congruenza di valori - a spiegare perché i messaggi attivisti espliciti generano un engagement maggiore in paesi come l'India. Pertanto, si propone la seguente ipotesi:

- H3: Il contesto culturale modera l'effetto positivo del framing esplicito sull'engagement.

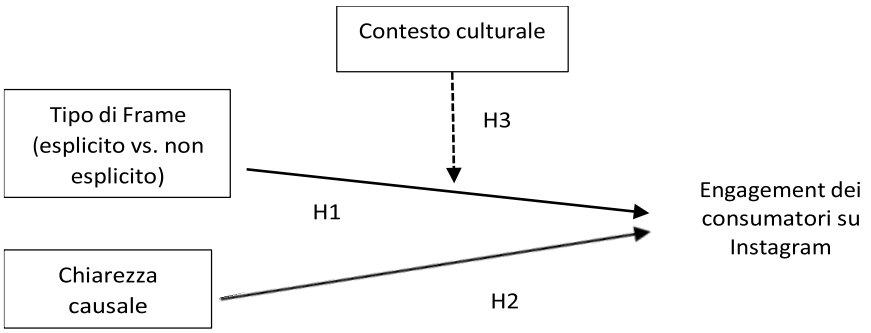



**Figura 1:** Modello concettuale e ipotesi (Fonte: elaborazione dell'autore)

## 3. Methodologia

### 3.1 Selezione del caso e contesto di ricerca

Seguendo l'approccio del caso singolo proposto da Yin (2017), lo studio seleziona MAC Cosmetics come caso teoricamente significativo per analizzare il ruolo del framing linguistico nel brand activism sull'engagement dei consumatori in culture differenti. Secondo Yin, un caso singolo è appropriato quando il caso è esemplare, rivelatore o teoricamente significativo - criteri che MAC soddisfa chiaramente.

MAC ha sviluppato un'identità attivista riconosciuta a livello globale, fondata su un impegno costante su temi quali inclusività di genere, diritti LGBTQ+ ed empowerment delle minoranze. La sola campagna Viva Glam ha raccolto oltre 500 milioni di dollari per iniziative legate all'HIV/AIDS e alla salute queer (MAC Cosmetics, 2024), dimostrando non solo un posizionamento simbolico, ma anche una legittimità attivista concretamente misurabile. Il brand è frequentemente citato nella letteratura accademica come esempio di brand activism intersezionale e inclusivo (Grier & Brumbaugh, 2013; Shukla et al., 2025). I temi trattati - visibilità, equità e rappresentazione - rientrano tra i domini più moralmente e politicamente sensibili del discorso contemporaneo sul brand. La loro rilevanza globale, unita al peso normativo che rivestono, li rende ideali per esaminare come i consumatori in culture diverse reagiscano non solo a cosa i brand comunicano, ma soprattutto a come lo comunicano. Ciò assume particolare importanza nel contesto delle crescenti aspettative dei consumatori riguardo alla sincerità del brand e al suo allineamento ai valori sociali (Vredenburg et al., 2020).

La ricerca si è focalizzata sulla comunicazione di MAC su Instagram in tre mercati culturalmente distinti - India, Messico e Stati Uniti - selezionati per la loro divergenza rispetto a dimensioni culturali chiave quali l'evitamento dell'incertezza, e l'individualismo-collettivismo (Hofstede, 2001; House et al., 2002). Gli account Instagram localizzati di MAC in questi paesi offrono contenuti attivisti comparabili, ma con variazioni stilistiche, consentendo un'analisi controllata di come le diverse strutture di framing - più che la rilevanza del tema trattato - influenzino l'engagement nei diversi contesti culturali.

### 3.2 Raccolta dati

Per investigare come il framing linguistico influenzi l'engagement degli utenti riguardo ai messaggi attivisti, è stata condotta un'analisi dei contenuti dei post pubblicati da MAC Cosmetics in tre Paesi culturalmente e geograficamente diversi: Stati Uniti, India e Messico.

I dati sono stati raccolti dagli account ufficiali Instagram di ciascun mercato in un arco temporale di due anni (gennaio 2022 - marzo 2024).

In totale, sono stati analizzati 314 post (Stati Uniti = 107; Messico = 103; India = 104). Il campione è stato limitato ai post che trattavano esplicitamente contenuti sociopolitici attivisti (ad esempio, diritti di genere, rappresentanza delle minoranze, salute pubblica, accesso all'istruzione). Sono stati esclusi i post puramente commerciali o incentrati sul prodotto. Ogni post è stato codificato da due ricercatori lungo più dimensioni derivanti dalle quattro funzioni del framing di Entman (1993): definizione del problema, diagnosi causale, valutazione morale e suggerimento di soluzioni, usando una classificazione binaria (presente/assente). Inoltre, ogni post è stato categorizzato in base alla "esplicità linguistica" (esplicito vs. non esplicito) seguendo un protocollo di codifica basato sul framing e guidato da Gong et al. (2025) e Vredenburg et al. (2020).

Per valutare la risposta del pubblico, è stato calcolato il tasso di engagement (ER) per ciascun post. Questa metrica è un proxy ampiamente utilizzato per misurare l'interazione del pubblico e l'efficacia dei contenuti sui social media (de Vries et al., 2012; Lou & Yuan, 2019), poiché controlla le dimensioni dell'account e consente confronti tra mercati.

### 3.3 Procedura di codifica

Per investigare la relazione tra framing linguistico e engagement dei consumatori, ogni post Instagram è stato codificato secondo una griglia strutturata che includeva caratteristiche retoriche e metriche di performance. Il dataset comprendeva variabili relative ai metadati del post, alla struttura del contenuto e all'interazione degli utenti. Ogni osservazione è stata identificata con un ID univoco e annotata con la data di pubblicazione e il link corrispondente su Instagram. Le metriche di engagement derivavano dal numero di like e commenti ricevuti da un post rispetto alla base di follower della pagina, permettendo di calcolare un tasso di engagement standardizzato. Questa metrica è stata calcolata come somma di like e commenti divisa per il numero totale di follower al momento della pubblicazione, moltiplicata per 100.

La componente testuale di ciascun post, sia nella didascalia sia nell'immagine associata, è stata preservata attraverso un estratto breve per facilitare l'interpretazione qualitativa. È stato quindi applicato uno schema di codifica deduttivo basato sulle quattro funzioni core del framing di Entman (1993). I post sono stati valutati per la presenza o assenza delle quattro funzioni proposte da Entman, codificando ogni funzione come variabile binaria.

Sulla base di questo framework, è stata introdotta una misura a doppio livello di esplicità del messaggio. Il primo livello consisteva in un indicatore binario, che distingueva i messaggi espliciti da quelli non espliciti. Il secondo livello misurava il grado di esplicità come variabile ordinale a quattro livelli - da 'nessuna' a 'alta' - in base al numero di elementi del framing chiaramente articolati. I post che includevano tutti e quattro gli elementi del framing sono stati classificati come espliciti, mentre i messaggi privi di tutti gli elementi sono stati considerati non espliciti. I casi intermedi, contenenti da uno a tre elementi, sono stati categorizzati come a media-bassa esplicità, con soglie determinate durante una fase pilota di codifica.

Ogni post è stato inoltre assegnato a una categoria tematica rappresentante il tema sociopolitico trattato (ad esempio, diritti LGBTQ+, equità di genere, salute mentale). Tali categorie sono state sviluppate in modo induttivo, partendo da un primo round di codifica aperta e definite successivamente tramite consenso tra i coder. Per garantire l'affidabilità del processo di codifica, due ricercatori hanno codificato indipendentemente l'intero dataset, testando l'affidabilità intercoder su un sottoinsieme casuale del 10%. I valori di

Krippendorff's alpha hanno superato la soglia standard di 0,80 per tutte le dimensioni chiave, indicativo di un alto livello di accordo. Eventuali discrepanze sono state risolte mediante revisione collaborativa. Quando necessario, i coder hanno incluso note osservazionali per documentare elementi contestuali, come riferimenti a notizie, collaborazioni o scelte visive rilevanti, a supporto dell'interpretazione durante la fase di analisi.

### 3.4 Costruzione delle variabili e strategia analitica

L'engagement degli utenti è stato operazionalizzato tramite il tasso di engagement (ER), calcolato come somma di like e commenti divisa per il numero di follower al momento della pubblicazione, moltiplicata per 100. Questa misura, ampiamente adottata nella ricerca sui social media (de Vries et al., 2012; Lou & Yuan, 2019), tiene conto delle differenze nella dimensione del pubblico tra i vari account nazionali. Data la sua asimmetria positiva, l'ER è stato log-trasformato per migliorare la normalità e successivamente winsorizzato al 5° e 95° percentile per ridurre l'influenza di valori estremi senza scartare osservazioni (Hair et al., 2019).

La principale variabile indipendente è il Tipo di Frame, codificata come 0 per i messaggi non espliciti e 1 per i messaggi espliciti, in base al livello di esplicità linguistica del post. Inoltre, è stata testata l'influenza di ciascuna delle quattro funzioni del framing di Entman (1993) - definizione del problema, diagnosi causale, valutazione morale e suggerimento di soluzioni - codificate come indicatori binary (presente/assente).

Per valutare gli effetti del framing sull'engagement, è stata adottata una strategia in due fasi. In primo luogo, sono stati condotti t-test di Welch per confrontare il log-ER medio tra le condizioni di framing, sia complessivamente sia per paese. Successivamente, è stata stimata una serie di regressioni OLS per prevedere il log-ER in base allo stile di framing, al contenuto retorico e alle interazioni con il paese, controllando per numero di follower, categoria del tema trattato e tempistica del post. Come verifica di robustezza, i modelli chiave sono stati replicati usando la regressione robusta di Huber, che minimizza l'influenza di eventuali outlier residui.

## 4. Resultati

Per testare le ipotesi dello studio, abbiamo innanzitutto confrontato i tassi medi di engagement tra i post che utilizzano un linguaggio esplicito rispetto a quelli non espliciti (H1). Come mostrato nella Tabella 2, la differenza non era statisticamente significativa nel campione complessivo (t = –0,428, p = .669; Cohen's d = –0,048), suggerendo che, in generale, il framing linguistico da solo non predice un engagement più elevato su tutti i post.

Tuttavia, controllando per i componenti retorici, l'analisi di regressione (vedi Tabella 2) ha rilevato che il framing esplicito predice significativamente un engagement più elevato (b = 0,042, p = .020), supportando H1. Tra le quattro funzioni del framing, solo la diagnosi causale ha mostrato un effetto positivo e significativo sull'engagement (b = 0,028, p = .001), in linea con H2. Al contrario, la raccomandazione di trattamento era negativamente associata all'engagement (b = –0,028, p = .031).

| **Confronto** | **t** | **p-value** | **Cohen's d** |
|---|---|---|---|
| Non esplicito vs. esplicito | - 0.428 | 0.669 | - 0.048 |

**Tabella 2:** Media di Engagement per Tipo di Framing (t-test di Welch)
(Fonte: elaborazione dell'autore)

| Predittore | Coef. | Std. Err. | Z |
|---|---|---|---|
| Tipologia di Frame | 0.042 | 0.018 | 2.33 |
| Causal Diagnosis | 0.028 | 0.008 | 3.33 |
| Treatment | - 0.028 | 0.013 | - 2.16 |

**Tabella 3:** Regressione Robusta Predittiva dell'Engagement (H1–H3)
(Fonte: elaborazione dell'autore)

Abbiamo quindi testato H3, che postula che il contesto culturale moderi l'effetto del framing esplicito. La Tabella 4 mostra che i livelli di engagement variano significativamente tra i paesi ($F = 43{,}93$, $p < .001$), con il Messico che mostra il tasso di engagement più alto ($M = 0{,}242$), seguito dall'India ($M = 0{,}122$) e dagli Stati Uniti ($M = 0{,}049$).

| Paese | Engagement medio |
|---|---|
| India | 0.122 |
| Messico | 0.242 |
| Stati Uniti | 0.049 |

**Tabella 4:** Media di Engagement per Paese (Fonte: elaborazione dell'autore)

Un modello di regressione includendo termini di interazione tra tipo di Frame e Paese (vedi Tabella 5) conferma che l'effetto del framing esplicito è più forte in India e negativo negli Stati Uniti e in Messico. Ciò fornisce supporto per H3.

| Termine | Coef. | p-value |
|---|---|---|
| Tipo di frame x Messico | - 0.058 | 0.001 |
| Tipo di frame x Stati Uniti | - 0.036 | 0.020 |
| (Baseline: effetto del tipo di frame in India) | 0.025 | 0.181 |

**Tabella 5:** Effetti di Interazione Frame × Paese (H4) (Fonte: elaborazione dell'autore)

Nel complesso, questi risultati suggeriscono che, sebbene il linguaggio esplicito generalmente favorisca l'engagement quando contestualizzato con chiarezza retorica (H1–H2), questo

effetto è moderato dal contesto nazionale (H3) e si riduce quando i post enfatizzano soluzioni.

## 5. Discussion and Conclusions

Questo studio ha analizzato come il framing linguistico nel brand activism, in particolare l'impiego di un linguaggio esplicito rispetto a uno non esplicito, influenzi l'engagement dei consumatori in mercati culturalmente eterogenei. Il lavoro si fonda sulla Framing Theory (Entman, 1993), sulla Signaling Theory (Spence, 1973; Connelly et al., 2011) e sulla Cultural Congruity Theory (Luna & Peracchio, 2001), con l'obiettivo di esaminare l'impatto delle strategie retoriche e delle funzioni del framing sull'interazione degli utenti con i post pubblicati da MAC Cosmetics su Instagram in India, Messico e Stati Uniti.

I risultati confermano empiricamente il ruolo centrale del framing nel modellare l'engagement dei consumatori con contenuti attivisti. In particolare, i post caratterizzati da un linguaggio esplicito hanno generato livelli di engagement significativamente più elevati rispetto a quelli che impiegano un linguaggio non esplicito. Tale evidenza è coerente con la letteratura che sottolinea come messaggi razionalizzati riducano l'ambiguità retorica, aumentino la percezione di sincerità e favoriscano una più profonda elaborazione del contenuto (Gong et al., 2025; Vredenburg et al., 2020). Alla luce dell'Elaboration Likelihood Model (Petty & Cacioppo, 1986), il linguaggio esplicito sembra attivare la central route processing, stimolando risposte più forti e consapevoli da parte degli utenti.

Oltre agli aspetti stilistici, l'analisi delle quattro funzioni del framing proposte da Entman evidenzia che l'attribuzione causale svolge un ruolo particolarmente rilevante nel favorire l'engagement. I post che esplicitano in modo chiaro le cause del problema affrontato mostrano una maggiore capacità di generare interazioni, in linea con la Attribution Theory (Weiner, 1985), secondo cui la presenza di cause percepite come interne, stabili e controllabili favorisce reazioni positive e riduce lo scetticismo. Al contrario, la proposta di soluzioni è risultata associata a una lieve ma significativa diminuzione dell'engagement. Sebbene tale risultato possa apparire controintuitivo, esso è coerente con gli studi di psicologia sociale sulla reattanza (Kim & Cameron, 2011) e sulla collective action fatigue (van Zomeren et al., 2008). In particolare, messaggi percepiti come eccessivamente prescrittivi possono indurre gli utenti a disimpegnarsi, soprattutto quando suscitano sensazioni di pressione morale o quando la soluzione appare imposta dall'alto, piuttosto che frutto di un processo partecipativo.

L'analisi cross-country evidenzia inoltre che l'effetto positivo del linguaggio esplicito varia in funzione del contesto culturale. L'efficacia del framing esplicito risulta significativamente più elevata in India rispetto a Messico e Stati Uniti, confermando l'ipotesi H3. Questo risultato contribuisce alla letteratura sulle contingenze culturali nella comunicazione attivista (Hofstede, 2001; Luna & Peracchio, 2001). Sebbene l'India presenti un basso livello di uncertainty avoidance, l'alto grado di collettivismo e le forti aspettative normative in materia di discorso morale possono spiegare la risposta favorevole a un linguaggio strutturato e trasparente. Al contrario, nei contesti più individualisti e maggiormente tolleranti all'ambiguità, come Messico e Stati Uniti, la forza persuasiva dei frame espliciti tende ad attenuarsi.

Nel complesso, i risultati sottolineano l'importanza di adattare la comunicazione attivista non solo alla causa sostenuta, ma anche al contesto culturale di riferimento. Il linguaggio non rappresenta un mero strumento espressivo: esso costituisce un segnale strategico capace di amplificare o ridurre la credibilità percepita dell'impegno del brand.

## 6. Contributi Teorici

Questo studio apporta diversi contributi teorici alla letteratura sul brand activism, sulla teoria del framing e sulla comunicazione di marketing interculturale.

In primo luogo, esaminando empiricamente l'effetto del framing linguistico sull'engagement degli utenti, estendiamo la ricerca precedente sul brand activism oltre la mera salienza dei temi e il posizionamento (Sarkar & Kotler, 2018; Vredenburg et al., 2020). In particolare, consideriamo come la forma di articolazione del messaggio, e nello specifico il grado di esplicità linguistica, influenzi la risposta dei consumatori. Mentre studi precedenti hanno enfatizzato la chiarezza della posizione del brand e l'allineamento alla causa (Bhagwat et al., 2020), i nostri risultati mostrano che non tutti i messaggi attivisti vengono elaborati nello stesso modo: il modo in cui una posizione viene comunicata rilevante tanto quanto la posizione stessa. In tal senso, dimostriamo che il framing linguistico incide significativamente sulle reazioni dei consumatori, indipendentemente dalla causa trattata. Questo risultato arricchisce l'intuizione di Gong et al. (2025), i quali si sono concentrati sul linguaggio reattivo in contesti di crisi (CSA), mostrando che il linguaggio esplicito incrementa l'engagement anche nell'attivismo volontario e non legato a crisi.

In secondo luogo, il lavoro contribuisce alla teoria del framing (Entman, 1993) introducendo uno schema di codifica strutturato e linguisticamente fondato per l'analisi della comunicazione attivista. Applicando le quattro funzioni del framing proposte da Entman, evidenziamo come l'attribuzione causale, spesso trascurata, svolga un ruolo cruciale nel generare engagement.

In terzo luogo, la ricerca connette le prospettive del framing e del signaling, proponendo che il linguaggio esplicito funzioni come segnale credibile di autenticità (Spence, 1973; Connelly et al., 2011). In questa prospettiva, il nostro studio fornisce un meccanismo teorico innovativo che collega la formulazione linguistica dei messaggi agli esiti di engagement dei consumatori, suggerendo che la trasparenza comunicativa riduce la percezione di opportunismo e rafforza la fiducia, considerata un antecedente chiave dell'engagement nei contesti attivisti.

Infine, lo studio contribuisce alla letteratura sull'adattamento culturale mostrando che l'impatto del framing esplicito varia a seconda dei contesti nazionali. Il confronto tra tre mercati caratterizzati da profili culturali distinti aggiunge profondità empirica alla Cultural Congruity Theory (Luna & Peracchio, 2001) e risponde alle richieste di ampliare l'analisi oltre i contesti WEIRD nel marketing internazionale (Henrich et al., 2010). I risultati suggeriscono che variabili culturali quali collettivismo, aspettative normative e tolleranza all'ambiguità influenzano significativamente il modo in cui i messaggi attivisti vengono decodificati dal pubblico.

Nel complesso, questi contributi offrono una comprensione teorica più articolata di come i brand possano comunicare in modo efficace attraverso un framing linguistico strategico, adattando il proprio discorso attivista a differenti contesti culturali.

## 7. Implicazioni manageriali

I risultati di questo studio offrono implicazioni operative significative per i brand manager, in particolare per coloro impegnati nella progettazione di campagne attiviste in contesti globali.

In primo luogo, i risultati mostrano che l'inquadramento linguistico rappresenta un elemento cruciale: i messaggi veicolati attraverso un linguaggio esplicito generano livelli più elevati di engagement, soprattutto quando includono spiegazioni causali chiare. Ne deriva che, nella

creazione di contenuti attivisti, i brand dovrebbero evitare formulazioni vaghe o meramente performative, privilegiando invece giustificazioni trasparenti e ben articolate. In tal modo si favorisce non solo la chiarezza comunicativa, ma anche la percezione di autenticità, un attributo sempre più rilevante nella comunicazione brand-cause.

In secondo luogo, l'analisi evidenzia che l'inquadramento problema-causa stimola l'engagement, mentre un'eccessiva enfasi sulle soluzioni tende a ridurlo. Ciò mette in discussione l'assunto manageriale secondo cui i messaggi orientati alla soluzione siano intrinsecamente costruttivi. Nei contesti attivisti, soluzioni percepite come prescrittive o semplificate possono generare affaticamento nel pubblico o attenuare la percezione di urgenza. I manager dovrebbero pertanto bilanciare l'enfasi sull'identificazione del problema con inviti alla riflessione e all'azione, piuttosto che affidarsi esclusivamente a indicazioni direttive.

In terzo luogo, i risultati della nostra analisi cross-culturale confermano che l'efficacia delle strategie di framing varia tra i diversi contesti nazionali. In particolare, il mercato indiano risponde in maniera più favorevole a messaggi espliciti, probabilmente in virtù di norme sociali che enfatizzano coerenza e giustificazione morale. Al contrario, in Messico e negli Stati Uniti tali effetti risultano attenuati. È dunque consigliabile che i marketer conducano analisi diagnostiche del pubblico a livello regionale e modulino di conseguenza il grado di esplicità linguistica, evitando approcci uniformi (one-size-fitsall) nel brand activism internazionale.

Infine, il framework metodologico adottato - che integra la teoria del framing con l'analisi dei social media - fornisce ai manager uno strumento diagnostico applicabile sia ex ante, per testare le campagne in fase di progettazione, sia ex post, per valutarne la performance. Griglie di codifica simili possono essere utilizzate per monitorare i contenuti, individuare debolezze linguistiche e ottimizzare l'engagement in mercati culturalmente eterogenei.

## Bibliografia


Bhagwat Y., Warren N. L., Beck J. T., & Watson IV G. F. (2020). Corporate Sociopolitical Activism and Firm Value. Journal of Marketing. https://doi.org/10.1177/0022242920937000

Cammarota A., & Branca G. (2025). Generation Z consumers' perspective: how and why should (not) brands engage in activism? Italian Journal of Marketing, 21–50 (2025).

https://doi.org/10.1007/s43039-025-00109-x

Cammarota A., Avallone F., Marino V., & Resciniti R. (2024). Can authenticity be built? Looking for factors that influence authentic brand activism. Sinergie Italian Journal of Management, 42(1):2024. https://doi.org/10.7433/s123.2024.02

Cammarota A., D'Arco M., Marino V., & Resciniti R. (2023). BRAND ACTIVISM: A Literature

Review and Future Research Agenda. International Journal of Consumer Studies, 47(5), 1669-

1691. https://doi.org/10.1111/ijcs.12967

Connelly, B.L., Certo, S.T., Ireland, R.D., & Reutzel, C.R. (2011). Signaling theory: A review and assessment. Journal of Management, 37(1), 39-67. https://doi.org/10.1177/0149206310388419

de Vries, L., Gensler, S., & Leeflang, P.S.H. (2012). Popularity of Brand Posts on Brand Fan Pages: An Investigation of the Effects of Social Media Marketing. Journal of Interactive Marketing, 26(2), 83-91. http://dx.doi.org/10.1016/j.intmar.2012.01.003

Deng Q., Hine M. J., Ji S., & Wang Y. (2021). Understanding consumer engagement with brand posts on social media: The effects of post linguistic styles. Electronic Commerce Research and Applications, 48(3): 101068. https://doi.org/10.1016/j.elerap.2021.101068

Entman R. M. (1993). Framing: Toward Clarification of A Fractured Paradigm, Journal of Communication, 43(4), 51-58. https://doi.org/10.1111/j.1460-2466.1993.tb01304.x

Florence E., Fleischman D., Mulcahy R., & Wynder M. (2022). Message framing effects on sustainable consumer behaviour: a systematic review and future research directions for social marketing. Journal of Social Marketing, 12(6). 10.1108/JSOCM-09-2021-0221

Goffman, E. (1974). Frame analysis: An essay on the organization of experience. Harvard University Press.

Gong Y., Tang X., Chang E., & Wan F. (2025). EXPRESS: Corporate Sociopolitical Activism and Language Strategies for Mitigating Animosity in a Host Country. Journal of International Marketing. https://doi.org/10.1177/1069031X251319018

Grappi S., Bergianti F., Gabrielli V., & Baghi I. (2024). The effect of message framing on young adult consumers' sustainable fashion consumption: The role of anticipated emotions and perceived ethicality. Journal of Business Research, 170, 114341. https://doi.org/10.1016/j.jbusres.2023.114341

Grier S. A., Crockett D., Johnson G. D., Thomas K. D., & Bradford T. W. (2024). Race in

Consumer Research: Past, Present and Future. Journal of Consumer Research, 51 (1), pp. 56-65, 10.1093/jcr/ucad050

Grier S., & Brumbaugh A. M. (2013). Noticing Cultural Differences: Ad Meanings Created by Target and Non-Target Markets. Journal of Advertising, 28(1), pp. 79–93. https://doi.org/10.1080/00913367.1999.10673578

Hair J. F., Risher J., Sarstedt M., & Ringle C. M. (2019). When to use and how to report the results of PLSSEM, European Business Review, 31(1). 10.1108/EBR-11-2018-0203

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? The

Behavioral and brain sciences, 33(2-3), 61–135. https://doi.org/10.1017/S0140525X0999152X

Hofstede G.H., (2001). Culture's Consequences: Comparing Values, Behaviors, Institutions and

Organizations Across Nations, 2nd ed. Sage, Thousand Oaks, CA. https://doi.org/10.1016/S0005-7967(02)00184-5

House R., Javidan M., Hanges P., & Dorfman P. W. (2002). Understanding Cultures and Implicit Leadership Theories Across the Globe: An Introduction to Project GLOBE, Journal of World Business, 37(1), pp. 3–10. https://doi.org/10.1016/S1090-9516(01)00069-4

Kim H. J., & Cameron G. T. (2011). Emotions Matter in Crisis. Communication Research, 36(6). 10.1177/0093650210385813

Kipnis E., Damangeot C., Pullig C., & Williams J. D. (2020). Institutionalizing diversity and inclusion engaged marketing (DIEM) for multicultural marketplace wellbeing. Journal of Public Policy & Marketing, 40(3). 10.1177/0743915620975415

Kothari H., Choudhary A., Jain A., & Singh S. (2025). Impact of social media advertising on consumer behavior: role of credibility, perceived authenticity, and sustainability. Frontiers in Communication. https://doi.org/10.3389/fcomm.2025.1595796

Lee Z., Syed Alwi S. F., & Gambetti R. (2024). The thousand faces of beauty: How credible storytelling unlocks disability representation in inclusive luxury fashion branding. Journal of Business research, 181(11). 10.1016/j.jbusres.2024.114744

Livas C., Faidon T., &Nansy K. (2023). Consumer sentiment toward international activist advertising. Innovative Marketing, 19 (2), 250-260. https://doi.org/10.21511/im.19(2).2023.20

Lou, C., & Yuan, S. (2019). Influencer Marketing: How Message Value and Credibility Affect

Consumer Trust of Branded Content on Social Media. Journal of Interactive Advertising, 19, 58-

73. https://doi.org/10.1080/15252019.2018.1533501

Luna, D., & Peracchio, L. A. (2001). Moderators of language effects in advertising to bilinguals: A psycholinguistic approach. Journal of Consumer Research, 28(2), 284–295. https://doi.org/10.1086/322903

Maher R., & Schmidt N. (2025). Reframing tradition: how NGOs sell market-based conservatio to Indigenous communities—lessons from the Leco community in Bolivia. Humanities & Social Sciences Communications. https://doi.org/10.1057/s41599-024-04303-8

Mangiò F., Pedeliento G., Andreini D., & Zarantonello L. (2023). How persuasive is woke brand communication on social media? Evidence from a consumer engagement analysis on Facebook. Journal of Brand Management. https://doi.org/10.1057/s41262-023-00347-4

Melchiades Soares A. (2023). Climate change framing in the communication of CSR policies: the Secil Group example. Journal of Communication Management, 27(2), pp. 226-240.

https://doi.org/10.1108/JCOM-04-2022-0048

Mendelson J., Vijan M., Card D., & Budak C. (2024). Framing Social Movements on Social

Media: Unpacking Diagnostic, Prognostic, and Motivational Strategies. Journal of Quantitative Description Digital Media. https://doi.org/10.51685/jqd.2024.icwsm.9

Moorman C. (2020). Commentary: Brand Activism in a Political World. Journal of Public Policy & Marketing, 39(4): 388-392. https://doi.org/10.1177/0743915620945260

Mukherjee S., & Althuizen N. (2020). Brand activism: Does courting controversy help or hurt a brand? International Journal of Research in Marketing, 37(4), 772-788. https://doi.org/10.1016/j.ijresmar.2020.02.008

Muraro I. S., Thorson K., & Huddleston P. T. (2023). Spurring and sustaining online consumer activism: the role of cause support and brand relationship in microlevel action frames. Journal of Brand Management, 30, 461-477. https://doi.org/10.1057/s41262-023-00322-z

Napoli J., Dickinson S., Beverland M. B., & Farrelly F. (2014). Measuring consumer-based brand authenticity. Journal of Business research, 67(6). https://doi.org/10.1016/j.jbusres.2013.06.001

Petty R. E., & Cacioppo J.T. (1986). The Elaboration Likelihood Model of Persuasion. Advances in Experimental Social Psychology, 19(1):124-205. https://doi.org/10.1016/S00652601(08)60214-2

Petty, R. E., & Wegener, D. T. (1999). The elaboration likelihood model: Current status and controversies. In S. Chaiken & Y. Trope (Eds.), Dual-process theories in social psychology, 37–

72. The Guilford Press.

Pöyry E., & Laaksonen S. (2022). Opposing brand activism: triggers and strategies of consumers' antibrand actions. European Journal of Marketing. European Journal of Marketing, 56(13), 261184. https://doi.org/10.1108/EJM-12-2020-0901

Rimmer, Kelsie (2022), "What Is Brand Activism? 10+ Tips from Brands & Creators Making an

Impact on Social Media," Envato, (accessed June 19 2025), https://elements.envato.com/learn/brand-activism

Sarkar, C. & Kotler, P. (2018). Brand Activism. From Purpose to Action. USA: Idea Bite Press

Schwartz S. H. (1994). Are There Universal Aspects in the Structure and Contents of Human Values? Journal of Social Issues, 50(4), 19–45. https://doi.org/10.1111/j.1540-4560.1994.tb01196.x

Schwartz S. H. (2012). An Overview of the Schwartz Theory of Basic Values, Online Readings in Psychology and Culture, 2(1). https://doi.org/10.9707/2307-0919.1116

Shukla P., Rosendo-Rios V., & Khalifa D. (2025). Should Global Brands Engage in Brand

Activism? Journal of International Marketing, 33(1) 1-16, DOI: https://doi.org/10.1177/1069031X241270606

Slater M. D., & Rouner D. (2006). Entertainment - Education and Elaboration Likelihood: Understanding the Processing of Narrative Persuasion. Communication theory, 12(2), 173-191.

https://doi.org/10.1111/j.1468-2885.2002.tb00265.x

Spence M., (1973). Job Market Signaling. The Quarterly Journal of Economics, 87(3), 355–374. https://doi.org/10.2307/1882010

Trimble C. S., & Rifon N. J. (2006). Consumer Perceptions of Compatibility in Cause-Related Marketing Messages. International Journal of Nonprofit and Voluntary Sector Marketing, 11(1), 29-47. https://doi.org/10.1002/nvsm.42

Van Zomeren, M., Postmes, T., & Spears, R. (2008). Toward an integrative social identity model of collective action: A quantitative research synthesis of three socio-psychological perspectives. Psychological Bulletin, 134(4), 504-535. 10.1037/0033-2909.134.4.504

Vo, T.-H., Tan, G. W.-H., Pham, N. T., Truong, T. H.-D., & Ooi, K.-B. (2025). Promoting customer engagement and brand loyalty on social media: The role of virtual influencers. International Journal of Consumer Studies, 49(2). 10.1111/ijcs.70028

Volpe V. V., Perusi Benson G., Ross J. M., Briggs A. S., Mejía-Bradford S. C., Alexander A. R., & Hope E. C. (2023). Finding the bright side: Positive online racial experiences, racial identity, and activism for Black young adults. Computers in Human Behavior, 144(2). 0.1016/j.chb.2023.107738

Vredenburg J., Kapitan S., Spry A., & Kemper J. A. (2020). Brands Taking a Stand: Authentic Brand Activism or Woke Washing?, Journal of Public Policy & Marketing, 39(4), 444-460.

https://doi.org/10.1177/0743915620947359

Wagner T. F., Baccarella C. V., & Voigt K-I. (2017). Framing social media communication: Investigating the effects of brand post appeals on user interaction, European Management Journal. 10.1016/j.emj.2017.05.002

Weiner B., (1985). An Attributional Theory of Achievement Motivation and Emotion. Psychological Review, 92(4), 548-573. https://doi.org/10.1037/0033-295X.92.4.548

Wood W., & Eagly A. H. (1981). Stages in the Analysis of Persuasive Messages: The Role of

Causal Attributions and Message Comprehension. Journal of Personality and Social Psychology,

40(2), 246-259. https://doi.org/10.1037/0022-3514.40.2.246

Xie S., Wei H., & Chen S. (2024). Power from words: The influence of brand activism message framing on consumer purchase intention. Psychology & Marketing, 21(11). https://doi.org/10.1002/mar.22073

Yang J., & Battocchio A. F. (2020). Effects of transparent brand communication on perceived brand authenticity and consumer responses. Journal of Product & Brand Management. 10.1108/JPBM-03-2020-2803

Yin, R. K. (2017). Case Study Research and Applications: Design and Methods. Washington DC: Sage Publications.

Zhou X., Lou C., & Huang X. (2023). Transcendent Brand Activism Advertising: Explicating the Roles of Color and Message Framing in Advertising Effectiveness. Journal of Advertising. 10.1080/00913367.2023.2217866

# Aligning Front-of-Pack Labeling Research with Consumer Needs: A Cross-Country Analysis of Research Intensity and Policy Urgency

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## Abstract

Front of Pack Nutritional Labeling (FOPL) is a key strategy to address rising global obesity and diet-related noncommunicable diseases. This study examines whether recent academic research aligns with the public health needs and policy development stages of different countries. Using a mixed approach we identified a disconnection: while nearly 30% of countries face high obesity rates and lack FOPL implementation, over 70% of research focuses on countries with established systems. This reveals a misalignment between research efforts and policy urgency. Our findings suggest the need for stronger coordination between researchers and policymakers to ensure that scientific evidence supports FOPL adoption where it is most needed.

*Keywords: Front-of-Pack Nutritional Labels; Obesity; Overweight; Policy-making; Food; Bibliometric analysis.*

### 1. Introduction

Global institutions are increasingly prioritizing the growing prevalence of obesity and overweight worldwide, as highlighted by the World Health Organization (WHO, 2025). Between 1990 and 2022, obesity rates among children and adolescents aged 5–19 rose from 2% to 8%, while adult obesity more than doubled, from 7% to 16%. Once considered an issue limited to high-income countries, obesity is now widespread in many middle-income nations, which report some of the highest prevalence rates. This global trend poses a major public health challenge, fueling the rise of noncommunicable diseases and placing mounting pressure on healthcare systems (WHO, 2024); a key factor contributing to this issue is malnutrition, which includes not only deficiencies but also excesses and imbalances in nutrient intake. In response, a range of stakeholders—from individuals to policymakers and industry players—have introduced various countermeasures. Among these, Front-of-Pack Nutritional Labeling (FOPL) has emerged as a prominent strategy to inform consumers about the nutritional quality of food products (Mazzù et al., 2023). FOPL systems vary by country: directive formats like Nutri-Score are voluntarily used in several European nations, Warning Labels are prevalent in South America, and non-directive models such as Italy's NutrInform Battery offer alternative approaches.

While FOPLs are widely acknowledged as effective and necessary, their implementation differs significantly across countries in terms of "policy maturity" (van der Bende and Lissner, 2019; European Commission, 2020), resulting in a fragmented regulatory landscape.

Consequently, research efforts—both in focus and intensity—do not always align with the various stages of the policy lifecycle. Scholarly output tends to surge during moments of public debate or uncertainty, such as during the selection of an FOPL system or in later stages assessing its impact.

Despite a robust body of literature evaluating FOPL effectiveness, there remains a limited understanding of countries' underlying needs in relation to FOPL, especially when viewed through the lens of public health challenges and policy development stages. This paper therefore (i) explores the alignment between these needs and recent FOPL research (2018–2023), focusing on research intensity, quality, and geographic distribution, and (ii) highlights a disconnect, showing that research efforts are not always concentrated where they are most urgently needed.

## 2. Metodologia

This study adopts a mixed-method approach rooted in public policy analysis, integrating three key components: (i) a systematic review of the literature on Front-of-Pack Labels (FOPLs), (ii) an initial assessment of the policymaking landscape related to FOPLs across various countries, and (iii) a comparative analysis of country-level health indicators related to obesity. The policy cycle framework is employed to trace the evolution of FOPL initiatives through the different stages of the policymaking process. To support the conceptual framework and uncover cross-national patterns, relevant academic literature on FOPLs, policy development, and nutrition governance was thoroughly examined.

### 2.1 Systematic Literature Review and Research focus

The study began with a Systematic Literature Review conducted in accordance with PRISMA guidelines. In the initial phase, a search was carried out using the query ("= Front AND Pack AND Nutr*") across the Scopus and Web of Science databases, restricted to peer-reviewed articles published between 2020 and 2024. This search yielded 1,316 records. Following the removal of duplicates and dataset cleaning, a relevance screening was performed based on journal quality, using the Scimago Journal Rank (SJR) as a reference. Only articles published in top-quartile (Q1) journals were retained, narrowing the pool to 1,161 papers. This subset was further refined to 238 articles by selecting only those with an SJR above the median value within each main thematic area.

In the third stage, a detailed manual screening was conducted to ensure the inclusion of high-quality studies with clear thematic relevance. Articles that did not explicitly address Front-of-Pack Labeling (FOPL) or deviated substantially from the core topic were excluded, resulting in a curated dataset of 150 articles. Finally, a full-text analysis was carried out, during which specific information from each article was systematically recorded in a dedicated review file. At this stage, additional exclusions were made due to content misalignment with the study's objectives—issues not evident during the abstract screening—yielding a final dataset of 105 articles, 91 of which were directly associated with individual countries.

### 2.2 Policy lifecycle stages

Policy life cycle frameworks offer a valuable lens for examining the progression of public policy development and implementation. Drawing on established literature (Robinson and Eller, 2010), this study identifies a series of stages beginning with the "absence" of policy discourse, followed by "agenda setting," "problem identification," and "policy formulation," which encompasses both "drafting a proposal" and initiating the "legislative process." The final stages involve "adoption" (either voluntary or mandatory) and "monitoring, adjustment, and evaluation" to assess and refine policy effectiveness.

In the context of Front-of-Pack Labeling (FOPL), the "problem identification" phase typically entails recognizing critical public health issues—such as rising obesity and overweight rates—and their links to poor dietary habits. The subsequent "agenda-setting" stage reflects increasing interest in FOPL as a policy response to nutrition-related diseases. The "policy formulation" stage is particularly pivotal, involving the assessment of alternative policy options. This includes drafting a proposal and proceeding through the legislative process, where the policy undergoes debate, approval, and legal ratification.

The "adoption" stage—whether voluntary or mandatory—depends heavily on political and institutional commitment. Once adopted, FOPL systems enter the "implementation" phase, which may encounter obstacles such as limited consumer engagement or "label fatigue" (Pfister and Pozas, 2023). This leads to the final phase of "monitoring, adjustment, and evaluation", aimed at measuring the policy's outcomes and improving its performance over time.

To determine each country's position within the policy lifecycle, we analyzed data from 197 countries using the WHO GIFNA (2025) dataset. This encompasses all 193 United Nations member states, as well as additional entities including Vatican City, French Polynesia, Kosovo, and Palestine. Countries were categorized into nine macro-regions: (1) North America, (2) Central America and the Caribbean, (3) South America, (4) Europe – EU27, (5) Europe – non-EU27, (6) Africa, (7) Middle East, (8) Asia (excluding the Middle East), and (9) Oceania. Table 1 presents an overview of FOPL policymaking status across these regions.

For analytical clarity, countries were grouped into three overarching policy lifecycle phases: (i) "Pre-adoption", (ii) "Voluntary adoption, monitoring, and adjustment" and (iii) "Mandatory adoption and monitoring". The findings reveal that most countries (74.62%) remain in the early, pre-adoption stages, while only 6.60% have progressed to mandatory adoption.

| Macro-Region | Countries in the macro-region | Countries in before voluntary adoption stages | Countries in voluntary adoption, monitoring and adj. stages | Countries in mandatory adoption and monitoring stages |
|---|---|---|---|---|
| | Number | Number | Number | Number |
| North America | 3 | 2 | 0 | 1 |
| Central America and the Caribbean | 20 | 20 | 0 | 0 |
| South America | 12 | 3 | 1 | 8 |
| Europe – EU 27 | 27 | 13 | 14 | 0 |
| Europe, Non EU 27 | 19 | 13 | 6 | 0 |
| Africa | 54 | 54 | 0 | 0 |
| Middle East | 16 | 9 | 5 | 2 |
| Asia (excl. Middle-East) | 31 | 20 | 9 | 2 |
| Oceania | 15 | 13 | 2 | 0 |
| Total | 197 | 147 | 37 | 13 |
| *Percentage on the total* | *100%* | *74.62%* | *18.78%* | *6.60%* |

**Table 1:** Status of policy lifecycle by macro-region

### 2.3 Obesity-related health indicators

To evaluate the severity of obesity-related challenges across countries, we identified a set of key indicators. Specifically, the analysis included: (a) Body Mass Index (BMI), a widely used screening measure that estimates body fat based on height-to-weight ratio (with definitions from the Cleveland Clinic, 2025, and data primarily sourced from WorldData, 2025); (b) the prevalence of obesity and overweight within the total population, expressed as a percentage; (c) the incidence of noncommunicable diseases (NCDs), measured by the proportion of total deaths attributable to these conditions (data mainly retrieved from the World Bank, 2025); and (d) relevant covariates highlighted in the literature, including education level, income or purchasing power, age, and gender (Cooper et al., 2021; Egnell et al., 2018; Pettigrew et al., 2017), with data primarily obtained from WorldData (2025) and Numbeo (2025)

Of the complete dataset, 59 countries—representing approximately 30% of the total sample—had comprehensive data available across all selected indicators (see Table 2).

| Macro-Region | Countries in the macro-region<br>Number | Indicators available<br>Average number (out of 16) |
|---|---|---|
| North America | 3 | 16.0 |
| Central America and the Caribbean | 20 | 14.1 |
| South America | 12 | 15.4 |
| Europe – EU 27 | 27 | 15.9 |
| Europe, Non EU 27 | 19 | 13.0 |
| Africa | 54 | 12.6 |
| Middle East | 16 | 15.3 |
| Asia (excl. Middle-East) | 31 | 14.7 |
| Oceania | 15 | 13.1 |

**Table 2:** Number of countries and data availability by macro-region

## 3. Results

Using the dataset described above, we clustered countries based on two primary criteria: (i) the status of Front-of-Pack Label (FOPL) policy adoption—specifically, whether a FOPL system is currently implemented in the market—and (ii) key obesity-related health indicators, namely average Body Mass Index (BMI) and the proportion of deaths attributable to noncommunicable diseases (NCDs). BMI functions as an input indicator, reflecting potential health risks, while NCD-related mortality serves as an output indicator, capturing the consequences of such risks (e.g., Riquelme et al., 2021; García-Witulski, 2025).

From the original dataset, 184 countries were retained, with 13 excluded due to incomplete data. Countries were categorized according to standard adult BMI classifications (CDC, 2025): those with an average BMI above 30 were classified as "obese," those between 25 and 29.9 as "overweight," and those below 25 as having a "healthy weight". Notably, no country in the dataset reported an average BMI below 18.5, which would indicate an underweight population.
For NCD-related mortality, the median value across countries was calculated and used as a threshold to divide the sample into two groups: those with a "higher incidence of NCD-related deaths" and those with a "lower incidence." By combining these health classifications with the presence or absence of FOPL policies, we identified 12 distinct country clusters (see Table 3).

| BMI Level | NCD incidence | Policy status | | Total |
|---|---|---|---|---|
| | | Early | In place | |
| BMI>30 | | 9 (4.9%) | 2 (1.1%) | 11 (6.0%) |
| | Higher NCD | 5 (2.7%) | 1 (0.55%) | 6 (3.3%) |
| | Lower NCD | 4 (2.2%) | 1 (0.55%) | 5 (2.7%) |
| BMI: 25-29.9 | | 84 (45.7%) | 41 (22.3%) | 125 (67.9%) |
| | Higher NCD | 49 (26.6%) | 29 (15.8%) | 78 (42.4%) |
| | Lower NCD | 35 (19.0%) | 12 (6.5%) | 47 (25.5%) |
| BMI <25 | | 42 (22.8%) | 6 (3.3%) | 48 (26.1%) |
| | Higher NCD | 3 (1.6%) | 4 (2.2%) | 7 (3.8%) |
| | Lower NCD | 39 (21.2%) | 2 (1.1%) | 41 (22.3%) |
| Total | | 135 (73.4%) | 49 (26.6%) | 184 (100.0%) |

**Table 3:** Country clustering by typology: incidence by segment

Clusters comprising countries where the average population falls into the "obese" or "overweight" categories—combined with a high incidence of NCD-related mortality—are of analytical interest. These groupings reflect nations facing acute public health challenges. Notably, 54 countries (29.3% of the sample) fall within this category while remaining in the early, pre-adoption phases of FOPL policy development. This represents a significant opportunity for targeted research and institutional action. While some of these countries have initiated limited legislative or drafting activities, they have not yet advanced to the voluntary or mandatory implementation stages. Others show minimal policy engagement, with little to no regulatory or legislative initiatives underway. These countries are typically lower-income or developing nations, where FOPL has not yet emerged as a governmental or institutional priority. A further 39 countries (21.2% of the sample) also fall into the "BMI > 30" or "BMI 25–29.9" range but report lower rates of NCD-related mortality. This discrepancy may be explained by several factors, including younger population demographics, delayed onset of NCDs, better access to basic healthcare, variation in leading causes of mortality, or potential underreporting and data quality limitations. Despite lower current mortality rates, these countries present a latent risk of future health deterioration and thus represent a strategic target for early-stage preventive policies such as FOPL implementation. In contrast, 16.3% of the sample consists of countries with similarly high BMI and overweight prevalence, but with active FOPL policy engagement. These nations have typically adopted voluntary labeling schemes, indicating broad industry participation, heightened consumer awareness, and institutional readiness to transition toward mandatory regulation. Such countries, often more economically developed, tend to implement multi-

phase FOPL strategies and demonstrate a clear commitment to nutrition policy as a core public health priority.

### 3.1 Advances in research and its link to supporting policy development

Each article selected through the literature review was examined to determine its geographical focus. A value of "one" was assigned to a country whenever it was explicitly addressed in the study—whether through experimental research, policy evaluation, or other analytical methods. This process yielded a total of 188 entries. Of these, 174 were associated with 50 specific countries, while the remaining 14 referred either to broader continental regions or lacked a defined national focus, instead contributing to the conceptual or theoretical development of FOPL. The findings reveal a marked concentration of research activity in specific geographic areas, suggesting an uneven global distribution of scholarly attention (see Table 4).

| Macro-Region | Policy status | | Total |
|---|---|---|---|
| | Early | In place | |
| North America | 24 | 6 | 30 |
| Central America and the Caribbean | - | - | - |
| South America | 2 | 29 | 31 |
| Europe – EU 27 | 9 | 52 | 62 |
| Europe, Non EU 27 | - | 16 | 16 |
| Africa | 8 | - | 8 |
| Middle East | - | - | - |
| Asia (excl. Middle-East) | 3 | 17 | 20 |
| Oceania | | 8 | 8 |
| Total | 46 | 128 | 174 |

**Table 4:** Research by macro-region and by policy status

Major countries focus of the research are displayed in Figure 1.

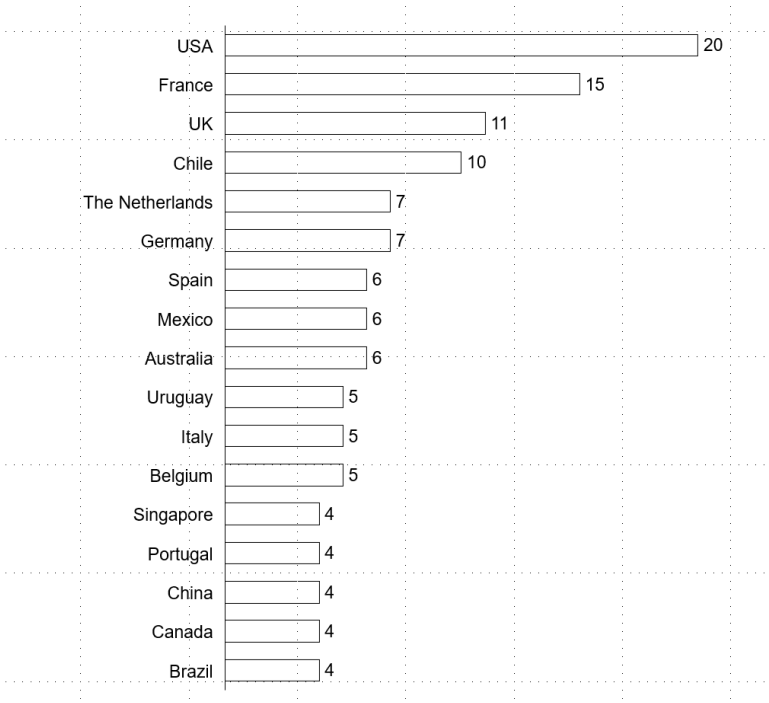



**Figure 1:** Country focus of advances in research

In this respect, authors affiliated with institutions of 12 different countries were active in top journals (Figure 2).

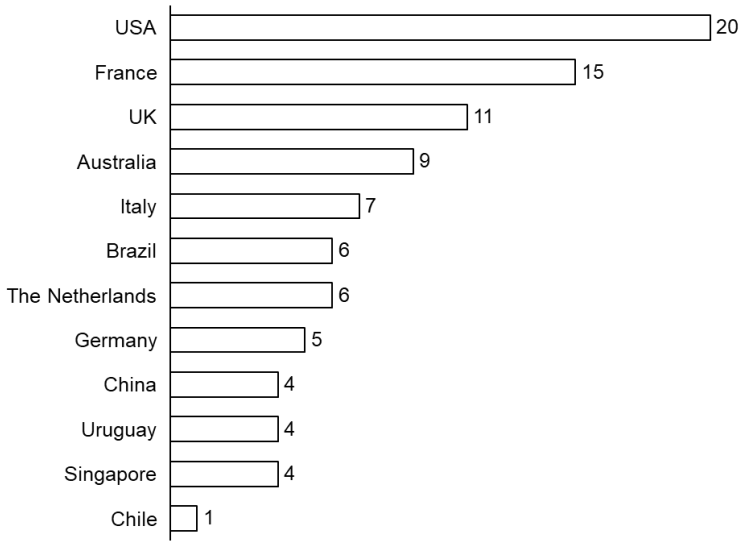



**Figure 2.** Authorship by country of affiliation of the main author

Authors affiliated with institutions in the United States and China—together responsible for 24 publications (26.0%)—were predominantly associated with studies examining countries

that remain in the early stages of FOPL policy development. A second, more substantial group includes 57 papers (62.0%) focusing on countries that were early adopters of voluntary FOPL systems, such as France, Italy, Germany, the Netherlands, Singapore, the United Kingdom, and Australia. A third cluster comprises 11 studies (12.0%) centered on countries where FOPL policies have already been implemented and where institutional efforts are now directed toward evaluating their real-world impact. This latter group primarily includes Chile, Uruguay, and Brazil.

Notably, a significant share of recent scholarly output in high-ranking journals (73.6%) has concentrated on countries with existing FOPL policies. These studies explore a broad range of issues, including assessments of policy effectiveness, comparative analyses of labeling schemes, and the development of new conceptual or applied frameworks (see Table 5).

| BMI Level | NCD incidence | Paper by Policy status Number, percentage | | Total |
|---|---|---|---|---|
| | | Early | In place | |
| BMI >30 | | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) |
| | Higher NCD | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) |
| | Lower NCD | 0 (0.0%) | 0 (0.0%) | 0 (0.0%) |
| BMI: 25-29.9 | | 37 (21.3%) | 106 (60.9%) | 143 (82.2%) |
| | Higher NCD | 33 (19.0%) | 82 (47.1%) | 115 (66.1%) |
| | Lower NCD | 4 (2.3%) | 24 (13.8%) | 28 (16.1%) |
| BMI < 25 | | 9 (5.2%) | 22 (12.6%) | 31 (17.8%) |
| | Higher NCD | 2 (1.1 %) | 20 (11.5%) | 22 (12.6%) |
| | Lower NCD | 7 (4.0%) | 2 (1.1%) | 9 (5.2%) |
| Total | | 46 (26.4%) | 128 (73.6%) | 174 (100.0%) |

**Table 5:** Incidence of research by country clustering – Number of paper and distribution by cluster

In the United States, research on Front-of-Pack Labeling (FOPL) can be organized into several distinct micro-clusters. The first cluster explores the impact of various labeling formats—such as warning labels (Hughner and Dumitrescu, 2024), stop sign symbols (Rybak et al., 2024), and Traffic Light systems (Meng and Chan, 2022 —with a particular focus on their ability to influence healthier and more sustainable food choices. A second cluster is more policy-oriented, examining how FOPL initiatives are positioned as tools to promote healthier eating behaviors and curb the prevalence of noncommunicable diseases (NCDs). A third body of literature evaluates the behavioral outcomes of nutritional labeling interventions, including studies like those by Downs and Demmler (2020), which assess how such measures affect consumer decision-making and encourage shifts toward alternative or healthier food options. Lastly, several studies focus on the Nutrition Facts Panel, analyzing its effectiveness and influence within the broader framework of front-of-pack and back-of-pack labeling strategies.

In France, most studies focus on the application of the Nutri-Score system, reflecting a highly mature phase of research on this specific labeling scheme. This is evidenced by large-scale field experiments conducted in retail settings (Dubois et al., 2021) as well as investigations within broader communication and media contexts (Courbet et al., 2024; Hémar-Nicolas et al., 2024). Overall, the literature has progressed beyond initial evaluations of Nutri-Score's potential benefits, moving toward more advanced analyses of its practical effectiveness and contextual relevance.

In the United Kingdom, research has largely concentrated on the practical application of Traffic Light labeling systems. Several studies have investigated their influence on consumer behavior with respect to specific nutrients (Mauri et al., 2021), either in isolation or when combined with additional visual cues such as green labels (Macdiarmid et al., 2021). Other studies have explored how complementary strategies—such as shelf placement and product allocation in retail environments—can enhance the effectiveness of Traffic Light labels in promoting healthier purchasing decisions (Grandi et al., 2021; Harastani et al., 2020).

In Chile, the research landscape on Front-of-Pack Labeling (FOPL) has reached a mature stage, with a predominant focus on the country's implementation of warning labels. Much of the literature adopts a distinctly economic perspective, analyzing the effects of FOPLs on outcomes such as prices, real wages, and employment (Paraje et al., 2021; Alé-Chilet et al., 2022; Pachali et al., 2023). Complementing this, a second stream of research adopts a broader policy-oriented lens (Araya et al., 2022). These studies examine the influence of various stakeholders—particularly food industry actors—in shaping or resisting FOPL policy development and implementation (Mialon et al., 2020), as well as the health impacts of FOPLs on vulnerable populations, including children and adolescents (Fretes et al., 2025).

In the Netherlands, research has underscored the positive role of Front-of-Pack Labels (FOPLs) in encouraging healthier eating behaviors. Notable labeling schemes studied include the national Dutch Choices logo (van der Bend et al., 2020) and the Traffic Light system. Additionally, recent work (Maesen et al., 2022) demonstrates a measurable impact of FOPL implementation on product sales.

In contrast, the body of FOPL research specific to Germany remains limited. One key study examined the influence of the Nutri-Score label on individuals' dietary planning (Hau and Lange, 2024), while most other research involving Germany appears within broader cross-country comparisons.

In Spain, the literature has primarily focused on the role of FOPLs in preventing health-related conditions, with Nutri-Score being the most frequently analyzed scheme. Studies have explored its relevance in the context of gluten-free product consumption (De las Heras-Delgado et al., 2021), the association between low nutritional scores and mortality risk (Gómez-Donoso et al., 2021), and its implications for renal function (Montero-Salazar et al., 2022). One particularly noteworthy contribution investigates how FOPLs moderate the relationship between brand attitude and purchase intention (Medina-Molina et al., 2021).

In Mexico, FOPL research carries strong policy relevance. Several studies explore divergent stakeholder perspectives on FOPL adoption (Durán et al., 2022), while others assess the effectiveness of labeling in reducing the consumption of ultra-processed foods (Cruz-Casarrubias et al., 2021) or position FOPLs as part of a broader set of tools to address obesity and noncommunicable diseases (Rivera et al., 2024).

In Australia, nearly all studies focus on the Health Star Rating (HSR), the country's voluntary FOPL system. Research approaches the HSR from both nutritional and applied perspectives. Nutritionally, studies investigate how components such as whole grains are factored into the HSR algorithm (Byron et al., 2024). From an applied standpoint, scholars have examined its integration into digital retail environments like online supermarkets (Maganja et al., 2023), as well as its broader implications for public health policy (Sainsbury et al., 2020).

In Uruguay, research centers on maximizing the effectiveness of warning labels. This includes examining the role of supportive communication campaigns (Ares et al., 2021) and the strategic placement of labels on specific product categories, such as white bread

(Antúnez et al., 2020) and sugar-reduced desserts marketed to children (Velázquez et al., 2023).

In Italy, studies predominantly benchmark the effectiveness of various FOPL schemes in terms of consumer comprehension, preference, and influence on dietary behavior (Hasni et al., 2024). Additional research explores how FOPLs interact with contextual factors, such as environmental cues (Mazzù et al., 2025) or product-specific considerations, as in the case of olive oil (Mazzù et al., 2024).

A significant portion of the literature has adopted a cross-country perspective. For instance, some studies evaluate technical developments such as the updated Nutri-Score algorithm (Merz et al., 2024), or the integration of environmental indicators using Traffic Light color schemes (Neumayr and Moosauer, 2021). Others compare the effectiveness of various labels based on consumers' objective understanding and interpretation (Egnell et al., 2020). Another cluster of cross-national research focuses on policy-related dimensions, aiming to assess the effectiveness of nutritional labeling implementation in specific regions (Barlow et al., 2021; Pettigrew et al., 2023). Within the Americas, several reviews have examined the impact of labeling policies across different national contexts (Crosbie et al., 2023), and have proposed conceptual frameworks to better understand the relationship between food environments and consumer food choices (Constantinides et al., 2021).

## 4. Discussion and conclusions

This study represents an initial attempt to examine the recent evolution of scientific research on Front-of-Pack Labeling (FOPL) and to compare it with the current state of policymaking across countries. The objective is to encourage critical reflection on whether research efforts are effectively aligned with the specific needs of different country clusters and the various stages of the policy lifecycle.

The research makes several key contributions. First, it offers preliminary insights into the alignment between scientific output and policymaking stages, highlighting how certain phases of policy development tend to attract greater attention from high-quality research, particularly in regions where the urgency of FOPL implementation is highest. Second, it underscores the disparities in research focus relative to consumer health priorities and policy maturity. While a significant portion of academic work concentrates on evaluating existing FOPL models or proposing context-specific innovations, these efforts are not always synchronized with countries' most pressing policy needs. Findings reveal an uneven distribution of research intensity and quality, as well as thematic fragmentation. This often stems from differences in national regulatory approaches and institutional research priorities. Comparative studies—spanning various phases of the policy lifecycle—constitute a major share of the literature and typically assess the effectiveness of FOPL schemes in influencing consumer behavior, public health outcomes, and industry practices. However, a persistent misalignment exists between the timing of research outputs, the public health conditions in specific countries, and the evolving demands of policy. While policymakers require timely, actionable insights to inform decisions, academic research may operate on different timelines and pursue broader theoretical goals, thereby limiting its immediate policy relevance. These observations point to the need for improved coordination between academic researchers and institutional stakeholders. Strengthening this collaboration could help ensure that scientific findings more effectively inform regulatory decisions and contribute to enhancing population health in context-specific ways.

The study is not without limitations. It focuses primarily on publicly available data on obesity-related health metrics and includes only peer-reviewed articles published in top-tier journals, as ranked by Scimago. Future research could broaden the scope to include additional data

sources, a wider range of publication types, and a longer time span, potentially revealing shifts in research priorities or the emergence of long-term trends. Furthermore, it would be valuable to investigate the extent to which institutional funding frameworks shape research agendas and geographic focus.

In summary, global institutions should place greater emphasis on encouraging—and, where appropriate, subsidizing—research in countries with the greatest need for intervention, particularly those with high rates of obesity and noncommunicable diseases. A more cross-disciplinary and targeted research approach would support the effective integration of FOPL into national legislation, ultimately contributing to improved health outcomes at the global level.

## References


Alé-Chilet, J. and Moshary, S. (2022) "Beyond consumer switching: supply responses to food packaging and advertising regulations", Marketing Science, 41(2), pp. 243–270. https://doi.org/10.1287/mksc.2021.1315

Antúnez, L., Alcaide, F., Giménez, A. and Ares, G. (2020) "Can sodium warnings modify preferences? Case study of white bread", Food Research International, 134, 109239. https://doi.org/10.1016/j.foodres.2020.109239

Araya, S., Elberg, A., Noton, C. and Schwartz, D. (2022) "Identifying the effects of food labeling effects on consumer behavior", Marketing Science, 41(5), pp. 982–1003. https://doi.org/10.1287/mksc.2022.1356

Ares, G., Vidal, L., Otterbring, T., Aschemann-Witzel, J., Curutchet, M. R., Giménez, A. and Bove, I. (2021) "Communication campaigns to support the use of nutritional warnings: different messages for different people?", Health Education & Behavior, 48(5), pp. 584–594. https://doi.org/10.1177/10901981211003510

Barlow, P. and Thow, A. M. (2021) "Neoliberal discourse, actor power, and the politics of nutrition policy: A qualitative analysis of informal challenges to nutrition labeling regulations at the World Trade Organization, 2007–2019", Social Science & Medicine, 273, 113761. https://doi.org/10.1016/j.socscimed.2021.11376

Byron, C., Kissock, K. R., Barrett, E. M. and Beck, E. J. (2024) "Aligning front-of-pack labeling with dietary guidelines: including whole grains in the Health Star Rating", European Journal of Nutrition, 63, pp. 2025–2033. https://doi.org/10.1007/s00394-024-03404-z

Centers for Disease Control and Prevention (CDC) (2025) Adult BMI Categories. Available at: https://www.cdc.gov/bmi/adult-calculator/bmi-categories.html (Accessed: March 2025).

Chen, X., Gao, Z., House, L. and Gao, Y. (2024) "Do color-coded Nutrition Facts Panels nudge the use of nutrition information?", Food Policy, 129, 102730.

Cleveland Clinic (2025) Body Mass Index (BMI). Available at: https://my.clevelandclinic.org/health/articles/9464-body-mass-index-bmi (Accessed: March 2025).

Constantinides, S. V., Turner, C., Frongillo, E. A., Bhandari, S., Reyes, L. I. and Blake, C. E. (2021) "Using a global food environment framework to understand relationships with food choices in diverse low- and middle-income countries", Global Food Security, 29, 100511. https://doi.org/10.1016/j.gfs.2021.100511

Cooper, A. J., Gupta, S. R., Moustafa, A. F. and Chao, A. M. (2021) "Sex/Gender differences in obesity prevalence, comorbidities, and treatment", Current Obesity Reports, 10(4), pp. 458–466. https://doi.org/10.1007/s13679-021-00453-x

Courbet, D., Jacquemier, L., Hercberg, S., Touvier, M., Sarda, B., Kesse-Guyot, E., Galan, P., Buttafoghi, N. and Julia, C. (2024) "A randomized controlled trial to test the effects of displaying the Nutri-Score in food advertising on consumer perceptions and intentions to purchase and consume", International Journal of Behavioral Nutrition and Physical Activity, 21(1), p. 38. https://doi.org/10.1186/s12966-024-01588-5

Crosbie, E., Gomes, F. S., Olvera, J., Patiño, S. R. G., Hoeper, S. and Carriedo, A. (2023) "A policy study on front–of–pack nutrition labeling in the Americas: Emerging developments and outcomes", The Lancet Regional Health–Americas, 18.

Cruz-Casarrubias, C., Tolentino-Mayo, L., Vandevijvere, S. and Barquera, S. (2021) "Estimated effects of the implementation of Mexican warning labels on the use of health and nutrition claims on packaged foods", International Journal of Behavioral Nutrition and Physical Activity, 18(1), p. 76. https://doi.org/10.1186/s12966-021-01148-1

De las Heras-Delgado, S., Alías-Guerrero, A. N., Cendra-Duarte, E., Salas-Salvadó, J., Vilchez, E., Roger, E., Hernández-Alonso, P. and Babio, N. (2021) "Assessment of price and nutritional quality of gluten-free products versus their analogs with gluten using the algorithm of the Nutri-Score front-of-package labeling system", Food & Function, 12(9), pp. 3858–3872. https://doi.org/10.1039/d0fo02630a

Downs, S. and Demmler, K. M. (2020) "Food environment interventions targeting children and adolescents: A scoping review", Global Food Security, 27, 100403. https://doi.org/10.1016/j.gfs.2020.100403

Dubois, P., Albuquerque, P., Allais, O., Bonnet, C., Bertail, P., Combris, P., Lahlou, S., Rigal, N., Ruffieux, B. and Chandon, P. (2021) "Effects of front-of-pack labels on the nutritional quality of supermarket food purchases: Evidence from a large-scale randomized controlled trial", Journal of the Academy of Marketing Science, 49(1), pp. 119–138. https://doi.org/10.1007/s11747-020-00723-5

Durán, R., Asmitia, E., Rivera, J., Barquera, S. and Tolentino-Mayo, L. (2022) "Analysis of stakeholders" responses to food warning label regulation in Mexico", Health Research Policy and Systems, 20, 108. https://doi.org/10.1186/s12961-022-00922-2

Egnell, M., Talati, Z., Hercberg, S., Pettigrew, S. and Julia, C. (2018) "Objective understanding of front-of-package nutrition labels: An international comparative experimental study across 12 countries", Nutrients, 10, 1542.

Egnell, M., Talati, Z., Galan, P., Andreeva, V. A., Vandevijvere, S., Gombaud, M., Dréano-Trécant, L., Hercberg, S., Pettigrew, S. and Julia, C. (2020) "Objective understanding of the Nutri-score front-of-pack label by European consumers and its effect on food choices: An online experimental study", International Journal of Behavioral Nutrition and Physical Activity, 17(1), 146. https://doi.org/10.1186/s12966-020-01053-z

European Commission (2020b) "Presidency conclusions on front-of-pack nutrition labeling, nutrient profiles and origin labeling". Available at: https://data.consilium.europa.eu/doc/document/ST-14048-2020-INIT/en/pdf (Accessed: March 2025).

Fialon, M., Nabec, L. and Julia, C. (2024) "Understanding the influence of stakeholders on the implementation of front-of-pack nutrition labeling in the absence of public debate: The case of Portugal", Health Research Policy and Systems, 22(1), p. 20.

Fretes, G., Wilson, N. L. W., Corvalan, C., Economos, C. D. and Cash, S. B. (2025) "Front-of-pack labels and young consumers: An experimental investigation of nutrition and sustainability claims in Chile", Food Quality and Preference, 127, 105432. https://doi.org/10.1016/j.foodqual.2025.105432

García-Witulski, C. (2025) "Noncommunicable disease mortality and economic costs attributable to high body mass index in Argentina", Public Health, 238, pp. 139–151. https://doi.org/10.1016/j.puhe.2024.10.034

Gómez-Donoso, C., Martínez-González, M. Á., Perez-Cornago, A., Sayón-Orea, C., Martínez, J. A. and Bes-Rastrollo, M. (2021) "Association between the nutrient profile system underpinning the Nutri-Score front-of-pack nutrition label and mortality in the SUN project: A prospective cohort study", Clinical Nutrition, 40(2), pp. 1085–1094. https://doi.org/10.1016/j.clnu.2020.07.008

Grandi, B., Burt, S. and Cardinali, M. G. (2021) "Encouraging healthy choices in the retail store environment: Combining product information and shelf allocation", Journal of Retailing and Consumer Services, 61, 102522. https://doi.org/10.1016/j.jretconser.2021.102522

Harasta, R., James, L. J., Walton, J. and Woolley, E. (2020) "Tackling obesity: a knowledge base for industrial food reformulation", Innovative Food Science & Emerging Technologies, 64, 102433. https://doi.org/10.1016/j.ifset.2020.102433

Hasni, M. J. S., Mittone, L. and Savadori, L. (2024) "Impact of the Health Star Rating front-of-packaging label on preferences for food products", British Food Journal, 126(13), pp. 542–558. https://doi.org/10.1108/BFJ-04-2024-0372

Hau, R. C. and Lange, K. W. (2024) "Learning about good nutrition with the 5-color front-of-package label "Nutri-Score": An experimental study", Food Science and Human Wellness, 13, pp. 1195–1200. https://doi.org/10.26599/FSHW.2022.9250099

Hémar-Nicolas, V., Guichard, N. and Clauzel, A. (2024) "Dissonance and confusion occur when the nutrient core as a nutritional signal is misinterpreted", Food Policy, 128, 102677. https://doi.org/10.1016/j.foodpol.2024.102677

Hughner, R. S. and Dumitrescu, C. (2024) "Effectiveness of sugar-sweetened beverage warning labels: An examination of consumer reactance and cost of compliance", Journal of Business Research, 182, 114812. https://doi.org/10.1016/j.jbusres.2024.114812

Li, W., Finkelstein, E. A. and Zhen, C. (2022) "Intended and unintended consequences of salient nutrition labels", American Journal of Agricultural Economics, 104(2), pp. 853–872.

Lim, J. H., Rishika, R., Janakiraman, R. and Kannan, P. K. (2020) "Competitive effects of front-of-package nutrition labeling adoption on nutritional quality: evidence from facts up front–style labels", Journal of Marketing, 84(6), pp. 3–21.

Liu, R., Gao, Z., Snell, H. A. and Ma, H. (2020) "Food safety concerns and consumer preferences for food safety attributes: Evidence from China", Food Control, 112, 107157.

Macdiarmid, J. I., Cerroni, S., Kalentakis, D. and Reynolds, C. (2021) "How important are healthiness, carbon footprint, and meat content when purchasing a ready meal? Evidence from a non-hypothetical discrete choice experiment", Journal of Cleaner Production, 282, 124510. https://doi.org/10.1016/j.jclepro.2020.124510

Maesen, S., Lamey, L., Braak, A. and Jansen, L. (2022) "Going healthy: How do product characteristics influence the impact of front-of-pack health symbols on sales?", Journal of the Academy of Marketing Science, 50(1), pp. 108–130. https://doi.org/10.1007/s11747-021-00796-w

Maganja, D., Davies, T., Sanavio, L., Louie, J. C. Y., Huffman, M. D., Trieu, K. and Wu, J. H. Y. (2023) "Current food labeling practices in online supermarkets in Australia", International Journal of Behavioral Nutrition and Physical Activity, 20, 105. https://doi.org/10.1186/s12966-023-01504-3

Mauri, C., Grazzini, L., Ulqinaku, A. and Poletti, E. (2021) "Effect of front-of-package nutrition labels on the choice of low-sugar products", Psychology & Marketing, 38(8), pp. 1323–1339. https://doi.org/10.1002/mar.21473

Mazzù, M. F., Baccelloni, A. and Finistauri, P. (2022) "Uncovering the effect of European policy-making initiatives in addressing nutrition-related issues: A systematic literature review and bibliometric analysis of front-of-pack labels", Nutrients, 14(16), 3423.

Mazzù, M. F., Baccelloni, A. and Romani, S. (2023) "Counteracting noncommunicable diseases with front-of-pack nutritional labels' informativeness: An inquiry into the effects on food acceptance and portion selection", British Food Journal, pp. 562–578.

Mazzù, M. F., Marozzo, V., Baccelloni, A. and Giambarresi, A. (2023) "The effects of combining front-of-pack nutritional labels on consumers' subjective understanding, trust, and preferences", Psychology & Marketing, 40(8), pp. 1484–1500.

Mazzù, M. F., He, J. and Baccelloni, A. (2024) "Unveiling the impact of front-of-pack nutritional labels on conflicting nutrition information: A congruity perspective on olive oil", Food Quality and Preference, 118, 105202.

Mazzù, M. F., Donato, C. and Marozzo, V. (2025) "An investigation of the interplay between front-of-pack nutritional labels and plastic packaging materials in healthy foods", Food Quality and Preference, 122, 105291.

Medina-Molina, C., Rey-Moreno, M. and Periáñez-Cristóbal, R. (2021) "Analysis of the moderating effect of front-of-pack labeling on the relationship between brand attitude and purchase intention", Journal of Business Research, 122, pp. 304–310. https://doi.org/10.1016/j.jbusres.2020.08.062

Meng, Y. and Chan, E. Y. (2022) "Traffic light signals and healthy food choices: Investigating sex differences", Psychology & Marketing, pp. 360–369.

Merz, B., Temme, E., Alexiou, H., Beulens, J. W. J., Buyken, A. E., Bohn, T., Ducrot, P., Falquet, M.-N., García Solano, M., Haidar, H., Infanger, E., Kühnelt, C., Rodríguez-Artalejo, F., Sarda, B., Steenbergen, E., Vandevijvere, S. and Julia, C. (2024) "Nutri-Score 2023 Updates", Nature Food, 5(2), pp. 102–110. https://doi.org/10.1038/s43016-024-00920-3

Mialon, M., Corvalan, C., Cediel, G., Scagliusi, F. and Reyes, M. (2020) "The food industry"s political practices in Chile: "The economy has always been the main concern", Globalization and Health, 16, 107. https://doi.org/10.1186/s12992-020-00638-4

Mialon, M., Gaitan Charry, D. A., Cediel, G., Crosbie, E., Baeza Scagliusi, F. and Pérez Tamayo, E. M. (2020) "The architecture of the state was transformed in favour of the interests of companies": Corporate political activity of the food industry in Colombia", Globalization and Health, 16, pp. 1–16.

Montero-Salazar, H., Guallar-Castillón, P., Banegas, J. R., Åkesson, A., Rey-García, J., Rodríguez-Artalejo, F. and Donat-Vargas, C. (2022) "Food consumption is based on the nutrient profile system underlying nutrient core and renal function in older adults", Clinical Nutrition, 41(7), pp. 1541–1548. https://doi.org/10.1016/j.clnu.2022.05.004

Neumayr, L. and Moosauer, C. (2021) "How to induce sales of sustainable and organic food: The case of a traffic light eco-label in online grocery shopping", Journal of Cleaner Production, 328, 129584. https://doi.org/10.1016/j.jclepro.2021.129584

Numbeo (2025) Numbeo Database. Available at: https://www.numbeo.com/ (Accessed: March 2025).

Pachali, M. J., Kotschedoff, M. J. W., van Lin, A., Bronnenberg, B. J. and van Herpen, E. (2023) "How do nutritional warning labels affect price?", Journal of Marketing Research, 60(1), pp. 92–109. https://doi.org/10.1177/00222437221105014

Paraje, G., Colchero, A., Wlasiuk, J. M., Martner Sota, A. and Popkin, B. M. (2021) "Effects of Chilean food policy packages on aggregate employment and real wages", Food Policy, 100, 102016. https://doi.org/10.1016/j.foodpol.2020.102016

Pettigrew, S., Jongenelis, M., Miller, C. and Chapman, K. (2017) "Path analysis model of factors influencing children's requests for unhealthy foods", Eating Behaviors, 24, pp. 95–101.

Pettigrew, S., Jongenelis, M. I., Hercberg, S. and Julia, C. (2023) "Front-of-pack nutrition labels: Equitable public health intervention", European Journal of Clinical Nutrition, 77(1), pp. 135–137.

Pfister, F. and Pozas, C. (2023) "The influence of Chile's food labeling and advertising law and other factors on dietary and physical activity behavior of elementary students in a peripheral region: A qualitative study", BMC Nutrition, 9(1), p. 11.

Riquelme, R., Rezende, L. F., Guzmán-Habinger, J., Chávez, J. L., Celis-Morales, C., Ferreccio, C. and Ferrari, G. (2021) "Noncommunicable disease deaths attributable to high body mass index in Chile", Scientific Reports, 11(1), 15500.

Rivera, J. A., Colchero, M. A., Pérez-Ferrer, C. and Barquera, S. (2024) "Perspective: Mexico's experience in building a toolkit for obesity and noncommunicable disease prevention", Advances in Nutrition, 15, 100180. https://doi.org/10.1016/j.advnut.2024.100180

Robinson, S. E. and Eller, W. S. (2010) "Participation in policy streams: Testing the separation of problems and solutions in subnational policy systems", Policy Studies Journal, pp. 199–216.

Rybak, G., Burton, S., Johnson, A. M. and Berry, C. (2021) "Promoted claims on food product packaging: Comparing the direct and indirect effects of processing and nutrient content claims", Journal of Business Research, 135, pp. 464–479.

Rybak, G., Burton, S. and Berry, C. (2024) "Reducing the negative impact of ultra-processed foods: Consumer response to natural claims, organic claims, and processing level disclosures", Journal of Business Research, 177, 114588. https://doi.org/10.1016/j.jbusres.2024

Sainsbury, E., Magnusson, R., Thow, A.-M. and Colagiuri, S. (2020) "Explaining resistance to regulatory interventions to prevent obesity and improve nutrition: A case study of a sugar-sweetened beverage tax in Australia", Food Policy, 93, 101904. https://doi.org/10.1016/j.foodpol.2020.101904

Sun, X., Wang, R., He, P. and Liu, B. (2024) "Effects of environmental and nutritional labels on consumers' dietary choices: Evidence from China", Environmental Impact Assessment Review.

Talati, Z., Egnell, M., Hercberg, S., Julia, C. and Pettigrew, S. (2019) "Consumer perceptions of five front-of-package nutrition labels: An experimental study across 12 countries", Nutrients, 11, 1934.

Van der Bend, D. L. M. and Lissner, L. (2019) "Differences and similarities between front-of-pack nutrition labels in Europe: A comparison of functional and visual aspects", Nutrients, 11(3), 626.

Van der Bend, D. L. M., Jansen, L., van der Velde, G. and Blok, V. (2020) "The influence of a front-of-pack nutrition label on product reformulation: A ten-year evaluation of the Dutch Choices program", Food Chemistry: X, 6, 100086. https://doi.org/10.1016/j.fochx.2020.100086

Velázquez, A. L., Vidal, L., Antúnez, L., Alcaire, F., Varela, P. and Ares, G. (2023) "Children's reaction to sugar-reduced dairy desserts in the context of the implementation of nutritional warning labels: An exploratory study", Food Research International, 170, 113001. https://doi.org/10.1016/j.foodres.2023.113001

World Bank (2025) World Development Indicators. Available at: https://data.worldbank.org/ (Accessed: March 2025).

WorldData (2025) World Data Information Platform. Available at: https://www.worlddata.info/ (Accessed: March 2025).

World Health Organization (WHO) (2024) Health at a Glance: Asia/Pacific. Paris: OECD Publishing.

World Health Organization (WHO) (2025) Obesity. Available at: https://www.who.int/health-topics/obesity#tab=tab_1 (Accessed: March 2025).

World Health Organization (WHO GIFNA) (2025) The Global Database on the Implementation of Food and Nutrition Action. Available at: https://gifna.who.int/summary/FOPL (Accessed: March 2025).

# Country-of-Origin Effect on AI-Generated Fashion Content: A Conceptual Paper

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## Abstract

This research explores how Generative AI (GenAI) in social media content (SMC) creation affects consumer perceptions in the luxury fashion industry. Based on the cue utilization theory, signaling theory, and self-concept theory, the study proposes a conceptual model to shed some light on better understanding the relationships among how AI-generated SMC may backfire on customers' willingness to pay more. The main contribution consists in introducing the country-of-origin (COO) image as a key factor in shaping customers' responses: the research proposes a framework in which the negative impact of AI is reduced when the brand is associated with a favorable country image, such as Italy. By integrating COO into the debate on AI-generated branded content, this research offers a new perspective on how cultural brand signals interact with technological innovation, providing both theoretical and practical contributions for marketers operating in the luxury fashion sector.

*Keywords: AI-generated content; brand authenticity; self-congruity, country-of-origin; luxury brands*

## 1. Introduction

Once defined by exclusivity, rarity, and tradition, luxury has undergone a radical transformation (Kumar et al., 2020). Digital innovation is the main driver of this shift, which is transforming how luxury companies engage with their customers (Creevey et al., 2021).

One of the latest innovations that is affecting the way luxury brands communicate is the use of generative artificial intelligence (GenAI) to automate the creation of social media content (SMC) (Dwivedi et al., 2023).

However, in the luxury sector, wherein a brand "has a prestigious image within the market built on qualities such as artisanship, craftsmanship, or service quality" (Ko et al. 2019), the use of GenAI for creating social media and advertising campaigns raises important questions regarding authenticity perceptions and sense of exclusivity and uniqueness. For instance, can a message created by an algorithm evoke the same sense of craftsmanship, creativity, and emotional depth that defines luxury fashion? Or does GenAI risk undermining the creation of a relationship between brands and customers by altering the way people see luxury brands? What role does the COO play in guiding AI-driven communications to ensure they reflect a brand's value and avoid unintended consequences?

Since a luxury brand's positioning is strongly linked to its country-of-origin (COO), the COO's image is an important factor that shapes customers' brand evaluations, perceptions, and purchasing behavior (Adina et al., 2015). In this context, the connection to a country renowned for craftsmanship and exclusivity, such as Italy, can help ground AI-generated messages in a more tangible and credible narrative. By evoking cultural associations of artisanal excellence, attention to detail, and timeless style, the COO serves as an anchor that enhances the authenticity of brand communications shaped by generative AI. This connection not only strengthens the emotional resonance of the message but also mitigates the risk of skepticism toward GenAI (Magnusson et al., 2019), strengthening the customer's belief in the brand's authenticity, quality, and values and consequently the willingness to pay.

To fill this gap, the present study proposes a conceptual model to investigate how AI-generated content in luxury fashion SMC creation affects consumers' perceptions of authenticity, self-congruity, and willingness to pay more. This study adds to the literature by integrating COO image into the debate on AI-generated content, highlighting how such symbolic cues shape consumer responses towards luxury brands.

## 2. Theoretical Background

We draw on three well-established theories in the fields of marketing: cue utilization theory (Jacoby and Haddock, 1971; Olson, 1972; Olson and Jacoby, 1972), signaling theory (Erdem and Swait, 1998; Erdem et al., 2006; Erdem and Swait, 2016), and self-concept theory (Sirgy, 1982; Sirgy et al., 1997), to explain how AI-generated content may influence brand authenticity perceptions, self-congruity, and ultimately consumers' willingness to pay.

Drawing on cue utilization theory (Jacoby et al., 1971), consumers may assess SMC quality based on extrinsic cues (Javeed et al., 2022), such as COO and AI disclosure, especially in high-involvement contexts like luxury fashion. As explained by signaling theory, these cues act as signals that can shape customers' perceptions (Javeed et al., 2022). In this sense, using GenAI for creating SMC may weaken the customer's perceived authenticity. In such cases, extrinsic cues like a strong COO image may serve as compensatory signals, mitigating the possible negative effects of GenAI on authenticity perceptions. Finally, according to self-concept theory (Sirgy, 1982), consumer responses are shaped by the alignment between brand signals and their self-image, which affects self-congruity and downstream behavioural responses such as willingness to pay more. Drawing from these theories, Figure 1 shows a conceptual framework of the factors that may affect how customers respond to AI-generated content in the luxury fashion context and forms the basis of the following research hypotheses.

Recent research that analyzes customers' responses to AI-generated advertising and social media campaigns found mainly negative results. Indeed, AI-generated advertisements have negatively impacted the credibility and attitude towards advertising (Baek, 2024) and brands (Sands, 2025). Similarly, including an AI disclosure label on an advertisement has been shown to decrease trust and customer attitudes towards the advertisement itself, especially when used to generate intangible attributes (Grigsby et al., 2025). However, while the majority of previous studies have focused on cognitive responses, behavioral outcomes, such as willingness to pay more, have been largely unexplored (Ali et al., 2025). Defined as "a consumer's readiness or inclination to pay a higher price for a product or service" (Zeithaml, 1988), the willingness to pay more is especially relevant in contexts like luxury fashion, where exclusivity is key.

While consumers may not always discern whether content is human or AI-generated, their behavioral responses tend to turn negative when the use of GenAI is explicitly disclosed (To et al., 2025). This suggests that adopting GenAI in content creation may undermine brand

authenticity and exclusivity that justify premium pricing in the luxury sector (Hung et al., 2011; To et al., 2025). In this vein, the following hypothesis is proposed:

H1. GenAI adoption for social media content creation (vs Human) will negatively impact willingness to pay more

To explain the relationship between AI-generated content creation and customers' behavioral responses, previous studies have revealed that brand authenticity and self-congruity may play a role. Nevertheless, they found mixed results. Brand authenticity, defined as the extent to which a brand is perceived as genuine, of high quality, and craftsmanship-related by its customers (Alexander, 2009), leads to favorable brand outcomes, such as trust, positive attitudes, and behavioral responses. In the context of AI-generated content creation, on the one hand, it has emerged that the use of GenAI in social media strategies may lead to a reduction of the perceived authenticity as it diminishes the credibility of a post and, in turn, the attitudes towards and the engagement with brands (Brüns and Meißner, 2024). Similarly, using AI-generated content seems to lower the customers' perception of the brand's authenticity and their brand responses, especially in the luxury context, since customers perceived a violation of their expectations of identity benefits, such as exclusivity and aspirational values (To et al., 2025). On the other hand, by allowing brands to personalize their marketing strategies, AI-generated content seems to enhance the customers' perception of authenticity because brands can create consistent narratives and customized experiences (Ali et al., 2025). Another organismic response that has to be considered to understand the underlying mechanisms between GenAI and consumer behavioral response is self-congruity, namely, a psychological concept reflecting the consumer's self-identity alignment with how they perceive a brand. When consumers perceive a brand as authentic, they tend to identify with the brand, develop emotional ties with it, and be more willing to buy and pay more for that brand (Fatma and Khan, 2024). In the context of AI-generated content, it seems that the negative impact of GenAI on brand authenticity may also backfire on the authentic alignment with consumers' self-concepts, as AI-generated content lacks the emotional nuance and cultural sensitivity that are characteristics of human-generated content (Ali et al., 2025). Nevertheless, GenAI's capability to create content tailored to consumers' preferences and values could promote deeper resonance and alignment, reinforcing customers' self-concepts and enhancing self-congruity (Dwivedi, 2024). In this vein, the following hypothesis is proposed:

H2. The effect of GenAI adoption for creating social media content (vs Human) on willingness to pay will be sequentially mediated by brand authenticity and self-congruity. The negative effect of GenAI adoption on willingness to pay more is driven by a) lower perceived authenticity, which leads to b) lower self-congruity.

When a brand originates from a country strongly associated with values such as artisanal quality and heritage, such as Italy in the fashion sector, the COO acts as a contextual anchor that enhances perceived authenticity. This aligns with the cue congruence framework (Magnusson et al., 2011), suggesting that consistency between different brand signals (e.g., origin and communication style) can reduce cognitive dissonance. Moreover, drawing on the signaling theory (Erdem & Swait, 1998), we argue that a strong COO image may amplify the overall perceived trustworthiness and authenticity of the message, even when the message is AI-generated. Thus, the COO can help restore coherence between message and brand identity, especially in high-involvement categories such as luxury fashion.

Brands linked to high-image COO, such as Italy, are typically expected to embody authenticity, craftsmanship, and tradition (Cheah et al., 2016; Cappelli et al., 2019). In line with this, a strong COO image generally enhances brand authenticity (Siew et al., 2018) and, therefore, can serve as a buffer that mitigates the potentially negative effects of AI-generated

content on brand authenticity and self-congruity. Therefore, the following hypotheses are presented:

H3. Perceived country image positively affects brand authenticity

H4. GenAI adoption for creating social media content and the COO effect will interact to influence brand authenticity and self-congruity. When social media content is generated by GenAI, a brand with a high-country image is expected to generate (a) higher brand authenticity and (b) higher self-congruity compared to a brand with a low country image.

H5. The interaction between GenAI adoption for creating social media content and the COO effect will positively influence customers' willingness to pay more through brand authenticity and self-congruity.

Consumers tend to associate luxury brands with uniqueness, human craftsmanship, and emotional depth (Han & Kim, 2020), which raises their expectations for authenticity and personal relevance. When GenAI generates a SMC, it may conflict with these expectations, creating a stronger sense of incongruity than mainstream brands, which are less bound by such symbolic values. Consequently, the negative effect of AI-generated content on brand authenticity and self-congruity is expected to be stronger for luxury brands than for mainstream brands, due to the perceived misalignment between the artificial origin of the content and the emotional and symbolic meanings traditionally associated with luxury (Jacob et al., 2020). Consequently, the following hypotheses are proposed:

H6. GenAI adoption for creating social media content, COO effect, and brand luxury will interact to influence brand authenticity and self-congruity. When social media content is generated by GenAI, a luxury brand is expected to generate (a) lower brand authenticity and (b) lower self-congruity compared to mainstream brands.

H7. The interaction between GenAI adoption, COO image, and brand luxury will influence customers' willingness to pay more through brand authenticity and self-congruity.

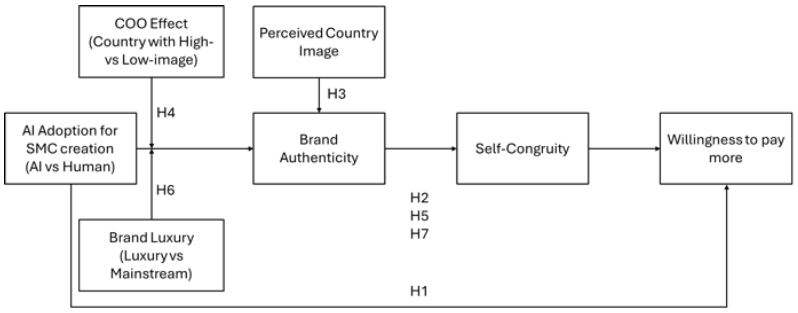



**Figure 1:** Proposed Conceptual Framework

## 3. Conclusion

This paper contributes to the literature by conceptualizing how AI-generated content interacts with symbolic cues, proposing a theoretical framework that links generative AI adoption for SMC creation to key consumer outcomes. Drawing on cue utilization theory,

signaling theory, and self-concept theory, the framework articulates the mechanisms through which GenAI may undermine or reinforce brand meaning, depending on contextual factors such as the brand's COO image and luxury positioning. Specifically, the framework proposes that GenAI adoption may negatively affect willingness to pay by reducing perceived brand authenticity and self-congruity, and that strong extrinsic cues, such as COO image, may attenuate these effects. Furthermore, the framework theorizes that this consumer response may be particularly pronounced in the case of luxury brands, positioning brand luxury as a boundary condition.

By integrating COO image into the debate on AI-driven brand communications, this framework emphasizes the role of cultural heritage and national symbolism in buffering the AI aversion that seems to characterize customers' response to AI-generated advertising.

The proposed framework offers several directions for future research. Scholars may empirically examine how different dimensions of COO image (e.g., functional vs. symbolic) or varying types of AI content (e.g., text, image, video) influence consumer behavioral responses. Additional boundary conditions, such as consumer involvement, AI literacy, or conspicuous consumption tendencies, could also enrich the theoretical understanding of GenAI's impact on brand-consumer relationships.

From a managerial perspective, the study provides guidance for luxury brand manager aiming to balance innovation with preserving symbolic brand values. By leveraging signals based on extrinsic cues, such as a strong COO image, brands may reduce the risks associated with GenAI adoption and maintain perceived authenticity in their social media activities.

## Main References*


Ali, L., Ali, F., Abdalla, M., & Alotaibi, S. (2025). Beyond the hype: Evaluating the impact of generative AI on brand authenticity, image, and consumer behavior in the restaurant industry. International Journal of Hospitality Management, 131, 104318.

Brüns, J. D., & Meißner, M. (2024). Do you create your content yourself? Using generative artificial intelligence for social media content creation diminishes perceived brand authenticity. Journal of Retailing and Consumer Services, 79, 103790.

Creevey D., Coughlan J., & O'Connor C (2022). Social media and luxury: A systematic literature review. International Journal of Management Reviews, 24, 99–129.

Erdem, T., & Swait, J. (1998) Brand Equity as a Signaling Phenomenon. Journal of Consumer Psychology, 7, 131-157.

Fatma, M., & Khan, I. (2024). Brand authenticity and consumers' willingness to pay a premium price (WPP): The mediating role of brand identification. Journal of Brand Management. 31. 1-13.

Olson, J. C., & Jacoby, J. (1972). Cue utilization in the quality perception process. In M. Venkatesan (Ed.), Proceedings of the 2nd Annual Conference of the Association for Consumer Research (vol. 2, pp. 167–179).

Setiadi, E., Adiwijaya, M., & Subagio, H. (2018). The Impact of Brand Awareness and Country of Origin on Purchase Intention with Mediation of Self Congruity on Chinese Brand Automotive Products Wuling. Petra International Journal of Business Studies, 1, 70-79.

Siew, S.-W., Minor, M. S., & Felix, R. (2018). The influence of perceived strength of brand origin on willingness to pay more for luxury goods. Journal of Brand Management, 25(6), 591–605.

Sirgy, M. J. (1982). Self-Concept in Consumer Behavior: A Critical Review. Journal of Consumer Research, 9(3), 287–300.

To, R. N., Wu, Y.-C., Kianian, P., & Zhang, Z. (2025). When AI Doesn't Sell Prada: Why Using AI-Generated Advertisements Backfires for Luxury Brands. Journal of Advertising Research, 1–35.

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# Strategie Di Marketing Internazionale Degli Oli Evo Biologici Certificati E Valorizzazione Dei Premi Internazionali Di Qualita'

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## Abstract

I prodotti agroalimentari biologici sono percepiti dai consumatori nazionali ed internazionali come prodotti di grande qualità organolettica e soprattutto di beneficio per la salute, in quanto permettono di evitare i pericolosi rischi per la salute, provenienti dall'utilizzo di pesticidi e sostanze chimiche dannose. I prodotti agroalimentari biologici sono sottoposti ad un processo di certificazione biologica, con controlli periodici, dal campo di coltivazione al prodotto finale, secondo normative e standard nazionali e internazionali. Esistono diverse competizioni nazionali ed internazionali, per i differenti prodotti biologici, che premiano questi ultimi in relazione alla qualità delle caratteristiche organolettiche del prodotto o per l'eccellenza del packaging di prodotto. Con questo contributo, relativo ad una ricerca in fieri, si intende contribuire alla letteratura di Marketing Internazionale, approfondendo le strategie di marketing nei mercati esteri, applicate dalle imprese di olio extra vergine di oliva (EVO) certificato biologico (Dominici A. et al., 2025) che hanno partecipato a qualche competizione ed ottenuto un premio internazionale, analizzando come le imprese di questo settore valorizzano questi premi per crescere nei mercati internazionali e verificando, inoltre, i legami tra le strategie di marketing internazionali attuate in seguito all'ottenimento dei premi e le performance ottenute nella crescita delle quote di mercato nei Paesi esteri.

*Keywords: Strategie di Export, Olio EVO, Certificazioni Biologiche, Premi Qualità, Fiducia, Reputazione*

## 1. Introduzione

I prodotti agroalimentari biologici sono percepiti dai consumatori nazionali ed internazionali come prodotti di grande qualità organolettica (Wojciechowska Solis J. et al, 2025; Muñoz-Pant S.C., 2025; Udgam Mishra and Park Thaichon, 2025; Jakubowska D. et al., 2024; Carzedda M., 2021; Sánchez V.M et al., 2021; Kushwah S., 2019) e soprattutto di beneficio per la salute, in quanto permettono di evitare i numerosi rischi per la salute, provenienti dall'utilizzo di pesticidi e sostanze chimiche dannose (Winter C.K. and Davis S.F., 2006). I prodotti agroalimentari biologici sono sottoposti ad un processo di certificazione biologica, con controlli periodici, dal campo di coltivazione al prodotto finale. La qualità garantita dalla certificazione di prodotto biologico, secondo gli standard dell'IFOAM (International Federation of Organic Agriculture Movements) e/o la normativa nazionale, comunitaria e internazionale vigente, rappresenta un elemento fondamentale per incrementare e trasmettere la fiducia (Morosan E. 2025; Nguyen N.T., 2025, Ayyub S. et al., 2021) nei consumatori a livello mondiale, soprattutto per un segmento di consumatori attenti alla salute e alla sostenibilità ambientale. Infatti, i prodotti agroalimentari biologici sono il risultato di processi di coltivazione che non usano pesticidi e che rispettano numerose procedure, nonché apposite normative per controllare il territorio circostante il luogo di coltivazione, in modo da evitare ogni tipo di contaminazione del prodotto biologico.

La domanda mondiale del mercato di prodotti agroalimentari biologici è oramai in forte ascesa e anche nel mercato italiano si evidenzia una crescita della domanda di prodotti agroalimentari biologici. Il valore del biologico è stimato in circa 6,5 miliardi nel mercato italiano con una crescita di circa il 5,7% rispetto all'anno precedente e un'incidenza del 4% sul totale fatturato nazionale dell'agroalimentare (SANA, Nomisma 2025) e con un valore export dei prodotti agroalimentari biologici pari a circa 3,9 miliardi (pari a più della metà del totale del fatturato dei prodotti biologici) e una percentuale del 6% sul fatturato nazionale dell'agroalimentare. Nel corso dell'ultimo anno il consumo dei prodotti agroalimentari biologici è aumentato sia nel mercato nazionale sia in quello estero. Si evidenzia che i consumi del 2024, riportati da uno studio realizzato da Nomisma e AssoBio, confermano una tendenza in crescita, non solo mondiale (IFOAM & FIBL 2025), ma anche nazionale, portando l'Italia al 4° posto nella classifica mondiale, tra i paesi che valorizzano maggiormente la produzione biologica. Gli acquisti consapevoli dei consumatori italiani evidenziano anche che il 93% della popolazione, nella fascia di età 18-65 anni, include consapevolmente almeno un prodotto a marchio biologico nel carrello della spesa, rispetto al 50% della popolazione nel 2012. Si ritiene, inoltre, importante evidenziare che dal 2024 l'Italia si è dotata di un Piano d'Azione Nazionale per la produzione biologica (PANBio 2024-26), in attuazione di quanto previsto dalla normativa nazionale (Legge del 9 marzo 2022 n. 23), al fine di garantire la tutela, lo sviluppo e la competitività della produzione agricola con metodo biologico, la realizzazione di un marchio per i prodotti italiani biologici finalizzato a rinvigorire il mercato, facendo leva sull'attenzione che il consumatore rivolge ai prodotti Made in Italy, la valorizzazione delle filiere locali e l'impiego di risorse per promuovere la ricerca specializzata per il biologico (ISMEA, 2024). Dall'analisi del settore, emerge anche un importante fattore di cambiamento da parte dei consumatori italiani ed esteri (Pant S.C. et al., 2024), che si sta riscontrando, dopo la pandemia da Covid-19 (Murmura F., Musso F. et al. 2024), con riguardo alla consapevolezza dell'importanza di un'alimentazione sana (Mainolfi G., et al. 2025), ponendo una maggiore attenzione verso i prodotti alimentari biologici e in particolare verso l'olio Extra Vergine d'Oliva (EVO) Biologico, che sempre più è percepito come un prodotto fondamentale per la salute umana, anche per effetto della divulgazione di numerosi studi scientifici. Dunque, la letteratura di Marketing, che ha studiato il comportamento di acquisto del consumatore verso i prodotti agroalimentari biologici, sopra riportata, negli anni passati si è chiesta e ancora oggi si sta chiedendo come aumentare l'impatto e la fiducia, che comunque stanno evolvendo (Wojciechowska Solis J. et al, 2025; Muñoz- Pant S.C., 2024; Udgam Mishra and Park Thaichon, 2025; Jakubowska D. et al., 2024), tra i consumatori di prodotti biologici nazionali ed esteri. Nel frattempo, dai dati secondari evidenziati nei numerosi rapporti statistici di settore citati, si conferma proprio che oramai la domanda di prodotti agroalimentari biologici si sta evolvendo e sta diventando sempre più consapevole del valore qualitativo di un prodotto agroalimentare biologico certificato. Invece, è evidente che, per diversi elementi legati al momento di acquisto (prezzo, fiducia, posizionamento nella distribuzione, comunicazione realizzata, formazione del consumatore, etc), non vi sia ancora una situazione omogenea e di piena domanda né in Italia, né in Europa e tanto meno nel resto del mondo verso i prodotti biologici agroalimentari. Pertanto, essendoci ancora molta strada da percorrere per incrementare la domanda dei mercati nazionale ed internazionali, le imprese italiane ed estere di prodotti agroalimentari biologici devono continuare a migliorare le loro strategie di marketing per poter conquistare quote di mercato nei diversi mercati nazionali ed internazionali.

Nelle strategie di marketing internazionale (Alon I. et al., 2022) sicuramente è indispensabile saper comunicare e promuovere la qualità dei propri prodotti biologici ai consumatori esteri e rappresenta una sfida notevole riuscire a conquistare la loro fiducia nei mercati internazionali (Abitabile C., 2015), che scontano una minore conoscenza della reputazione e della serietà dei singoli brand stranieri e dei loro prodotti biologici, ma anche delle certificazioni di produzione biologica, che le stesse imprese riportano sull'etichetta dei propri

packaging. I prodotti agroalimentari biologici, inoltre, sono da anni riconosciuti e premiati, attraverso competizioni nazionali ed internazionali (Rebufa C. et al., 2021)nelle diverse tipologie del settore agroalimentare, facilitando anche la maggiore conoscenza e la consapevolezza dei consumatori.

Dunque, in questo contributo si intende delineare un progetto di ricerca avviato per approfondire non solo la situazione del settore dei prodotti agroalimentari biologici, ma comprendere "se" e "come" le imprese italiane ed estere del settore riescono a migliorare la crescita commerciale e reputazionale nei mercati internazionali, attraverso una strategia promozionale di partecipazione alle competizioni internazionali di prodotto biologico certificato e di comunicazione della stessa partecipazione, con o senza l'ottenimento del relativo Premio. Tali competizioni di prodotti biologici agroalimentari certificati, nelle diverse tipologie presenti in Italia e nel mondo, attraverso giurie composte da cosiddetti "panel" di esperti valutatori di prodotto, verificano in primis le caratteristiche e la qualità intrinseca del prodotto biologico certificato e del rispettivo packaging, valutando, in quest'ultimo caso, la conformità alle norme di confezionamento, la chiarezza e la completezza delle informazioni riportate sull'etichetta, il design dell'involucro e della bottiglia. Tra le diverse competizioni per i Premi nazionali e internazionali attualmente riconosciute, il presente progetto ha voluto avviare un percorso di ricerca e osservazione delle imprese di prodotti biologici agroalimentari, previo accordo con un'impresa pugliese che gestisce uno dei principali premi internazionali (premio BIOL), analizzando le strategie di marketing internazionale e i relativi risultati o performance nei mercati nazionali ed internazionali, riscontrati dalle imprese nazionali ed estere, partecipanti a questa competizione nel settore dell'olio extra vergine di oliva (EVO) certificato biologico (Carzedda M. et al., 2021).

Il presente contributo, pertanto, intende contribuire alla letteratura di marketing internazionale, partendo dallo studio delle strategie di marketing internazionale delle imprese di produzione di olio EVO certificato biologico, che partecipano e ottengono un premio internazionale per la qualità dei loro prodotti biologici e per il loro packaging e avviando uno studio sui legami esistenti tra i risultati di crescita delle imprese agroalimentari nei mercati internazionali e le loro strategie di marketing mix internazionali, connesse alla partecipazione e all'ottenimento dei rispettivi premi nelle competizioni internazionali dei prodotti agroalimentari certificati biologici.

## 2. Metodologia

Al fine di poter studiare nel dettaglio le strategie di marketing internazionale delle imprese di produzione di olio EVO certificato biologico e i legami con la partecipazione e l'ottenimento dei relativi premi, si è elaborato un questionario di 24 domande da sottoporre, in una survey online, alle imprese italiane ed estere che hanno partecipato alle competizioni e ottenuto o meno un premio internazionale per la qualità dei loro prodotti di olio EVO certificato biologico e per il loro packaging, in modo da verificare i legami con la conseguente crescita o meno nei mercati esteri in cui l'impresa è presente e valorizza tale partecipazione con l'ottenimento del rispettivo premio. Le imprese non sono state selezionate, ma hanno deciso in maniera spontanea, al momento dell'iscrizione alla competizione, se accogliere l'invito alla compilazione del questionario ricevuto da parte dell'Organizzazione del Premio Internazionale BIOL per l'edizione 2025. Al momento, su un campione di circa trecento imprese che negli ultimi anni partecipano in media alla competizione del Premio BIOL, hanno già risposto al questionario oltre un centinaio, con una percentuale di circa l'ottanta per cento di imprese italiane, di diverse regioni d'Italia e con differenti dimensioni aziendali, e per il venti per cento di imprese estere.

Inoltre, tra queste si individueranno alcune imprese italiane, di diverse regioni, ed estere, che daranno la loro disponibilità per un'intervista semi strutturata in profondità per approfondire

come applicano tali strategie di marketing nei mercati esteri e come valorizzano nei mercati esteri la partecipazione e l'ottenimento di un premio internazionale di qualità.

## 3. Risultati Attesi, Limiti E Futuri Sviluppi

Attraverso un'analisi dei dati, al momento in corso, ci si attende di verificare quali strategie di marketing internazionale sono state attuate dalle imprese di olio EVO certificato biologico che hanno partecipato e ottenuto un premio nazionale e internazionale, quali sono i legami tra l'ottenimento del Premio, la valorizzazione dello stesso premio attraverso le strategie di marketing internazionale (premium price, distribuzione, partecipazione a fiere internazionali e comunicazione digitale) e le performance ottenute nella crescita delle quote di mercato nei Paesi esteri dopo l'implementazione delle suindicate strategie di marketing. Al momento si ritiene esiguo il numero di risposte ottenute per una generalizzazione statistica ed infatti si ritiene di continuare la presente ricerca attraverso la stabilizzazione del presente progetto in un Osservatorio delle imprese di prodotti agroalimentari certificati biologici, in modo da poter approfondire maggiormente i legami tra la partecipazione e l'ottenimento dei premi di qualità, le strategie di marketing internazionali e le performance conseguite nei rispettivi mercati esteri. Infine, si ritiene anche di poter confrontare quanto realizzato in Italia nel settore dell'olio EVO certificato biologico con altri prodotti agroalimentari biologici di uno o due Paesi Europei, in modo da realizzare un'analisi comparativa di imprese differenti per prodotti e mercati di origine.

## Bibliografia


Alon I. Jaffe E. Luceri B. Prange C. Vianelli D., (2022), Marketing Internazionale, Italia, Giappichelli

Abitabile C., (2015), L'internazionalizzazione del Biologico Italiano, CREA 2015;

Ayyub S. et al., (2021), Drivers of Organic Food Purchase Intention in a Developing Country: The Mediating Role of Trust, SAGE Open July-September 2021: 1¬ –12;

Boys K.A. et al., (2022), The international trade of U.S. organic agri-food products: export opportunities, import competition and policy impacts. Renewable Agriculture and Food Systems. 37(6):603-617;

Carzedda M. et al., (2021); Consumer Preferences for Origin and Organic Attributes of Extra Virgin Olive Oil: A Choice Experiment in the Italian Market. Foods, 10, 994;

Di Vita G. et al., (2021), Local, organic or protected? Detecting the role of different quality signals among Italian olive oil consumers through a hierarchical cluster analysis, Journal of Cleaner Production 290 - 125795;

Daraboina R. et al., (2024), Segmentation of organic food consumers: A revelation of purchase factors in organic food markets, Journal of Retailing and Consumer Services 78 – 103710;

Doba, K.,et al.. (2019), Regional products and traditional and organic food: coexistence or competition?, Journal of Agribusiness and Rural Development, 1(51), 15–20;

Dominici A. et al., (2025), Territorial brand equity in the wine market and the role of the organic label: A consumer perspective, Food Quality and Preference 126 – 105419;

Golijan J., (2018), Global organic food market, Acta Agriculturae Serbica, Vol. XXIII, 46 (2018); 125-140

Jakubowska D. et al., (2025), Why Do Consumers Buy Organic? Exploring Motivations and Socio-Economic Patterns, Agriculture, 15, 50;

Kushwah S. et al., (2019), Determinants of organic food consumption. A systematic literature review on motives and barriers, Appetite 143 - 104402;

Hughner R.S., (2007), Who are organic food consumers? A compilation and review of why people purchase organic food Journal of Consumer Behaviour 6: 94–110;

IFOAM-FIBL, (2025), The World of Organic Agriculture Statistics and Emerging Trends;

ISMEA, (2024) , BIO in cifre 2024, con la partecipazione di FederBIO, AssoBIO e SINAB, ISBN 9788896095409;

Lobo A. e Mascitelli B., (2014), Opportunities for small and medium enterprises in the innovation and marketing of organic food: investigating consumers' purchase behaviour of organic food products in Victoria, Australia.AI & Soc 29, 311–322;

Lombardo, L., Farolfi, C., Capri, E., (2021), Sustainability Certification a New Path of Value Creation in the Olive Oil Sector: The ITALIAN Case Study. Foods 2021, 10, 501;

Mainolfi G., et al., (2025), «If I Care, I Buy». Exploring an Integrated Model of Environmental Concern, Attitudes, Anticipated Guilt and Purchase Intention in Sustainable Vegan Fashion, in "Micro & Macro Marketing" 1/2025, pp. 145-174;

Melovic B et al., (2020), The Analysis of Marketing Factors Influencing Consumers' Preferences and Acceptance of Organic Food Products—Recommendations for the Optimization of the Offer in a Developing Market, Foods 2020, 9, 259;

Mercati V. (2016), Organic agriculture as a paradigm of sustainability: Italian food and its progression in the global market, Agriculture and Agricultural Science Procedia 8 798 – 802, Eselvier;

Morosan E. (2025), Perception, Trust, and Motivation in Consumer Behavior for Organic Food Acquisition: An Exploratory Study. Foods 2025, 14, 293;

Muñoz-Sánchez, V.M.; Pérez-Flores, A.M., (2021), The Connections between Ecological Values and Organic Food: Bibliometric Analysis and Systematic Review at the Start of the 21st Century. Sustainability, 13, 3616;

Murmura F., Musso F. et al., (2024), Organic Honey - Comparison of Generational Behaviour and Consumption Trends After Covid-19, Journal of Food Products Marketing, 67 – 88;

Nguyen N.T., (2025), The impact of consumption values on the intention to purchase organic food: The moderating role of trust, HCMCOUJS - Economics and Business Administration , n. 16 (2);

Paffarini et al., (2025), The impact of multiple labeling on consumer choices for extra virgin olive oil: A cross-country study, Agricultural and Food Economics, 13:26

Pant S.C. et al., (2024); Organic food consumption: A bibliometric–content analysis, Journal Consumer Behavior,. 2024;23:2730–2750;

Pant, S. et al. (2024). Global Trends in Organic Food Consumption Studies: A Bibliometric Perspective in book: Emerging Trends in Food and Agribusiness Marketing ISBN 9798369367155;

Raynolds L. T. (2004), The globalization of organic agro-food networks. World development, 32(5), 725-743;

Rebufa C., Pinatel C., Artaud J., Girard F., (2021), A comparative study of the main international extra virgin olive oil competitions: Their impact on producers and consumers, Trends in Food Science & Technology 107 445–454;

Rigby D., Brown S. (2003), Organic Food and Global Trade: Is the Market Delivering Agricultural Sustainability?, The University of Manchester, School of economic Studies, Discussion Paper Series n. 326;

Sahu S., (2025), Analysis of Consumer Preference towards Organic Products, International Scientific Journal of Engineering and Management (ISJEM) Volume: 04 Issue: 06 | June – 2025, ISSN: 2583-6129;

SANA-Nomisma (2025), Il Mercato Bio a cura di Zucconi Silvia, in occasione di Rivoluzione BIO in SANA Food 2025 "Choose the European Organic Leaf for a better World. Good choices matter". Rapporto SANA Nomisma 2025;

Sánchez V.M et al., (2021), The Connections between Ecological Values and Organic Food: Bibliometric Analysis and Systematic Review at the Start of the 21st Century, Sustainability, 13, 3616;

Santucci, F. M., Callieris, R. & del Bello, D. (2020). Organic olive oil in Italy: a missed opportunity? Bulgarian Journal of Agricultural Science, 27 (No 6) 2021, 1039–1050;

Torquati B., Cecchini L., Paffarini C., Chiorri M., (2021), The economic and environmental sustainability of extra virgin olive oil supply chains: An analysis based on food miles and value chains, Economia agro-alimentare, Food Economy, Vol. 23, Iss. 1, Art. 4, pp. 1-28 - ISSN 1126-1668;

Winter C.K. and Davis S.F., (2006), Organic Foods, Journal of Food Science, Vol. 71/9;

Wojciechowska Solis J. et al., (2025); Factors Determining Buying Behavior on the Organic Food Market in the Visegrad Group Countries—Using Canonical Correlation Analysis. Sustainability, 17, 672;

Viganò L., (2015), L'evoluzione dei consumi alimentari e il ruolo del biologico, in Abitabile C., Sardone R. (a cura di), Il consumo sostenibile: dalla teoria alla pratica. Il caso dei prodotti biologici, INEA, Roma;

Udgam Mishra and Park Thaichon, (2025), Why is no one buying organic food? The role of nature experience and attitude antecedents on purchase intention, Asian Journal of Business Research, Volume 15 Issue 1.

# Do Dedicated Measures of Ecological Country Image Outperform Conventional Country Image Scales? A Predictive Validity Perspective

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## Abstract

Recent research has been arguing in favor of using dedicated (i.e., domain-specific) measures of a country's ecological/environmental/green image in studies of sustainable consumer behavior. However, there is no empirical evidence confirming that such dedicated measures outperform conventional country image scales in terms of predicting consumer responses. This study (Ntotal = 926) compares the predictive validity of Lala et al.'s (2008) environmental/social country image (ESCI) measure with Roth and Romeo's (1992) product-country image scale (PCI) on (a) consumer perceptions of product sustainability, and (b) purchase probability. The results across two distinct product categories, two types of sustainability labels, and four different product origins offer clear evidence in favor of the PCI scale and call into question the need for developing fine-grained measures specifically capturing environmental/social aspects of country image.

*Keywords: environmental/ecological country image, product-country image, perceived product sustainability, purchase probability*

## 1. Introduzione

In recent years, the importance of sustainability in terms of economic, social, and environmental dimensions (Elkington 1997) has been increasing: more and more consumers seek sustainable products (e.g., McKinsey & Company and NielsenIQ 2023), firms are often implementing sustainability programs (e.g., Leonidou et al. 2013), and governments around the world pursue sustainable development (e.g., United Nations 2015). As a result of these developments, there has been growing research interest as to the role of country-of-origin (COO)[1] in the context of sustainable consumption, not least because there are marked differences between countries in terms of demand and supply for sustainable products, eco-certification policies, and the attention paid to environmental and social issues (e.g., Li et al. 2018). Such inter-country differences may "lead buyers concerned with sustainability to favour (vs. avoid) purchasing products that come from countries projecting favourable (vs.

[1] COO has been conceptualized either as brand origin (BO), namely "*the country which a consumer associates with a product or brand as being its source, regardless of where the product is actually produced*" (Jaffe and Nebenzahl 2006, p. 29) ) or as country of manufacture (COM), namely "*the country in which the product is manufactured or assembled*" (Hamzaoui-Essoussi and Merunka 2007, p. 412). BO and COM can be the same or different; the latter case is exemplified by bi-national or hybrid products (e.g., Insch and McBride 2004).

unfavourable) images related to environmental and social commitment" (Dekhili et al. 2021, p. 665).

Broadly speaking, three distinct research streams characterize the literature linking COO to sustainable consumption. The first stream seeks to determine the relative importance of COO and sustainability cues (e.g., eco-labels) as attributes in consumer decision making and typically employs conjoint analysis as its methodology (e.g., Brand and Rausch 2021). The second stream focuses on how COO together with sustainability cues (typically eco-labels) influences consumer responses in terms of product evaluations, attitudes, and intended/actual behavior (e.g., Tran and Paparoidamis 2020). The third stream consists of methodological efforts seeking to develop "dedicated" scales of ecological/environmental/green country image (e.g., Garcia-de-Frutos and Ortega-Egea 2015). Such efforts reflect researchers' concerns that "conventional" country image measures (see Roth and Diamantopoulos 2009 for a review) "completely exclude environmentally and socially related dimensions" (Dekhili and Achabou 2015, p.91); this exclusion (presumably) limits their applicability to the study of sustainable consumer behavior and calls for the use of scales specifically and explicitly focusing on environmental/social aspect of a country's image.

Surprisingly, however, there is no empirical evidence demonstrating that dedicated measures of a country's ecological/environmental image are indeed superior to standard/conventional country image scales when it comes to explaining/predicting sustainable consumer behavior: it is merely assumed that the former will outperform the latter. In this paper, we question this assumption by undertaking a systematic comparison of the predictive ability of Lala et al.'s (2008) dimensions of environmental/social country image (ESCI) versus Roth and Romeo's (1992) product-country image (PCI) scale. The ESCI is the first measure to focus explicitly on sustainability issues at a country level and is frequently cited in subsequent similar scale development efforts (e.g., Thogersen and Pedersen 2021); on the other hand, the PCI is probably the most established and widely used country image scale in COO research. [2]

## 2. Metodology

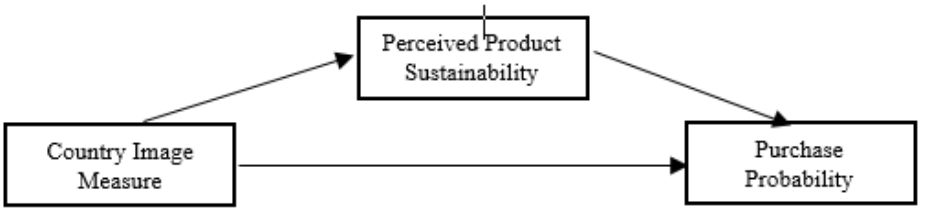
### 2.1 Model and Data

To compare the predictive validity of the ESCI and PCI scales, we use the model in Figure 1 which includes two important consumer outcomes used in COO and sustainability research, namely (a) consumer perceptions of the focal product's sustainability (scale adapted from Gershoff and Frels 2015), and (b) their likelihood of buying the product (scale adapted from Juster 1966; 0% = would definitely not buy, 100% = would definitely buy). We also use product involvement (Mittal and Lee 1988), age, income, gender, and social desirability (Steenkamp et al., 2010) as control variables.[3]

[2] The Roth and Romeo (1992) paper – in which the PCI scale is proposed – has attracted more than 2,400 citations (Google Scholar, May 2025).

[3] Controlling for social desirability is important in the current context, given the well-known "attitude-behavior" gap repeatedly noted in studies of sustainable purchasing behavior (e.g., Wiederhold and Martinez 2018).

We apply this model under two different conditions: in the first condition, only the product origin (i.e. the COO) is disclosed to consumers; in the second condition, a sustainability label is also shown on the product package, in addition to COO information. Using fictitious brands as stimuli to avoid confounding effects related to brand equity (Dimofte et al. 2008), we estimate the model in two very different product categories (chocolate and microwaves), employing different product origins (chocolate: Denmark and Bulgaria), and different sustainability labels (chocolate: Fairtrade; microwaves: Energy Star). We collected the data on the Prolific platform with an online questionnaire created on Qualtrics (NTotal = 926, approx. 50% male, all Italian citizens); received £9.00/hour (approx. €10.53/hour) in compensation. Table 1 provides an overview of the data structure.




*Note:* Product Involvement, Age, Income, Gender, and Social Desirability included as control variables.

**Figure 1:** Estimated Model

| **Product Origin** | **No Label** | **Sustainability Label** | **Product category** |
|---|---|---|---|
| Denmark | N = 116 | N = 105 | Chocolate |
| Bulgaria | N = 112 | N = 114 | |
| Germany | N = 129 | N = 115 | Microwaves |
| Türkiye | N = 123 | N = 112 | |

**Table 1:** Data Overview

## 2.2 Analysis and Results

We used Model 4 of the PROCESS routine (Hayes 2022) to estimate the model parameters in Figure 1 and obtain the relevant coefficients of determination (i.e., R2 values) for the two criterion variables (perceived product sustainability and purchase probability); a comparison of the magnitudes of the R2 values when ESCI and PCI are respectively used as independent variables enables an assessment of their relative predictive ability.[4] Tables 3 and 4 show the relevant results.

[4] Prior to estimation, we checked the reliability of the ESCI and PCI scales in all eight data cells in Table 1; both scales proved to be highly reliable (Cronbach's $\alpha > 0.70$).

| Country Image Scale | Denmark | | Bulgaria | | Germany | | Türkiye | |
|---|---|---|---|---|---|---|---|---|
| | **PPS** | **PP** | **PPS** | **PP** | **PPS** | **PP** | **PPS** | **PP** |
| ESCI | 0.298 | 0.436 | 0.208 | 0.395 | 0.120 | 0.312 | 0.209 | 0.268 |
| PCI | 0.349 | 0.538 | 0.238 | 0.461 | 0.116 | 0.337 | 0.241 | 0.380 |

**Table 2:** $R^2$ Values: ESCI vs. PCI (No Sustainability Label)

| Country Image Scale | Denmark | | Bulgaria | | Germany | | Türkiye | |
|---|---|---|---|---|---|---|---|---|
| | **PPS** | **PP** | **PPS** | **PP** | **PPS** | **PP** | **PPS** | **PP** |
| ESCI | 0.461 | 0.457 | 0.042 | 0.219 | 0.190 | 0.242 | 0.332 | 0.294 |
| PCI | 0.508 | 0.460 | 0.080 | 0.291 | 0.119 | 0.286 | 0.235 | 0.304 |

Note: PPS = Perceived Product Sustainability, PP= Purchase Probability

**Table 3:** $R^2$ Values: ESCI vs. PCI (Sustainability Label)

Focusing initially on product sustainability perceptions, with few exceptions, the PCI scale outperforms the ESCI scale in terms of explanatory power; its R2 values consistently exceed those of the ESCI scale in five out of eight comparisons in Tables 2 and 3; only when the COO is Germany or Türkiye (with a sustainability label) is the opposite the case. The superiority of the PCI scale is even more evident when purchase probability is the dependent variable. Here, the PCI scale outperforms the ESCI scale across all eight comparisons and the magnitude of the difference in R2 values is even more pronounced, particularly when no sustainability label is present (see Denmark and Türkiye in Table 1).

## 3. Discussion and Conclusions

Overall, our results cannot but cast doubt on the utility of using dedicated/domain-specific scales capturing environmental/social aspects of country image in sustainability research. Although we only scrutinized the predictive validity of the Lala et al. (2008) measure, we failed to reveal any marginal benefit over Roth and Romeo's (1992) "traditional" country image measure (at least from a predictive validity perspective). These findings are quite surprising, particularly with respect to the prediction of perceived product sustainability. Intuitively, given the explicit focus of the ESCI measure on sustainability issues, one would expect that it would consistently explain more variance in sustainability perceptions than the broader/more general PCI scale; however, this did not turn out to be the case.

Regarding purchase probability, the performance of the ESCI measure was even more disappointing as there was not a single instance where it outperformed the PCI scale – even in cases where the product carried a sustainability label. The difference in R2 values were often substantial (up to 11.2%) and always in favor of the PCI scale. A potential explanation is that the ESCI measure has – by definition – a narrower scope than the PCI scale as its conceptual domain focuses only on sustainability issues. As a result, its influence on purchase probability has to be mainly channeled through perceptions of product sustainability and it

is difficult to conceptually identify other/additional pathways (captured by the direct effect in Figure 1) that would boost that influence. However, purchase probability does not only depend on consumers' assessments of product sustainability but also on other evaluative judgments, such as quality and reliability; and a more general country image measure – such as the PCI scale – is better able to impact such judgments above and beyond its influence on sustainability perceptions.

Of course, whether other scales focusing on ecological/environmental/social dimensions of a country's image (e.g., Garcia-de-Frutos 2015; Thogersen and Pedersen 2021; Lee et al. 2024) are likely to perform better is an empirical question that only future research can answer. Given our findings, we strongly advise researchers to examine the performance of these scales versus conventional country image scales before the latter are dismissed as being inappropriate for use in sustainability research.

## References


Brand, B. M., Rausch, T. M. (2021), Examining Sustainability Surcharges for Outdoor Apparel Using Adaptive Choice-Based Conjoint Analysis, Journal of Cleaner Production, 289, 125654.

Dekhili, S., Achabou, M. (2015), The Influence of the Country-of-Origin Ecological Image on Ecolabelled Product Evaluation: An Experimental Approach to the Case of the European Ecolabel, Journal of Business Ethics, 131 (1), 89–106.

Dekhili, S., Crouch, R. C., El Moussawel, O. (2021), The Relevance of Geographic Origin in Sustainability Challenge: The Facets of Country Ecological Image," Journal of Consumer Marketing, 38 (6), 664–78.

Dimofte, C. V., Johansson, J. K., Ronkainen I. A. (2008), Cognitive and Affective Reactions of US Consumers to Global Brands, Journal of International Marketing, 16 (4), 113–135.

Elkington, J. (1997), Cannibals with Forks: The Triple Bottom Line of 21st Century Business, Stoney Creek, CT: New Society Publishers.

García-de-Frutos, N., Ortega-Egea, J. M. (2015). An integrative model of consumers' reluctance to buy foreign products: do social and environmental country images play a role?, Journal of Macromarketing, 35(2), 167-186.

Gershoff, A. D., Frels, J. K. (2015), What Makes It Green? The Role of Centrality of Green Attributes in Evaluations of the Greenness of Products, Journal of Marketing, 79 (1), 97–110.

Hayes, A. F. (2022), Introduction to Mediation, Moderation, and Conditional Process Analysis, 3rd ed., New York: Guilford Press.

Lala, V., Allred, A. T., Chakraborty, G. (2008). A multidimensional scale for measuring country image, Journal of International Consumer Marketing, 21(1), 51-66.

Leonidou, C., Katsikeas, C. S., Morgan, N. A. (2013), Greening the Marketing Mix: Do Firms Do It and Does It Pay Off?, Journal of the Academy of Marketing Science, 41 (2), 151–170.

Mittal, B., Lee, M. (1988), Separating Brand-Choice Involvement from Product Involvement via Consumer Involvement Profiles, Advances in Consumer Research, 15 (1), 43–49.

Roth, K. P., Diamantopoulos, A. (2009). Advancing the country image construct, Journal of Business Research, 62(7), 726-740.

Roth, M. S., Romeo, J. B. (1992), Matching Product Category and Country Image Perceptions: A Framework for Managing Country-of-Origin Effects, Journal of International Business Studies, 23 (3), 477–497.

Steenkamp, J. B. E., De Jong, M. G., Baumgartner, H. (2010). Socially desirable response tendencies in survey research, Journal of Marketing Research, 47(2), 199-214.

Thøgersen, J., Pedersen, S. (2021). The importance of the export country's environmental image for consumer responses to an imported environmentally friendly product, International marketing review, 38(6), 1217-1241.

Tran, T. H., Paparoidamis, N. G. (2020), Eco-Innovations in Global Markets: The Effect of Ecological (In)Congruence on Consumers' Adoption Intentions, Journal of International Marketing, 28 (3), 64–83.

United Nations (2015), Transforming our world: the 2030 Agenda for Sustainable Development, United Nations General Assembly, (https://sdgs.un.org/2030agenda).

# From Purpose to Performance: How Brand Reputation Links Humane Entrepreneurship to International Performance

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## Abstract

In the current global context, firms are increasingly expected to integrate ethical, sustainable, and human-centered principles in their strategy. Humane Entrepreneurship (HumEnt), which encompasses entrepreneurial (EO), sustainability (SO), and human resource orientations (HRO), offers a framework to align business performance with broader social goals. This study investigates the relationship between HumEnt and international performance, with a specific focus on the mediating role of brand reputation. Using primary data from 228 Italian firms, we examine whether different levels of HumEnt are associated with variations in international performance and whether these differences are explained by firms' international reputation. The analysis applies a mediation framework to assess both direct and indirect effects. The results indicate that the influence of HumEnt on international performance is mediated significantly by brand reputation. The direct effect of HumEnt on performance is not statistically significant, suggesting that brand reputation is the primary channel through which HumEnt contributes to international outcomes. These findings contribute to the literature on HumEnt by providing empirical evidence on its strategic relevance in international business. For practitioners, the study underlines the importance of fostering brand credibility through ethical and sustainable practices as a tool to enhance competitiveness in international markets. The results support the view that purpose-driven strategies can generate value beyond the domestic context, reinforcing the role of reputation in translating humane values into measurable international performance.

*Keywords: Humane Entrepreneurship, Humane Entrepreneurial Orientation, International Performance, International Competitiveness, Brand Reputation*

## 1. Introduzione

The ongoing transformation of the global business environment, driven by intensifying climate crises, widening social inequalities, and the depletion of natural resources, is compelling firms to reassess their strategic priorities and social responsibilities (Parente et al., 2021; Zhao et al., 2024). Businesses are increasingly expected not only to generate profit but also to act as agents of positive change by addressing complex societal and environmental challenges (Ghauri et al., 2021). This evolution in expectations has given rise to alternative business models that embed ethical commitments, stakeholder well-being, and sustainable value creation into their core operations.

Among these, Humane Entrepreneurship (HumEnt) has emerged as a framework integrating economic dynamism with a strong focus on human, social, and environmental capital (Kim et al., 2018; Parente et al., 2018). HumEnt is defined by three strategic orientations: Entrepreneurial Orientation (EO), Sustainability Orientation (SO), and Human Resource Orientation (HRO) (Parente et al., 2021). EO encourages proactiveness and calculated risk-taking, essential for navigating dynamic global markets (Covin & Lumpkin, 2011). SO aligns firms with growing demands for responsible business conduct, enabling long-term resilience and stakeholder alignment (Kuckertz & Wagner, 2010; Muñoz & Dimov, 2015). HRO refers to inclusive, people-centered practices that enhance employee engagement, creativity, and organizational learning (Kim et al., 2018; Vesci et al., 2023).

By placing these orientations at the heart of firm strategy, HumEnt enables organizations to build strategic flexibility, social legitimacy, and a deep-rooted alignment with global institutional expectations, which are key drivers of international competitiveness and performance (George et al., 2023; Zahra, 2021). Firms that internalize the principles of HumEnt may develop a distinct ethical identity that resonates with stakeholders across diverse markets, allowing them to differentiate themselves from competitors through purpose-driven value propositions (Chakrabarty & Wang, 2012; Henderson, 2021).

However, despite its growing theoretical appeal, the relationship between HumEnt and international performance remains unexplored. Existing studies have primarily focused on domestic outcomes of sustainability and ethical practices (Mayer, 2021; Muñoz et al., 2018), leaving a significant gap in understanding how purpose-driven strategies translate into superior performance in global markets. In particular, the role of intangible assets, such as brand reputation, in mediating this relationship has received limited empirical and theoretical attention.

Brand reputation, understood as stakeholders' collective perception of a firm's integrity, values, and social impact, is increasingly recognized as a critical determinant of global success (Hall Jr. & Lee, 2014). As international consumers, investors, and partners become more attuned to issues of transparency, fairness, and sustainability, a strong ethical reputation can serve as a powerful mechanism for building trust and overcoming the liabilities of foreignness (Chabowski et al., 2023). Firms that embody the tenets of HumEnt, through demonstrable commitments to human development, environmental stewardship, and inclusive innovation, are more likely to cultivate this reputational capital (Aspelund, 2017). In turn, this can enhance their ability to achieve growth and access new markets (El Tarabishy et al., 2022).

Moreover, recent research suggests that ethical and sustainability-driven firms tend to be more innovative, resilient, and socially embedded. These traits are strongly associated with long-term international performance (El Tarabishy et al., 2022; Xin et al., 2023). Bae et al. (2018), for instance, argue that HumEnt can stimulate inclusive innovation that strengthens global performance by addressing underserved needs across borders.

In light of this, the present study investigates how HumEnt contributes to a firm's international success and whether this relationship is shaped by reputational factors. Accordingly, we propose the following hypotheses (see Figure 1):

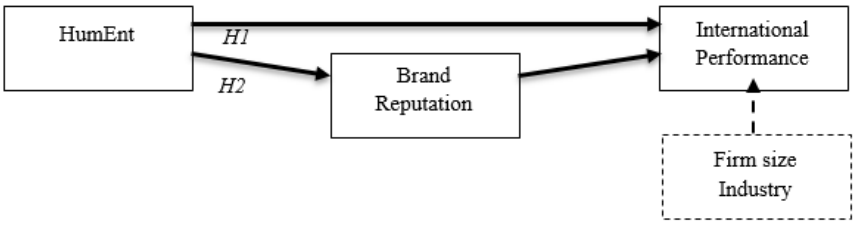



**Figure 1:** Conceptual Framework

H1: Firms with a strong HumEnt orientation are more likely to achieve superior international performance.

H2: Brand reputation mediates the relationship between HumEnt orientation and international performance.

## 2. Methodology

The study draws on primary data collected within the framework of the PRIN project, funded by the Italian Ministry of University and Research. A structured questionnaire was administered via email between December 2024 and February 2025 to a heterogeneous sample of Italian firms. The sample encompassed companies recognized as Best Places to Work 2023, EMAS-certified firms, B-Corporations, businesses listed on the Italian Stock Exchange, Euronext Growth firms, and innovative SMEs. This purposive sampling strategy enabled broad coverage across various organizational forms and industries within the Italian entrepreneurial ecosystem. After excluding incomplete submissions, the final dataset comprised 228 fully completed surveys, with 50% of the sample consisting of exporting firms.

The survey instrument was designed to capture multiple dimensions of international business performance. Specifically, the indicators were adapted from Donbesuur et al. (2020), while constructs related to HumEnt were operationalized based on Vesci et al. (2024). Brand reputation was assessed through a self-reported measure, capturing respondents' perceptions of how their company is viewed in the market. All these variables were measured using 7-point Likert scales, as detailed in Table 1.

The analytical approach was structured into three sequential phases to uncover latent firm typologies and examine their impact on international performance outcomes.

First, a cluster analysis was conducted to detect naturally occurring profiles within the sample, based on the standardized values of HumEnt variables. This step facilitated the identification of meaningful behavioral profiles among the firms.

In the second phase, regression models were employed to assess the predictive influence of cluster membership on international performance outcomes. These models allowed for the examination of how distinct firm profiles are associated with variations in international performance, accounting for potential covariates.

Finally, a mediation analysis was conducted to test the presence of indirect effects. This analysis aimed to explore whether specific mechanisms mediated the relationship between cluster profiles and international performance, thereby offering a deeper understanding of the underlying dynamics.

| Variable Name | Description | Unit |
|---|---|---|

| | | |
|---|---|---|
| *HumEnt* | | Likert Scale (1-7) |
| • EO | 3 items (innovation, competitiveness, aggressiveness) (Covin & Slevin, 1989) | |
| • SO | 2 items (social sustainability, environmental sustainability) (Muñoz & Dimov, 2015) | |
| • HRO | 4 items (empathy, no discrimination, employee development, participation) (Kim et al., 2018) | |
| *International Performance* | 6 items (international market share, sales volumes, sales growth, profitability, overall international performance, overall results achieved) (Donbesuur et al., 2020) | Likert Scale (1-7) |
| *Brand Reputation* | Self-reported measure | Likert Scale (1-7) |
| *Firm Size* | Firm size class (Micro, Small, Medium, Large) | Categorical (1-4) |
| *Industry* | Sector of the firm (Manufacturing, Services, Commerce, Construction) | Categorical (1-4) |

**Table 1:** Key variables description

## 3.Preliminary Findings

The analytical process began with a Confirmatory Factor Analysis (CFA) to validate the measurement model of HumEnt, which integrates EO, SO, and HRO. Standardized factor loadings were satisfactory across constructs, with all exceeding the 0.50 threshold. Significant positive covariances among the latent constructs further supported their theoretical interrelatedness. Factor scores for each HumEnt dimension were then extracted and standardized to perform k-means cluster analysis. Although the elbow and silhouette methods suggested differing optimal cluster numbers (3 and 2, respectively), theoretical interpretability favored a three-cluster solution. These clusters were labeled as "Low HumEnt", characterized by below-average scores across EO, SO, and HRO; "In Transitions", exhibiting moderate EO and slightly positive SO and HRO; and "High HumEnt" displaying above-average scores on all dimensions (see Table 2). The average silhouette width of 0.323 indicated a reasonable clustering solution.

| **Cluster** | **EO** | **SO** | **HRO** |
|---|---|---|---|
| *Low HumEnt* | -0.52 | -1.24 | -0.99 |
| *In Transition* | -0.72 | 0.14 | 0.19 |
| *High HumEnt* | 1.14 | 0.74 | 0.52 |

**Table 2:** Cluster Profiles (mean standardized scores)

Multiple linear regression analyses, controlling for firm size and industry, were conducted using a composite indicator of international performance as the dependent variable (see Table 3). Consistent with H1, results revealed that firms in the "High HumEnt" cluster significantly outperformed the "Low HumEnt" cluster in composite international performance ($\beta = 0.714$, $p < 0.05$). The "In Transition" cluster did not differ significantly from the "Low HumEnt" group ($\beta = 0.252$, $p > 0.05$). These results held for multiple international performance indicators, notably sales growth ($\beta = 0.865$, $p > 0.05$) and overall results achieved ($\beta = 0.738$, $p > 0.05$). Industry effects showed that firms in the Service sector consistently had lower international performance. All these results suggest that organizations embracing a strong human-centric approach tend to achieve superior outcomes in international markets.

Building on this, to test H2, we conducted a causal mediation analysis controlling for firm size and industry. "High HumEnt" firms showed significantly higher brand reputation than

"Low HumEnt" firms (β = 1.198, p < 0.01), with "In Transition" firms also reporting higher reputation (β = 0.766, p < 0.05). When both cluster membership and brand reputation were included in predicting international performance, brand reputation emerged as a strong positive predictor (β = 0.421, p < 0.001), while the direct effect of the "High HumEnt" cluster on performance became non-significant (β = 0.200, p > 0.05).

| Variable | Model 1 (Direct Effect) | Model 2 (Mediation) |
|---|---|---|
| Intercept | 3.724*** | 2.052*** |
| "In Transition" (Cluster 1) | 0.252 | -0.059 |
| High HumEnt" (Cluster 3) | 0.714* | 0.200 |
| Brand Reputation | - | 0.421*** |
| Size (Small) | -0.142 | -0.376 |
| Size (Medium) | 0.362 | 0.087 |
| Size (Large) | 0.826 | 0.726 |
| Industry (Services) | -0.922** | -0.749** |
| Industry (Commerce) | -0.714 | -0.818 |
| *Goodness of Fit Indices* | | |
| R-squared | 0.185 | 0.355 |
| Adjusted R-squared | 0.137 | 0.311 |

Significance levels: ***p < 0.001, ** p < 0.01, *p < 0.05

**Table 3:** Results of model estimation for the composite index of International Performance

Formal mediation tests confirmed a significant Average Casual Mediation Effect (ACME) for composite international performance (ACME = 0.326, 95% CI: 0.038, 0.700, p < 0.05), with a non-significant Average Direct Effect (ADE), indicating full mediation. This mediation pattern persisted across individual performance items, suggesting the central role of brand reputation in translating HumEnt into international success.

## 4. Discussion, Limitations, and Future Research

The current preliminary study offers evidence that HumEnt, defined by the integration of EO, SO, and HRO (Parente et al., 2018), enhances international business performance. Firms demonstrating high commitment to these principles significantly outperformed others. However, a closer analysis of this relationship reveals that this advantage is primarily explained by brand reputation. Our mediation analysis shows that the performance benefit of HumEnt is fully channeled via enhanced reputational capital, suggesting that brand reputation plays a key, though not necessarily exclusive, role in this dynamic. In essence, ethical and human-centered strategies must be visible and credible to international stakeholders to yield tangible results.

The research aims to contribute to both theory and practice. From a managerial standpoint, adopting HumEnt practices is not enough. Firms must also cultivate and communicate a strong brand identity rooted in these values. Theoretically, this study underlines the role of brand reputation as a central mechanism linking ethical orientations to global competitiveness.

Nonetheless, the study's cross-sectional design limits causal interpretations, and reliance on self-reported measures introduces potential bias. Additionally, the focus on Italian firms may constrain generalizability. Future research should therefore adopt longitudinal and cross-cultural approaches to explore how the HumEnt-reputation-international links evolve over time and across institutional contexts. Examining additional mediators, such as innovation

capabilities or stakeholder engagement, could further deepen our understanding of how HumEnt strategies translate into sustainable competitive advantage in global markets.

## References


Aspelund, A. (2017). Doing Good and Doing Well? International Entrepreneurship and Social Responsibility. International Journal of Entrepreneurship, 21(2), 13–32.

Bae, T., Kang, M. S., Kim, K.-C., Park, J.-H., & Bae, Z.-T. (2018). Humane Entrepreneurship: Theoretical Foundations and Conceptual Development. The Journal of Small Business Innovation, 20(4), 11–21.

Chabowski, B. R., Gabrielsson, P., Hult, G. T. M., & Morgeson, F. V. (2023). Sustainable international business model innovations for a globalizing circular economy: a review and synthesis, integrative framework, and opportunities for future research. Journal of International Business Studies. https://doi.org/10.1057/s41267-023-00652-9

Chakrabarty, S., & Wang, L. (2012). The Long-Term Sustenance of Sustainability Practices in MNCs: A Dynamic Capabilities Perspective of the Role of R&D and Internationalization. Journal of Business Ethics, 110(2), 205–217. https://doi.org/10.1007/s10551-012-1422-3

Covin, J. G., & Lumpkin, G. T. (2011). Entrepreneurial orientation theory and research: Reflections on a needed construct. Entrepreneurship: Theory and Practice, 35(5), 855–872. https://doi.org/10.1111/j.1540-6520.2011.00482.x

Covin, J. G., & Slevin, D. P. (1989). Strategic management of small firms in hostile and benign environments. Strategic Management Journal, 10(1), 75–87. https://doi.org/10.1002/smj.4250100107

Donbesuur, F., Ampong, G. O. A., Owusu-Yirenkyi, D., & Chu, I. (2020). Technological innovation, organizational innovation, and international performance of SMEs: The moderating role of domestic institutional environment. Technological Forecasting and Social Change, 161. https://doi.org/10.1016/j.techfore.2020.120252

El Tarabishy, A., Hwang, W. S., Enriquez, J. L., & Kim, K. C. (2022). The empirical performance of humane entrepreneurship. Journal of the International Council for Small Business, 3(1), 7–23. https://doi.org/10.1080/26437015.2021.1940374

George, G., Haas, M. R., McGahan, A. M., Schillebeeckx, S. J. D., & Tracey, P. (2023). Purpose in the For-Profit Firm: A Review and Framework for Management Research. Journal of Management, 49(6), 1841–1869. https://doi.org/10.1177/01492063211006450

Ghauri, P., Strange, R., & Cooke, F. L. (2021). Research on international business: The new realities. International Business Review, 30(2). https://doi.org/10.1016/j.ibusrev.2021.101794

Hall Jr., E. H., & Lee, J. (2014). Assessing the Impact of Firm Reputation on Performance: An International Point of View. International Business Research, 7(12). https://doi.org/10.5539/ibr.v7n12p1

Henderson, R. M. (2021). Changing the purpose of the corporation to rebalance capitalism. Oxford Review of Economic Policy, 37(4), 838–850. https://doi.org/10.1093/oxrep/grab034

Kim, K. C., ElTarabishy, A., & Bae, Z. T. (2018). Humane Entrepreneurship: How Focusing on People Can Drive a New Era of Wealth and Quality Job Creation in a Sustainable World. Journal of Small Business Management, 56, 10–29. https://doi.org/10.1111/jsbm.12431

Kuckertz, A., & Wagner, M. (2010). The influence of sustainability orientation on entrepreneurial intentions - Investigating the role of business experience. Journal of Business Venturing, 25(5), 524–539. https://doi.org/10.1016/j.jbusvent.2009.09.001

Mayer, C. (2021). The Future of the Corporation and the Economics of Purpose. Journal of Management Studies, 58(3), 887–901. https://doi.org/10.1111/joms.12660

Muñoz, P., Cacciotti, G., & Cohen, B. (2018). The double-edged sword of purpose-driven behavior in sustainable venturing. Journal of Business Venturing, 33(2), 149–178. https://doi.org/10.1016/j.jbusvent.2017.12.005

Muñoz, P., & Dimov, D. (2015). The call of the whole in understanding the development of sustainable ventures. Journal of Business Venturing, 30(4), 632–654. https://doi.org/10.1016/j.jbusvent.2014.07.012

Parente, R., El Tarabishy, A., Botti, A., Vesci, M., & Feola, R. (2021). Humane entrepreneurship: Some steps in the development of a measurement scale. Journal of Small Business Management, 59(3), 509–533. https://doi.org/10.1080/00472778.2020.1717292

Parente, R., ElTarabishy, A., Vesci, M., & Botti, A. (2018). The Epistemology of Humane Entrepreneurship: Theory and Proposal for Future Research Agenda. Journal of Small Business Management, 56, 30–52. https://doi.org/10.1111/jsbm.12432

Vesci, M., Botti, A., Feola, R., Conti, E., & El Tarabishy, A. (2023). Bridging theory and practice in the humane entrepreneurship domain: insights from small and medium Italian enterprises. Journal of Small Business and Enterprise Development, 30(3), 567–586. https://doi.org/10.1108/JSBED-11-2021-0465

Vesci, M., Botti, A., & Parente, R. (2024). Humane entrepreneurial orientation as strategic posture: A proposal for measurement and enterprise classification. In Humane Entrepreneurship and Innovation: An Alternative Way to Promote Sustainable Development (pp. 105–131). Emerald Group Publishing Ltd. https://doi.org/10.1108/978-1-83797-374-320241007

Xin, Y., Khan, R. U., Dagar, V., & Qian, F. (2023). Do international resources configure SMEs' sustainable performance in the digital era? Evidence from Pakistan. Resources Policy, 80. https://doi.org/10.1016/j.resourpol.2022.103169

Zahra, S. A. (2021). International entrepreneurship in the post Covid world. Journal of World Business, 56(1). https://doi.org/10.1016/j.jwb.2020.101143

Zhao, S., Peerally, J. A., De Fuentes, C., & Gonzalez-Perez, M. A. (2024). The determinants of multinational enterprises' sustainable innovations. International Business Review, 33(5). https://doi.org/10.1016/j.ibusrev.2024.102318

# Track 2
# Consumer Behavior

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I ricercatori di consumer behavior studiano come gli individui, i gruppi o le organizzazioni scelgono, acquistano, consumano e dispongono di beni, servizi, esperienze ed idee, al fine di soddisfare i propri bisogni e obiettivi. In questa sezione, vengono dunque analizzati sia gli atteggiamenti che i comportamenti degli individui nell'ambito delle proprie scelte di acquisto e consumo. Avvalendosi del supporto di teorie e metodi provenienti da diversi ambiti scientifici (es. psicologia, sociologia, statistica, antropologia, neuroscienze, economia, information technology), lo studio del consumer behavior fornisce ai ricercatori e ai manager una grande varietà di approcci e strumenti di analisi (ad esempio, sia metodologie quantitative che qualitative), finalizzati a ottenere una solida base di conoscenze e insight su numerosi aspetti che sono centrali per la formulazione delle strategie di marketing. Tra questi, possono ad esempio essere menzionati i seguenti:

- Qual è l'impatto delle variabili ambientali, storiche e culturali sui comportamenti di consumo;
- Qual è il ruolo dei fattori sociali (es. gruppi, comunità, famiglie) nell'interpretazione o previsione dei comportamenti di consumo;
- Quali sono i processi psicologici attraverso cui i consumatori pensano, ragionano, percepiscono le informazioni, ricordano, formano preferenze e scelgono;
- Quali sono le emozioni che intervengono nei processi decisionali che riguardano l'acquisto e il consumo;
- Quali sono le diverse fasi seguite dagli individui nei vari processi di acquisto e consumo;
- Qual è il ruolo delle variabili di marketing (es. prodotto, marca, prezzo, spazi commerciali, etc.) nell'influenzare il comportamento del consumatore.

Consumer behavior research explores how individuals, groups, and organizations select, buy, use, and dispose of products, services, and ideas. It examines attitudes and behaviors in consumption decisions, using theories and methods from fields such as psychology, sociology, anthropology, neuroscience, and economics. The goal is to provide insights that support effective marketing strategies.

Core themes include the influence of cultural and environmental factors, the role of social groups, key psychological and emotional processes in decision-making, the stages of purchasing and consumption, and the impact of marketing variables such as product, brand, price, and retail settings.

# Please, Mind the Gap! Dal Dire al Fare Sostenibile

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## Abstract

In un contesto in cui la sostenibilità è al centro delle agende politiche, economiche e aziendali, il comportamento dei consumatori rappresenta una leva fondamentale per promuovere modelli di consumo più responsabili. Tuttavia, il divario tra intenzioni dichiarate e comportamenti effettivi – noto come say–do gap – continua a ostacolare la transizione verso scelte realmente sostenibili. Questo studio propone un'analisi integrata dei comportamenti di consumo e di acquisto in Italia, basata su dati dichiarativi e comportamentali raccolti tramite il Consumer Panel Service di NielsenIQ. L'analisi di oltre 9.600 famiglie ha permesso di identificare sei cluster con differenti profili sociodemografici, attitudinali e di acquisto, evidenziando sia segmenti coerenti tra intenzioni e comportamenti, sia gruppi più contraddittori. Il contributo si inserisce in un più ampio progetto di ricerca finalizzato a monitorare nel tempo l'evoluzione del consumo sostenibile e a fornire strumenti pratici per ridurre il divario tra intenzione e azione. Le evidenze emerse offrono implicazioni rilevanti per le strategie di marketing volte alla promozione di modelli di consumo più consapevoli, inclusivi e stabili nel tempo.

*Keywords: Sostenibilità; Consumer Behavior; NielsenIQ; Consumo Consapevole.*

## 1. Introduzione

Negli ultimi decenni, la sostenibilità ha conquistato un posto di primo piano nelle agende politiche, economiche e sociali a livello globale, passando da tema marginale legato all'ambiente a fondamento imprescindibile dello sviluppo del ventunesimo secolo (Schaefer & Crane, 2005; Portney, 2015; Ferrero-Ferrero et al., 2023). Se inizialmente il concetto si legava prevalentemente alla scarsità di risorse naturali (Kuhlman & Farrington, 2010), oggi si riconosce in modo sempre più condiviso la sua triplice natura che integra le dimensioni ambientale, sociale ed economica (Purvis et al., 2018), evolvendosi rispetto a quanto sostenuto dall'accademia negli anni '80.

Tuttavia, nonostante gli sforzi delle Nazioni Unite, formalizzati attraverso gli Obiettivi di Sviluppo Sostenibile (SDGs) (Whittingham et al., 2023), i progressi attuati restano ancora insufficienti (United Nations, 2023). È in questo scenario che i comportamenti della domanda assumono un'importanza strategica: è infatti nelle scelte quotidiane delle persone che si giocano molte delle possibilità reali di cambiamento. Come sottolineato da Sheth et al. (2011), il modo in cui i cittadini orientano le proprie decisioni d'acquisto può diventare una delle leve più potenti – e allo stesso tempo più complesse – per avvicinare l'economia globale a modelli più sostenibili.

Sebbene i consumatori dichiarino una crescente attenzione ai temi etici e ambientali, e ricerchino brand in linea con i propri valori (Anuradha et al., 2023), le scelte sostenibili restano ancora minoritarie, soprattutto in presenza di barriere percettive come prezzi elevati o prestazioni percepite inferiori rispetto a prodotti considerati meno o non proprio sostenibili (Olson, 2013). A complicare ulteriormente il quadro contribuisce l'evidenza che molte decisioni di acquisto avvengono direttamente nel punto vendita (Inman et al., 2009), in un contesto dominato da stimoli sensoriali, eccesso di informazioni, euristiche e scorciatoie cognitive, nonché dinamiche impulsive non sempre consapevoli. Proprio per questo motivo, le aziende hanno iniziato a sperimentare strategie di marketing pensate per influenzare responsabilmente il comportamento d'acquisto, agendo direttamente sull'architettura delle scelte attraverso leve di marketing come il posizionamento di prezzo (Bedek 2011; Ingenbleek, 2015; Hecht et al., 2020), la gestione dell'assortimento e il category management (Hecht et al., 2020), le private label (Ngobo, 2011; Gielens et al., 2021) e l'intensità promozionale (Bedek, 2011). Grazie ai diversi interventi nei punti vendita, mirati al miglioramento del comportamento dei consumatori (Wansink, 2017), lo shopper marketing diventa un terreno fertile su cui le imprese, sia industriali che commerciali, possono agire per stimolare scelte più sostenibili.

In questo scenario, infatti, lo shopper marketing – inteso come l'insieme di strumenti, tattiche e azioni volte a influenzare il comportamento del consumatore durante il path-to-purchase (Shankar, 2011) – assume una nuova e profonda valenza sociale volta a spingere le scelte di acquisto verso prodotti che hanno un impatto positivo sia sulle persone che sul pianeta. Se orientato verso obiettivi di benessere collettivo, lo shopper marketing può dunque contribuire a promuovere scelte consapevoli e sostenibili, trasformando il punto vendita in un vero e proprio luogo di creazione di valore sociale (Yoder et al., 2021; Bellini, 2023). Tutto ciò depone a favore della centralità dei retailer nelle attività promosse a sostegno della sostenibilità lungo tutto il percorso d'acquisto (Yoder et al., 2021). Per essere efficace, questo approccio richiede un cambio di paradigma: occorre integrare i principi dell'economia comportamentale, della psicologia cognitiva e delle neuroscienze nelle logiche di marketing tradizionale, così da interpretare con maggiore precisione le dinamiche decisionali dei consumatori. Solo così è possibile comprendere come le scelte vengano realmente prese nei contesti di acquisto e intervenire in modo mirato sulla loro attivazione e consolidamento.

Tuttavia, le scelte sostenibili non sono facili da compiere né, soprattutto, da mantenere stabilmente nel tempo, poiché richiedono uno sforzo cognitivo significativo che sfugge spesso al controllo consapevole e si arrende di fronte a una forza di volontà che, per definizione, non è inesauribile (Bellini et al., 2025). In queste condizioni, diventano centrali gli strumenti dell'economia comportamentale, che permettono di intercettare i meccanismi mentali impliciti alla base delle decisioni e di orientarli verso scelte in grado di migliorare il benessere individuale e collettivo. Le scelte sostenibili, inoltre, si configurano spesso come "intertemporali" (Thaler & Sunstein, 2008), ovvero richiedono un sacrificio immediato nel presente (es. in termini di tempo, prezzo o comodità) a fronte di benefici futuri e collettivi, spesso meno tangibili e quindi difficili da percepire, da valutare e misurare nell'immediato o comunque nel breve periodo. Tale asimmetria percettiva riduce la forza di volontà degli individui (Bellini et al., 2025) e compromette la stabilità delle scelte sostenibili nel tempo, minando l'efficacia delle intenzioni dichiarate e aprendo la strada a un diffuso disallineamento comportamentale. Un elemento chiave per comprendere l'inefficacia delle sole dichiarazioni di intenti è rappresentato dal cosiddetto "say–do gap", ovvero il divario tra ciò che i consumatori affermano di voler fare (intenzioni) e ciò che realmente fanno (comportamenti). Questo fenomeno, ampiamente documentato in letteratura (Sheeran & Webb, 2016; Bellini et al., 2025), rivela che anche i soggetti con forte consapevolezza ambientale e sociale non necessariamente traducono tali convinzioni in scelte di acquisto coerenti. Le cause sono molteplici: dalla presenza di barriere cognitive e motivazionali (Shah & Oppenheimer, 2008;

Bellini et al., 2025), alla mancanza di incentivi immediati (Thaler & Sunstein, 2008), fino a ostacoli di tipo strutturale come prezzi elevati (Olson, 2013) o scarsa o inadeguata visibilità dei prodotti sostenibili nel punto vendita (Inman et al., 2009).

All'interno di quello che viene definito da Bellini (2023) come "conscious shopping", ossia consumo responsabile, il say–do gap rappresenta non solo una sfida per la ricerca accademica, ma anche un ostacolo concreto per tutte quelle imprese che intendono promuovere comportamenti sostenibili attraverso le leve dello shopper marketing. È quindi fondamentale individuare strategie capaci di colmare questa distanza tra intenzione e comportamento, trasformando il dichiarato in abitudini stabili e coerenti di consumo sostenibile. In questa prospettiva, il ruolo dei retailer si rivela particolarmente rilevante nel riavvicinare il "dire" al "fare": grazie alla loro capacità di incidere sul contesto decisionale, possono intervenire direttamente nel punto vendita per facilitare scelte più sostenibili, agendo su leve di marketing, cognitive e ambientali che incoraggino comportamenti virtuosi senza richiedere uno sforzo deliberativo eccessivo. È proprio in questo contesto che si inserisce il concetto di nudging, inteso come insieme di interventi "leggeri e gentili" e non prescrittivi sull'architettura delle scelte è in grado di orientare i comportamenti in modo prevedibile senza imporre vincoli né modificare significativamente gli incentivi economici (Thaler & Sunstein, 2008)[5]. Le leve del nudging si rivelano particolarmente efficaci nel guidare le decisioni degli individui poiché fanno leva sulle componenti emotive, più reattive in situazioni in cui la forza di volontà si affievolisce di fronte all'incertezza del risultato e alla difficoltà di quantificare il ritorno personale (Thaler & Sunstein, 2008). Esso agisce, infatti, su automatismi cognitivi, componenti emotive e risposte affettive, riducendo lo sforzo deliberativo e facilitando decisioni virtuose (Bargh et al., 2001; Shah & Oppenheimer, 2018; Caraban et al., 2019; Wozniak et al., 2024). L'efficacia del nudging nel promuovere comportamenti sostenibili è ampiamente documentata in letteratura (Lehner et al., 2016; Mont et al., 2014; Trewern et al., 2021; Mirbabaie et al., 2022; Amiri et al., 2024). In particolare, queste "spinte gentili" si sono dimostrate cruciali nel colmare il persistente gap tra intenzioni e comportamenti (Sheeran & Webb, 2016; Bergram et al., 2022; Bellini et al., 2025), contribuendo a trasformare scelte episodiche e azioni isolate in abitudini consolidate e socialmente desiderabili. Tali obiettivi dovrebbero trovare rispondenza nelle strategie delle imprese, sia commerciali che industriali, promuovendo nudges lungo tutto il customer journey.

In questo contesto teorico e operativo, il presente lavoro si propone di misurare il fenomeno del "say-do-gap" in ambito di sostenibilità attraverso un'analisi empirica basata sui dati del Consumer Panel Service di NielsenIQ (di seguito CPS) che integrano dati autodichiarati e comportamentali.

Comprendere la complessità e l'eterogeneità della domanda è una condizione necessaria per avviare una riflessione concreta sulla direzione verso la quale devono orientarsi le strategie di marketing delle imprese affinché possano portare un contributo fattivo e concreto in ambito di sostenibilità. L'analisi, aggiornata al 2025, introduce una nuova segmentazione supportata da una base dati ampliata e aggiornata, offrendo evidenze quantitative utili per comprendere con maggiore precisione le dinamiche che caratterizzano il divario tra intenzione e azione.

## 2. Background teorico

Il crescente interesse dei consumatori verso la sostenibilità ha aperto nuove sfide per la comprensione e la promozione di comportamenti di acquisto allineati ai principi della responsabilità ambientale e sociale. Tuttavia, numerosi studi hanno evidenziato l'esistenza di

[5] Definizione di nudge di Thaler & Sunstein, 2008: "nudge is any aspect of the choice architecture that alters people's behavior in a predictable way without forbidding any options or significantly changing their economic incentives".

un persistente divario tra ciò che i consumatori dichiarano di voler fare e ciò che effettivamente fanno nel contesto reale di consumo: il cosiddetto say–do gap (Sheeran & Webb, 2016; Carrington et al., 2010; White et al., 2019; Munro et al., 2023). Questo fenomeno, particolarmente rilevante nei comportamenti di acquisto di beni di largo consumo, riflette una distanza tra la sensibilità espressa dai consumatori e le azioni concrete ed effettivamente compiute nel momento della scelta d'acquisto (Yamoah & Acquaye, 2019). Le ragioni alla base di questo gap sono molteplici e, come evidenziato da Munro et al. (2023) in una recente analisi sistematica sul say–do gap della spesa alimentare sostenibile nel contesto del supermercato, coinvolgono una serie di fattori che vanno ben oltre l'individuo. Questi includono barriere cognitive, motivazionali e strutturali, come la percezione di prezzi più elevati, la disponibilità limitata di alternative sostenibili, la scarsa visibilità o promozione dei prodotti in-store (Yamoah & Acquaye, 2019), la mancanza di fiducia nelle etichette e nei retailer (Munro et al., 2023), nonché la difficoltà di valutare i benefici ambientali e sociali nell'immediato o comunque nel breve periodo (Shah & Oppenheimer, 2008; Olson, 2013; Frank & Brock, 2018; Lehner, 2015; Munro et al., 2023). Inoltre, il comportamento d'acquisto sostenibile è spesso descritto come una scelta intertemporale (Thaler & Sunstein, 2008), in cui i costi percepiti si manifestano immediatamente (in termini di tempo, denaro o sforzo cognitivo), mentre i benefici sono collettivi, diluiti nel tempo e spesso difficili da quantificare (Bellini, 2023). Questo disallineamento tra costi immediati e benefici differiti indebolisce la determinazione individuale e può tradursi in compromessi pratici o divergenze tra intenzioni dichiarate e comportamenti effettivi (Ferrero-Ferrero et al., 2023). Secondo la Theory of Planned Behavior (Ajzen, 1991), l'intenzione di compiere un'azione è influenzata da attitudini, norme soggettive e percezione di controllo; tuttavia, numerosi studi evidenziano come l'intenzione, da sola, non sia sufficiente a determinare comportamenti coerenti, soprattutto in situazioni ad alto carico cognitivo o basso supporto ambientale (Carrington et al., 2010; White et al., 2019). Di conseguenza, anche i consumatori più motivati, consapevoli e informati possono incontrare ostacoli significativi che compromettono l'attuazione concreta delle loro intenzioni di acquisto sostenibile (Munro et al., 2023). Come sottolineato da Carrington et al. (2010; 2014), il passaggio dall'intenzione all'azione è tutt'altro che lineare: esso si rivela particolarmente critico proprio nel punto vendita, dove prevalgono abitudini consolidate, dinamiche impulsive e considerazioni legate a prezzo, convenienza o gusti individuali e non (Sarti et al., 2018). In tale contesto, in cui si realizzano gran parte delle scelte di consumo (Inman et al., 2009), l'organizzazione dell'offerta e dell'assortimento, la comunicazione visiva, l'impiego di etichette affidabili e di supporti visivi in-store capaci di guidare il consumatore verso scelte più sostenibili rappresentano leve determinanti per orientare le scelte del consumatore (Frank & Brock, 2018; Lehner, 2015). Attribuire il fallimento comportamentale esclusivamente all'individuo risulta quindi riduttivo. Il contributo di Munro et al. (2023) invita a superare la tradizionale prospettiva microcentrica, proponendo un cambio di paradigma verso una visione sistemica ispirata al macromarketing. Il punto vendita non è, dunque, considerato solo come luogo decisionale, ma come un ecosistema complesso in cui molteplici attori — dai produttori ai retailer, fino alle istituzioni regolatrici — interagiscono e si influenzano reciprocamente, contribuendo in modo decisivo a determinare le condizioni che facilitano o ostacolano il consumo sostenibile. Questa visione evidenzia l'importanza di progettare ambienti, politiche e pratiche commerciali capaci di attivare meccanismi di feedback positivi, stimolando un processo evolutivo nelle abitudini di consumo e nelle capacità decisionali del consumatore. È in questo ambiente che le strategie di shopper marketing possono giocare un ruolo cruciale nel facilitare scelte più sostenibili (Shankar, 2011; Yoder et al., 2021; Bellini, 2023). Agendo su leve quali il posizionamento dei prodotti, la gestione dell'assortimento, l'uso delle private label o l'intensità e la frequenza delle attività promozionali (Bedek, 2011; Ingenbleek, 2015; Gielens et al., 2021), le imprese possono influenzare concretamente il comportamento degli

acquirenti, soprattutto quando tali azioni sono integrate in un'architettura delle scelte favorevole (Wansink, 2017; Bellini et al., 2025).

In questa prospettiva, il retailer può assumere il ruolo di nudger, configurando il punto vendita in modo da rendere le scelte sostenibili più semplici, immediatamente identificabili e desiderabili, orientando i comportamenti attraverso modifiche contestuali che preservano la libertà di scelta del consumatore (Thaler & Sunstein, 2008; Bellini et al., 2025). Secondo la definizione originaria proposta da Thaler e Sunstein (2008) il nudge fa riferimento a qualsiasi aspetto dell'architettura delle scelte che modifica il comportamento delle persone in modo prevedibile, senza proibire alcuna opzione o alterare in modo significativo gli incentivi economici. La sua efficacia nel promuovere comportamenti sostenibili è ampiamente documentata in letteratura (Lehner et al., 2016; Mont et al., 2014; Trewern et al., 2021; Mirbabaie et al., 2022; Amiri et al., 2024). Nello specifico, le leve del nudging si sono dimostrate particolarmente efficaci nel promuovere comportamenti sostenibili, grazie alla loro capacità di agire su automatismi cognitivi, risposte emotive e affettive, riducendo lo sforzo deliberativo e semplificando il processo decisionale (Thaler & Sunstein, 2008; Bargh et al., 2001; Shah & Oppenheimer, 2018). Tali interventi risultano particolarmente utili nelle decisioni intertemporali, in cui i costi sono percepiti come immediati e i benefici come futuri e diffusi. La letteratura evidenzia come le "spinte gentili" siano più efficaci delle strategie persuasive tradizionali nel colmare il say–do gap, contribuendo alla costruzione di abitudini più sostenibili lungo l'intero customer journey (Lehner et al., 2016; Bergram et al., 2022; Bellini et al., 2025). L'impiego di spinte gentili e non intrusive — come la disposizione dei prodotti, la visibilità immediata dell'offerta sostenibile, la chiarezza informativa e l'introduzione di opzioni predefinite — consente di orientare le scelte dei consumatori senza comprometterne l'autonomia decisionale. Tali strategie si collocano all'interno dello shopper marketing sostenibile e offrono una risposta operativa al say–do gap, in particolare nei contesti in cui il processo decisionale è complesso o il coinvolgimento motivazionale è ridotto (Bellini et al., 2025; Lehner, 2015).

A fronte della complessità che caratterizza il say–do gap, emerge la necessità di comprendere più a fondo l'eterogeneità dei consumatori in relazione ai comportamenti sostenibili. Differenziare tra soggetti motivati ma incostanti, individui che adottano pratiche sostenibili per abitudine o convenienza, e consumatori poco coinvolti consente di restituire una lettura più realistica delle scelte di acquisto e di sviluppare strategie di marketing più mirate. Integrare dimensioni attitudinali e comportamentali rappresenta, in questo senso, un passaggio fondamentale per valutare l'efficacia delle iniziative promosse dal retail e per progettare interventi specifici per ciascun profilo di clientela.

## 3. Obiettivi della ricerca

Questo studio si propone di indagare in profondità il comportamento dei consumatori italiani rispetto alla sostenibilità, con l'obiettivo di comprendere come le intenzioni dichiarate si traducano – o meno – in scelte di acquisto effettive. In un contesto in cui il consumo sostenibile rappresenta una leva strategica per il cambiamento, ma è ostacolato da barriere cognitive, economiche e contestuali, il lavoro mira a fornire una lettura integrata e aggiornata del fenomeno. Lo scopo dello studio è quello di mappare la popolazione italiana in base alla coerenza tra atteggiamenti dichiarati e comportamenti reali di acquisto sostenibile, attraverso l'analisi congiunta di dati attitudinali e comportamentali, al fine di identificare cluster distinti di consumatori e supportare lo sviluppo di strategie di marketing e policy più efficaci nel colmare il divario tra il "dire" e il "fare".

## 4. Metodologia

L'indagine sulla sostenibilità rappresenta una sfida metodologica di notevole complessità, in quanto presuppone l'identificazione preliminare di criteri e parametri in grado di definire in maniera operativa cosa possa essere considerato "sostenibile", tanto dal punto di vista della domanda quanto da quello delle imprese. Si tratta di un ambito in continua evoluzione, caratterizzato da una cornice normativa ancora in via di consolidamento e da un lessico non ancora pienamente condiviso. Al fine di costruire un approccio metodologico rigoroso e fondato su evidenze oggettive, ci siamo avvalsi dei database forniti da NielsenIQ (NIQ), in particolare del Consumer Panel Service, che ci ha consentito di accedere a informazioni statisticamente significative in merito ai comportamenti di consumo sostenibile.

I consumatori sono stati profilati secondo una triplice dimensione: sociodemografica, attitudinale e comportamentale. Il Consumer Panel di NIQ costituisce uno strumento particolarmente utile per raccogliere sia dati dichiarativi, tramite syndicated survey, sia dati comportamentali concreti relativi agli acquisti di prodotti sostenibili raccolti tramite il servizio Homescan di NielsenIQ. Homescan è un consumer panel attivo in oltre 25 Paesi, composto da oltre 13.000 famiglie solamente in Italia, selezionate secondo criteri rappresentativi della popolazione nazionale. Le famiglie partecipanti registrano sistematicamente gli acquisti effettuati nei canali del largo consumo, sia fisici sia online, utilizzando un'app mobile o uno scanner domestico fornito da NielsenIQ. Ogni registrazione include informazioni dettagliate relative al prodotto acquistato — marca, formato, prezzo, punto vendita, eventuali promozioni — consentendo così un'analisi approfondita dei comportamenti di acquisto. I partecipanti al panel sono incentivati tramite un sistema di raccolta punti, convertibili in premi o buoni regalo, che contribuisce a garantire continuità e affidabilità nella registrazione dei dati. I dati comportamentali sono stati classificati secondo la tassonomia del database Immagino, sviluppato da NielsenIQ in collaborazione con GS1 Italy. Il panel raccoglie periodicamente informazioni sulle caratteristiche sociodemografiche e sul comportamento d'acquisto reale. Le indagini, condotte in modalità single source, permettono di ottenere dati coerenti e integrati: le famiglie che rispondono ai questionari sono infatti le stesse che registrano i propri acquisti, permettendo così una segmentazione accurata e affidabile. Ai fini dell'analisi, la segmentazione è stata condotta secondo due misure principali:

- la dimensione del "dire", ovvero ciò che i consumatori dichiarano di fare in termini di sostenibilità, rilevata attraverso un set strutturato di domande che esplorano l'atteggiamento verso ambiti quali il benessere individuale, sociale e ambientale;

- la dimensione del "fare", che si riferisce al comportamento effettivo di acquisto, misurato sulla base della quota di prodotti sostenibili presenti nel carrello, espressa in termini di value share, secondo attributi riconducibili alla tre anime della sostenibilità.

Tale approccio consente un'analisi integrata tra atteggiamenti e comportamenti, permettendo di delineare con maggiore precisione i profili dei consumatori in relazione alla sostenibilità.

## 5. Risultati e Discussione

Al fine di rispondere agli obiettivi di ricerca, la raccolta delle dichiarazioni autoriferite dei consumatori, - e quindi relative alla dimensione del say - è stata condotta tramite un questionario CAWI (Computer-Assisted Web Interviewing), strutturato esclusivamente con domande chiuse basate su una scala Likert a 5 punti. Il questionario è stato somministrato a un campione di 13.148 individui rappresentativi della popolazione italiana, e completato da 9.643 rispondenti, con un tasso di risposta pari al 74%. La somministrazione è avvenuta nel periodo compreso tra il 7 e il 15 febbraio 2025. L'obiettivo principale dello strumento era quello di indagare il profilo di sostenibilità dei partecipanti. In particolare, sono stati rilevati

comportamenti sostenibili generali — quali, a titolo puramente esemplificativo e non esaustivo, l'acquisto di prodotti in formato ricaricabile (refill), l'utilizzo di elettrodomestici a pieno carico, la pratica di docce brevi e la riduzione del consumo di carne — nonché atteggiamenti specifici legati alle tre dimensioni della sostenibilità precedentemente individuate. Ai fini della segmentazione dei consumatori italiani, sono state identificate come domande discriminanti quelle relative all'importanza attribuita alla sostenibilità e alla disponibilità a pagare un sovrapprezzo per prodotti sostenibili. Le restanti domande del questionario sono state utilizzate per descrivere i profili dei cluster emersi dall'analisi.

Per quanto riguarda la rilevazione dei comportamenti effettivi di consumo – e quindi relative alla dimensione del do -, è stato impiegato il servizio Homescan. Ai fini della segmentazione dei consumatori italiani per la dimensione del fare, è stata misurata la value share di prodotti con claim (Figura 1) che fanno riferimento alla tre anime della sostenibilità individuate - il Good For Me, il Good For Planet e il Good For Society.

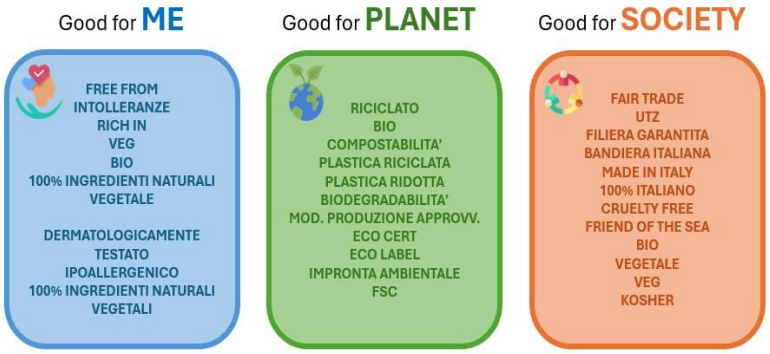



**Figura 1:** I claim considerati per l'analisi
(Fonte: Elaborazione degli autori basata sui claim classificati secondo il database Immagino GS1)

## 5.1 La segmentazione in cluster

L'interrogazione del Consumer Panel riguardo alla dimensione del "dire" (atteggiamento verso la sostenibilità e intenzioni di acquisto di prodotti sostenibili) e del "fare" (acquisto effettivo di prodotti sostenibili), ha portato all'identificazione di sei cluster di acquirenti (Figura 2).

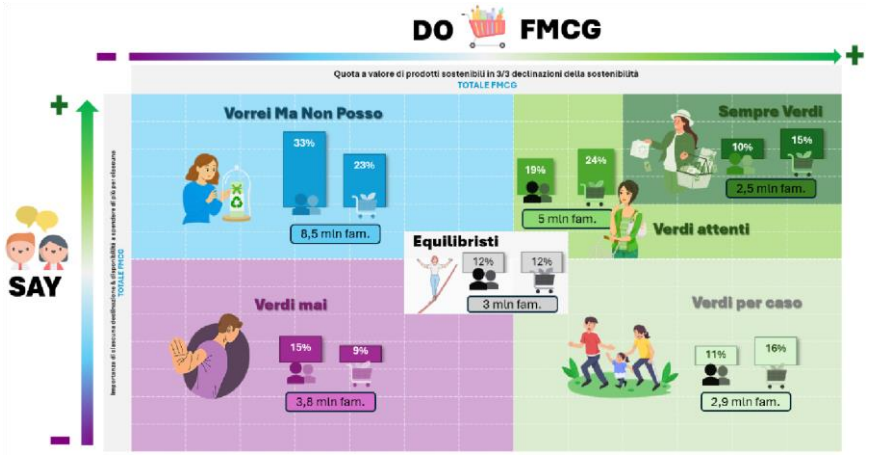
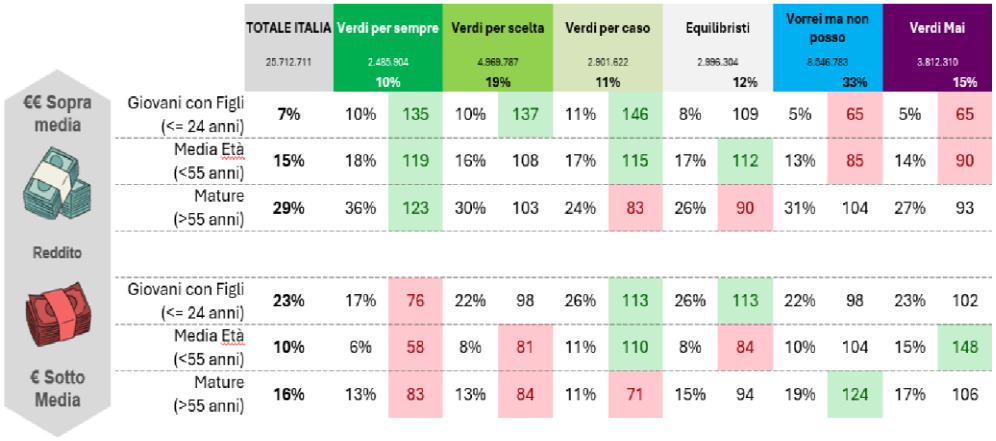



**Figura 2:** I sei cluster di acquirenti
(Fonte: Elaborazione degli autori basata sui basata sui dati NIQ)

La parte destra della matrice rappresenta tre gruppi — "Sempre Verdi", "Verdi Attenti" e "Verdi Per Caso" — accomunati da una significativa incidenza di acquisti sostenibili, seppur con livelli di consapevolezza differenti. In particolare, i "Sempre Verdi" e i "Verdi Attenti" si distinguono per una scelta deliberata e intenzionale di prodotti sostenibili, mentre i "Verdi Per Caso" sembrano manifestare comportamenti coerenti con la sostenibilità in modo non intenzionale, probabilmente influenzati da fattori contestuali piuttosto che da una reale motivazione valoriale. È interessante comprendere cosa stimoli questo comportamento che potremmo definire "inconscio". I due cluster situati nella parte sinistra della matrice ("Vorrei Ma Non Posso" e "Verdi Mai") acquistano di rado prodotti sostenibili ma per ragioni eterogenee. I "Verdi Mai" mostrano un disinteresse consapevole e deliberato verso la sostenibilità, che si riflette in un contributo marginale alla spesa sostenibile. I "Vorrei Ma Non Posso", invece, pur dichiarandosi sensibili ai temi ambientali e sociali, non traducono tali intenzioni in comportamenti coerenti nel punto vendita, suggerendo la presenza di barriere esterne o interne che meritano un'ulteriore indagine. Infine, il cluster degli "Equilibristi" occupa una posizione intermedia, caratterizzata da una relativa coerenza tra intenzioni e comportamenti, ma priva di una chiara direzione valoriale. Questo gruppo appare sostanzialmente allineato alla media nazionale, senza manifestare un orientamento deciso né verso la sostenibilità né verso il suo rifiuto.

## 5.2 Il profilo sociodemografico e di consumo dei cluster

I dati sociodemografici, comportamentali e di acquisto raccolti tramite il Consumer Panel offrono una base solida per comprendere le motivazioni che caratterizzano i diversi profili di sostenibilità individuati. L'analisi di questi dati consente non solo di delineare con precisione le caratteristiche distintive di ciascun cluster, ma anche di trarre indicazioni operative utili per le aziende interessate a sviluppare strategie di shopper marketing orientate a promuovere scelte di consumo più consapevoli all'interno del punto vendita. L'analisi si è basata sull'impiego di indici, in cui il valore 100 rappresenta la media nazionale: scostamenti al di sopra o al di sotto di tale soglia indicano, rispettivamente, una maggiore o minore incidenza del fenomeno osservato rispetto al totale della popolazione, consentendo un confronto immediato e intuitivo tra i diversi segmenti di consumatori.




| | TOTALE ITALIA 25.712.711 | Verdi per sempre 2.485.804 10% | | Verdi per scelta 4.969.787 19% | | Verdi per caso 2.901.622 11% | | Equilibristi 2.896.304 12% | | Vorrei ma non posso 8.546.783 33% | | Verdi Mai 3.812.310 15% | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Giovani con Figli (<= 24 anni) | 7% | 10% | 135 | 10% | 137 | 11% | 146 | 8% | 109 | 5% | 65 | 5% | 65 |
| Media Età (<55 anni) | 15% | 18% | 119 | 16% | 108 | 17% | 115 | 17% | 112 | 13% | 85 | 14% | 90 |
| Mature (>55 anni) | 29% | 36% | 123 | 30% | 103 | 24% | 83 | 26% | 90 | 31% | 104 | 27% | 93 |
| Giovani con Figli (<= 24 anni) | 23% | 17% | 76 | 22% | 98 | 26% | 113 | 26% | 113 | 22% | 98 | 23% | 102 |
| Media Età (<55 anni) | 10% | 6% | 58 | 8% | 81 | 11% | 110 | 8% | 84 | 10% | 104 | 15% | 148 |
| Mature (>55 anni) | 16% | 13% | 83 | 13% | 84 | 11% | 71 | 15% | 94 | 19% | 124 | 17% | 106 |

**Figura 3:** I sei cluster di acquirenti
(Fonte: Elaborazione degli autori basata sui dati NIQ)

- I Sempre Verdi rappresentano il profilo ideale del consumatore sostenibile: rappresentano circa 2,5 milioni di famiglie italiane, pari al 10% della popolazione, e acquistano in modo consapevole e convinto, contribuendo al 15% del fatturato generato dai prodotti «green». Questo segmento presenta elevate disponibilità economiche ed è caratterizzato da un orientamento marcato verso la qualità, la precisione e l'attenzione ai dettagli, privilegiando prodotti premium, naturali e salutari. Nei punti vendita si informano con attenzione sull'offerta, dedicando tempo alla lettura delle informazioni presenti sui packaging. La loro sensibilità verso la sostenibilità è a 360°: adottano comportamenti responsabili in ogni ambito della vita quotidiana. Utilizzano più della media il canale online per individuare prodotti adatti alle loro esigenze e, una volta trovati i punti vendita che rispecchiano i loro valori, diventano clienti fedeli e difficilmente li abbandonano. Distribuzione e industria dovrebbero cooperare sinergicamente allestendo in-store experience e corner tematici dedicati alla sostenibilità, con l'obiettivo di intensificare il coinvolgimento di questi consumatori e consolidare il loro legame valoriale con il punto vendita.

- I Verdi Attenti sono un target simile ai Sempre Verdi, ma con caratteristiche distintive: circa 5 milioni di famiglie italiane, pari al 19% della popolazione, che mostrano attenzione alla sostenibilità, sebbene con un approccio più orientato alla qualità del prodotto. Rappresentano la quota più alta della spesa sostenibile (24%), un dato in parte giustificato anche dalla presenza di bambini nelle famiglie. A differenza dei "Sempre Verdi", preferiscono marche note e affidabili, privilegiando la sicurezza rispetto all'esplorazione o alla curiosità verso nuovi prodotti. Anche per loro il prezzo non è un fattore determinante nelle scelte d'acquisto, ma rispetto ai primi le promozioni hanno un impatto leggermente superiore. Per loro si suggerisce di valorizzare in assortimento linee certificate (B Corp, Fair Trade, ecc.) mediante badge distintivi e strategie di shelf marketing.

- I Verdi Per Caso costituiscono un target contraddittorio: circa 2,9 milioni di famiglie italiane, pari all'11% della popolazione, che pur dichiarando una bassa sensibilità verso la sostenibilità contribuiscono al 16% della spesa sostenibile. Si tratta in prevalenza di famiglie con figli, appartenenti sia a fasce di reddito elevate che più basse. Per questi consumatori il prezzo rappresenta un fattore determinante: sono disposti a cambiare marca per approfittare di promozioni. La spesa, per loro, è vissuta come un dovere noioso ma inevitabile, più che come un momento di scelta o scoperta. In punto vendita l'esplorazione autonoma degli

scaffali risulta minima, con decisioni di acquisto guidate da abitudini consolidate e dall'insegna di riferimento. Alla luce di tali caratteristiche, si rende opportuno sfruttare il patrimonio distributivo delle imprese come leva di nudging: attraverso la progettazione strategica del layout e l'inserimento discreto di referenze sostenibili in posizioni privilegiate all'interno dell'assortimento, è possibile orientare in modo indolore le scelte di questo cluster verso prodotti che favoriscono la sostenibilità, senza incidere sul loro desiderio di rapidità e semplicità nell'esperienza di acquisto.

- Gli Equilibristi rappresentano un target intermedio, 12% della popolazione che genera il 12% della spesa sostenibile: rispetto al totale Italia sono allineati alla media, sia per comportamenti d'acquisto che per sensibilità verso la sostenibilità. Il prezzo è un elemento centrale nelle loro decisioni: ma ad esempio, pur non scegliendo un punto vendita in base alle promozioni, queste possono influenzare la scelta dei singoli prodotti. Sono consumatori pragmatici, attenti al risparmio ma facilmente influenzabili dagli acquisti d'impulso. Non si informano in modo approfondito e raramente leggono le informazioni riportate sulle confezioni. Tuttavia, mostrano una forte attenzione alla salute fisica: nei loro carrelli compaiono infatti prodotti per il benessere e articoli dedicati agli sportivi, come integratori e alimenti funzionali. Poiché gli Equilibristi rappresentano un bacino di clientela potenzialmente recettivo, risulta strategico implementare interventi di carattere informativo e di attivazione "soft". In termini di informazione, è opportuno privilegiare messaggi chiari e sintetici (es. badge ambientali immediatamente riconoscibili) unitamente a supporti digitali in-store che illustrino in modo rapido il valore aggiunto dei prodotti eco-friendly. Sul versante dell'attivazione, il cross-selling tra referenze legate al benessere fisico e alternative sostenibili e l'introduzione di promozioni mirate su assortimenti green possono stimolare l'acquisto per impulso, spingendo gradualmente questo segmento verso scelte maggiormente eco-consapevoli.

- I Vorrei Ma Non Posso rappresentano un importante segnale d'allarme: circa 8,5 milioni di famiglie italiane, pari al 33% della popolazione, che pur dichiarandosi sensibili ai temi ambientali, in punto vendita non acquistano prodotti sostenibili. Si tratta principalmente di famiglie mature con reddito contenuto. Pur affermando che il prezzo non è un fattore decisivo, sono molto sensibili agli aumenti di costo. Questi consumatori consultano assiduamente volantini cartacei e digitali e distribuiscono gli acquisti tra più insegne per massimizzare le opportunità promozionali; amano esplorare l'assortimento, ma continuano a privilegiare brand consolidati. Acquistano principalmente alcolici. Per intervenire efficacemente su questo cluster, è imprescindibile una sinergia strutturata tra distribuzione e industria: occorre promuovere un dialogo condiviso finalizzato a rendere accessibili opzioni sostenibili anche a fasce di reddito più basse, mediante iniziative di "democratizzazione" del prodotto green. Ciò può tradursi, ad esempio, nella creazione di linee a marchio del distributore a basso prezzo, co-progettate con le realtà industriali, e in campagne di comunicazione congiunte che stimolino la consapevolezza dei consumatori circa il valore e l'impatto delle scelte sostenibili, ponendo le basi per un cambio culturale nell'interpretazione della sostenibilità come bene collettivo.

- I Verdi Mai sono un target distante dai valori della sostenibilità: circa 3,8 milioni di famiglie italiane, pari al 15% della popolazione, che contribuiscono solo per il 9% alla spesa sostenibile. Si tratta principalmente di nuclei a basso reddito, con abitudini di consumo orientate al risparmio. Acquistano con maggiore frequenza nei discount rispetto ai restanti cluster, e tra i prodotti più presenti nei loro carrelli rispetto alla media figurano bevande gassate e alcolici. Il prezzo è il driver principale nelle loro scelte d'acquisto, mentre la marca ha un peso trascurabile, le promozioni invece catturano il loro interesse e possono influenzare le scelte. Il loro processo decisionale è rapido, con scarsa attenzione alle informazioni riportate sulle confezioni e ridotta disponibilità a dedicare tempo alla fase di

selezione dei prodotti. Per promuovere l'inclusione di questo cluster nel percorso verso comportamenti più sostenibili, è indispensabile partire da interventi informativi di base che riducano le barriere cognitive e percettive all'ingresso nel mondo "green". A tal fine, si possono sviluppare campagne in-store e digitali focalizzate sulla comunicazione semplificata dei benefici ambientali, affiancando a ogni offerta promozionale una componente educativa che renda la sostenibilità un vantaggio tangibile e immediatamente comprensibile.

L'analisi condotta attraverso il Consumer Panel ci permette di identificare i canali di acquisto preferiti per ogni target (Tabella 1), così come i negozi che frequentano abitualmente per fare la spesa (Tabella 2). Tale evidenza apre una riflessione sulla centralità dei luoghi di acquisto nel determinare i comportamenti d'acquisto: in che misura, infatti, il profilo del consumatore dipende dalle strategie implementate dai distributori nei punti di vendita?

| | **Online** | **Ipermercati** | **Supermercati** | **Prossimità** | **Specialisti drug** | **Discount** |
|---|---|---|---|---|---|---|
| **Sempre Verdi** | 143 | 128 | 113 | 97 | 66 | 53 |
| **Verdi Attenti** | 120 | 122 | 108 | 101 | 86 | 68 |
| **Verdi Per Caso** | 139 | 123 | 108 | 75 | 88 | 78 |
| **Equilibristi** | 88 | 104 | 104 | 84 | 114 | 98 |
| **Vorrei Ma Non Posso** | 73 | 76 | 90 | 115 | 116 | 127 |
| **Mai Verdi** | 67 | 71 | 89 | 107 | 113 | 152 |

**Tabella 1:** I luoghi d'acquisto dei cluster (Fonte: Elaborazione degli autori basata sui dati NIQ)

Prendendo in esame diciotto insegne operanti sul territorio nazionale (Tabella 2), emerge chiaramente come alcuni operatori distributivi risultino maggiormente attrattivi per specifici segmenti di consumatori. Nel presente caso, l'attenzione è rivolta al cluster dei "*Verdi per Caso*" e all'insegna B. Come precedentemente evidenziato, i "*Verdi per Caso*" – famiglie sia ad alto che a basso reddito di giovane e media età, caratterizzate da una scarsa dichiarata sensibilità verso la sostenibilità ma da atteggiamenti d'acquisto "virtuosi" in punto vendita – rappresentano un segmento di grande interesse per comprendere i meccanismi che inducono consumatori poco motivati verso il "green" a scegliere comunque referenze con claim legati alla sostenibilità. In particolare, si ipotizza che la familiarità con un assortimento integrato, in cui prodotti sostenibili convivono accanto a referenze tradizionali, unitamente all'applicazione di tecniche di nudging – quali l'allocazione di spazi espositivi privilegiati, l'uso di promozioni mirate e politiche di pricing strategico – giochino un ruolo determinante nell'attivazione di comportamenti d'acquisto inconsapevoli. Questo approccio suggerisce che il semplice posizionamento e la comunicazione visiva selettiva possano veicolare una "spinta gentile" verso l'opzione sostenibile, convertendo l'esposizione ripetuta in un acquisto "per abitudine" piuttosto che in una scelta deliberata.

| | Sempre Verdi | Verdi Attenti | Verdi Per Caso | Equilibristi | Vorrei Ma Non Posso | Mai Verdi |
|---|---|---|---|---|---|---|
| INSEGNA A | 164 | 140 | 84 | 92 | 76 | 63 |
| INSEGNA B | 156 | 142 | 143 | 101 | 54 | 50 |
| INSEGNA C | 123 | 82 | 93 | 95 | 100 | 121 |
| INSEGNA D | 123 | 99 | 135 | 101 | 77 | 100 |
| INSEGNA E | 118 | 123 | 115 | 92 | 86 | 75 |
| INSEGNA F | 116 | 96 | 125 | 115 | 82 | 96 |
| INSEGNA G | 110 | 122 | 107 | 105 | 91 | 66 |
| INSEGNA H | 92 | 95 | 114 | 108 | 97 | 98 |
| INSEGNA I | 76 | 101 | 96 | 144 | 87 | 112 |
| INSEGNA L | 74 | 94 | 68 | 86 | 100 | 175 |
| INSEGNA M | 73 | 85 | 94 | 115 | 110 | 117 |
| INSEGNA N | 70 | 66 | 92 | 75 | 136 | 126 |
| INSEGNA O | 59 | 73 | 73 | 109 | 118 | 154 |
| INSEGNA P | 58 | 79 | 87 | 108 | 124 | 119 |
| INSEGNA Q | 55 | 75 | 94 | 137 | 100 | 149 |
| INSEGNA R | 43 | 63 | 81 | 92 | 130 | 161 |
| INSEGNA S | 40 | 83 | 61 | 75 | 148 | 127 |
| INSEGNA T | 33 | 65 | 66 | 109 | 141 | 142 |

**Tabella 2:** I retailer preferiti dei cluster (Fonte: Elaborazione degli autori basata sui dati NIQ)

Al contrario, il canale discount, invece, ha un'incidenza superiore alla media per i cluster "*Vorrei Ma Non Posso*" e "*Verdi Mai*" (Tabella 1). In questi punti vendita, caratterizzati da un'offerta fortemente orientata al prezzo e alla velocità di turnover, le referenze sostenibili faticano a emergere in un assortimento che privilegia esclusivamente articoli a basso costo e (pochi) brand consolidati per il risparmio immediato. Di conseguenza, le famiglie "*Vorrei Ma Non Posso*" – pur dichiarando una sensibilità verso le tematiche ambientali – non incontrano prodotti "green" sufficientemente visibili o competitivi in termini di prezzo, alimentando la percezione, seppur apparente, che il discount non sia un contesto idoneo per realizzare scelte sostenibili. Allo stesso modo, i "*Verdi Mai*", che già mostrano una propensione minima al consumo sostenibile, vedono confermata la lontananza da questo mondo: la comunicazione in-store, basata esclusivamente su promozioni e sconti generalizzati, non introduce alcuna narrazione sul valore ambientale che possa stimolare anche solo curiosità. La carenza di un patrimonio distributivo sostenibile e la scarsità di spazi espositivi riservati a linee "green" consolidano quindi un circolo vizioso in cui questi cluster rimangono esclusi dal mercato della sostenibilità, nonostante la loro potenziale volontà di aderire a comportamenti di acquisto più responsabili.

## 6. Conclusioni

Il presente studio ha permesso di esplorare in profondità il comportamento dei consumatori italiani in relazione alla sostenibilità, mettendo in luce la complessità del rapporto tra ciò che viene dichiarato (say) e ciò che viene effettivamente fatto (do). Questo disallineamento, noto come say–do gap, rappresenta una delle principali sfide per chi si occupa di marketing sostenibile e per le politiche pubbliche orientate al cambiamento dei modelli di consumo.

L'analisi ha evidenziato come la sostenibilità non sia più un tema di nicchia, ma un elemento che attraversa trasversalmente le scelte di consumo, pur con intensità e consapevolezze differenti. La segmentazione in sei cluster ha permesso di restituire una fotografia articolata della popolazione italiana, in cui coesistono consumatori fortemente orientati alla sostenibilità, soggetti ambivalenti e profili ancora distanti da questi valori. Questi cluster possono essere assunti dalle imprese come target specifici di strategie mirate alla promozione e/o al consolidamento di comportamenti sostenibili.

Un target senz'altro molto interessante per le imprese è costituito dall'ampio segmento di individui "Vorrei Ma Non Posso" che, pur dichiarando attenzione ai temi ambientali e sociali, non riesce a tradurre tali intenzioni in comportamenti coerenti. Si tratta di un target ad alto potenziale, già ricettivo, che se raggiunto con adeguate strategie di marketing, volte a favorire l'accessibilità all'offerta sostenibile, può facilmente migrare nei "Sempre Verdi".

Ugualmente interessante è il cluster dei "Verdi Per Caso", la cui esistenza conferma il potere che hanno le imprese di influenzare e orientare i comportamenti di acquisto e di consumo. La presenza dei "Verdi Per Caso" suggerisce che esistono margini di intervento anche su consumatori apparentemente disinteressati, i cui comportamenti possono essere orientati positivamente attraverso leve di shopper marketing.

Allo stesso modo, l'eterogeneità tra retailers in relazione alla presenza di questo cluster evidenzia che alcune leve di retailing mix sono più efficaci di altre in termini di capacità di "spingere gentilmente" acquisti sostenibili.

Un ulteriore aspetto senz'altro distintivo del presente lavoro risiede nella metodologia. L'adozione di un approccio integrato, che combina dati dichiarativi e comportamentali, consente di comprendere in modo oggettivo le dinamiche del consumo sostenibile e di trarre indicazioni utili per orientare in modo concreto ed efficace le strategie e le azioni operative delle imprese. L'utilizzo di fonti oggettive e rappresentative, quali il Consumer Panel di

NielsenIQ, ha permesso di superare i limiti delle sole indagini di opinione, offrendo una base solida per l'elaborazione di strategie mirate.

Pur offrendo risultati significativi, il presente lavoro presenta alcune limitazioni. Lo studio costituisce infatti la fase iniziale di un progetto più ampio, che prevede l'integrazione dell'analisi condotta tramite il Consumer Panel Service (CPS) di NielsenIQ con i dati del Retail Measurement Service (RMS), al fine di valutare l'impatto di variabili chiave legate alle insegne distributive. Tra queste, si considereranno indicatori come l'ampiezza del patrimonio distributivo, la presenza più o meno marcata della marca del distributore, il posizionamento di prezzo e l'intensità promozionale. Inoltre, la ripetizione annuale dell'indagine consentirà non solo di monitorare l'evoluzione dei comportamenti nel tempo, ma anche di affinare un linguaggio condiviso tra i partner del progetto, utile alla redazione dei bilanci di sostenibilità in linea con le nuove normative europee. Infine, l'osservazione longitudinale della domanda permetterà di distinguere tra tendenze strutturali e fenomeni ciclici, offrendo indicazioni strategiche preziose per imprese e istituzioni impegnate nella promozione di modelli di consumo più sostenibili.

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## Bibliografia

Ajzen, I. (1991), The Theory Of Planned Behavior, Organizational Behavior And Human Decision Processes, 50(2), 179-211.

Amiri, B., Jafarian, A., & Abdi, Z. (2024), Nudging Towards Sustainability: A Comprehensive Review Of Behavioral Approaches To Eco-Friendly Choice, Discover Sustainability, 5, 444.

Anuradha, A., Shilpa, R., Thirupathi, M., Padmapriya, S., Supramaniam, G., Booshan, B., ... & Thangam, D. (2023), Importance Of Sustainable Marketing Initiatives For Supporting The Sustainable Development Goals, In Handbook Of Research On Achieving Sustainable Development Goals With Sustainable Marketing, Pp. 149-169.

Bargh, J. A., Gollwitzer, P. M., Lee-Chai, A., Barndollar, K., & Trötschel, R. (2001), The Automated Will: Nonconscious Activation And Pursuit Of Behavioral Goals, Journal Of Personality And Social Psychology, Vol. 81 N. 6, P. 1014.

Bedek, A. (2011). Sustainability Marketing Strategies: Examples Of Best Practices In Croatia.

International Journal Of Management Cases, 13(2), 33-43.

Bellini, S. (2023), (Sweet) Marketing For Conscious Shopping.

Bellini, S., Bacchilega, C., & Aiolfi, S. (2025), The Power Of Advertising And Promotion In Shaping Consumer Attitudes Toward Food In "Reference Module In Food Science", Elsevier.

Bergram, K., Djokovic, M., Bezençon, V., & Holzer, A. (2022), The Digital Landscape Of Nudging: A Systematic Literature Review Of Empirical Research On Digital Nudges, In Proceedings Of The 2022 Chi Conference On Human Factors In Computing Systems, Pp. 1-16.

Caraban, A., Karapanos, E., Gonçalves, D., & Campos, P. (2019), 23 Ways To Nudge: A Review Of Technology-Mediated Nudging In Human-Computer Interaction, In Proceedings Of The 2019 Chi Conference On Human Factors In Computing Systems, Pp. 1-15.

Carrington, M. J., Neville, B. A., & Whitwell, G. J. (2010), Why Ethical Consumers Don't Walk Their Talk, Journal Of Business Ethics, 97(1), 139–158.

Carrington, M. J., Neville, B. A., & Whitwell, G. J. (2014), Lost In Translation: Exploring The Ethical Consumer Intention–Behavior Gap, Journal Of Business Research, 67(1), 2759-2767.

Ferrero-Ferrero, I., Muñoz-Torres, M. J., Rivera-Lirio, J. M., Escrig-Olmedo, E., & Fernández-Izquierdo, M. Á. (2023). Sdg Reporting: An Analysis Of Corporate Sustainability Leaders. Marketing Intelligence & Planning, 41(4), 457-472.

Frank, P., & Brock, C. (2018), Bridging The Intention–Behavior Gap Among Organic Grocery Customers: The Crucial Role Of Point-Of-Sale Information, Psychology & Marketing, 35(8), 586602.

Gielens, K., Ma, Y., Namin, A., Sethuraman, R., Smith, R. J., Bachtel, R. C., & Jervis, S. (2021). The Future Of Private Labels: Towards A Smart Private Label Strategy. Journal Of Retailing, 97(1), 99-115.

Hecht, A. A., Perez, C. L., Polascek, M., Thorndike, A. N., Franckle, R. L., &

Moran, A. J. (2020). Influence Of Food And Beverage Companies On Retailer Marketing Strategies And Consumer Behavior. International Journal Of Environmental Research And Public Health, 17(20), 7381.

Ingenbleek, P. T. (2015). Price Strategies For Sustainable Food Products. British Food Journal, 117(2), 915-928.

Inman, J. J., Winer, R. S., & Ferraro, R. (2009). The Interplay Among Category Characteristics, Customer Characteristics, And Customer Activities On In-Store Decision Making. Journal Of Marketing, 73(5), 19-29. Http://Dx.Doi.Org/10.1509/Jmkg.73.5.19

Kuhlman, T., & Farrington, J. (2010), What Is Sustainability?, Sustainability, Vol. 2, N.11, Pp. 3436-3448.

Lehner, M., Mont, O., & Heiskanen, E. (2016), Nudging–A Promising Tool For Sustainable Consumption Behaviour?. Journal Of Cleaner Production, Vol. 134, Pp. 166-177.

Mirbabaie, M., Marx, J., & Germies, J. (2022), Conscious Commerce--Digital Nudging And Sustainable E-Commerce Purchase Decisions.

Mont, O., Lehner, M., & Heiskanen, E. (2014), Nudging: A Tool For Sustainable Behaviour?.

Munro, P., Kapitan, S., & Wooliscroft, B. (2023), The Sustainable Attitude-Behavior Gap Dynamic When Shopping At The Supermarket: A Systematic Literature Review And Framework For Future Research, Journal Of Cleaner Production, 426, 138740.

Ngobo, P. V. (2011). Private Label Share, Branding Strategy And Store Loyalty. Journal Of Retailing And Consumer Services, 18(4), 259-270.

Olson, E. L. (2013), It's Not Easy Being Green: The Effects Of Attribute Tradeoffs On Green Product Preference And Choice, Journal Of The Academy Of Marketing Science, 41, 171-184.

Portney, K. E. (2015), Sustainability, Mit Press.

Purvis, B., Mao, Y., & Robinson, D. (2019), Three Pillars Of Sustainability: In Search Of Conceptual Origins, Sustainability Science, Vol. 14, Pp. 681-695.

Sarti, S., Darnall, N., & Testa, F. (2018), Market Segmentation Of Consumers Based On Their Actual Sustainability And Health-Related Purchases, Journal Of Cleaner Production, 192, 270-280.

Schaefer, A., & Crane, A. (2005), Addressing Sustainability And Consumption. Journal Of Macromarketing, Vol. 25, N. 1, Pp. 76-92.

Shah, A. K., & Oppenheimer, D. M. (2008), Heuristics Made Easy: An Effort-Reduction Framework, Psychological Bulletin, 134(2), 207.

Shankar, V. (2011), Shopper Marketing, Cambridge, Ma: Marketing Science Institute.

Sheth, J. N., Sethia, N. K., & Srinivas, S. (2011), Mindful Consumption: A Customer-Centric Approach To Sustainability, Journal Of The Academy Of Marketing Science, 39, 21-39.

Thaler, R. H., & Sunstein, C. R. (2009), Nudge: Improving Decisions About Health, Wealth, And Happiness, Penguin.

Trewern, J., Chenoweth, J., Christie, I., Keller, E., & Halevy, S. (2021), Are Uk Retailers Well Placed To Deliver 'Less And Better'meat And Dairy To Consumers?, Sustainable Production And Consumption, Vol. 28, Pp. 154-163.

United Nations. (2023), The Sustainable Development Goals Report 2023: Special Edition.

Wansink, B. (2017), Healthy Profits: An Interdisciplinary Retail Framework That Increases The Sales Of Healthy Foods, Journal Of Retailing, 93(1), 65-78.

White, K., Habib, R., & Hardisty, D. J. (2019), How To Shift Consumer Behaviors To Be More Sustainable, Journal Of Marketing, 83(3), 22–49.

Whittingham, K. L., Earle, A. G., Leyva-De La Hiz, D. I., & Argiolas, A. (2023), The Impact Of The United Nations Sustainable Development Goals On Corporate Sustainability Reporting. Brq Business Research Quarterly, Vol. 26, N. 1, Pp. 45-61

Wozniak, T., Stieger, M., Griesser, S., Gantenbein, S., & Schaffner, D. (2024), Encouraging Sustainable Packaging Choices: The Impact Of Nudging On Online Shoppers' Decision For Reusable Packaging, In Proceedings Of The European Marketing Academy, 52nd.

Yamoah, F. A., & Acquaye, A. (2019), Unravelling The Attitude-Behaviour Gap Paradox For Sustainable Food Consumption: Insight From The Uk Apple Market, Journal Of Cleaner Production, 217, 172-184.

Yoder, A. D., Proaño, G. V., & Handu, D. (2021), Retail Nutrition Programs And Outcomes: An Evidence Analysis Center Scoping Review, Journal Of The Academy Of Nutrition And Dietetics, 121(9), 1866-1880.

# Bibamus et Gaudeamus Dum Iuvenes Sumus: A First Research on Gen Z's Wine Consumption in Italy

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## Abstract

In 2024, the Italian wine sector generated €14 billion in revenue, representing approximately 10% of the national agri-food industry (ISMEA, 2025). Despite its economic significance, the sector is experiencing a marked decline in both production and number of enterprises. This trend coincides with a significant shift in consumer preferences, particularly among younger generations. While existing literature has addressed individual factors such as price, health, sustainability, and product knowledge (Russo, 2025; Savelli & Travasi, 2024; Casalegno et al., 2019), a comprehensive framework that integrates these dimensions remains lacking. This study explores the factors influencing wine consumption among Italian Generation Z, aiming to understand how the wine sector might align with the values and behaviors of a demographic increasingly distant from traditional consumption models. Employing a mixed-method approach, the research includes a critical literature review, qualitative insights from two focus groups, and a quantitative survey distributed to Gen Z respondents. Findings indicate that emotional value serves as a key mediating variable between wine perception and consumption behavior. Specifically, wine positive perceptions related to social interaction, status, sustainability, health, and knowledge significantly enhance emotional value, which in turn increases the likelihood of wine consumption. Conversely, wine price perception and concerns about drinking-driving showed no significant effect. These results suggest that Gen Z's relationship with wine is nuanced and emotionally driven, challenging prevailing assumptions of disinterest. The study contributes to both academic debate and industry practice, offering strategic insights for revitalizing the Italian wine sector.

*Keyword: wine, Gen Z, Italy, emotional value*

## 1.Introduction

The Italian wine market is not just an economic powerhouse, it's a key part of the nation's cultural identity, symbolizing tradition, territory, and excellence. Yet today, this market risks being undervalued, precisely at a time when it should be revitalized with greater vigor, especially among younger generations.

Our study explores how Italian Gen Z - born between 1995 and 2012 - relates to wine, how they perceive it, what images and meanings they associate with it, and what keeps them far from wine or could potentially draw them closer.

The development of the conceptual model adopted in this study stems from a critical review of the existing literature, which tends to address variables related to youth wine consumption

in isolation, overlooking the role of emotional dimensions in mediating behavior. Indeed, there is a lack of structured models that integrate rational drivers with more subjective and symbolic elements, such as each individual's "sentiment" toward wine. Results on one hand, help to gain a deeper understanding of Gen z attitudes and behaviours related to wine; on the other they offer valuable insights for businesses in the sector, which now face the challenge of having to speak through a new language to the Gen Z, without compromising the authenticity of the product. If the Gen Z is disinterested about wine, the risk is not just a market crisis, for Italy it would represent a loss of a vital part of the cultural heritage.

## 2. The Italian Wine Market and Gen Z

In 2024, the Italian wine sector generated €14 billion in revenue, representing approximately 10% of the national agri-food industry (ISMEA, 2025). That year, wine production saw a drop of 23.2% from the previous year. Consumption also remained below pre-pandemic levels, influenced by economic uncertainty and evolving consumer preferences (Statista, 2024). Cultural factors continue to shape wine consumption in Italy. The Enpaia–Censis Report (2024) underscores wine's symbolic value across generations, despite inflation and financial constraints. Gen Z is a heterogeneous cohort marked by rapid adaptability, digital fluency, and growing economic power, with a purchasing capacity exceeding $44 billion (Kahawandala and Peter, 2020). Unlike previous generations, Gen Z does not associate wine with luxury or prestige. According to Taylor et al. (2018), social status was once a motivating factor in wine consumption, but recent research (Russo, 2025) shows that wine choices among university students are now driven by personal experiences, price sensitivity, and peer influence rather than branding or packaging. Studies by Casalegno et al. (2019) and Savelli & Travasi (2024) show that Gen Z consumers value environmentally friendly production and short supply chains, though they often lack a clear understanding about sustainability certifications, labeling, and online information sources. This knowledge gap partly stems from the wine sector's historical failure to communicate effectively with younger audiences (Wilson et al., 2018). There is also growing interest in wines with reduced alcohol and carbohydrate content, particularly among health-conscious consumers (Ghvanidze et al., 2017).

Nonetheless, financial limitations and limited product knowledge hinder Gen Z willingness to pay premium prices for sustainable options (Savelli & Travasi, 2024).

Casalegno et al. (2019) report that young consumers are more likely to base their wine purchases on a cost-benefit analysis, emphasizing affordable yet value-aligned choices. However, targeted communication strategies may increase price tolerance. Chikumbi et al. (2020) found that transparent messaging about additive-free wines aligned with environmental values can boost consumers' readiness to pay a premium.

According to IWSR (2024) and Earl (2024), Gen Z is increasingly reducing alcohol intake in favor of physical and mental well-being. Wine is often preferred over spirits for its perceived healthfulness, but lower-alcohol options are especially favored. Russo (2025) and Spence (2020) found that drinking typically occurs during social gatherings, meals, or celebrations, with minimal association to solitary or nightlife contexts supporting its relational dimension. Supermarkets and restaurants are the primary points of purchase, further indicating wine's integration into casual, communal life.

Finally, as noted by Master of Wine Andrea Leonardi (as cited in Sottile, 2024), Gen Z may not yet find wine particularly satisfying, but their engagement could grow if wines are tailored to their evolving preferences. Success in reaching this demographic, requires not the imposition of tradition, but attentive listening and alignment with Gen Z actual new values.

## 3. Methodology

The research adopts a mixed-method approach both qualitative and quantitative. Two focus groups are conducted to explore the relationship between Gen Z and wine consumption. This qualitative investigation provides significant insights which, combined with the prior analysis of scientific literature, serve as a solid foundation for the development a quantitative three-level mediation model as follows (see figure 1):

- Causal factors: conspicuous consumption (Russo, 2025; Thach, 2022; Casalegno et al., 2019; Taylor et al., 2018;), perception of wine as a means of socialization (Russo, 2025; Spence, 2020; Casalegno et al., 2019; Taylor et al., 2018), perception of wine pricing (Russo, 2025; Spence, 2024; Savelli e Travasi, 2024; Hulkower, 2020; Casalegno et al., 2019; D'Amico et al., 2016), perception of wine as healthy (Savelli e Travasi, 2024; Earl, 2024; Thach, 2022; Ghvanidze et al., 2017; Samoggia, 2016), concerns about driving after drinking (Reports from Ministry of Health), perception of wine sustainability (Earl, 2024; Savelli e Travasi, 2024; D'Amico et al., 2016), and wine-related knowledge (Savelli e Travasi, 2024; Casalegno et al., 2019);
- Intermediate variable: emotional value (sentiment) attributed to wine;
- Behavioral outcome: actual wine consumption.

In light of the literature review, there is a clear need to consider certain individual variables that may moderate the relationships between the causal factors and the behavioral outcome. Specifically, five sociodemographic moderators were identified: gender, age, geographic area of origin, level of education and employment. In addition, several general attitudes were included: general health-oriented attitude, sustainability orientation, subjective risk sensitivity related to driving and conspicuous attitude/symbolic consumption disposition.

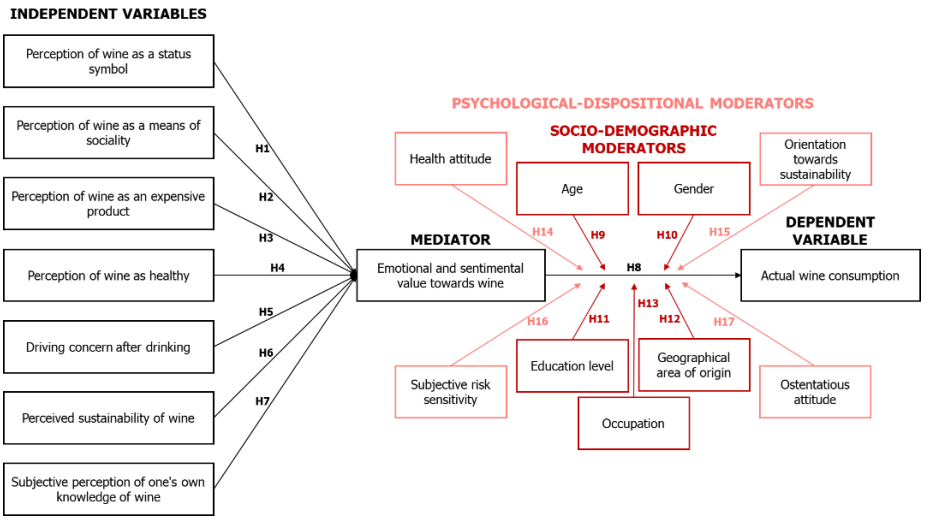



**Figure 1:** The Research Quantitative Model

A questionnaire was distributed using Qualtrics platform. Sampling followed a non-probabilistic, convenience-based approach, focusing on the Italian population belonging to Gen Z (over 18 years of age). A total of 337 valid responses were collected.

## 4. Results

Findings highlight the complexity and depth of the relationship between Gen Z and wine. The mediation analysis reveales the crucial role of emotional value as a bridge between

perception and behavior. Wine perceptions related to status, socialization, sustainability, health, and knowledge were found to positively influence emotional value, which in turn significantly increases the likelihood of consumption. This suggests that, for Gen Z, wine is not just a product but a cultural, symbolic, and relational experience, capable of generating deep emotional connections – in line with recent literature and Censis data (2024), which recognize wine as a cultural asset that conveys identity and social meaning. In contrast, price perception and concerns about driving do not significantly impact emotional value. This may be explained by the idea that strong emotional engagement with wine reduces sensitivity to cost. Furthermore, internalized social responsibility can weaken symbolic attachment to the product.

Overall, our study distinguishes between functional barriers (e.g., cost, legal risk) that affect feasibility, and emotional drivers (e.g., values, identity, sentiment) that shape deep motivation.

The model confirms emotional value as a significant mediator between perceptions and behavior. In cases of full mediation (e.g., sustainability, status), emotional value is the only pathway through which perception affects behavior. In partial mediation (e.g., socialization, health, knowledge), both direct and mediated effects coexist.

Ultimately, the model positions emotional value as the core psychological mechanism translating perception into consumption action. Moderation analysis found only one significant effect: risk sensitivity alters the relationship between emotional value and actual consumption suggesting that even emotionally engaged youth may limit intake if they are highly risk-averse. This aligns with increasing regulatory and cultural focus on road safety and responsible drinking.

## 5. Conclusions

To attract Gen Z, wine companies must move beyond traditional approaches and reposition wine as a cultural and emotional experience, not just a commodity. Many young consumers lack wine knowledge or emotional attachment, making it crucial to emphasize storytelling, symbolism, and authenticity.

A targeted communication strategy should also reflect the diversity within Gen Z considering that young consumers seek brands that are genuine and value-driven. Companies should use short-form, visually engaging formats and adopt a familiar language that resonates with younger audiences.

Promoting wine as a sustainable and health-conscious choice can strengthen its emotional appeal. This can be achieved through low-alcohol or organic options and by transparently sharing environmental efforts. However, the low-alcohol wine segment lags behind other categories like beer and needs both product and branding innovation to feel aspirational rather than inferior.

Wine education could be another key driver, it should begin early, ideally in schools. Many young people, feel uncertain about choosing or tasting wine. Brands should offer simple, interactive learning experiences to boost confidence and engagement. Wine must also adapt to Gen Z's preference for experiences over products. Sensory events, social media–friendly formats, and short urban wine tourism can make wine more accessible and memorable.

Finally, to overcome perceptions of wine as elitist, producers should explore more inclusive formats and informal narratives - without compromising perceived quality. While tradition (like corks and glass) still matters, modern packaging can convey elegance and trust when paired with thoughtful design. Personalized labels and direct sales can also strengthen brand

connection. Since Gen Z embraces digital retail, but when buying wine many still prefer physical interaction, e-commerce should evolve into a more immersive, guided experience, while direct-to-consumer channels remain key in building lasting relationships.

Public policy should also support innovation and sustainability—from digital transformation and supply chain integration to wine tourism and circular economy initiatives. Encouraging youth involvement in the sector through start-up incentives and training programs can help bridge the generational gap.

As already mentioned, rather than adopting moralistic or punitive approaches, public efforts should protect and promote wine's cultural, territorial, and ecological value, helping to define it as a product that connects history, community, and identity. In fact, focus groups revealed a strong "Italian" perception of wine among young people, who prefer national labels and view wine as deeply rooted in tradition.

## References


Casalegno, C., Giachino, C. e Bertoldi, B. (2019). "A New Generation for the Wine Industry". Micro & Macro Marketing, XXVIII(1): 49–70. Bologna: Società editrice il Mulino. DOI: 10.1431/93016

Chikumbi, L., Ščasný, M., Muchapondwa, E. e Thiam, D. (2020). "Premium Price for Natural Preservatives in Wine: A Discrete Choice Experiment". AAWE Working Paper No. 255. New York: American Association of Wine Economists, agosto.

D'Amico, M., Di Vita, G., & Monaco, L. (2016). Exploring environmental consciousness and consumer preferences for organic wines without sulfites. Journal of Cleaner Production, 120, 64–71.

Earl N. (2024). "Can the wine industry adapt to the 'lifestyle generations'?" Decanter

Ghvanidze, S., Velikova, N., Dodd, T. e Oldewage-Theron, W. (2017). "A discrete choice experiment of the impact of consumers' environmental values, ethical concerns, and health consciousness on food choices: A cross-cultural analysis". British Food Journal, 119(4): 863–881

Hulkower, N.D. (2020). "What Can I Still Afford to Drink?" AAWE Working Paper No. 254. New York: American Association of Wine Economists, giugno.

IWSR (2025) "Five key trends defining opportunities in the global wine market in 2025". IWSR, 20 marzo

Kahawandala, N. e Peter, S. (2020). "Factors affecting Purchasing Behaviour of Generation Z". In: Proceedings of the International Conference on Industrial Engineering and Operations Management, Dubai, UAE, 10–12 marzo 2020. IEOM Society International, pp. 1153 -1162.

Osservatorio del mondo agricolo Enpaia – Censis (2024). "Il consumo di vino per generazioni". Verona: Report.

Russo V., (2025). Il vino e i giovani italiani. Vinitaly 2025.

Samoggia, A. (2016). "Wine and health: faraway concepts?". British Food Journal, 118(4): 946–960. Bingley: Emerald Group Publishing Limited. DOI: 10.1108/BFJ-07- 2015-0267

Savelli, E. e Travasi, A. (2024). "Technological and Sustainable Orientation in the Wine Context: A Focus on Gen Z". Micro & Macro Marketing, XXXIII(3): 551–572. Bologna: Il Mulino. DOI: 10.1431/113948

Sottile, L. (2024). "30 milioni di consumatori di vino, ma meno fedeli". Gambero Rosso, 16 maggio.

Spence, C. Wine psychology: basic & applied. Cogn. Research 5, 22 (2020). https://doi.org/10.1186/s41235-020-00225-6

Spence C., (2024). Cognitive influence on the evaluation of wine: The impact and assessment of price. Food Research International, Volume 187.

Statista (2024). "Wine market in Italy".

Taylor, J.J., Bing, M., Reynolds, D., Davison, K., e Ruetzler, T. (2018). "Motivation and personal involvement leading to wine consumption". International Journal of Contemporary Hospitality Management, 30(2): 702–719. Bingley: Emerald Publishing Limited. DOI: 10.1108/IJCHM-06-2016-0335

Thach, L. (2022). "Analyzing Wine Preferences of Generation Z Wine Consumers in High and Low-Involvement Situations on a Global Basis". Paper presentato alla 13th Academy of Wine Business Research Conference, Burgundy School of Business, Dijon, 5–8 luglio 2022, pp.161-164.

Wilson, D., Háros, R., Lewis, J. e Wiederkehr, M. (2018). "How should we digitize the wine sector?" AAWE Working Paper No. 232. American Association of Wine Economists, settembre.

# Navigating Ethical and Functional Tensions in Food Delivery: Insights from Italian Consumers

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## Abstract

Food delivery platforms (FDPs) have become increasingly integrated into consumers' daily routines, offering speed and convenience while raising concerns about ethics and sustainability. This study examines the tensions between functional and moral considerations in platform use, with a focus on the role of local delivery platforms (LDPs). Drawing on a mixed-methods approach, the research combines qualitative insights from two student focus groups with quantitative evidence from a representative survey of 1,946 Italian consumers, 800 of whom regularly use FDPs. Findings confirm the dominance of convenience-driven motives, while also highlighting a clear valueaction gap: although many consumers express concerns about rider conditions and environmental impact, these concerns rarely influence their behavior. LDPs, despite aligning with consumer values around locality and fairness, remain marginal due to low visibility and perceived inefficiency. The study examines the theoretical implications of consumer ethics and platform engagement, outlining practical strategies for both platform operators and policymakers to reconcile efficiency with emerging moral expectations.

*Keywords: Food Delivery Platforms; Online Food Ordering; Local Food Consumption; Ethical Consumption.*

## 1. Introduction

The rapid expansion of food delivery platforms (FDPs) has reshaped food consumption practices, embedding new routines into consumers' daily lives. These platforms offer unprecedented convenience and variety, yet raise critical questions about labor conditions, environmental impact, and the role of local alternatives. In this context, understanding how consumers navigate the interplay between functional benefits and ethical concerns is becoming increasingly relevant, particularly considering growing interest in sustainable and locally sourced food consumption. This study examines consumer attitudes, motivations, and tensions surrounding the use of food delivery services, with a focus on the perceived differences between national and local platforms. More specifically, it aims to uncover the underlying values and behaviors that shape delivery choices in Italy through a mixed-methods approach, including two focus groups and a representative survey of around 2000 Italian consumers, 800 of whom regularly use food delivery platforms.

## 2. Literature Review

In recent years, food consumption patterns have undergone significant changes due to the rise of digital technologies and the increasing use of online platforms and apps (Kaur et al.,

2021). Traditional activities such as product comparison and supplier selection are now often performed through digital intermediaries (Cochoy et al., 2020), with the COVID-19 pandemic accelerating this digital transition (Francioni et al., 2022; Jun et al., 2022).

Digital platforms have become key players in the distribution system, redefining relationships among producers, retailers, and consumers (Wichmann et al., 2022). At the same time, consumers are increasingly empowered, showing interest in ethical, sustainable, local, and authentic products (Reich et al., 2018). Therefore, a tension has emerged between the expansion of global platforms—often criticized for their environmental and social impact—and the growing demand for ethical and sustainable alternatives (Chocoy et al., 2020).

The food delivery sector exemplifies this shift. Since the first online order in 1994, platforms like Just Eat, Glovo, and Deliveroo have offered a fully integrated experience (Shankar et al., 2022), leveraging technologies such as GPS tracking, flexible payments, and feedback systems (Farah et al., 2021). User experience is crucial to customer loyalty, with key factors in convenience, speed, and interface quality (Leung et al., 2023).

Research identifies both functional and symbolic motivations behind FDP usage: convenience, time-saving, variety, and promotional access (Teo et al., 2024; Zhao et al., 2023). The Technology Acceptance Model and the Theory of Planned Behavior highlight the importance of perceived usefulness, trust, and personal attitude (Francioni et al., 2022).

Meanwhile, critics focus on social and environmental issues: rider working conditions, urban emissions, and potential food waste (Sharma et al., 2021; Siragusa et al., 2022). Local delivery platforms (LDPs) have thus emerged as a counter-model, promoting ethical labor, shorter supply chains, and community engagement (Bongianni, 2022). Yet, their adoption remains limited due to visibility, operational constraints, and perceived inefficiency (Teo et al., 2024). Despite expressing sustainable and ethical values, consumers often prioritize convenience, cost, and habit (Zepeda & Li, 2006), revealing a value-action gap. LDPs appear more appealing to specific consumer segments—educated, environmentally aware urban dwellers—suggesting the need for strategic positioning and increased visibility to realize their full potential.

## 3. Methodology

This study adopted a mixed-methods approach to explore consumer perspectives on FDPs and LDPs, combining qualitative insights from focus groups with quantitative data from a large-scale survey. The qualitative phase consisted of two focus groups conducted between May and June 2024, involving 11 university students aged 21 to 27. Following a semi-structured discussion guide, each session was moderated by two academic researchers with expertise in marketing and consumer behavior. The first group included six university students (four males and two females), mostly living away from home in urban areas. The second group involved five students (two males and three females) residing with their families or independently in smaller towns. The discussions aimed to investigate both practical usage patterns and symbolic meanings associated with delivery services, whether for prepared meals or online grocery shopping. Participants engaged actively, offering a nuanced perspective on the motivations, barriers, and ethical dilemmas surrounding the use of food delivery services.

The quantitative phase involved an online survey administered with the support of a professional market research firm. The survey targeted a representative sample of 1946 Italian consumers, ensuring demographic diversity across age, gender, geographic region, and socio-economic background. The questionnaire aimed to quantify key behaviors and

attitudes identified in the qualitative phase, providing robust insights into the current state and potential evolution of food delivery consumption across the Italian population.

## 4. Findings

### 4.1 Focus Groups

Participants in the two focus groups widely recognized convenience as the primary reason for using delivery platforms—for both prepared meals and online groceries— especially during periods of intense study or socializing. However, some also reported guilt when ordering under poor weather conditions or expressed concerns about the riders' working conditions.

Geographic context emerged as a key determinant in service availability. While urban participants had access to multiple platforms, those from smaller towns relied on informal or non-digital services. This uneven access significantly shaped usage patterns.

Price sensitivity and service efficiency were frequently discussed. Several students reported frustration over missing items, high delivery fees, or service delays, particularly during weekends. These experiences influenced the perceived reliability of specific platforms.

Food waste was another contested topic: while some viewed delivery as a way to avoid leftovers, others believed it led to increased waste, especially when food was not consumed promptly. This suggests that the delivery's environmental impact is not uniformly perceived and varies depending on personal habits and food types.

A distinction was made between delivery and dining out. Many considered delivery a substitute for home-cooked meals, rather than a replacement for restaurant experiences. However, for some, ordering in had become an alternative to going out, reflecting social and economic priorities.

Riders' working conditions also received attention. Students showed awareness of differences between casual and full-time riders, raising concerns about labor protection and fairness. Nevertheless, ethical considerations are rarely translated into concrete behavior changes. Indeed, attitudes toward LDPs remained largely indifferent. Despite acknowledging the moral and territorial values promoted by these platforms, most participants do not differentiate them from mainstream services like Glovo or Just Eat. This suggests a disconnect between declared values and actual consumption practices, highlighting functional dominance over ethical criteria in delivery choices.

### 4.2 Survey

Eight hundred consumers currently use food delivery platforms, representing approximately 40% of the sample, indicating that less than half of Italians utilize these channels for food purchases. Platforms account for a small share of total food purchases, at slightly more than 3%, and are outnumbered mainly by supermarkets (41.1%), local shops (27.9%), and hypermarkets (16.6%). Therefore, although the penetration of this channel reaches 40% of the population, its economic impact remains marginal.

Focusing on platform users, 21.9% use them to purchase fresh food once a week or more, 38.1% less than once a week but at least once a month, and the rest of the sample uses them even less frequently. The frequency of purchase of ready-to-eat food is even lower.

The most important motives for using food delivery platforms are "convenience" (27.2%), getting unusual or tricky food (17.2%), lack of time for cooking (14.1%), and special social

occasions (14.1%). Most occasions (around 75%) where Italian consumers obtain food from platforms are for a collective gathering, such as with friends, family, and the like.

Respondents declare that the most important criteria they employ to select their preferred platform are food quality and typology, straightforward indication of delivery time and delivery fees, the variety of restaurants available, and the platform's usability (website or app).

At least one-third employ the app or website of individual restaurants or shops, even if not exclusively.

Platform users believe that platforms can save people time and are intuitive and easy to use; however, they are not always economically convenient. Moreover, they believe that they exploit riders, which is a significant issue, and would prefer to rely on local suppliers for both products and delivery services. Platforms are also considered highly impactful. Ultimately, many choose to prepare their food or dine at a more authentic and satisfactory restaurant.

In perspective, platform users request more respect for riders and lower delivery fees, which are the most frequently cited expectations. These are followed by other requests, such as an increasing share of local products in the platforms' assortments, a wider variety of foods and suppliers, shorter delivery times, and a need to reduce the environmental impact of the entire delivery process.

## 5. Discussion

This study provides a multi-layered understanding of how Italian consumers interact with food delivery platforms, illuminating both their practical behaviors and the value tensions inherent in these practices. Findings from both the focus groups and the survey confirm what much of the literature has anticipated: functional motives—primarily convenience, time-saving, and platform usability—continue to dominate the rationale behind FDP usage (Francioni et al., 2022; Teo et al., 2024). In particular, a clear valueaction gap emerges: although participants express concern over rider exploitation and environmental impact—issues widely discussed in the literature (Sharma et al., 2021; Siragusa et al., 2022)—these concerns rarely translate into actual behavior change.

In line with prior studies (Zepeda & Li, 2006), ethical and sustainability considerations are recognized but subordinated to convenience and habit. This is particularly visible in the widespread indifference toward LDPs, which—despite their potential to promote sustainable, community-based food consumption—still struggle to gain traction due to low visibility and perceived inefficiency (Bongianni, 2022; Teo et al., 2024).

The practical implications of these findings are twofold. For platform operators, improving delivery affordability and transparency—especially regarding rider treatment—may enhance consumer trust and loyalty. Integrating more local products and vendors could also increase differentiation and appeal, particularly among environmentally conscious users. Policymakers and local institutions can support and promote LDPs by fostering digital infrastructure, enhancing communication efforts, and promoting ethical certifications, thereby highlighting their social and territorial value.

Ultimately, the future success of food delivery will depend on striking a balance between efficiency and ethics. Platforms that meet consumers' functional needs while addressing their latent moral concerns may be best positioned to thrive as the market matures.

## References


Bongianni, O. (2022), "La storia di Robin Food, la cooperativa che consegna il cibo a domicilio", Informatore Coop.fi, 5 ottobre 2022.

Cochoy, F., et al. (2020), "Digitalizing consumer society: Equipment and devices of digital consumption", Journal of Cultural Economy, Vol. 13, N. 1, pp. 1–11.

Farah, M. F., Ramadan, Z. e Kanso, J. (2021), "Satisfying the online food crave: The case of online food aggregators", International Journal of Consumer Studies, Vol. 46, N. 4, pp. 1413-1427.

Francioni, B., Curina, I., Hegner, S. M. e Cioppi, M. (2022), "Predictors of continuance intention of online food delivery services: Gender as moderator", International Journal of Retail & Distribution Management, Vol. 50, N. 12, pp. 14371457.

Jun, K., Yoon, B., Lee, S. e Lee, D.-S. (2022), "Factors influencing customer decisions to use online food delivery service during the COVID-19 pandemic", Foods, Vol. 11, N. 1, 64.

Kaur, P., Dhir, A., Talwar, S. e Ghuman, K. (2021), "The value proposition of food delivery apps from the perspective of theory of consumption value", International Journal of Contemporary Hospitality Management, Vol. 33, pp. 1129–1159.

Leung, Y. L., Chan, R. L. H., Chiu, D. K. W. e Ruwen, T. (2023), "Investigating the consumption behavior of young adults using online food delivery platforms during the COVID-19 pandemic", Aslib Journal of Information Management, Vol. 77, N. 2, pp. 330-353.

Reich, B. J., Beck, J. T. e Price, J. (2018), "Food as ideology: Measurement and validation of locavorism", Journal of Consumer Research, Vol. 45, N. 4, pp. 849-868.

Shankar, A., Jebarajakirthy, C., Nayal, P., Maseeh, H. I., Kumar, A. e Sivapalan, A. (2022), "Online food delivery: A systematic synthesis of literature and a framework development", International Journal of Hospitality Management, Vol. 104, 103240.

Sharma, R., Dhir, A., Talwar, S. e Kaur, P. (2021), "Over-ordering and food waste: The use of food delivery apps during a pandemic", International Journal of Hospitality Management, Vol. 96, 102977.

Siragusa, C., Tumino, A., Mangiaracina, R. e Perego, A. (2022), "Electric vehicles performing last-mile delivery in B2C e-commerce: An economic and environmental assessment", International Journal of Sustainable Transportation, Vol. 16, N. 1, pp. 2233.

Teo, S. C., Liew, T. W. e Lim, H. Y. (2024), "Factors influencing consumers' continuance purchase intention of local food via online food delivery services: The moderating role of gender", Cogent Business & Management, Vol. 11, N. 1, 2316919.

Wichmann, J. R. K., Wiegand, N. e Reinartz, W. J. (2022), "The platformization of brands", Journal of Marketing, Vol. 86, N. 1, pp. 109-131.

Zepeda, L. e Li, J. (2006), "Who buys local food?", Journal of Food Distribution Research, Vol. 37, N. 3, pp. 1-11.

Zhao, Y., Zhao, X. e Liu, Y. (2023), "How brick-and-mortar retailers and grocery delivery platforms influence purchase intention?", International Journal of Retail & Distribution Management, Vol. 51, N. 12, pp. 1677-169.

# Reconstructing the Digital Funnel: A SEM-Based Perspective on Consumer Pathways and Service Expectations

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## Abstract

In the realm of e-commerce, aligning digital funnel design with buyer expectations is critical for guiding consumers from awareness to purchase and beyond. This paper synthesizes insights from a buyer's expectation survey and structural equation modelling (SEM) of online consumer behaviour to propose a redesigned digital funnel. Drawing on an online buyer survey of desired e-commerce services and a SEM-validated model of choice mechanisms, the paper maps key digital services to appropriate funnel stages (Awareness, Consideration, Decision, and Post-purchase Loyalty). The proposed funnel highlights how heuristic-driven services – such as intuitive search and filtering by category/brand/price – in the consideration stage, and context-driven features (e.g., shopping by occasion) combine to drive deal-seeking behaviours, ultimately influencing purchase decisions. We integrate recent research on customer decision journeys and digital service design to ensure each funnel stage is supported by features that meet buyer needs while improving conversion. The findings indicate a significant gap between seller offerings and buyer expectations in current funnels, and demonstrate how our SEM-informed funnel can contribute to bridge this gap. We discuss theoretical and practical implications for e-commerce managers to enhance user experience, increase trust, and cultivate loyalty by deploying the right features at the right stage of the customer journey. All claims are supported with evidence from literature and foundational works in marketing and information systems.

*Keywords: digital marketing funnel; structural equation modeling (SEM); consumer decision-making; e-commerce experience; user journey personalization*

## 1. Introduction

E-commerce customer journeys are often conceptualized as a «digital funnel», guiding users from initial awareness through consideration to purchase and post-purchase engagement. This funnel metaphor – rooted in classic consumer decision models (e.g., the AIDA hierarchy) – delineates stages where marketers must attract attention, foster interest, drive decisions, and ultimately secure loyalty. Designing an effective digital funnel is critical: it provides a clear, efficient path that simplifies decision-making, minimizes drop-offs, and enhances satisfaction. Yet, many e-commerce funnels fall short of buyer expectations. Studies reveal a persistent gap between the services online sellers offer and what consumers actually desire or use when shopping online (D'Avanzo & Kufflik, 2013). Bridging this gap is essential for improving conversion rates and customer experience.

Prior research by D'Avanzo and Colaiori (2023) identified that e-commerce websites often lack non-compensatory decision aids that consumers value. For example, buyers may expect robust search and filtering options, informative reviews, and personalized recommendations, but sellers do not always provide these features or fail to implement them in line with buyer needs. The result is an "expectation gap" that can lead to user frustration and lost sales. Moreover, the traditional linear funnel is being challenged by contemporary customer journey models that emphasize ongoing engagement and a «loyalty loop» beyond the initial purchase. Customers now interact with firms across myriad touchpoints and may re-enter the funnel through post-purchase interactions, reviews, or social media advocacy (Lemon & Verhoef, 2016). These developments call for a redesign of the «digital funnel» that not only reflects stages of buyer decision-making, but also integrates features proven to influence consumer behaviour at each stage.

Against this backdrop, the present study aims to synthesize two complementary and mutual perspectives – buyer expectations across the funnel stages and SEM-validated consumer behaviours – into a unified, redesigned digital funnel model. The first perspective comes from a survey-based study of e-commerce buyers which revisited the digital funnel from the buyer's point of view. It identified which online services (e.g., site search, product recommendations, reviews) buyers deem most valuable at different stages of their journey and highlighted mismatches between what buyers want and what sellers commonly offer. The second perspective is through a structural equation modelling (SEM) to discover which e-commerce website features significantly drive consumer choices. The SEM analysis proposes a subset of eight non-compensatory choice mechanisms (e.g., filtering by brand, price, occasion, etc.) out of dozens of possible services, and grouped these into latent factors, or constructs, that predict online purchase intent. The SEM model highlights how three constructs of shopping behaviours interrelate: one capturing «product-filtering heuristics» (by category, brand, price), another capturing «goal-oriented filters» (by recipient or occasion), and a third capturing «deal-seeking actions» (viewing sale items, new arrivals, top-sellers). These data-driven insights offer a valuable lens on which site features truly influence consumer decisions.

Research problem and contribution: building on these prior works, we address the problem of how to integrate buyer expectations with empirically validated consumer behaviours in order to redesign the digital funnel.

We ask:

- RQ1: which e-commerce services should be present at each stage of the funnel to meet buyers' expectations?

- RQ2: how do these services correspond to behaviours that significantly drive online purchase decisions?

By answering these questions, our study contributes a synthesized funnel model that is both «buyer-centric» and «behaviourally validated». In contrast to generic funnel models, our proposed model is grounded in empirical evidence, trying to ensure theoretical rigor and practical relevance too.

It extends traditional funnels by explicitly mapping specific digital services (e.g., search filters, reviews, payment options) to funnel stages, guided by what buyers expect and what actually impacts their choices as per SEM findings.

We also incorporate post-purchase and loyalty stages, reflecting modern understandings of the customer journey as an ongoing cycle rather than a terminal funnel.

The remainder of the paper is organized as follows. First, we review the theoretical framework underpinning digital funnels, buyer decision-making, and relevant online services, drawing on marketing and IS literature. Next, we outline our methodology for synthesizing the two key points of view. We then present results and the discussion in the form of a redesigned funnel, including a detailed comparison of services identified in the buyer survey vs. the SEM model, where we interpret the findings in light of theory and prior research, and derive implications, even if at its early stage. Managerial implications are then outlined, providing guidance for practitioners on implementing the recommended funnel design. Finally, we conclude with a summary of contributions and suggestions for future research.

## 2. Theoretical Framework

### 2.1 Digital funnel and customer journey concepts

The notion of a «sales funnel» or «marketing funnel» has long been used to describe the stages of consumer decision-making, from initial awareness to purchase (and in extended models, post-purchase engagement). The concept originates from early marketing frameworks like the AIDA model (Awareness–Interest–Desire–Action) proposed over a century ago, which conceptualized a narrowing process where many prospects at the top eventually convert into a smaller number of buyers at the bottom. Modern interpretations of the funnel incorporate more nuanced stages and recognize post-purchase behaviours.

For instance, Gabbott and Hogg (1998) delineated pre-encounter, encounter, and post-encounter phases in service interactions. In e-commerce contexts, the encounter phase can be further refined into an exploratory stage (as the customer acquaints themselves with the website and offerings), a choosing/consideration stage (active product search and evaluation), and a purchase stage (transaction completion).

More recent literature on customer experience emphasizes that the journey does not end at purchase; rather, post-purchase phases like consumption, loyalty, and advocacy are crucial to firm success (Lemon & Verhoef, 2016). Loyalty loop models (Court et al., 2009) reconceptualize the funnel as a continuous cycle where satisfied customers re-enter the loop via repeat purchases or influence others via advocacy. This evolving view underlines the importance of including post-purchase services (e.g., support, personalized follow-ups) in funnel design.

### 2.2 Buyer decision-making and information processing online

A stream of research in marketing and information systems has examined how consumers gather information and make decisions online. A key distinction is between compensatory and non-compensatory decision strategies (Arana & León, 2009). In compensatory strategies, consumers evaluate trade-offs, allowing a high value on one attribute to compensate for a low value on another. In contrast, non-compensatory strategies (i.e, heuristics) involve simplified decision rules where consumers set cut-off criteria and eliminate options that don't meet the thresholds, without extensive trade-offs. Online shopping environments often encourage heuristic approaches due to information overload and the abundance of choices. Gigerenzer and Goldstein's (1996) work on bounded rationality argues that simple heuristics can be remarkably effective, enabling «fast and frugal» decisions with limited cognitive effort. E-commerce websites implement these heuristics as interactive tools: for example, filtering by category or price is a non-compensatory strategy that helps «narrow choices», quickly, without comparing every product detail. Such features reduce cognitive load and decision complexity, which is beneficial given that too many options or too much information can overwhelm consumers.

Studies on information overload in e-commerce demonstrate that presenting information in an organized, filtered manner helps consumers cope with extensive choice. When consumers encounter excessive product information, or complex interfaces, they often experience increased decision stress and reduced satisfaction, a phenomenon exacerbated when site design does not aid efficient scanning and filtering (Kusi et al. 2022). Conversely, if consumers feel inundated with unstructured information, their satisfaction and confidence drop. Furner and Zinko (2017) specifically explored the role of online reviews in this context. They showed that more extensive information in product reviews boosts trust and purchase intention up to a point, but beyond an optimal level it leads to diminishing returns and even declines in trust if information load becomes excessive. Notably, they found web interfaces can handle higher information loads better than mobile interfaces, implying that effective web design (with sorting, filtering, etc.) can mitigate overload. These findings underscore the importance of well-designed informational services – such as filtering options, concise yet thorough product descriptions, and user reviews – at the consideration stage of the funnel. They need to provide enough information to inform decisions and build trust, but not so much as to overwhelm.

### 2.3 Critical e-commerce services across the funnel

Prior work has identified various website features that facilitate different stages of the buyer's journey. During the Awareness or exploratory stage, consumers benefit from tools that orient them to the product space and pique interest. A shopping guide or clear categorization of products can introduce the range of offerings and help users navigate intuitively. According to D'Avanzo & Colaiori (2023), a shopping guide on the homepage (e.g., category overviews or gift guides) serves as a valuable starting point that frames the site's offerings and directs users to relevant sections. In addition, showcasing new arrivals or best-selling products on the landing page can attract user attention – these features leverage social proof and novelty to raise awareness of popular or latest items. Indeed, consumers highly appreciate seeing "What's new" or top sellers as it helps them discover trends or desirable options with minimal effort (see Figure 1). However, many sellers underutilize these: only about 29% of e-commerce sites offered a top sellers feature, despite ~68% of consumers expecting it. Similarly, highlighting discounted products (sale items) early can draw in deal-seekers; around 80% of consumers in one study wanted a products on sale filter, yet fewer than 20% of sites provided it.

In the Consideration stage, where users actively search and evaluate options, numerous online services come into play. A functional search engine is paramount – buyers overwhelmingly expect the ability to quickly find specific products via search. In fact, the availability of a good search function streamlines decision-making and saves time.

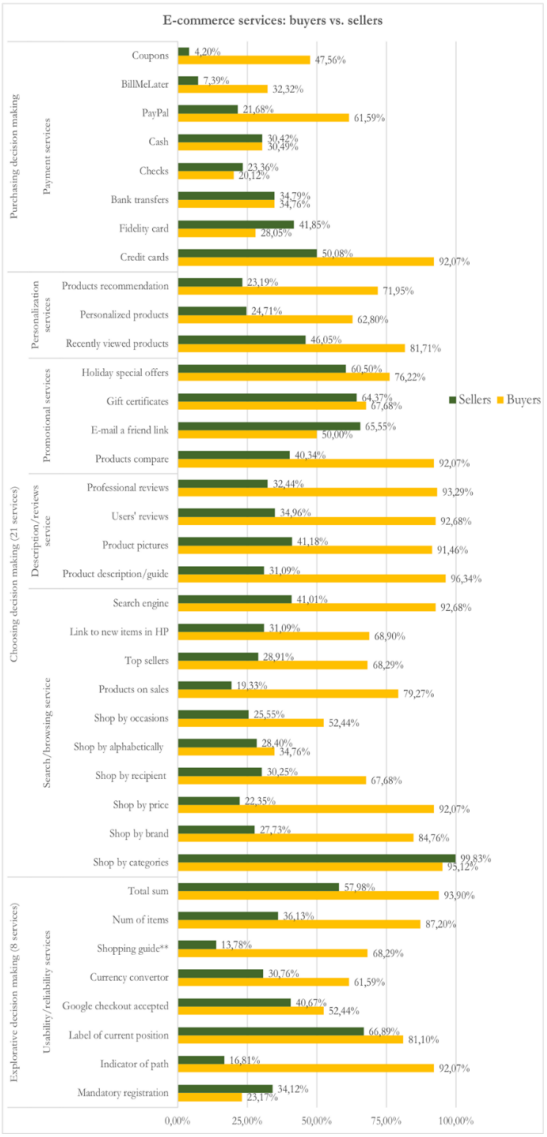



**Figure 1:** The figure shows, at the same time, the 37 services that were analyzed by D'Avanzo and Colaiori (2023). In yellow are represented the buyer's expectation (what buyer want) in terms of utility of the service, while in green are reported the percentages of e-commerce sites (sellers) that offer those services. For each service, it is possible to note the possible gap between what is offered (by the 594 e-commerce analysed) and how much the same services are expected by buyers (sample of 165 interviewees).

Almost all e-commerce websites provide basic search, and it's considered a standard feature (93% of sites in a 594-website survey had it). But the mere presence of search is not enough (only 41% of seller offer this service); its effectiveness (accuracy, ease of use) is crucial. Research shows that search algorithms and recommendation quality significantly influence purchase intention. Alongside search, navigation by categories is another key service. Organizing products into «logical categories» or hierarchies (and allowing shop by category) simplifies exploration, helping users systematically browse areas of interest. This feature was among the most frequent services provided by sellers and also highly expected by buyers, aligning both sides. Beyond category, more granular filters like shop by brand and shop by price are vital in consideration phases. These allow buyers to narrow down options according to their preferences or budget constraints, implementing a heuristic elimination of unsuitable

options. Buyers place great importance on brand and price filters – they were identified as highly expected tools for evaluating choices (by brand is expected by 85% of buyers, while by price by 92% of them, even if both of them have low spread among sellers). The SEM analysis introduced in the following indeed confirms that filtering by brand, price, and category form a significant construct influencing online consumer behaviour. This factor (named F1 in the following SEM model) essentially captures a consumer's heuristic attitude of «I want to see only items from certain brands, within my price range, or in a specific category» which streamlines the decision process.

Another set of tools in Consideration is contextual filters, such as shopping by recipient (e.g., gifts for men, women, children) or by occasion (e.g., holiday, back-to-school). These services address the situation-specific intent behind a purchase. While not all consumers shop by occasion, a substantial segment finds it useful: about 52% of buyers expected such filters, yet only ~25% of sellers offered them. The SEM analysis introduced in the following highlights the importance of these context-based mechanisms: shop by recipient and shop by occasion clustered into a construct (F7 in the SEM model), representing the consumer's goal-oriented intention (e.g., buying for a specific purpose or person). This factor significantly drives the selection of certain products, confirming that when sites allow filtering by context, it aligns with how many consumers approach shopping (especially for gifts or events).

Crucially, the consideration stage is also where product information and social proof shape decisions. Consumers demand comprehensive product descriptions (expected by 96% of buyers) and images (92% expected) to evaluate quality and fit-for-need. High-quality product pictures are indispensable; they set expectations and build confidence in the product's appearance. Visual presentation can often make or break a sale in e-commerce due to the inability to physically inspect items. Additionally, user reviews and professional reviews (expert opinions) become highly influential at this stage (see Fig. 1). They provide social proof, reduce uncertainty, and help buyers compare options. In fact, user-generated ratings and reviews have been found to be a "main component of purchase decisions" online. Furner & Zinko (2017) showed that well-curated reviews increase trust in the product and the platform. Accordingly, buyers in the survey rated reviews as critical features in the funnel's consideration phase. Many sellers have implemented review systems, but they are not as widely provided as buyers would like, as can be noticed looking at the gap on the corresponding bars of Fig. 1. Taken together, the literature and empirical evidence suggest that to support the consideration stage, an e-commerce site should integrate robust search and navigation, filtering heuristics for efficient sorting, and rich informational content (detailed descriptions, images, and reviews) to facilitate informed, confident decision-making.

Moving to the decision stage (the intent-to-purchase and purchase action phase), the focus shifts to transaction facilitation and reassurance. At this point, the user has selected a product and is ready to buy, so the site's job is to make checkout smooth and build final trust. One key service is displaying the total sum (cart total) and any cost details (taxes, shipping) clearly before checkout. Buyers expect transparency in pricing; showing the running total of their cart helps them manage their budget and avoid surprises. Total sum was among the most expected features during the intent stage, expected by about 94% of buyers. Another useful feature is an indicator of path or checkout progress bar. Clearly indicating the steps to completion (shipping, payment, confirmation, etc.) guides users and reduces anxiety by showing how close they are to finishing the purchase. This contributes to user satisfaction and prevents navigation confusion in the crucial final stage.

Trust is paramount at the decision stage, so offering secure and convenient payment options is critical. Acceptance of major credit cards is standard and expected – it signals reliability and meets consumers' usual payment habits. Beyond that, providing alternative payment

methods like PayPal can significantly enhance perceived security and convenience. PayPal, for instance, is trusted by many buyers for its fraud protections and ease of use; buyers value having it available and, in the survey, identified PayPal as a highly desired option during the purchasing stage. The presence of Buy Now, Pay Later services (e.g., the referenced "BillMeLater") can also influence purchase completion by reducing immediate financial burden – although the first study noted these may be less universally expected, some buyers appreciate the flexibility.

Additionally, incentives like coupons or discounts can be decisive at this stage. A timely coupon code or an automatically applied discount can motivate on-the-fence customers to complete the purchase. Consumers often look for coupon fields or promotions at checkout, and the expectation of finding a deal can increase conversions (the notion of getting a better price provides the final nudge). Coupons were among the services highly desired by buyers but not frequently offered by sellers, representing a missed opportunity to boost conversion rates.

Finally, Post-purchase and Loyalty stages involve services that encourage repeat engagement and turn purchasers into returning customers or advocates. After a purchase, features like "recently viewed products" or "related items" on the confirmation page or in account history can re-engage customers, reminding them of items they considered and potentially sparking a new purchase. The first study emphasizes that showing recently viewed items post-purchase can nurture the relationship and set the stage for the next buying cycle. In the longer term, personalized recommendations become crucial in the loyalty phase. Tailored product suggestions (via recommender systems leveraging prior purchase and browsing data) help create a one-to-one feel, enhancing customer satisfaction and loyalty. Personalized recommendation systems that integrate real-time user behavior—such as browsing and click histories—can significantly enhance accuracy, satisfaction, and loyalty in e-commerce contexts (Barzegar Nozari et al., 2024). This implies that effective personalization can drive incremental sales and deepen engagement. Buyers in the survey study also indicated they expect personalization in the loyalty stage – e.g., personalized product offers or emails catering to their preferences. Other loyalty-stage services include loyalty programs or fidelity cards, although interestingly the first study noted that a "fidelity card" was not highly expected during initial buying phases (likely because loyalty programs become relevant after trust in the platform is established).

### 2.4 Summary of gaps and theoretical implications

The literature and prior empirical findings collectively highlight that while numerous digital services can support the customer journey, not all are equally valued by consumers or effective in practice. Foundational works stress the role of website quality and features in fostering satisfaction and loyalty. For example, Bilgihan & Bujisic (2015) showed that well-designed website features are essential for building online customer relationships and influence purchase decisions. Easy navigation, convenient interfaces, and informative content lead to positive user experiences and competitive advantage for online retailers. From an IS perspective, factors like information quality (completeness, relevance of content) have been empirically linked to customer satisfaction (Chang, & Yang, 2010; Sehgal & Malik, 2024). Customers actively evaluate the information on websites – including price info and reviews from other buyers – and poor information quality can cause dissatisfaction and lost sales. Thus, there is a theoretical rationale for aligning funnel design with information-rich, user-centric features.

Based on the above rationale (i.e., buyer expectations and a body of knowledge), D'Avanzo & Colaiori proposed a new digital funnel that is based on the buyers' expectations. The contribution of their work is an attempt to map e-commerce services, identified though a

buyers' survey, on an extended version of a digital funnel made by 8 levels, as shown in the Figure 2.

However, implementing every possible service is neither practical nor necessary. The real challenge is to identify which services matter most at each stage, according to both consumer expectations and actual impact on behaviour. The expectation – offering gaps identified (e.g., high desire for coupons vs. low availability, desire for occasion-based shopping vs. low support) suggest specific areas for improvement, a job already tried by D'Avanzo & Colaiori (2023). Meanwhile, the SEM findings proposed in the following provide data-driven filters to prioritize features that significantly shape choices (like brand/price filters, context filters, and highlighting deals). By integrating these perspectives, our theoretical stance is that an optimized digital funnel is one that:

1. meets consumer expectations by providing the services they find most useful at each decision stage, thereby reducing friction and building trust;

2. leverages proven behaviours by emphasizing features that consumers actually use to make decisions (as validated by statistical models), thus efficiently guiding them toward purchase.

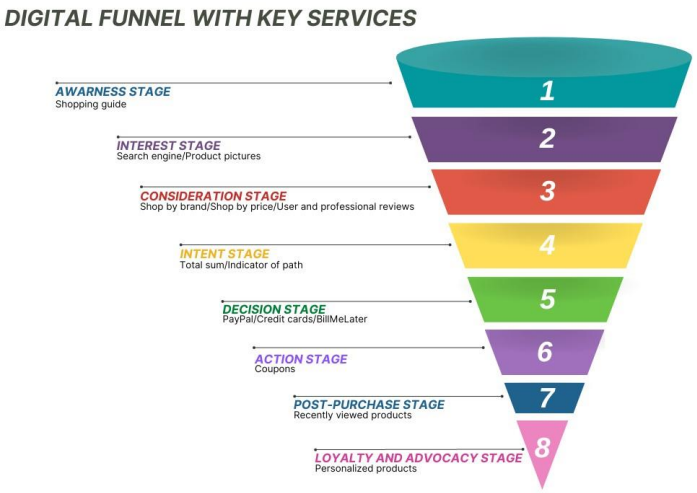



**Figura 2:** Graphical representation of a revisited digital funnel, incorporating 8 levels with their corresponding services. The figure is reproduced from the work of D'Avanzo and Colaiori (2023), courtesy of the authors.

In the next section, we describe how we combined the findings introduced above to develop such a funnel.

## 3. Methodology

Our research integrates findings from two complementary point of views to design a new digital funnel model. We leverage existing empirical results – one from a buyer survey study by D'Avanzo and Colaiori (2023) and another from a structural equation modelling (SEM) applied to their survey data – and connect them through conceptual mapping. This approach is akin to a meta-synthesis, or integrative framework development, common in conceptual research in marketing and IS.

### 3.1 Data sources

As mentioned above the dataset employed comes from D'Avanzo & Colaiori, 2023, which examined buyers' expectations of e-commerce website services across funnel stages. In their study, the authors based their funnel model on an extensive survey of online consumers (n = 165) using a 37-item questionnaire (5-point Likert scales) addressing various website features. Respondents were asked how useful/expected certain services were in their online shopping experience. The sample covered a broad demographic (both genders, ages spanning <21 to 50+) to capture diverse buyer perspectives. Additionally, they analyzed the prevalence of services on 594 e-commerce websites, identifying 68 distinct service variants and noting their frequency of implementation by sellers. These services were categorized following Gabbott & Hogg's (1998) phases (pre-encounter, encounter subdivided into exploratory/choosing, and post-encounter), as can be seen looking at left side of Figure 1.

The survey results were then used to pinpoint gaps between «buyer expectations» (which services were rated highly by consumers) and «seller offerings» (which services were infrequently available on sites). The key outputs of this first study that we utilize are:

a) a rank of services by how «highly expected» they are from the buyer's perspective;

b) identification of services that are both highly expected by buyers yet not common on sellers' websites;

c) a proposed eight-stage funnel model mapping specific services to each stage of the buying journey (their Figure 2).

We extracted qualitative insights from this paper – including direct statistics (e.g. «90% of consumers expect X, but only 30% of sites offer it») and the conceptual placement of services in funnel stages – to inform our funnel design.

After that we carried out a SEM analysis of e-commerce decision mechanisms identified through the survey. Using SEM, that is the novelty represented by our approach, we developed a full measurement model, where multiple observed items (questions about specific mechanisms) load onto latent factors representing broader decision-making constructs. Through model refinement (dropping non-significant items – services/filters - and improving fit indices), we arrived at a final SEM model (Figure 3) comprising three latent factors (labeled F1, F7, F4) and eight observed variables (the specific services). The model fit was excellent (CFI ≈ 0.993, RMSEA ≈ 0.019). Each factor/construct corresponds to a cluster of related services:

- F1: shopping heuristics by category, brand, price. These were all significant with F1, indicating consumers who tend to filter by brand also consistently filter by price and categories, suggesting a propensity for classical product filtering.

- F7: Goal-oriented heuristics by recipient and occasion. This construct reflects a consumer's intention to buy with a specific aim or context (e.g. a gift for someone or for a particular event). High scores on F7 mean the user frequently uses those contextual filters.

- F4: Deal-seeking and novelty-seeking behaviours. These items correspond to shop by products on sale, shop by top sellers, and links to new items on the home page respectively. F4 thus represents a tendency to focus on promotions, popular items, or new arrivals (composite «offers» factor).

The SEM's structural model then examined relationships among these factors. It found that F1 and F7 are significantly correlated, and both have causal influences on F4 (standardized coefficients: F1 → F4 = 0.31, F7 → F4 = 0.78, both $p < 0.05$).

In other words, consumers who rely on basic filters and those who shop by context both tend to engage with sale/top-seller/new-item features; together, F1 and F7 explain about 80% of the variance in the deal-seeking factor F4 ($R^2 = 0.801$).

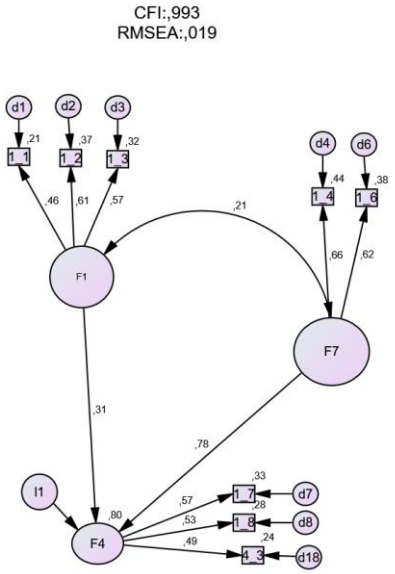



**Figure 3:** The figure shows the SEM model comprising the three latent factors (labelled F1, F7, F4) and eight observed variables (the specific services). The structural model (causal relations) explains F4 on the basis of F1 and F7. The model fits properly and the explanatory (independent) variables F1 and F7 are significant ($p<0,05$). This means that if we know the value of F1 and F7, we could predict the value of F4,
according to the relation: F4=0,31F1+0,78F7

This suggests that highlighting deals or popular items (F4 behaviors) is particularly effective for customers who are filtering by preferences or shopping for specific occasions – a valuable insight for funnel design.

For our purposes, the critical outputs from the SEM study are the eight specific services validated as significant and their association with decision-making constructs. These eight services are: category filtering, brand filtering, price filtering, recipient-based filtering, occasion-based filtering, viewing sale items, viewing top-sellers, and viewing new arrivals. We treat these as the "SEM-validated" behaviours that our funnel model should incorporate at appropriate stages.

| SEM model | | |
|---|---|---|
| **Model Code** | **Variable (choice mechanism)** | **Construct** |
| 1_1 | *Shop by categories* | **F1** |
| 1_2 | *Shop by brand* | |
| 1_3 | *Shop by price* | |
| 1_4 | *Shop by recipient (e.g. products for children; women, etc…)* | **F7** |
| 1_6 | *Shop by occasions* | |
| 1_7 | *Shop by products on sale* | **F4** |
| 1_8 | *Shop by top sellers* | |
| 4_3 | *Links to new items on home page* | |

**Table 1:** Table report all variables/services as for the measurement model. F1 is composed for questions 1-1, 1-2 and 1-3, F7 composed for questions 1-4 and 1-6, and F4 is composed for questions 1-7, 1-8 and 4-3.
The meaning of each variable/question is also reported.

### 3.2 Integrative approach

We combined the above sources through the following steps:

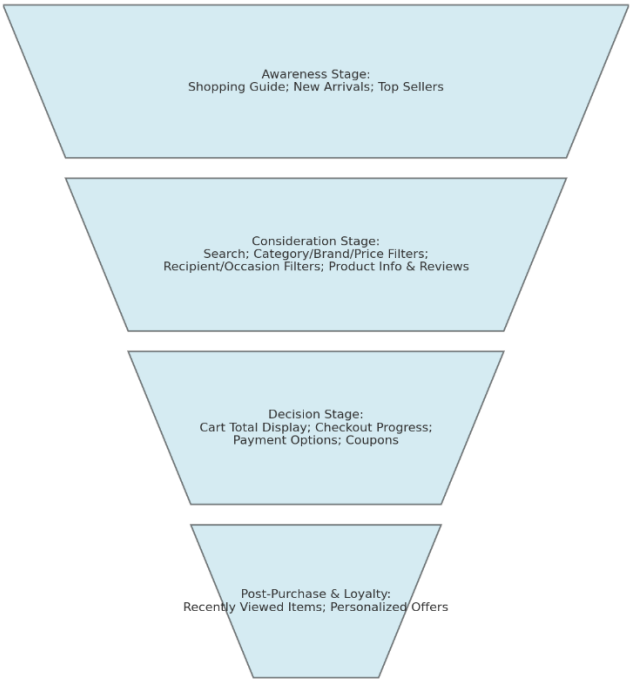
*1. Stage definition alignment* - We first reconciled the stages used in the buyer survey's funnel model with common funnel terminology and the SEM study's focus. The buyer survey by D'Avanzo and Colaiori 2023, based on the same buyers' questionnaire we have employed, defined eight stages (Awareness, Interest, Consideration, Intent, Decision, Action, Post-Purchase, Loyalty/Advocacy) and mapped certain services to each.

For simplicity and coherence with widely used stages, we consolidated these into a slightly broader set: Awareness (including initial exploration/interest), Consideration, Decision (including intent/action of purchase), and Post-Purchase (including loyalty). This consolidation was also necessary because the SEM study primarily dealt with the «choosing» phase (overlapping our Consideration stage) and did not explicitly cover pre-awareness or post-purchase. Thus, our redesigned funnel uses four principal stages, ensuring that at least the classic trio (Awareness, Consideration, Decision) mentioned in the research question are covered, along with the post-purchase loyalty stage. We will, however, discuss sub-stage nuances (like "Interest" as part of Awareness, or "Intent/Action" within Decision) as needed.

*2. Mapping buyer-expected services to stages* – Based on the funnel designed by D'Avanzo and Colaiori, we listed the key services expected by buyers at each stage. For example, in the Awareness stage, buyers emphasized a shopping guide and easy initial exploration; in Consideration stage, they valued search, filters (by category/brand/price), and reviews; in the Decision stage, they wanted clear cost total, progress indicators, and trusted payment options, plus incentives like coupons; in Post-Purchase, they expected things like recently

viewed items, and in Loyalty, personalized recommendations. We documented these stage-service mappings and noted which of those services had notable expectation-offer gaps.

**Figure 4:** Redesigned digital funnel mapping buyer-expected services and SEM-validated behaviors to the stages of the online customer journey. Each funnel stage lists the critical website features or services that cater to user needs at that phase, based on buyer surveys and validated consumer




choice mechanisms.

*3. Incorporating SEM-validated services* - Next, we took the eight SEM-confirmed services and assigned them to the funnel stage where they look more logically belong to. For instance, category/brand/price filters clearly fit in the Consideration stage (when users are narrowing choices), recipient/occasion filters also fit in Consideration (particularly if the user's goal is defined at search time), and viewing sale items, top sellers, new items typically occur during product browsing – which could be late Awareness or early Consideration, depending on site design. We considered that Top sellers and New items on home page are often homepage features (Awareness stage), whereas Products on sale might be a filter or separate page used during product search (Consideration stage). However, since the SEM grouped these three together and tied them as outcomes of earlier filtering behaviours, we treated them as bridging Awareness/Consideration stages. In our integrated funnel, we decided to place Highlighting new arrivals and top-sellers as an Awareness-stage tactic (to draw interest), and Filter by sale/discounts as a Consideration-stage feature for deal-seekers.

*4. Reconciling differences and filling gaps* - Some expected services from the buyer survey did not appear in the SEM model (likely because that model was confined to the choosing phase and heuristic filters). Notably, search engine and user/pro reviews were not in the final SEM model. Search engine was actually tested but removed from the SEM due to not fitting well (it had a high expected importance but perhaps low variance since nearly all use it). We kept

site search as a crucial feature in our funnel's Consideration stage due to its obvious utility, supported by abundant literature (e.g., the link between easy search and conversion). Reviews, while not a heuristic filter per se, are information sources that strongly affect Consideration (as shown by Furner & Zinko and others), so we included user reviews and expert reviews as part of the Consideration stage in our model to preserve the buyer's perspective. Conversely, the SEM study identified shop by recipient and shop by occasion as significant, whereas the buyer survey's top-level funnel discussion did not explicitly highlight these in their stage descriptions (they were mentioned in the gap analysis though). We therefore made sure to add contextual filters (occasion/recipient) to our Consideration stage, as a distinct element separate from generic category filters.

For stages outside of SEM's focus (Awareness and Post-Purchase), we relied primarily on the buyer survey and supporting literature. SEM provided little direct insight on, say, loyalty programs or post-purchase behaviour, so features like personalized recommendations, order tracking, etc., were brought in from the buyer expectations study and prior research (e.g. importance of personalization for retention). We recognize this as a limitation – our funnel's latter stages are grounded more on descriptive expectations than on SEM validation – but it is necessary for completeness.

*5. Conceptual model construction* - With the above mapping in place, we constructed a conceptual model of the redesigned funnel. This is illustrated in Figure 4, which we created to visualize the funnel stages and the key services at each stage. The figure uses a classic funnel shape with segments labelled as Awareness, Consideration, Decision, and Post-Purchase & Loyalty, and lists inside each segment the main services or features assigned to that stage. Each listed service is either drawn from the buyer expectation analysis (with literature backing) or from the SEM's statistically validated set. We ensured that all eight SEM services appear in the figure at their appropriate positions, and that all major buyer-desired services are also present.

*6. Comparative analysis* - Finally, to address the requirement for a detailed comparison of services from the two points of view, we performed a crosswalk analysis. We tabulated each service of interest (see Table 2) and indicated whether it was (a) highly expected by buyers, (b) frequently offered by sellers, and (c) included as significant in the SEM model. This allowed us to discuss in the Results Section which services are "unanimously supported" (expected by buyers and confirmed by SEM) versus those that are "expected but under-leveraged" (desired by buyers but not emphasized in current practice or model) or "emerging behaviours" (highlighted by SEM even if not top-of-mind for buyers). For example, filter by brand/price falls in the first category (buyers want it and SEM confirms it influences decisions), while site search is expected by buyers (and universally offered by sellers) but didn't factor into the SEM (likely due to ubiquity). Shop by occasion is an interesting case of the third category – SEM shows it's impactful, and a majority of consumers do expect it, but it wasn't among the very top features listed by buyers perhaps because not all need it for every purchase. We integrate these observations into the Results narrative.

The overall methodological approach is qualitative in the integration but rooted in quantitative findings from the source studies. By triangulating between the buyer survey evidence, the SEM statistical evidence, and prior literature, we aim to build a funnel model as more robust as possible and evidence-based. In order to maintain rigor, we linked our model back to established concepts (e.g. heuristics, information overload, customer journey theories).

## 4. Results and discussion

Redesigned digital funnel model - Based on our synthesis, we propose a redesigned digital funnel that aligns buyer expectations with SEM-validated behaviors. Figure 4 presents a

visual representation of this funnel, encompassing four main stages – Awareness, Consideration, Decision, and Post-Purchase/Loyalty – with the key e-commerce services mapped to each stage.

At a high level, the redesigned funnel ensures that as the customer moves from the top (Awareness) to the bottom (Decision and beyond), they are continually supported by relevant site features. The model emphasizes a buyer-centric flow: starting from engaging the user with introductory guides and popular item highlights, through efficient search and filtering during Consideration, through a seamless and transparent checkout process, and finally into relationship-building features post-purchase. Below, we detail each stage of the funnel, highlighting how services from the twofold approach is integrated and comparing what buyers expect versus what is proven to influence behavior.

### 4.1. Awareness stage (initial exploration)

At the top of the funnel, the goal is to attract and orient potential customers. Our model incorporates a shopping guide as a prominent service in this stage. This could be a section on the homepage that introduces product categories or provides curated suggestions (e.g. Shop the gift guide or find the right product in 3 steps). The buyer survey indicated that a shopping guide is highly appreciated as a starting point for exploration. It serves to acquaint newcomers with the website's offerings and structure, thereby reducing the entry barrier for those who aren't sure where to begin. In practice, however, few e-commerce sites explicitly offer a guided shopping feature – this was identified as a gap, with buyers desiring guidance that sellers often don't provide. Additionally, the Awareness stage in our funnel features "New Arrivals" and "Top Sellers" showcases. These correspond to two of the SEM-validated items: links to new items on the home page and shop by top sellers. We position them in Awareness because they typically appear on the main entry pages to grab attention. For instance, a carousel of new arrivals keeps the content fresh and can intrigue repeat visitors, while a list of top-selling products leverages social proof (popularity) to draw interest. The inclusion of these features is strongly supported by the SEM study – they were part of factor F4 and were significantly driven by user predispositions (F1 and F7). Interestingly, while the buyer survey did not highlight new items or top sellers as top-of-mind expectations in their funnel description, the quantitative data suggests a majority of consumers do appreciate these (as evidenced by ~70% wanting top-seller lists). In fact, these features implicitly address a buyer's desire to simplify choice: a top-seller list says "these are tried-and-true favorites" and a new-arrivals list says "here's something novel you might not know about" – both cater to exploratory browsing. By including them, our funnel ensures that the awareness stage is not just about passive awareness (ads or external traffic) but an active on-site engagement where the website immediately presents useful entry points aligned with common buyer heuristics (trending or new items). From the perspective of buyer expectations vs. current offerings, we note a significant discrepancy: although consumers want these awareness features, only a minority of sites implement them effectively. For example, as mentioned earlier, top sellers and on sale sections were present in only ~29% and ~20% of surveyed websites, despite high consumer interest. Our results underscore the recommendation that e-commerce managers should integrate such features on their landing pages to meet user expectations and leverage user behaviour patterns. Not only do they attract attention, but SEM evidence suggests they play a role later in decision-making by connecting with how users filter and decide.

### 4.2. Consideration stage (active search & evaluation)

This is the most feature-rich stage in our redesigned funnel, reflecting the variety of tools consumers use to make informed choices. When a potential buyer has engaged with the site and moves into actively looking for products, the funnel must support efficient discovery,

comparison, and evaluation. At the core of this stage are the search and filtering services. Our model prominently includes the search engine as a carryover from the buyer expectations study – nearly all buyers expect to be able to search for specific items or keywords. While "search" did not show up in the final SEM model (likely because almost everyone uses search to some extent, making it less of a differentiating factor), it remains a sine qua non for e-commerce. The search bar typically sits atop any page; in funnel terms, it transitions the user from passive browsing (awareness) to goal-driven consideration. By typing a query, the consumer signals an intention, and the site's subsequent responsibility is to deliver relevant results or guidance (which may involve further filtering). Modern search implementations often go hand-in-hand with filtering options on the results page, which leads to the next set of services. Our funnel incorporates product filtering by various criteria: category, brand, price, and also occasion/recipient. The first three (category, brand, price) correspond to SEM factor F1 – they are confirmed to be a cluster of heuristics many users employ. Buyers themselves highly value these: shop by category was one of the most frequent and expected services, and shop by brand and price were explicitly noted as useful at the consideration stage in the buyer survey's funnel description. By providing these filters, a site allows the shopper to narrow down an overwhelming product list to a manageable set that meets basic criteria (e.g., showing only smartphones by a preferred brand under $300). The effect is twofold: (1) it reduces information overload, as suggested by information systems research – users see a curated subset rather than all 10,000 items, thus feeling less overwhelmed; and (2) it aligns with the natural decision strategies (non-compensatory elimination) that many consumers use. The SEM data showed that consumers who use one of these filters often use the others, indicating a segment of users who heavily rely on filtering to make decisions. For such users, if a site lacked robust filtering, it would likely lead to frustration and exit – hence including all three is important to meet expectations and keep those users engaged. It's worth noting that almost all e-commerce sites do have category browsing (as a fundamental navigation), but some smaller or poorly designed sites might have limited brand or price filter options. Our results strongly encourage implementing these standard filters and making them prominent in the UI (e.g., sidebar filters or filter menus on search results pages). The inclusion of occasion/recipient filters in our funnel is a direct adoption of SEM factor F7's insights. While not universally needed for every shopping session, these filters can be extremely powerful in scenarios where the buyer's need is defined by context (gift shopping, event shopping). In the survey, about half to two-thirds of respondents appreciated these filters, yet they were underprovided by sellers. The SEM confirms that those who do use these context filters form a coherent behavioural segment, and more importantly, their usage links to a higher propensity to engage with deals (F4). In practice, adding an occasion filter (like letting users filter "show me products for Birthday/Christmas/Wedding" etc.) or recipient (filter by "for kids/for him/for her") is a way of personalizing the browsing experience without needing detailed personal data – it taps into the situational variables of the purchase. Our funnel recommends including these as advanced search options or separate curated categories (many sites now have seasonal or gift sections, which is analogous to this). To illustrate, consider a user who comes with a vague goal: "I need a gift for my 10-year-old nephew's birthday." If the site offers a "shop by age" or "for kids" recipient filter, the user can quickly narrow down to relevant items. Without it, the user might resort to random searching or give up. Adopting this service directly addresses a known expectation gap: e.g., ~68% expect shop by recipient but only ~30% of sites offer it. Our model thus explicitly features it in the consideration toolkit, suggesting its broader implementation. Next, our funnel ensures rich product information is available in the consideration stage to facilitate evaluation. This includes product descriptions and product pictures, which the buyer survey found to be among the highest expected elements from an e-commerce site. Although not explicitly an interactive "service" like search or filter, we treat comprehensive product info as a service the site provides to help

decision-making. The importance of detailed, quality product content is well-documented: it aligns with consumers' need for information to reduce uncertainty (a principle from the Elaboration Likelihood Model, for instance, where high-involvement purchases require central-route information processing). In the survey, product description ranked at the very top of expected features (with virtually all respondents rating it highly). Naturally, most sellers do provide descriptions and images; the challenge is ensuring quality and completeness. Some sites skimp on content (leading to cognitive dissonance or lack of trust). Our results reinforce that investing in thorough, clear, and accurate product information is crucial, as it directly correlates with buyer satisfaction and willingness to proceed. This is echoed by Sehgal & Malik (2024), who found that information quality on websites positively influences customer satisfaction and loyalty. Similarly, multiple studies cited in the theoretical framework (e.g., Chang, & Yang, 2010; Chen & Schwartz 2006) indicate that when consumers find consistent, relevant, and transparent information (including pricing, specs, etc.), they are more likely to trust the site and make a purchase. Finally, user reviews and professional reviews - i.e., social proof mechanisms – are integrated into the Consideration stage of our model. In the buyer survey's funnel, these were highlighted as critical in the consideration phase, providing social and expert validation to aid decisions. They were also among the services that buyers expect but that are not universally available or easy to find on all sites (some sellers hide reviews or lack expert content). The literature supports their impact: for example, Furner & Zinko (2017) showed that reading online product reviews can directly increase purchase intention, up until the point of information overload. Tan et al. (2018) explicitly note that customer reviews are a main component of online purchase decisions. Professional reviews (e.g. editorial content, buying guides) add an authoritative assessment that some consumers find reassuring. While these review features were not part of the SEM model (likely because they are evaluative rather than choice-narrowing tools), we include them because they fulfill a different but complementary role in decision-making: building trust and confidence. In our funnel, after a user has narrowed down options via filters, they should have access to reviews to compare those final few options on qualitative merits. By incorporating user and expert reviews, the funnel addresses buyers' desire for validation of their choice from both peer experiences and expert opinions. In summary, our Consideration stage is packed with features, and for good reason: this is where the user's initial interest is converted into a firm intention to buy a specific item. The synergy of services here – search + filters (to find the candidate products), detailed info + images (to evaluate each candidate), and reviews (to verify quality and satisfaction) – creates an environment conducive to making an informed and confident purchase decision. The interplay between these features and the SEM constructs is notable. For instance, a user high on F1 (filtering by brand/price) will appreciate those filter options and then likely look at product pages (with images/descriptions) and might also check reviews; a user high on F7 (shopping by occasion) might navigate via that path, then similarly use product info and reviews to finalize. Both types (F1 and F7) are predicted to respond to sale/top-seller prompts (F4) – which is why even in Consideration, it's useful to allow sorting by "discount" or highlight if a filtered item is on sale (thus combining heuristic with deal-seeking triggers). We ensure our funnel doesn't isolate these elements, but allows them to work in tandem (e.g. filters can be applied simultaneously, search results can be sorted by popularity or discount, etc., and all product pages show reviews).

### 4.3. Decision Stage (Purchase & Checkout)

Once the user has selected a product (or products, if adding multiple to cart), they enter the Decision stage – essentially the checkout process and the moments right before the final conversion. The redesigned funnel focuses on transparency, convenience, and assurance at this stage, to encourage completion of the purchase. The first element is the Total Sum Display (Cart Summary). As soon as the user proceeds to checkout or views their shopping

cart, the site should prominently display the total cost including any shipping, taxes, or discounts. Buyers expect this clarity; the survey listed total sum as a highly expected feature because it helps users manage their budget and avoid unexpected charges. By showing the aggregated price, the site empowers users to make a final confirmation that the purchase is within their comfort zone. Our funnel incorporates this at the intent/decision crossover point – essentially bridging consideration to decision. Literature on checkout usability also emphasizes that cost transparency reduces cart abandonment, a finding echoed in practitioners' guides and academic studies alike (Chang & Chen, 2008; Kukar-Kinney et al., 2016). Thus, this simple feature can have a significant impact on whether the user clicks Place Order. Next is the indicator of ath (Checkout Progress Indicator). The buyer study noted that a clear indicator of where the user is in the process (e.g. "Step 2 of 3 – Payment Information") is beneficial. We have included this in our funnel as it contributes to usability and stress reduction. Knowing the steps remaining (and that it's not an endless form) keeps users from feeling lost or impatient. Progress indicators are essential in checkout design, as they provide clear feedback and reduce user anxiety—a feature shown to improve conversion rates by up to 35% in modern usability studies evaluating over 130 e-commerce sites (Baymard Institute, 2024). In our model, this fits squarely in the Decision stage. It wasn't part of the SEM (since it's not relevant to product choice, but rather to checkout experience), but its importance is validated by the buyer expectations and UX best practices. The payment options offered are another cornerstone of the Decision stage. Our model explicitly lists PayPal, Credit Cards, and similar alternatives (like BillMeLater as cited in the study, which is akin to modern BNPL services). Buyers view multiple payment methods as a trust signal and a convenience factor. The survey data showed PayPal was highly desired in the purchasing stage, and credit card acceptance of course a basic necessity. PayPal's influence is notable – its brand carries trust due to buyer protection, so including it can increase conversion rates (as also suggested by an increase in consumer comfort). Our funnel thus insists that providing trusted third-party payment options (PayPal, Apple Pay, etc.) alongside standard credit/debit processing is part of an optimal design. This aligns with foundational e-commerce trust literature: Pavlou (2003) noted that perceived security of payment methods positively affects online purchase intention. From the SEM perspective, payment methods were outside the scope (post-choice), but in bridging expectation to action, they are crucial. We also include mention of Buy Now Pay Later (BNPL) or deferred payment (the study's "BillMeLater") as a nice-to-have, recognizing that not all buyers expect it upfront. While the survey found it was less expected compared to PayPal or cards (likely because it's more niche), offering it can tip the scales for certain customers who might hesitate due to budget – thus in our integrated model, it is a feature that could increase the likelihood of completing the purchase for those on the fence. Another component of the Decision stage is the presence of Coupons or Discount Codes. We incorporate coupons as a lever in the Action sub-stage (which the first study distinguished as a separate "Action stage" after Decision, but we merge it here for simplicity). The availability (and communication) of a coupon or promotion can spur immediate action. For example, if during checkout the site highlights "Enter coupon code – members have a 10% off coupon available", it might encourage the user to use it and thus finalize the purchase (feeling they got a deal). The buyer survey specifically pointed out that coupons motivate action and were among the highly expected but less offered features. Many retail sites do use coupons in marketing campaigns, but anecdotally, users often search externally for coupons if they see a coupon code box (and if they don't find one, some might abandon the cart). One managerial takeaway (which we detail later) is that companies should either provide accessible coupons or remove the field to avoid "coupon scrounging" exits. In our funnel design, we assume the positive scenario: the business strategically uses coupons (or automatic discounts) to increase conversion at this final step, thereby aligning with consumer expectation for deals. In synergy with SEM findings, recall that factor F4 (deal-seeking) indicates many consumers respond strongly to sales – a coupon at checkout is

effectively a personalized sale for that user. So even though coupons weren't in the SEM model explicitly, the concept of deal-orientation was (via "shop by sale"), and this is an execution of that concept at point of purchase.

By implementing the above features, the Decision stage in our funnel is geared towards minimizing abandonment and maximizing trust. The buyer knows what they are paying (total sum), sees that the process is straightforward (path indicator), feels secure (recognized payment brands), and might even feel they got a special deal (coupon) – all of which increase the likelihood of completing the order.

### 4.4. Post-purchase & loyalty stage

The funnel does not end at the transaction. Post-purchase, the focus shifts to maintaining engagement and building a long-term relationship (loyalty and advocacy). Our redesigned funnel incorporates two key services here: recently viewed products and personalized recommendations (personalized products/offers).

Recently viewed products is a feature that many e-commerce sites implement on product pages or the homepage for returning users, but it can also be shown on the order confirmation page or in the user's account dashboard after purchase. The idea is to remind customers of their browsing history ("You recently looked at…") which can prompt them to continue shopping or consider items they left behind. The buyer survey highlights this in the Post-purchase stage, noting that showing recently viewed items helps nurture the relationship and set the stage for the next purchase. This aligns with the concept of the loyalty loop: even immediately after buying, planting the seed for a future purchase (especially if the user was undecided between a few items) can shorten the interval to the next conversion. Our model thus includes recently viewed items as a gentle re-engagement tool.

Personalized products/offers fall into the loyalty/advocacy stage. This refers to providing tailored recommendations based on the user's purchase history or preferences – for example, sending a follow-up email with "You might also like these accessories for your recent purchase" or showing a customized section on the homepage like "Recommended for You." The buyer study's loyalty stage explicitly mentions personalized suggestions as crucial for creating a one-to-one relationship and incentivizing future purchases. This is strongly supported by literature in both marketing and IS. Recommender systems research (e.g., Schafer et al. 2001) shows personalization increases perceived relevance, satisfaction, and can significantly boost repeat sales. In essence, personalization operationalizes the retention part of the funnel by continuing the conversation with the customer. Our funnel model underscores that after the initial purchase, engaging the customer with personalized content (product recommendations, exclusive deals, loyalty rewards, etc.) is necessary to foster loyalty and possibly turn the customer into an advocate (someone who will recommend the platform or share reviews – linking back to the beginning of the cycle where their advocacy contributes to awareness for others).

Other post-purchase services, though not explicitly depicted in Figure 1, can complement these, such as efficient customer service or easy returns (which build trust and satisfaction, indirectly affecting loyalty). The focus of our model remains on those identified by the buyer perspective study, so we stick to recently viewed and personalized offers as representative features. Implementing these ensures that the funnel is not a "one-and-done" pipeline, but rather feeds into a cyclical journey – satisfied customers see value even after the transaction, increasing the likelihood of re-entry at the Awareness stage in the future (albeit with the benefit of data-driven personalization).

Table 1 (below) summarizes the comparison of key services across the two source studies and our funnel model:

| Service | Buyer Expectation (Survey) | Seller Offering Frequency | SEM Validation | Included in Redesigned Funnel |
|---|---|---|---|---|
| Site search | Very high (essential) | ~96% of sites have it | Not in final model (removed) | Yes – Consideration |
| Category navigation/filter | Very high (essential) | ~96% of sites | Yes – Factor F1 | Yes – Consideration |
| Filter by brand | High | Common (exact % not given, but many) | Yes – Factor F1 | Yes – Consideration |
| Filter by price | High | ~20% sites (only) offer shop-by-price | Yes – Factor F1 | Yes – Consideration |
| Filter by recipient | Moderate (~65% expect) | ~25% of sites | Yes – Factor F7 | Yes – Consideration |
| Filter by occasion | Moderate (~50% expect) | ~25% of sites | Yes – Factor F7 | Yes – Consideration |
| On sale (discount filter) | Very high (~80% expect) | ~20% of sites | Yes – Part of F4 | Yes – Consideration (as sort/filter option) |
| Top sellers showcase | High (~65% expect) | ~25% of sites | Yes – Part of F4 | Yes – Awareness (homepage feature) |
| "New items" showcase | (Implied moderate, not explicitly polled) | Uncommon (observed qualitatively) | Yes – Part of F4 | Yes – Awareness (homepage feature) |
| Shopping guide (overview) | High (for exploration) | Rare (gap) | N/A (outside SEM scope) | Yes – Awareness |
| Product descriptions | Very high (top expected) | Nearly all sites (quality varies) | N/A (standard content) | Yes – Consideration (all products) |
| Product images | Very high (top expected) | Nearly all sites (quality varies) | N/A | Yes – Consideration (all products) |
| User reviews | High (crucial in consider) | ~25% of sites (provided by few) | N/A (not a heuristic mechanism) | Yes – Consideration |
| Professional reviews | Moderate-High (helpful) | Few sites (gap) | N/A | Yes – Consideration |
| Total price display | High (expected in cart) | Most sites (some hide until late) | N/A | Yes – Decision (cart/checkout) |
| Checkout step indicator | Moderate (improves UX) | Some sites (not universal) | N/A | Yes – Decision |
| PayPal payment | High (boosts trust) | Many sites (but not all) | N/A | Yes – Decision |
| Credit card payment | Very high (standard) | Almost all sites | N/A | Yes – Decision |
| "Bill Me Later" / BNPL | Low-Moderate (niche) | Few sites (was niche) | N/A | Yes – Decision (optional) |
| Coupons/discount codes | High (motivator) | Some sites (often not upfront) | N/A | Yes – Decision (action incentive) |
| Recently viewed items | Moderate (post-purchase helpful) | Some sites (common feature) | N/A | Yes – Post-Purchase |
| Personalized recomm. | High (loyalty builder) | Some sites (increasingly common) | N/A (if outside initial purchase) | Yes – Post-Purchase/Loyalty |

**Table 1:** Comparison of key e-commerce services across buyer expectations (survey data), seller offerings, SEM behavioral validation, and inclusion in our redesigned funnel (Fig. 4)

The table shows broad agreement on many features (especially filtering and basic info) between buyer expectations and SEM results, while highlighting areas of discrepancy (e.g., search and reviews highly desired by buyers but not captured by SEM; contextual filters and deal showcases strongly validated by SEM but not universally offered by sellers). Our redesigned funnel encompasses all listed features to maximize alignment with what consumers want and what they use.

From the above comparison and our funnel, a coherent picture emerges: to redesign the funnel effectively, an e-commerce site should proactively provide the services that buyers expect at each stage, especially those that have demonstrated impact on user behaviour. The synergy between buyer expectations and SEM findings is generally positive – features that buyer vocally want (like filters by price or showing deals) indeed have measurable effects on shopping patterns and outcomes. Where there were mismatches or gaps (like lacking reviews or contextual options), those present opportunities for improvement. Our results affirm that a funnel rich in decision-support tools (heuristics to narrow choices and information to evaluate them) will likely both satisfy customers and increase conversion effectiveness.

The redesigned funnel (as depicted in Figure 1 and detailed above) represents a blueprint for aligning e-commerce design with consumer expectations and proven behaviours. It is not merely a theoretical construct; it is grounded in concrete data: the voice of the customer and statistical modelling of their actions. In the next section, we discuss the implications of this model, how it relates to existing theory, and what it suggests for practitioners and future research.

## 5. Implications

One of the central issues highlighted by prior research (D'Avanzo & Kuflik, 2013) was the gap between what online buyers expect and what sellers deliver. Our results demonstrate that this gap can be systematically addressed by focusing on specific services at each funnel stage. The integration of buyer survey data (expectations) with SEM data (behavioural performance of features) provides evidence-based direction on where to intervene. For instance, at the consideration stage, buyers' desire for robust filtering and review features was met with patchy implementation by sellers; simultaneously, our SEM analysis confirms that when such features are used, they significantly shape the purchase path (improving likelihood of finding suitable products and engaging with promotions). The redesigned funnel, by including those features, effectively shows how to bridge that gap.

### 5.1. Theoretical implications

Theoretically, findings this support the argument that customer-centric design of information systems (in this case, e-commerce websites) can enhance decision outcomes and satisfaction (Grange & Benbasat, 2010). When an IS (website) aligns with users' mental models and preferences (e.g., providing a filter for the criterion the user cares about, or a review for the exact information they seek), it reduces the cognitive effort required (cognitive fit theory) and increases perceived usefulness, leading to higher adoption and success (Goodhue & Thompson, 1995; Todd & Benbasat, 1999). Our funnel's emphasis on non-compensatory tools (filters) aligns with Gigerenzer's notion of environmental structure: these tools work because they complement how consumers naturally eliminate options under information overload. By reducing overload and increasing relevant information (through reviews and clear descriptions), the funnel likely improves decision quality (the degree to which the chosen product fits the buyer's needs) and decision efficiency (the time/effort spent).

In fact, a key theoretical contribution of our work is highlighting the role of heuristic decision-making aids in each stage of the digital funnel. Traditional marketing funnels did not explicitly account for these micro-decision processes; they were high-level stages. Our model, informed by SEM findings, embeds heuristics (like shop by brand or shop by occasion) into the funnel. This acknowledges that at the consideration stage, consumers often do not perform full compensatory analysis of every alternative; instead, they heavily rely on heuristics to shortlist options. By designing the funnel around these heuristics (making them features of the website), we essentially institutionalize heuristics in the shopping process.

This has implications for the debate on consumer rationality in digital environments. Researchers like Hauser, Urban & Weinberg (1993) suggested that decision support systems can increase the utility of choices by enabling rational comparison. But more recent perspectives (Simonson, 2015) argue that too much choice and information leads consumers to fall back on simpler decision rules. Our findings support the latter: features that allow simple rules ("show me X under $Y") are highly valued and effective, whereas features enabling complex trade-off (like comparison matrices or long spec lists) were not highlighted by consumers. This is a heuristic-driven journey rather than an exhaustive search, consistent with theories of bounded rationality.

SEM structural model result that F1 and F7 (basic and contextual filters) drive F4 (deal-seeking with sales/top-sellers) has an interesting interpretation in funnel terms. It implies that consumers who engage deeply in consideration (using various filters) are also more likely to respond to promotional stimuli (sales, popular items). This suggests a nuanced journey: an engaged shopper might narrow their choices (consideration) and then make a final decision not purely on product attributes but on promotional factors (e.g., choosing the one that's on sale or a top seller among their narrowed set). In our funnel, we accommodate this by ensuring that promotional info (sales flags, etc.) is visible during consideration. The broader theoretical implication is that the boundaries between funnel stages are porous. Awareness and Consideration can loop – a sale banner might send a user back to consider a different product they hadn't thought of, or a top-seller list might bring awareness of a new option in the middle of deliberation. This resonates with the "messy middle" model proposed by some Google researchers (2020), where consumers oscillate between exploration and evaluation, influenced by triggers like promotions. Our funnel remains stage-structured, but by embedding these cross-stage features (e.g., showing deals during search), it acknowledges that real consumer behaviour is not strictly linear.

Rethinking funnel metrics. A subtle theoretical implication is the need to refine how we evaluate funnel performance. A funnel is typically measured by conversion rates at each stage (e.g., X% of aware become interested, Y% of interested actually buy). If we embed various features, we might also measure micro-conversions: e.g., what percentage use a filter? what percentage read reviews? These micro-conversions could be proxies for engagement quality. Our funnel suggests that higher usage of these critical features likely correlates with better outcomes (since they indicate the site is serving the user's needs). Future research could test if, for example, a site that gets 80% of users to use the search/filter tools sees higher overall conversion than a site where only 30% use them (maybe due to poor design). This interplay of feature usage and stage progression is an interesting area bridging IS (feature adoption) and marketing (funnel conversion). The SEM's $R^2$ of 0.80 for how filters drive deal engagement is an example of quantifying such relationships.

Alignment with foundational theories. Our funnel is a concrete instantiation of principles from both marketing and IS theory. From marketing, the hierarchy of effects model posited that cognitive (awareness), affective (interest, desire), and conative (action) stages lead to

purchase. Our funnel provides the tools to facilitate each step cognitively: awareness via guides/visuals, interest via relevant search results, desire via persuasive information (reviews, images), action via easy checkout. It supplements that with loyalty loops, aligning with relationship marketing theory that retention is as important as acquisition. From IS, the funnel embodies ideas from the Technology Acceptance Model (TAM) in an indirect way – by increasing perceived usefulness of the site, via helpful features, and perceived ease of use, via intuitive navigation and reduced effort, users are more likely to use the site and complete transactions (akin to "intention to use" leading to "usage behaviour"). Each added service, if well implemented, can boost these perceptions. For example, a filter by price can eases use for a budget-conscious user (ease of finding the right range), and a strong review system boosts perceived usefulness (site provides valuable info to make decisions). Thus, our funnel could serve as a framework for evaluating an e-commerce system's user-centric effectiveness.

### 5.2. Managerial implications

Our findings yield a number of actionable insights for e-commerce managers, digital marketers, and web platform designers seeking to optimize the online funnel.

*Stage-specific value* - Managers should ensure that each stage of the customer journey is supported by features that address the user's immediate needs and mindset. For the Awareness stage, this means investing in a strong landing page experience – include a shopping guide or clear category navigation for first-time visitors and use the homepage to showcase new and popular products. The presence of Top sellers" or Trending now sections can quickly engage users by leveraging social proof (i.e., people tend to trust popular items). Likewise, highlighting "New Arrivals" taps into curiosity. Currently, many sites underutilize this prime real estate; by populating it with content that buyers find useful (rather than just generic ads), managers can increase initial engagement. Consider metrics like bounce rate – a well-designed awareness stage with these features should reduce bounce rates as visitors find something that catches their interest immediately.

*Robust filtering and search tools* - The Consideration stage is where a website can really differentiate itself. Managers should implement robust search functionality with intelligent autocomplete and relevant results, as well as an array of filtering options (category, brand, price, rating, etc.). These should be easily accessible (e.g., visible filters on the sidebar or top of search results) and fast (use AJAX to update results without full page reloads, for instance). Our research shows that consumers actively use these tools to cope with product variety. If cost is a concern, managers can phase implementation: perhaps start with essential filters (category, price) and add more (brand, occasion) as they gather data on usage. However, given that shop by price and shop by brand were both highly expected and proven useful, those should be priority features.

*Information-rich product pages* - It may seem basic, but managers must not neglect the fundamentals of product page content. Our research reinforces that buyer expects thorough product descriptions, multiple high-quality images, and easy access to reviews. Managers should audit their product pages: are the descriptions detailed and helpful (not just marketing fluff, but concrete specs and usage info)? Are the images clear, zoomable, and do they show different angles or usage scenarios? Are customer reviews displayed prominently, and can users sort or filter them (e.g., see most recent, or see reviews with images)? These elements build trust. If internal resources are limited for content creation, consider leveraging manufacturers' descriptions or user-generated content (encourage buyers to leave reviews or photos). For instance, after purchase, sending an automated email asking for a review can steadily increase the volume of reviews over time. Many platform providers (like Amazon, Bazaarvoice) can facilitate review collection. The managerial takeaway is that investing in content quality correlates with conversion and reduced return rates (because customers have

clearer expectations, as Chang & Chen (2008) noted regarding detailed product info reducing returns). Our findings on the importance of information quality should suggest managers to allocate budget to content (copywriters, photographers, UX writers for guides, etc.), not just to advertising. It's more cost-effective to convert the traffic you already have by giving them the info they need than to spend more on acquiring new traffic that might bounce due to poor information

To sum up, managers should view the funnel not just as a marketing concept but as a framework for site functionality deployment. Each funnel stage suggests a checklist of features – our redesigned funnel could serve as that checklist. Those who systematically ensure each item is checked (and executed well) could likely outperform competitors who neglect parts of the funnel.

## 6. Conclusions and future work

In this study, we set out to synthesize buyer expectations with SEM-validated consumer behaviours into a redesigned digital funnel for e-commerce. By drawing on a buyer-centric survey study and a structural equation modelling analysis of online shopping mechanisms, we proposed a comprehensive funnel model that maps specific digital services to the appropriate stage of the buyer's journey. The contribution of the paper is twofold, to both theory and practice.

*Integrated funnel framework* – The proposed funnel model explicitly aligns what buyers want at each stage with what data shows they use. This goes beyond traditional funnel depictions by identifying concrete features (search filters, reviews, etc.) at each stage, thus operationalizing the funnel concept for digital channels. It contributes to marketing theory by refining the concept of the consideration stage to include heuristic decision aids, and extends the funnel into post-purchase loyalty with personalization features, reflecting modern customer journey thinking.

*Confirmation of non-Compensatory strategy importance* - Findings reinforce that non-compensatory decision strategies (like filtering by criteria) are not only preferred by consumers but have measurable impact on their purchase behaviour. This validates and extends prior work on heuristics in online choice (e.g., Haubl & Trifts, 2000; Gbadamosi et al., 2017) by showing how these strategies can be embedded in site design and how they correlate with outcomes (as evidenced by the SEM links to deal-seeking). It highlights that e-commerce systems should be designed to accommodate bounded rationality, which is a contribution to information systems design literature

*Enhanced customer journey rigor* - We situated our funnel in the context of Lemon & Verhoef's (2016) customer experience framework and Court et al.'s (2009) loyalty loop, while also referencing classic concepts like AIDA and TAM. This interdisciplinary approach (i.e., marketing + IS) strengthens the scholarly contribution, suggesting that optimal e-commerce design benefits from both disciplines. We showed how features influence psychological outcomes like trust (drawing on Furner & Zinko (2017) for reviews' effect on trust) and satisfaction (citing Sehgal & Malik (2024) on website features and satisfaction), thereby linking funnel stages to customer mindset changes.

*Conceptualization of a data-driven funnel* - Finally, by basing a funnel model on SEM results (something rarely done, as funnels are often drawn from intuition or qualitative observation), we show a novel approach to funnel conceptualization – one that is data-driven and statistically validated. This could inspire future research to apply similar methods (e.g., use PLS-SEM or path modelling on journey touchpoints) to refine other models like the B2B buying funnel or omnichannel customer journeys.

*Limitations*– The paper presents a lot of limitations. First of all, our synthesis relied on a twofold approach that analyzed only a few factors; while these were comprehensive, there may be other factors (e.g., emotional branding, social media influence) that lie outside their scope and thus ours. Additionally, our funnel model is generic for e-commerce retail – different verticals (fashion vs. electronics) or cultural markets might have nuances (for example, in some markets cash-on-delivery is a crucial payment option to list as expected). We focused on universal elements, but managers should adapt the model to their context as needed.

*Future work* - Future research could extend this work by empirically testing the performance of the redesigned funnel. For instance, a field experiment could implement several of the recommended features on an e-commerce site and measure the before/after impact on funnel metrics. Another avenue is to explore personalization within the funnel – e.g., dynamic funnels where the site adapts to user type (a novice gets a shopping guide, an experienced user gets straight to deals). The interplay of AI-driven personalization and funnel stages is ripe for exploration: does a personalized homepage (Awareness stage) significantly improve downstream conversion? Our model would predict yes, if done in line with user expectations.

## References


Arana, J. E., & León, C. J. (2009). Understanding the use of non-compensatory decision rules in discrete choice experiments: the role of emotions. Ecological Economics, 68(8-9), 2316–2326.

Barzegar Nozari, R., Divsalar, M., Abkenar, S. A., & Amiri, M. (2024). A novel behavior-based recommendation system for e-commerce. arXiv. https://doi.org/10.48550/arXiv.2403.18536.

Baymard Institute. (2024, November 13). Checkout UX 2024: 11 Pitfalls and Best Practices. Baymard. Retrieved from https://baymard.com/blog/current-state-of-checkout-ux.

Bilgihan, A., & Bujisic, M. (2015). The effect of website features in online relationship marketing: A case of online hotel booking. Electronic Commerce Research and Applications, 14(4), 222–232.

Chang, H. H., & Chen, S. W. (2008). The impact of customer interface quality, satisfaction and switching costs on e-loyalty: Internet experience as a moderator. Computers in Human Behavior, 24(6), 2927–2944.

Chang, C., & Yang, F. (2010). Exploring the cognitive loads of high-school students as they learn concepts in web-based environments. Computers & Education, 55(2), 673-680.

Court, D., Elzinga, D., Mulder, S., & Vetvik, O. J. (2009). The consumer decision journey. McKinsey Quarterly, 3(3), 96-107.

D'Avanzo, E. & Colaiori, A. (2023). The digital funnel revisited - A buyer's point of view" in XX SIM Conference Proceedings: Marketing per il benessere, la salute e la cura, Parma: Società Italiana Marketing (SIM), 2023, p. 1-16. - ISBN: 9788894782905. Atti di: SIM 2023, Firenze, 20-21 ottobre 2023.

D'Avanzo, E., & Kuflik, T. (2013). E-commerce websites' services versus buyers' expectations: an empirical analysis of the online marketplace. International Journal of Information Technology & Decision Making, 12(4), 651–677.

DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: a ten-year update. Journal of Management Information Systems, 19(4), 9–30.

Furner, C. P., & Zinko, R. A. (2017). The influence of information overload on the development of trust and purchase intention based on online product reviews in a mobile vs. web environment: an empirical investigation. Electronic Markets, 27, 211–224.

Gabbott, M., & Hogg, G. (1998). Consumers and Services. Chichester, UK: John Wiley & Sons.

Gigerenzer, G., & Goldstein, D. G. (1996). Reasoning the fast and frugal way: models of bounded rationality. Psychological Review, 103(4), 650–669.

Goodhue, D. L., & Thompson, R. L. (1995). Task-technology fit and individual performance. MIS Quarterly, 19(2), 213–236.

Grange, C., & Benbasat, I. (2010, January). Online social shopping: The functions and symbols of design artifacts. In 2010 43rd Hawaii International Conference on System Sciences (pp. 1-10). IEEE.

Haubl, G., & Trifts, V. (2000). Consumer decision making in online shopping environments: the effects of interactive decision aids. Marketing Science, 19(1), 4–21.

Hauser, J. R., Urban, G. L., & Weinberg, B. D. (1993). How consumers allocate their time when searching for information. Journal of Marketing Research, 30(4), 452–466.

Koo, D. M., & Ju, S. H. (2010). The interactional effects of atmospherics and perceptual curiosity on emotions and online shopping intention. Computers in human behavior, 26(3), 377-388.

Kukar-Kinney, M., Scheinbaum, A. C., & Schaefers, T. (2016). Compulsive buying in online daily deal settings: An investigation of motivations and contextual elements. Journal of business research, 69(2), 691-699.

Kusi, G. A., Rumki, M. Z. A., Quarcoo, F. H., Otchere, E., & Fu, G. (2022). The role of information overload on consumers' online shopping behavior. Journal of Business and Management Studies, 4(4), 162-178.

Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. Journal of Marketing, 80(6), 69–96.

Pavlou, P. A. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. International journal of electronic commerce, 7(3), 101-134.

Sehgal, M., & Malik, K. (2024). Unveiling the Secrets of Customer Satisfaction and Loyalty in Online Retail: A Structural Equation Modeling Approach. Journal of Operations and Strategic Planning, 7(2), 189-206.

Simonson, I. (2014). Mission Accomplished: What's Next for Consumer BDT-JDM Researchers?

Todd, P., & Benbasat, I. (1999). Evaluating the impact of DSS, cognitive effort, and incentives on strategy selection. Information Systems Research, 10(4), 356-374.

# The Role of Luxury Aesthetics in Driving Sustainable Consumption

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## Abstract

This research explores how the aesthetic framing of luxury products (specifically, inner vs. outer aesthetics) affects sustainable consumption, measured through the length of product usage (LPU). Across six experiments and a large-scale field study on social media content, we demonstrate that emphasizing inner aesthetics (e.g., craftsmanship and heritage) increases LPU compared to outer aesthetics (e.g., beauty and recognizability), through the mediating role of perceived authenticity. The effect is especially pronounced for consumers with lower conspicuous consumption orientation. These findings have important implications for sustainable marketing and luxury branding strategies: they suggest that luxury brands can actively shape more responsible consumption behaviours by leveraging communication choices that evoke heritage and craftsmanship rather than focusing solely on visual appeal. In doing so, brands can align sustainability goals with core luxury values.

*Keywords: luxury consumption, luxury aesthetics, sustainable consumption, authenticity, product durability*

## 1. Introduction

Luxury brands are increasingly integrating sustainability into their practices, signalling a shift in how exclusivity and responsibility can coexist. Companies such as Chanel, Gucci, and Cartier now use recycled materials or ethically sourced components, responding to consumer expectations and regulatory pressures. In parallel, academic research has begun to examine how luxury and sustainability may be reconciled (Amatulli et al. 2017). A growing stream of studies suggests that luxury goods can be inherently sustainable because of their superior quality and durability, which lead to longer product lifecycles and reduced waste (De Angelis, Amatulli, and Zaretti, 2020). This line of reasoning has led some scholars to propose that luxury brands should explicitly emphasize durability in their communications, positioning long-lasting products as a sustainable choice (Sun, Bellezza, and Paharia, 2021). While this productcentred perspective has merit, it overlooks the role of consumer perceptions and experiences in driving sustainable behaviour. Specifically, we argue that beyond material characteristics, consumers' aesthetic experience of luxury goods may influence how long they intend to use them.

Aesthetics are central to the luxury value proposition, yet prior literature has often treated this dimension as unidimensional. We propose a novel distinction between outer aesthetics (i.e., beauty, recognizability, and shapes) and inner aesthetics (i.e., craftsmanship and cultural

heritage). Outer aesthetics are typically visible and tied to social signalling, while inner aesthetics reflect intangible elements that connect the product to tradition and artisanal value. We argue that this aesthetic dichotomy has significant implications for sustainability, particularly in influencing the length of product usage (LPU), defined as how long consumers plan to or actually use a product. This research adopts a consumer-based perspective on sustainable luxury, shifting attention from physical product attributes to experiential and symbolic meanings. We suggest that products framed through inner aesthetics are perceived as more authentic, which fosters longer product use.

To test our hypotheses, we conducted six preregistered experiments and a large-scale field study using text analysis on over 22 million social media comments. Results consistently show that when brands highlight inner (vs. outer) aesthetics, consumers report both higher intended and actual LPU. This effect is explained by perceived authenticity, which mediates the relationship between aesthetic framing and product usage. Moreover, the effect is stronger for consumers with lower conspicuous consumption orientation, who are less driven by status signalling and more by personal relevance.

In summary, this research contributes to a more nuanced understanding of sustainable luxury. Rather than focusing solely on material durability, we show that the way a product is presented, especially in terms of aesthetic storytelling, can meaningfully influence sustainable behaviour. By leveraging inner aesthetics in communication, luxury brands can encourage consumers to keep and use products longer, thereby aligning sustainability goals with brand heritage and authenticity.

## 2. Theoretical Background

Historically, luxury and sustainability were seen as incompatible due to the perceived tension between luxury's values of personal pleasure, exclusivity, and status, and sustainability's emphasis on moderation and environmental ethics (Athwal et al., 2019). Scholars suggested that luxury consumers may not prioritize sustainability when purchasing luxury goods, often viewing environmental concerns as secondary to status signalling (Kapferer and Michaut-Denizeau, 2017). However, recent research has argued that luxury and sustainability can coexist, driven by characteristics intrinsic to luxury goods, such as their durability (Amatulli et al., 2017). Luxury products typically last longer than mass-market alternatives due to higher quality materials and craftsmanship, making them inherently more sustainable by reducing waste and encouraging long-term usage. As Sun, Bellezza, and Paharia (2021) noted, the consumption of fewer high-end goods can promote sustainability.

Despite these insights, sustainable luxury is not only about material durability. We argue that it also involves consumers' aesthetic experiences with luxury products. Aesthetics has been identified as a significant driver of consumer choice (Townsend, 2017), particularly in the context of luxury goods, where it plays a dual role in both functional and symbolic dimensions (Fuchs et al., 2013). Previous studies have often regarded luxury aesthetics as a single concept, but we propose a distinction between outer aesthetics (i.e., beauty, recognizability, and shapes) and inner aesthetics (i.e., craftsmanship and cultural heritage). Inner aesthetics are more closely linked to sustainable consumption, both environmentally and socially. From an environmental perspective, products made through traditional craftsmanship methods, like "Made in Italy" goods, are often rare and use fewer natural resources (Kapferer and Michaut, 2015). Socially, they contribute to the preservation of local craftsmanship and the development of communities. In contrast, outer aesthetics are frequently associated with conspicuous consumption, where products serve as social signals rather than lasting investments, potentially undermining sustainable intentions (Podoshen and Andrzejewski, 2012). Building on these arguments, we hypothesize that: H1: Highlighting inner (vs. outer) aesthetics increases LPU.

We further propose that this effect is mediated by perceived authenticity, defined as the extent to which a product is seen as genuine, responsible, and true to its heritage (Morhart et al., 2015). Previous research has identified authenticity as a key value in luxury consumption and a potential bridge to sustainability, especially when tied to craftsmanship and heritage (Septianto et al., 2020). Formally:

H2: Inner (vs. outer) aesthetics increase perceived authenticity, which enhances LPU. Lastly, we expect that consumers' conspicuous consumption orientation (CCO) moderates this effect. For consumers less driven by status signalling, inner aesthetics should have a stronger impact on perceived authenticity and, consequently, on LPU (Han et al., 2010).

H3: The positive effect of inner (vs. outer) aesthetics on authenticity is stronger among consumers with low CCO.

## 3. Methodology And Results

We conducted one field and six pre-registered experimental studies to test our hypotheses.

Study 1: main effect on LPU. The sample consisted of 153 Prolific participants (50% females; Mage = 29.70, SD = 9.38) who were randomly assigned to one of the two conditions (luxury aesthetics: inner vs. outer) in a between-subjects design. As expected, the inner aesthetics condition generated higher LPU than the outer aesthetics (Minner = 5.68, SD = 1.76 vs. Mouter = 4.68, SD = 2.03, $F(1, 151) = 10.37$, $p = .002$).

Study 2: main effect on actual LPU. The sample consisted of 296 Prolific participants (45% females; Mage = 41.54, SD = 13.60). Participants first read a description of a luxury product emphasizing either inner or outer aesthetics. They were then asked to recall and describe an item they personally owned that matched the assigned aesthetic characteristics. Finally, they reported when they had purchased the product, allowing us to measure actual LPU. The inner aesthetics condition generated higher actual LPU than the outer aesthetics (Minner = 4.68, SD = 2.07 vs. Mouter = 3.91, SD = 2.08, $F(1, 294) = 4.54$, $p = .002$), as well as higher planned LPU (Minner = 6.42, SD = 1.28 vs. Mouter = 6.07, SD = 1.48, $F(1, 294) = 10.13$, $p = .03$).

Study 3: field study. In December 2023, we identified the 100 most-followed luxury brand accounts using platforms such as SocialBlade. From these accounts, we extracted all posts published between 2019 and 2023, collecting data on post captions, engagement metrics (likes and comments), and media type (image, sidecar, or video). We also scraped all user comments associated with each post. The final dataset included 181,595 posts and over 22 million comments.

To quantify aesthetic characteristics and user references to LPU, we applied a dictionary-based text analysis approach. Since no pre-existing dictionaries were available, we developed custom lexicons for inner aesthetics (e.g., handmade, heritage), outer aesthetics (e.g., stylish, charm), and LPU (e.g., durable, lasting). Two independent coders refined the dictionaries based on construct definitions and author input, resulting in 64 inner, 212 outer, and 33 LPU terms. We then estimated OLS regression models predicting LPU (calculated through the comments) from inner and outer aesthetic cues (calculated through the post captions). In the baseline model, inner aesthetics significantly increased LPU ($b = 0.019$, $p < .001$), while outer aesthetics had no effect. This result held when controlling for brand fixed effects and various

postlevel covariates and linguistic controls (see Table 1). Overall, inner aesthetics predicted more LPU-related engagement from users, supporting our experimental results.

| DV | **Length of product usage** | | | | | |
|---|---|---|---|---|---|---|
| N | 181,595 | | | | | |
| | **Model 1** | | **Model 2** | | **Model 3** | |
| | *b* | *Robust SE* | *b* | *Robust SE* | *b* | *Robust SE* |
| Inner | .019** | .004 | .016** | .003 | .016** | .003 |
| Outer | .002 | .002 | .001 | .002 | .001 | .002 |
| Brand FE | | | Included | | Included | |
| Time FE | | | | | Included | |
| Likes Count | | | | | .000 | .001 |
| Comments Count | | | | | -.001 | .000 |
| Type of post (Sidecar) | | | | | .002 | .007 |
| Type of post (Video) | | | | | .010 | .008 |
| Concreteness | | | | | .001 | .003 |
| Positive emotions | | | | | .003 | .002 |
| Negative emotions | | | | | .000 | .001 |
| Cognition | | | | | .005* | .002 |
| Flesh-Kincaid | | | | | .004 | .002 |
| Intercept | .000** | .002 | -.006 | 0.014 | .006 | .019 |

* $p < .05$, ** $p < .01$.

**Table 1:** Regression Analysis Results.

Study 4: mediation effect. The sample consisted of 152 Prolific participants (61% females; Mage = 32.30, SD = 11). The inner aesthetics condition generated higher LPU than the outer aesthetics (Minner = 5.57, SD = 1.67 vs. Mouter = 4.57, SD = 2.07, F(1, 150) = 10.99, p =.001). Then, we found a significant indirect effect confirming the mediating role of authenticity (b = .30, SE = .14, 95% CI: .089, .623).

Study 5a: main effect with authenticity cue. The sample consisted of 123 Prolific participants (50% females; Mage = 29.78, SD = 10.43) who were randomly assigned to one of two conditions (luxury aesthetics: inner vs. outer with authenticity cue). As predicted, the LPU did not differ between the inner aesthetics condition and the outer aesthetics condition featuring the authenticity cue (Minner = 5.35, SD = 1.84 vs. Mouter+authenticity = 5.34, SD = 1.76, F(1, 121) = 0.001, ns). This study further supports the authenticity effect by showing that making it salient eliminates the LPU difference between inner and outer aesthetics.

Study 5b: main effect with authenticity cue. The sample consisted of 184 Prolific participants (50% females; Mage = 32.51, SD = 10.89) who were randomly assigned to one of two conditions who were randomly assigned to one of two conditions (luxury aesthetics: outer vs. outer with authenticity cue). As expected, the LPU was higher when the product description included the authenticity cue (Mouter = 4.54, SD = 1.99 vs. Mouter+authenticity = 5.19, SD = 1.81, F(1, 182) = 5.362, p = .02), giving additional support to our authenticity account.

Study 6: moderation effect. The sample consisted of 199 Prolific participants (49% females; Mage = 32.34, SD = 10.28). We measure CCO using a 12-item scale (from Chaudhuri, Mazumdar, and Ghoshal, 2011; $\alpha = .90$). Results showed a significant index of moderated mediation (b = -.20, SE = .09, 95% CI: -.394, -.028), indicating that the indirect impact of aesthetics on LPU via authenticity varied by CCO levels. Specifically, the mediation effect was stronger for individuals low in CCO and weaker for those high in CCO. When CCO was high, the indirect effect was significant but relatively small (b = .27, SE = .15, 95% CI:

.018, .588). At medium levels of CCO, the effect increased in magnitude (b = .56, SE = .14, 95% CI: .314, .853), and it was strongest when CCO was low (b = .82, SE = .21, 95% CI: .427, 1.256).

## 4. Contributions and Implications

This research offers two key theoretical contributions. First, it adds to the literature on sustainable luxury (e.g., Amatulli et al., 2017; Sun et al., 2021) by shifting the focus from product-based attributes to the consumer's aesthetic experience. We show that highlighting inner (vs. outer) aesthetics leads to longer product usage, offering a novel experiential driver of sustainable behaviour. Second, we contribute to the literature on authenticity in marketing (e.g., Morhart et al., 2015) by identifying perceived authenticity as the psychological mechanism through which aesthetic framing influences sustainable consumption. By introducing the distinction between inner and outer aesthetics, we also advance the understanding of how symbolic and design-related elements affect consumer behaviour in the luxury context.

From a managerial perspective, this research provides clear guidance for luxury brands seeking to promote sustainability. Our findings suggest that marketing communications should emphasize inner aesthetics to increase the perceived authenticity and longevity of luxury products. This approach is particularly effective among consumers with lower levels of conspicuous consumption orientation, for whom authenticity resonates more than status signalling. Moreover, our large-scale social media analysis provides a practical tool for assessing the aesthetic framing of brand content, helping managers design narratives that nudge consumers toward longer product use. For instance, saying "Our summer collection is a crafted work of artistry" should enhance LPU more than saying "Our summer collection is the state-of-the-art of glamor".

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## Key References (the full list is available upon request)

Amatulli, C., De Angelis, M., Costabile, M., & Guido, G. (2017). Sustainable luxury brands: Evidence from research and implications for managers. Springer.

Morhart, F., Malär, L., Guèvremont, A., Girardin, F., & Grohmann, B. (2015). Brand authenticity: An integrative framework and measurement scale. Journal of consumer psychology, 25(2), 200-218.

Sun, J. J., Bellezza, S., & Paharia, N. (2021). Buy less, buy luxury: Understanding and overcoming product durability neglect for sustainable consumption. Journal of Marketing, 85(3), 28-43.

# Gamification e sostenibilità: il caso greenApes nella prospettiva della teoria dell'autodeterminazione

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## Abstract

Le sfide ambientali e i mutamenti climatici che caratterizzano l'attuale scenario globale richiedono urgenti cambiamenti nei comportamenti individuali e collettivi, con una maggiore attenzione alla sostenibilità. Tra le strategie più innovative volte alla promozione di pratiche e abitudini sostenibili, la gamification è emersa come un approccio efficace, in grado di favorire motivazione e coinvolgimento. Nonostante l'interesse crescente sia da parte di studiosi che di professionisti, la letteratura sul tema appare ancora frammentata e necessita di maggiori approfondimenti basati su dati e ricerche empiriche. Muovendo dal framework teorico della Teoria dell'Autodeterminazione, il presente contributo intende colmare questo gap attraverso un'indagine netnografica incentrata sull'analisi di greenApes, azienda italiana che nasce con l'obiettivo di promuovere comportamenti sostenibili attraverso la gamification. Dopo aver introdotto il tema e presentato un breve inquadramento teorico, il paper descrive la metodologia e i risultati dell'indagine, evidenziandone le principali implicazioni, sia teoriche che pratiche.

*Keywords: Gamification, Sostenibilità, Autodeterminazione, Netnografia; greenApes.*

## 1. Introduzione

Le sfide ambientali e i mutamenti climatici che caratterizzano l'attuale scenario globale richiedono urgenti cambiamenti nei comportamenti individuali e collettivi, con una maggiore attenzione alla sostenibilità. Tra studiosi, istituzioni e professionisti di vari ambiti, è, ormai, consolidata l'idea che variazioni negli stili di vita, come la riduzione della produzione dei rifiuti e scelte di consumo più attente e responsabili, possano determinare benefici per l'ambiente e favorire la sostenibilità nelle sue dimensioni, ambientale, sociale ed economica (Crittenden et al., 2011).

Tra le strategie più innovative volte alla promozione di comportamenti e abitudini sostenibili, la gamification è emersa come un approccio efficace (Douglas e Brauer, 2021): essa è in grado di favorire motivazione e partecipazione e rendere le attività più coinvolgenti e attraenti attraverso l'applicazione di elementi tipici del gioco, come sfide, ricompense e punteggi, all'interno di contesti non ludici (Deterding et al., 2011). Nonostante l'interesse crescente da parte di studiosi e professionisti (Lim et al., 2025; Whittaker et al., 2021), la letteratura sul tema della gamification per la sostenibilità appare ancora frammentata e necessita di maggiori approfondimenti basati su dati e ricerche empiriche. Il presente contributo intende colmare questa lacuna attraverso una ricerca netnografica incentrata sull'analisi di greenApes, impresa italiana la cui missione è promuovere comportamenti sostenibili attraverso un'applicazione

basata su elementi di gioco. Nella prospettiva del presente lavoro, la sostenibilità è intesa nella sua triplice accezione, ossia ambientale, sociale ed economica: per i suoi meccanismi di funzionamento, l'app sviluppata da greenApes valorizza tutte e tre le dimensioni, promovendo comportamenti finalizzati alla salvaguardia ambientale, a un utilizzo responsabile delle risorse e al benessere della società, sia a livello locale che internazionale.

La restante parte del presente contributo è strutturata nel modo seguente: dopo un breve excursus teorico, il lavoro descrive la metodologia utilizzata per la selezione del caso, la raccolta e l'analisi dei dati. Successivamente, il lavoro presenta i risultati dell'indagine e si conclude evidenziando le implicazioni e le conclusioni del progetto di ricerca.

## 2. Background teorico

Tra gli approcci teorici più utilizzati e consolidati per analizzare il fenomeno della gamification, la Teoria dell'Autodeterminazione (Ryan and Deci, 2017, 2000) occupa una posizione di rilievo. Secondo questa teoria, motivazione e benessere individuali sono connessi alla soddisfazione di tre bisogni psicologici fondamentali: autonomia, competenza e relazione. L'autonomia riguarda il bisogno di ciascun individuo di sentirsi libero di scegliere e di agire autonomamente, senza imposizioni esterne; la competenza si riferisce al senso di efficacia e padronanza nel raggiungimento di determinati obiettivi; mentre la relazione fa riferimento al bisogno di connessione con altri individui e al senso di appartenenza a una dimensione sociale più ampia.

Nella prospettiva della Teoria dell'Autodeterminazione, la motivazione individuale può spaziare tra forme più controllate ed estrinseche (basate su ricompense, premi o sanzioni) a forme più autonome e intrinseche, fondate sull'interesse personale e su forme di interiorizzazione valoriale. L'applicazione della teoria all'ambito della gamification ha delle implicazioni interessanti, in particolar modo per ciò che riguarda la possibilità di transizione tra forme di motivazione estrinseca a forme di motivazione intrinseca, attraverso la valorizzazione dei bisogni di autonomia, competenza e relazione. Si inserisce, in questo ambito, il concetto di meaningful gamification proposto da Nicholson (2015): l'autore distingue la gamification basata su premi e gratificazioni esterne (reward-based gamification) dalla gamification significativa (meaningul gamification), fortemente integrata con il contesto della vita reale e volta a promuovere coinvolgimento, apprendimento e riflessione.

## 3. Metodologia

L'obiettivo di questa ricerca è esplorare le potenzialità della gamification nella promozione di comportamenti e pratiche sostenibili.

A partire dall'obiettivo cognitivo, sono state formulate due domande di ricerca (DR):

- DR1) Come può la gamification supportare i bisogni fondamentali di autonomia, competenza e relazione individuati dalla Teoria dell'Autodeterminazione e come ciò può influenzare il coinvolgimento degli utenti in pratiche sostenibili?
- DR2) Come può la gamification promuovere la motivazione intrinseca e favorire l'adozione di comportamenti sostenibili duraturi e stabili nel tempo?

Dal punto di vista metodologico, la ricerca ha previsto l'applicazione di una netnografia, un approccio qualitativo che traspone e adatta le tradizionali tecniche di ricerca etnografica allo studio di comunità e comunicazioni online (Kozinets, 2010). La scelta del caso di studio [6]è

[6] La scelta del caso è avvenuta nel rispetto dei previsti dalla letteratura sulla netnografia (Kozinets, 2010), ossia: rilevanza rispetto agli obiettivi e alle domande della ricerca; attività e presenza di comunicazioni frequenti e aggiornate quotidianamente; interattività e ricchezza informativa. La rilevanza dell'app è testimoniata da una

ricaduta su greenApes, azienda italiana con sede a Campi Bisenzio (Firenze), fondata nel 2012 e certificata B Corp a partire dal 2016.

L'app sviluppata da greenApes, scaricabile gratuitamente da Internet, consente agli utenti di tracciare le proprie azioni sostenibili e di trasformare i propri comportamenti virtuosi in punti virtuali, chiamati TWIN. Una volta raccolti, i TWIN possono essere utilizzati per sostenere iniziative ambientali e sociali promosse da associazioni, ONG e partner di greenApes. La raccolta dei TWIN permette, inoltre, agli utenti di sbloccare premi messi a disposizione dai partner dell'azienda, che consistono in sconti o promozioni per l'acquisto di prodotti e servizi sostenibili. All'interno dell'app è, inoltre, presente uno spazio condiviso, chiamato La Giungla, dove tutti gli iscritti possono incontrarsi virtualmente, scambiarsi informazioni, condividere consigli, suggerimenti e riflessioni sulle proprie pratiche sostenibili.

Oltre alla versione gratuita dell'applicazione, greenApes stabilisce collaborazioni e partnerships con altre aziende, interessate a sviluppare una versione customizzata dell'app per promuovere la sostenibilità tra i propri clienti e/o dipendenti e rafforzare la propria awareness come brand sostenibile ed eco-friendly.

La ricerca netnografica ha previsto, inizialmente, una fase preliminare di lurking[7] volta ad acquisire familiarità con la community e con le sue dinamiche di funzionamento. A questa fase ha fatto seguito un'osservazione partecipante, durante la quale i ricercatori, dopo aver palesato la propria presenza sia agli admin che agli utenti, hanno utilizzato quotidianamente l'app, partecipando attivamente alle sue attività, cimentandosi nelle sfide e interagendo con la comunità.

La raccolta delle informazioni è avvenuta integrando fonti diverse, come i documenti ufficiali dell'azienda disponibili sul sito web, l'analisi dei profili social di greenApes, i post e i commenti rilasciati dagli utenti all'interno dell'app, nonché le note sul campo derivanti dall'osservazione partecipante e contenenti le riflessioni emerse durante il lavoro di ricerca. Tutte le informazioni raccolte sono state analizzate combinando un processo di coding e analisi ermeneutica.

All'osservazione partecipante è stata affiancata la realizzazione di interviste in profondità, rivolte sia a rappresentati di greenApes che agli utenti, volte ad approfondire gli aspetti motivazionali e triangolare le informazioni raccolte attraverso l'osservazione, coerentemente con quanto previsto dal protocollo di ricerca netnografica.

## 4. Risultati preliminari

In questo paragrafo, sono riportati i risultati della ricerca, basati sulle informazioni raccolte e analizzate attraverso il framework teorico della Teoria dell'Autodeterminazione (Ryan and Deci 2017; 2000).

In riferimento alla DR1, dalle evidenze dell'indagine emerge che l'app greenApes promuove i bisogni di autonomia, competenza e relazione identificati da Ryan and Deci. Per quanto riguarda la dimensione dell'autonomia, l'app consente agli utenti di stabilire il livello e, soprattutto, le forme di partecipazione alle attività. Le sfide proposte sono volte a stimolare la creatività e l'interpretazione personale da parte degli utenti, piuttosto che l'esecuzione di compiti meccanici e ripetitivi. Aggiornate periodicamente nei contenuti, le sfide muovono da

serie di riconoscimenti internazionali ottenuti da greenApes per l'attività svolta, come il premio *B Corp Best for The World* nella categoria *Governance and Changemaker* nel 2019 e nella categoria *Governance* nel 2021.

[7] Il *lurking* consiste in un'osservazione nascosta e può rivelarsi una strategia molto utile in una fase esplorativa della ricerca, consentendo al ricercatore di acquisire informazioni sulla comunità e sulle sue dinamiche di funzionamento. Sulla base delle informazioni raccolte in fase di lurking, infatti, il ricercatore potrà valutare la migliore strategia di accesso alla comunità che sta studiando.

un tema generale (per esempio il problema dello smaltimento della plastica, oppure il riciclo dei giocattoli) e richiedono agli utenti di interpretare il tema stesso in modo personale, scrivendo commenti, scattando foto, effettuando ricerche e approfondimenti.

La partecipazione alle attività di greenApes valorizza anche la dimensione della competenza: per il superamento delle sfide, agli utenti è richiesto di ricercare informazioni su argomenti connessi alla sostenibilità. L'acquisizione di conoscenza è successivamente testata attraverso il superamento di quiz e sondaggi. L'app premia, inoltre, la realizzazione di comportamenti virtuosi (come l'attività fisica e le pratiche di consumo sostenibili) documentati dagli utenti attraverso la condivisione di post e foto. L'impegno di ciascun utente e i progressi raggiunti determinano il conseguimento di badge e "livelli" crescenti, visibili all'interno dei profili individuali e utili a evidenziare i miglioramenti in termini di conoscenze e competenze raggiunte.

L'app, infine, valorizza la dimensione della relazione attraverso la presenza dello spazio comunitario, La Giungla, che rappresenta uno dei principali elementi distintivi di greenApes, grazie al quale gli utenti possono confrontarsi quotidianamente, condividere esperienze, informazioni e buone pratiche. Il meccanismo dei TWIN e delle donazioni contribuisce a rafforzare il senso di comunità e appartenenza: ogni volta che un obiettivo di supporto a una campagna viene raggiunto, gli utenti festeggiano il traguardo come un successo collettivo, un segnale tangibile della forza e della coesione della comunità. Attraverso il focus su attività ludiche, ma strettamente ancorate al contesto della vita quotidiana e volte a favorire riflessione, coinvolgimento e apprendimento, greenApes promuove in modo originale la meaningful gamification teorizzata da Nicholson (2015).

Dal punto di vista motivazionale, l'app combina efficacemente elementi estrinseci, (come premi, sconti, ricompense) ed elementi intrinseci, che fanno leva su competenza, autonomia e relazione. I risultati della ricerca mettono in evidenza che la motivazione degli utenti di greenApes non è, infatti, riconducibile unicamente a dimensioni intrinseche o estrinseche, ma piuttosto a una combinazione dinamica di entrambi i tipi di motivazione. Premi e ricompense rappresentano una leva iniziale fondamentale per suscitare interesse, curiosità ed attivare la partecipazione, mentre, nel tempo, fattori legati alla soddisfazione dei bisogni individuati dalla Teoria dell'Autodeterminazione acquisiscono maggiore importanza. Questa combinazione di elementi intrinseci ed estrinseci suggerisce che la gamification per la sostenibilità opera attraverso un continuum motivazionale in cui le due dimensioni si rafforzano reciprocamente, favorendo il mantenimento dei comportamenti sostenibili nel lungo periodo e l'interiorizzazione di pratiche virtuose come parte della propria identità quotidiana (DR2).

## 5. Conclusioni

La presente ricerca suggerisce interessanti implicazioni dal punto di vista teorico e pratico. Innanzitutto, essa contribuisce a consolidare la validità della Teoria dell'Autodeterminazione nello studio della gamification per la promozione della sostenibilità. Lo studio arricchisce, inoltre, la letteratura sul tema della meaningful gamification, evidenziando come la dicotomia tra motivazione intrinseca e motivazione estrinseca possa essere superata. GreenApes, infatti, integra elementi reward-based (sconti, premi, badge) con meccanismi orientati alla soddisfazione dei bisogni di autonomia, competenza e relazione. Da questa integrazione deriva una forma ibrida di meaningful gamification, in cui i premi e le gratificazioni esterne non sono fine a sé stessi, ma risultano incorporati in pratiche quotidiane di sostenibilità e in dinamiche comunitarie di supporto reciproco.

La ricerca offre altresì indicazioni pratiche per tutte le organizzazioni, le istituzioni e le imprese interessate a sviluppare piattaforme gamificate per la promozione della sostenibilità,

mettendo in evidenza strategie e tecniche operative per favorire autonomia, competenza e relazione. La dimensione dell'autonomia può essere valorizzata preferendo sfide creative e personalizzabili, piuttosto che compiti rigidi e meccanici; la competenza può essere promossa consentendo agli utenti di acquisire conoscenze e rendendo visibili i progressi raggiunti attraverso badge e livelli. Infine, il bisogno di relazione è connesso all' integrazione di una dimensione comunitaria che favorisca condivisione e confronto tra gli utenti coinvolti.

In conclusione, lo studio conferma che la gamification, se progettata in modo equilibrato tra motivazioni intrinseche ed estrinseche, può rappresentare uno strumento efficace per incentivare l'adozione di comportamenti sostenibili nella vita quotidiana e favorire il mantenimento degli stessi nel tempo.

## Bibliografia


Crittenden, V. L., Crittenden, W. F., Ferrell, L. K., Ferrell, O. C., & Pinney, C. C. (2011). "Market-Oriented Sustainability: A Conceptual Framework And Propositions". Journal Of The Academy Of Marketing Science, 39, 71-85.

Deterding, S., Dixon, D., Khaled, R., Nacke, L. (2011). "From Game Design Elements To Gamefulness: Defining" Gamification"". In Proceedings Of The 15th International Academic Mindtrek Conference: Envisioning Future Media Environments, 9-15.

Douglas, B. D., Brauer, M. (2021). "Gamification To Prevent Climate Change: A Review Of Games And Apps For Sustainability". Current Opinion In Psychology, 42, 89-94.

Kozinets R.V. (2010). "Netnography: Doing Ethnographic Research Online". London: Sage Publications.

Lim, W. M., Das, M., Sharma, W., Verma, A., Kumra, R. (2025). "Gamification For Sustainable Consumption: A State-Of-The-Art Overview And Future Agenda". Business Strategy And The Environment, 34(1), 1510-1549.

Nicholson, S. (2015). "A Recipe For Meaningful Gamification". In Wood L., Reiners T. (Eds.), Gamification In Education And Business (Pp. 1–20). Springer.

Ryan, R. M., Deci, E. L. (2000). "Intrinsic And Extrinsic Motivations: Classic Definitions And New Directions". Contemporary Educational Psychology, 25(1), 54-67.

Ryan, R. M., Deci, E. L. (2017). "Self-Determination Theory: Basic Psychological Needs In Motivation, Development, And Wellness". Guilford Publications.

Whittaker, L., Mulcahy, R., Russell-Bennett, R. (2021). "Go With The Flow'for Gamification And Sustainability Marketing". International Journal Of Information Management, 61, 102305.

# All You Need Is... AI? Investigating Relationships Between Frequent Users and GenAI

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## Abstract

Generative AI (GenAI) tools are becoming deeply embedded in consumers' daily lives. This study investigates whether and how frequent users form relationships with these technologies. Using a qualitative approach based on 13 in-depth interviews, the research identifies four distinct relational patterns, shaped by users' perceptions of GenAI's competence and warmth. These perceptions influence the role GenAI plays in both purchase-related and more personal decisions. The study contributes to the emerging literature on consumer behavior and GenAI dynamics and offers early insights for research and practice.

*Keywords: Generative AI; Consumer-Brand Relationship; Companionship; Feelings.*

## 1. Introduction

OpenAI's ChatGPT didn't just launch: it exploded. One million users in five days (Davison et al., 2024), and, by February 2025, 400 million people were using it weekly. Two months later, that number had doubled, with over 800 million users: about 10% of the world's population. In a few days, GenAI had become part of everyday life (Badalyan, 2025; Agizza, 2025). However, ChatGPT is just one of several GenAI tools that are reshaping various sectors of society, as well as models of production and consumption (Chan & Choi, 2025; Nasr & El-Deeb, 2025), with enormous potential to impact consumer behavior (Cillo & Rubera, 2025; Dwivedi et al., 2023). GenAI has the potential to transform consumer-AI interactions by making them more human-like, leading to both promising opportunities and critical concerns (Wen & Laporte, 2024). In this context, the term consumers (hereafter users) refers to individuals engaging with GenAI technologies (Hermann & Puntoni, 2024).

Particularly emblematic cases involve consumers who even report feelings and relational bonds with GenAI tools. One example, reported by Kashmir (2025) in a New York Times article, describes Ayrin, a 28-year-old woman in a romantic relationship with Leo: a good listener, a stress-reliever, an empathic study partner. However, Leo is, in fact, a fictional construct, a "perfect boyfriend" prompt generated through ChatGPT. Ayrin's case may seem isolated, yet it could instead signal the emergence of a broader system of consumer–AI relational dynamics that remains largely unexplored (Chen et al., 2025; De Freitas et al., 2024). While consumers' tendency to create relationships with non-human entities such as brands (MacInnis & Folkes, 2017), robots (Ho et al., 2018), or other technologies (Singh, 2021) is widely documented, scholars have urged the need to examine how consumers engage with GenAI tools (Cillo & Rubera, 2025; Paul et al., 2023), as academic research continues to lag behind the developments unfolding in practice (Chen et al., 2025). Thus, the aim of this

research is to explore the relationships consumers develop with GenAI tools by addressing the following research question: What types of relationships may emerge between consumers and GenAI?

## 2. Theoretical Background

GenAI and Consumers: New Paradigms. It is reasonable to expect that GenAI tools will profoundly transform consumer attitudes and behaviors (Chan & Choi, 2025). GenAI offers consumers a natural and human-like form of communication (Baird & Maruping, 2021), operating in real time and with a high degree of personalization (Mogaji & Jain, 2024). GenAI tools can interpret inputs and respond with coherent, articulate, and timely content (Wen & Laporte, 2024). The extreme ease of use, the speed of responses, and the broad accessibility have led consumers to increasingly rely on GenAI. This growing dependency can be understood in terms of usage frequency and the level of trust consumers place in GenAI (Paul et al., 2023). In this perspective, Kumar et al. (2024) highlight that consumers may also move beyond purchase-related requests and use ChatGPT for more personal and intimate purposes (Edsall et al., 2023). Thus, the existing literature suggests, on the one hand, that GenAI, with its disruptive power in individuals' lives, may generate risks and detrimental effects (Hermann & Puntoni, 2024). On the other hand, the increasing frequency of use and the ways in which consumers engage with GenAI call for a timely investigation of how this phenomenon is evolving, as it appears to be giving rise to new attitudes and new forms of consumer–brand relationships (Alabed et al., 2024; Chan & Choi, 2025).

From Brands to Consumer-GenAI relationships. According to existing research, consumers form deep, symbolic, and evolving bonds with brands, traditionally constructed as social actors with voice, meaning, and personality, yet lacking autonomy (Batra, 2019; Kirby & Kent, 2010; Kohli et al., 2005). These consumer–brand relationships (hereafter, CBR), mirroring real relationships in many ways (Alvarez & Fournier, 2016), are embedded in broader sociocultural networks (Fournier & Alvarez, 2019) and tightly linked to how people construct their identities (Holt, 1997). At their core, they are co-created: a dynamic interplay between the parties, each shaping the other over time (Fournier, 1998; Hinde, 1978).

However, with the emergence of GenAI branded products, the nature of relationships becomes more complex. Due to their characteristics, GenAI tools can redefine the relational dynamics (Kumar et al., 2024; Paul et al., 2023). To explore how consumers relate to non-human agents, Fournier and Alvarez (2012) introduced the Brands as Intentional Agents Framework, which centers on two key socio-cognitive dimensions: warmth, that is the friendliness, benevolence, and moral intent perceived by the consumer toward the brand, and competence, that is, how consumers perceive the entity's intelligence, capabilities, and effectiveness. These dimensions are foundational for understanding CBR (Fiske et al., 2007), as they explain how and why a consumer begins to develop trust, cooperation, and relationships with a non-human agent. Studies have shown that relationships are deep and significant in the context of AI (Alabed et al., 2024), due to tools' anthropomorphic features such as having a name, a voice, constant presence, and empathy. Given these bonds with AI-based tools, consumer relationships can shape everyday life, for better (Vernuccio et al., 2023) or worse (Monteverde et al., 2025). It is therefore plausible that relational dynamics may also emerge with GenAI tools, especially given their rapid advancement and widespread use (Chen et al., 2025; De Freitas et al., 2025). Yet, the limited anthropomorphic cues and lack of emotional or personality traits (Alabed et al., 2024) suggest that these relationships may follow fundamentally different logics.

## 3. Methodology

Given the exploratory aim of this study, we employed a qualitative design based on in-depth, semi-structured interviews to capture consumers' attitudes, emotions, and perceptions toward GenAI tools (Creswell, 2009). Thirteen informants with varied demographic and socio-cultural background were recruited through purposive sampling and a self-selection form circulated via social media, targeting frequent GenAI users likely to provide rich, experience-based insights (Roulston & Martinez, 2015). Interviews were conducted between March and May 2025, either in person or via MS-Teams. Data were analyzed using inductive thematic analysis to identify recurring themes across the dataset (Braun & Clarke, 2006).

## 4. Preliminary findings

The analysis revealed four distinct relational patterns in frequent users' interactions with AI varying alongside the competence/warmth dimensions. For each pattern, we explore the key themes that emerged, the relational posture adopted toward AI, recurring metaphors, and underlying tensions.

High Competence/High Warmth. Informants in this cluster describe a relationship with AI that is deeply integrated into daily routines and emotionally rich. AI is not confined to a specific context but spans across domains, supporting everything from productivity to playful ideation. The relationships are characterized by enthusiasm and curiosity, reflecting a daily usage pattern that conceptualizes AI as a cognitive and emotional partner, as an extension of the self, imbued with trust and companionship. From a relational standpoint, users adopt a quasi-social stance, referring to AI as a "second self" or a "non-judgmental friend", highlighting openness and dependence on its presence. Users rhetorically refer to AI as a "moral compass", an "illicit affair", or a "sparring partner", conveying emotional comfort and intellectual stimulation. In some cases, AI even replaces human connection, offering more psychological relief than close others. Yet, beneath this closeness lies a web of tensions. The relationship is marked by a constant negotiation between autonomy and dependence, as well as anthropomorphization and rational detachment. While AI is warmly embraced as a partner in everyday sense-making, this cluster reflects a coexistence of integration and hesitation.

High Competence/Low Warmth. Informants within this cluster engage with AI through a pragmatic, critically detached lens. AI is integrated into professional lives and daily workflows but is never trusted. Outputs are constantly reviewed and adapted to preserve users' authorship. The relationship remains firmly instrumental, as AI is a means to an end rather than a partner. Relationally, users adopt a position of control, casting themselves as instructors and AI as an "apprentice," "student," or "assistant" requiring constant oversight. Humanizing metaphors are rejected, as AI is likened to a machine or a servant, that is efficient but subordinate. Emotionally, the tone is marked by restraint and ambivalence. While AI is appreciated as a productivity-enhancer, its use also evokes guilt, especially when it invades creative or authorial tasks. Fears of cognitive deskilling are recurrent, alongside ethical unease about AI's growing role in professional contexts. Tensions emerge around autonomy vs. efficiency and originality vs. standardization. Although users value AI's competence, trust is conditional and continuously negotiated. This cluster reflects a posture of guarded pragmatism: AI is a powerful tool, but one whose use must be carefully bounded to protect expertise, authenticity, and creative agency.

Low Competence/High Warmth. Informants within this cluster relate to AI with emotional openness and imaginative engagement, despite limited technical competence. While they frame AI as external to their world, they interact with it daily, often in reflective and exploratory contexts. The relationship is marked by a hybrid script: AI is not a peer or

authority but a symbolic extension of the user's imaginative space. Users adopt a posture of ironic curiosity, approaching AI as a non-threatening interlocutor, useful for narrative play and speculative thinking, though never fully trusted as a co-creator. Metaphors reinforce this playful detachment: AI is a "playground", a "serious toy", or a "benign intruder". Emotionally, this cluster is rich in curiosity and delight, tempered by underlying unease. Irony operates as both a mode of enjoyment and a shield against deeper concerns. While joking, users express anxiety about AI's subtle influence and lack of control. Tensions emerge between immersion vs. distance, irony vs. concern, and between critical awareness vs. thrill of experimentation. AI is simultaneously welcomed and resisted. In sum, AI is approached with cautious playfulness: emotionally warm and cognitively detached.

Low Competence/Low Warmth. Informants within this cluster relate to AI with marked skepticism, limited technical engagement, and emotional detachment. Their use of AI is strictly functional, driven by necessity rather than interest or trust. They reject any relational framing, refusing to humanize or emotionally invest in the system, which they describe as "cold" and "impersonal". Prevailing relational postures are defensive and supervisory, as users act like monitors rather than collaborators, interacting with AI under strict control. They are reluctant participants, motivated by the fear of professional obsolescence, while remaining ideologically critical. Metaphors reinforce this guarded stance, as AI is seen as a "surveillance device" or a "tightrope", evoking imbalance and systemic critique. Emotionally, the cluster is dominated by distrust and resignation. Users are concerned about loss of privacy and intellectual agency, as well as institutional double binds that both demand and forbid AI use. The few moments of relief are framed as acts of survival. Tensions abound: ethics vs. efficiency, exclusion vs. participation, resistance vs. dependency. Users feel caught between a cautious present and a future they fear may normalize what they resist. A final tension emerges between individual agency and systemic expectation, promoting a sense of detachment from dominant enthusiastic narratives. In sum, these users exhibit a posture of cold vigilance: AI is a watched object, engaged reluctantly and distanced affectively.

## 5. Conclusions

This study contributes to consumer behavior and consumer-AI interaction research (Minina Jeunemaître et al., 2025; Paul et al., 2023) by proposing a preliminary taxonomy of consumer-AI relationships based on perceived competence and warmth. Through inductive thematic analysis of 13 in-depth interviews, four relational clusters were identified, each marked by distinct emotional, cognitive, and relational patterns. Contrary to the claims of Alabed et al. (2024), who argue that GenAI lacks anthropomorphic features and thus inhibits the formation of relationships, our findings demonstrate that consumers are, in fact, establishing meaningful and relational bonds with these tools. Thus, rather than treating GenAI as a tool, many users engage with it as a relational and symbolic actor. Warmth emerged as the primary driver of emotional proximity and anthropomorphization: high-warmth users, regardless of competence, assign social roles to AI (e.g., companion, confidant, creative partner), fostering affective engagement, especially when paired with high competence. In contrast, low-warmth users adopt a distanced, instrumental stance, emphasizing control and rejecting anthropomorphization. Competence shapes strategic engagement: high-competence users integrate AI deliberately, using it either as a collaborator or as a task optimizer while maintaining authorship. Importantly, users don't just use AI, they narrativize it. Recurring metaphors (e.g., "mirror," "moral compass") reveal how symbolic framings guide expectations, shape attitudes, and influence emotional investment. These constructions have significant implications for understanding consumer experience and for informing GenAI adoption, design, and marketing. By introducing a competence-warmth taxonomy of consumer-AI relationships (Alvarez & Fournier, 2016), this study shifts the focus from purely instrumental adoption to the emotional and symbolic dimensions of GenAI use.

When AI is seen as a mirror, friend, or partner, interactions become effectively charged. When seen as a tool or threat, engagement remains pragmatic and detached. Future work should track how these stances evolve over time, what could be the positive or negative effects of leveraging relationships of this sort, and how the metaphors through which consumers narrate AI are structured and related to. These findings can inform the design and implementation of AI agents across digital and physical contexts. Recognizing variations in relational postures allow for more effective segmentation and interaction design. High-warmth users respond to cues of creativity and collaboration; low-warmth users prioritize transparency and control. Tailoring design and communication to these dynamics can foster trust, enhance engagement, and reduce both resistance and over-reliance.

## Key references (full list available on request)

Alvarez, C., & Fournier, S. (2016). Consumers' relationships with brands. Current Opinion in Psychology, 10, 129-135.

Fournier, S. (1998). Consumers and their brands: Developing relationship theory in consumer research. Journal of Consumer Research, 24(4), 343-373.

Fournier, S., & Alvarez, C. (2019). How brands acquire cultural meaning. Journal of Consumer Psychology, 29(3), 519-534.

Hermann, E., & Puntoni, S. (2024). Artificial intelligence and consumer behavior: From predictive to generative AI. Journal of Business Research, 180, 114720.

# Trauma-Informed, Co-Constructed Framework for In-Depth Market Interviews in Crisis Contexts

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## Abstract

Armed conflict, mass displacement, and climate-driven disasters have turned crisis into a routine backdrop for qualitative marketing research when both parties share a traumatic reality. Standard guides, however, still assume a detached interviewer and a uniquely vulnerable respondent. The study addresses this methodological gap with TICMI – the trauma-informed, co-constructed market interview framework. It draws on 76 post-Russian-invasion interviews with Ukrainian refugees across the EU and North America and marketing faculty who continued teaching under missile threat. Integrating trauma-informed care, co-creative interviewing, and an expanded consumer-vulnerability lens that recognizes interviewer distress, the framework sets out practical safeguards across pre-, during-, and post-interview stages. Pause-and-ground cues, language-flexible scripts, shared notepads, and reflexive self-checks helped maintain rapport and analytic depth even amid crisis settings. TICMI provides a clear, field-tested protocol for collecting ethical, high-quality insights in war, disaster, and other high-stress contexts, emphasizing the need to include trauma literacy into marketing-methods training.

*Keywords: crisis research contexts; shared traumatic reality; trauma-informed care; qualitative marketing methods; TICMI.*

### 1. Introduction

War, displacement, pandemics, and climate disasters have made crisis the routine backdrop for qualitative marketing research, where an interviewer and participant share the traumatic reality (Baum, 2013). Yet, field manuals still assume a neutral moderator and a uniquely vulnerable respondent (Durrant et al., 2010). Early cautions about re-victimizing consumers (Hill, 1995) and recent calls for trauma-informed interviews (Crosby et al., 2022) center almost wholly on participant safety. Psychology, however, shows that continual exposure to others' suffering can trigger vicarious trauma in researchers (Smith et al., 2021). Marketing scholarship largely ignores this risk, as the word "trauma" appears in only 0.4% of Psychology & Marketing articles (Farrell et al. 2024).

This study, therefore, asks how an in-depth market interview can remain ethical and analytically rich when both an interviewer and a participant share the same prolonged traumatic reality. Specifically: RQ1: Which trauma-informed adaptations keep business-

centered conversations flowing naturally? RQ2: How can interviewers' well-being be protected so that data quality is not distorted by unaddressed vicarious trauma?

The answer lies in the trauma-informed, co-constructed market interview framework. Drawing on 76 interviews after Russia's 2022 invasion of Ukraine with refugees in Europe and North America and with faculty teaching under missile threat, TICMI fuses the "4 Rs" of trauma-informed care with co-creative interviewing (Belk 2006) and extends consumer-vulnerability theory to consider also the researcher (Baker, Gentry & Rittenburg 2005). The result is a protocol that preserves rapport and data quality while safeguarding both parties.

## 2. Method

### 2.1. Research context

Russia's full-scale invasion of Ukraine (February 2022) displaced 6.9 million people abroad and 3.7 million internally; more than 12 million now require humanitarian aid (UNHCR, 2025). One in five Ukrainian universities has suffered damage or destruction (Carter 2024). Interviews, therefore, unfolded amid rolling blackouts, air-raid alerts, and persistent uncertainty—a textbook case of shared traumatic reality.

### 2.2. Participants and interviewers

Two trauma-exposed cohorts were purposefully sampled – the first comprised 32 displaced Ukrainians living in Europe and North America, and the second consisted of 66 heads of marketing departments or program coordinators at Ukrainian universities, many working from relocated or damaged campuses. Three Ukrainian marketing scholars moderated all sessions: one recently displaced to Western Europe, and two remained in Kyiv and Lviv under daily missile alerts. Their dual role as researchers and war-affected citizens made systematic self-monitoring critical.

### 2.3. Data collection

Participants first completed a short online survey that included informed consent and contact options. Follow-up interviews were semi-structured in Ukrainian via Zoom, Viber, WhatsApp, or Telegram—whichever platform minimized blackout and time-zone risk. Conversations paused for sirens or connection loss. Respondents could shift to audio-only, live text, or asynchronous voice notes and skip questions. Refugees received a closing thank-you, while faculty additionally joined a collaborative log that generated follow-up surveys and member-checking meetings.

2.4. Data analysis. Audio files were auto-transcribed (Turboscribe.ai) and manually verified. Reflexive thematic analysis progressed through familiarization, open coding, theme building, and iterative review. Three coders independently annotated an initial tranche, achieving substantial agreement. Researchers' reflexive notes were woven into the analysis to trace how shared trauma shaped questioning, prompting, and interpretation.

## 3. Results

### 3.1. Linguistic and paralinguistic signals of shared trauma

Instead of analyzing what refugees said, the study examined how they said it—the lexical choices, paralinguistic cues, and conversational moves that revealed distress and ultimately shaped the TICMI protocol. Four recurring patterns emerged, each illustrated below with a Ukrainian quotation followed by an English rendering.

*1. Emotional leakage and metacommentary.* Participants routinely named their own affect or commented on the interview as it unfolded: "усі плачуть" / "everyone is crying," "мені так боляче" / "it hurts to talk," "я постійно боюся" / "I am constantly afraid." Because fear and pain surfaced mid-sentence, these moments offered moderators natural pause points for the pause → ground → skip routine.

*2. Code-switching as an affective buffer.* Spontaneous shifts into English, Italian, or other non-native languages softened emotion ("sorry for that," "keep smiling," "piano-piano") and created momentary distance from painful detail. Allowing multilingual expression and mirroring it only when invited proved more stabilizing than insisting on a single language.

*3. Disclaimers, hedges, and safety checks.* Parenthetical queries such as "ти записуєш?" / "are you recording?" or «ти мені віриш?» / "do you believe me?" signaled exposure anxiety. Interviewers who echoed these concerns, saying, "I'm recording only for myself, not to miss important ideas," re-established safety and encouraged fuller disclosure.

*4. Humor and hyperbole masking distress.* Gallows humor, like "це, конечно, прикол" / "it's kind of a joke," "это цирк" / "it's ridiculous," and exaggerated anecdotes about bureaucratic absurdities or cultural peculiarities often preceded sudden topic shifts or brief silences. Recognizing laughter as a stress regulator, moderators acknowledged the joke, offered a brief grounding pause, and then probed the feelings beneath.

### 3.2. Translating patterns into the TICMI protocol

These speech cues directly informed TICMI's design: 15-minute micro-checks begin with "How does the conversation feel?", language flexibility is formalized, on-the-spot confidentiality reassurances are scripted, and a "humor flag" reminds interviewers that laughter may signal peak anxiety. Together, the adaptations translate conversational nuance into concrete safeguards, letting market researchers collect rigorous data while protecting both sides of the interview (see Table 1).

## 4. Discussion

### 4.1. Theoretical and practical contributions

TICMI operationalizes trauma-informed care's "4 Rs," but adds co-creative mechanics that re-center participant agency without abandoning commercial objectives. TICMI addresses analytic bias, often overlooked in consumer research, by extending vulnerability theory to include interviewer distress. Brands commissioning fieldwork in conflict zones can deploy TICMI with minimal delay. Evidence of richer transcripts and lower dropouts suggests better ROI on insight budgets.

### 4.2. Limitations and future research

The sample is culturally and geopolitically specific, so further studies should test TICMI in disaster relief or pandemic wards.

## 5. Conclusion

Crisis contexts demand that marketing researchers replace the myth of neutrality with a praxis that safeguards both interlocutors. TICMI offers a rigorously tested, practitioner-friendly roadmap. Including trauma awareness and co-constructive reflexivity into research-methods curricula will help ensure that marketing insight remains humane and trustworthy, even in crisis settings.

## References

Baker, S. M., Gentry, J. W., & Rittenburg, T. L. (2005). Building understanding of the domain of consumer vulnerability. Journal of Macromarketing, 25(2), 128–139. https://doi.org/10.1177/0276146705280622

Baum, N. (2013). Professionals' double exposure in the shared traumatic reality of wartime: Contributions to professional growth and stress. British Journal of Social Work, 44(8), 2113–2134. https://doi.org/10.1093/bjsw/bct085

Belk, R. W. (Ed.). (2006). Handbook of Qualitative Research Methods in Marketing. Cheltenham: Edward Elgar.

Crosby, E., McKeage, K., Rittenburg, T. L., & Adkins, N. R. (2022). Amplifying marginalised consumers' voices: A case for trauma-informed qualitative methodologies. International Journal of Market Research, 65(2–3), 320–339. https://doi.org/10.1177/14707853221139576

Durrant, G. B., Groves, R. M., Staetsky, L., & Steele, F. (2010). Effects of interviewer attitudes and behaviors on refusal in household surveys. Public Opinion Quarterly, 74(1), 1–36. https://doi.org/10.1093/poq/nfp098

Farrell, J. R., Machin, J., Mirabito, A. M., Drenten, J., Chan-Park, C., Crosby, E., & Adkins, N. R. (2024). Mental illness and marketing: A 50-year scoping review and future research framework. Psychology and Marketing, 41(11), 2555–2573. https://doi.org/10.1002/mar.22070

Hill, R. P. (1995). Researching sensitive topics in marketing: The special case of vulnerable populations. Journal of Public Policy & Marketing, 14(1), 143–148. http://www.jstor.org/stable/30000386

Smith, E., Pooley, J.-A., Holmes, L., Gebbie, K., & Gershon, R. (2021). Vicarious trauma: Exploring the experiences of qualitative researchers who study traumatized populations. Disaster Medicine and Public Health Preparedness, 17, 1–6. https://doi.org/10.1017/dmp.2021.333

UNHCR. (2025). Ukraine Refugee Crisis: Aid, Statistics and News | USA for UNHCR. The UN Refugee Agency. https://www.unrefugees.org/emergencies/ukraine/

# Prompt Until It Hurts: Understanding Irrational Engagement with Generative AI

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## Abstract

This study explores the phenomenon of prompt perseverance, a form of persistent engagement in which users continue interacting with generative AI tools despite inefficiencies, diminishing returns, or recurring frustration. Drawing from 8,934 user-generated comments on Reddit and Facebook, the research adopts an inductive qualitative content analysis approach to investigate the emotional, behavioral, and psychological mechanisms underlying this emerging form of digital behavior. Findings reveal four core themes: (1) emotional bonding with the AI, (2) illusion of incremental mastery, (3) productive procrastination, and (4) algorithmic hope. Users anthropomorphize AI agents, develop affective attachments, and sustain interaction not merely for utility but for symbolic and emotional reasons. The study advances the concept of prompt perseverance as a ritualized and meaning-laden behavior, offering new insights into human–AI interaction that challenge traditional models of rational tool use and continuance. Theoretically, the paper contributes to experiential consumption, digital coping, and symbolic engagement literatures. Methodologically, it illustrates the value of user-generated trace data in capturing affective and irrational digital practices. Practically, the findings suggest that AI developers and marketers should account for emotional and symbolic user dynamics, which may drive engagement independently of functional performance. This work opens new avenues for understanding how individuals relate to emerging technologies and highlights the importance of psychological investment in shaping the long-term adoption and usage of AI platforms.

*Keywords: Prompt Perseverance, Generative AI, Consumer behaviour, Human–AI Interaction, Symbolic consumption, Qualitative Content Analysis.*

## 1. Introduction

Generative AI tools have become integral to the daily workflows of millions of users, supporting tasks from idea generation to content creation and problem solving (Zhao et al., 2023). Tools such as ChatGPT, Claude, and Grok offer sophisticated interaction experiences, prompting users to engage in extended prompting behavior across multiple iterations (Sun et al., 2024). Yet, despite growing concerns over efficiency and result quality, many users remain deeply engaged with these systems, even when outcomes are suboptimal. This raises a fundamental behavioral and psychological question: why do users persist in prompting AI systems even when it seems irrational to do so?

While existing studies have explored satisfaction, continuance intention, and perceived usefulness in digital tool usage (Venkatesh et al., 2003), less attention has been paid to emotionally charged and effort-intensive behaviors that emerge in generative AI contexts

(Kumar et al., 2021). This study seeks to address this gap by exploring the phenomenon of prompt perseverance, a behavioral pattern in which users persistently prompt generative AI tools despite low utility returns. Unlike traditional technology continuance, prompt perseverance appears to be driven by symbolic, emotional, and ritualistic dynamics that merit closer investigation.

The relevance of this inquiry extends beyond performance metrics, tapping into the experiential dimensions of digital consumption (Holbrook & Hirschman, 1982) and affective user–platform relations (Nass & Moon, 2000). Through the qualitative analysis of 8,934 user-generated comments on Reddit and Facebook, this study identifies four key mechanisms underlying prompt perseverance: Emotional Bonding, Illusion of Incremental Mastery, Productive Procrastination, and Algorithmic Hope. These mechanisms illuminate how consumers form para-social attachments, internalize AI skill development, and displace goal-oriented work through prolonged interaction.

By uncovering the deeper motivational and emotional underpinnings of AI engagement, this paper contributes to the growing literature on human–AI interaction, affective computing, and consumer behavior in digital environments. It also introduces prompt perseverance as a conceptually novel form of digitally mediated persistence, with implications for platform design, user psychology, and the symbolic consumption of intelligent tools.

## 2. Theoretical Background: Understanding Prompt Perseverance Beyond Rational Use

Digital engagement literature has long studied user continuance behavior, often through models such as the Technology Acceptance Model (Venkatesh & Davis, 2000), which emphasize rational appraisals like perceived usefulness and ease of use. However, recent scholarship increasingly recognizes the emotional, symbolic, and identity-based dimensions of technology use, especially in contexts involving AI (Holbrook & Hirschman, 1982; Nass & Moon, 2000). As users interact more extensively with generative AI, their engagement transcends efficiency-seeking to encompass emotional investment, ritualistic behavior, and exploratory persistence. In affective computing and human–AI interaction research, para-social relationships with intelligent agents have been documented, highlighting how anthropomorphized systems evoke social and emotional responses (Christodoulides et al., 2021). Similarly, behavioral economics literature offers insights through concepts like the illusion of control (Langer, 1975) and the sunk cost fallacy, explaining how individuals overestimate their agency and remain committed to inefficient systems due to prior investment. While some studies have explored prompt optimization strategies (Tafesse & Wood, 2024), few have unpacked the irrational perseverance that emerges during repeated prompting cycles. Our study contributes by synthesizing insights from consumer psychology, cognitive bias theory, and affective digital engagement to theorize prompt perseverance as a unique form of irrational commitment, embedded in emotional bonding, cognitive distortion, and symbolic gratification.

## 3. Methodology

This study adopts an exploratory qualitative approach to examine the emotional, behavioral, and psychological dimensions of persistent user engagement with generative AI tools (Snelson, 2016). The dataset consists of 8,934 user-generated comments collected manually from Reddit (5,478 comments) and Facebook (3,456 comments), where users discussed their experiences with tools like ChatGPT, Claude, and Grok. Threads and posts were selected based on relevance, interaction richness, and comment volume, allowing access to naturally occurring digital trace material (Graham & Stough, 2025).

Reddit offered detailed narratives and peer interactions, while Facebook contributed broader user perspectives. All data were anonymized and processed ethically, in line with internet research guidelines (Markham & Buchanan, 2015; Micu et al., 2017). No private content was accessed.

Following Schreier (2012) and Mayring (2021), we applied inductive qualitative content analysis. Initial open coding identified descriptive labels, which were then organized through axial coding into higher-order themes. This process surfaced recurring motivations and engagement patterns such as emotional bonding, cognitive biases, and future expectations. Two researchers independently coded the data; discrepancies were resolved with a third reviewer to ensure triangulation and reliability.

Saturation was reached when no new themes emerged. A coding log was maintained, and representative quotes were selected for each theme. This interpretive approach aligns with prior studies exploring symbolic and affective dimensions in user–platform interaction (Rossolatos, 2019; Christodoulides et al., 2021). The analysis led to the conceptualization of prompt perseverance, a behavioral pattern characterized by irrational persistence in AI prompting despite diminishing returns.

## 4. Findings

The analysis identified four core themes that explain prompt perseverance—users' persistent engagement with generative AI tools despite diminishing returns. These themes reflect deeper emotional, behavioral, and cognitive processes and are visually synthesized in Figure 1.

### 4.1 Emotional Bonding with the AI

Users often described ChatGPT using relational metaphors, attributing human-like traits such as loyalty or companionship. This para-social framing triggered emotions of guilt when switching models, e.g., "I feel like I'm about to betray my best friend." Such expressions echo emotional brand attachment (Thomson et al., 2005) and anthropomorphism literature (Nass & Moon, 2000; Arora et al., 2025), illustrating how affective ties reduce users' likelihood of abandoning the tool. This reinforces the experiential consumption logic (Holbrook & Hirschman, 1982), where symbolic meaning overrides instrumental performance.

### 4.2 Illusion of Incremental Mastery

Users frequently blamed themselves, not the AI, for poor results, believing that success required more skilled prompting: "I just haven't asked the right way yet." This reflects an illusion of control (Langer, 1975) and gamified learning logic, where near-success reinforces engagement. In line with Tafesse and Wood (2024), the act of refining prompts becomes a self-reinforcing behavior framed as skill development, supporting a mastery narrative that sustains prolonged use.

### 4.3 Productive Procrastination

Participants acknowledged excessive prompting even when it delayed task completion. Yet, they justified it as cognitively engaging: "At least I felt like I was doing something." This mirrors structured procrastination (Steel, 2007) and symbolic productivity (Holbrook & Hirschman, 1982), where user effort is emotionally validated even without functional gain. It also echoes cognitive offloading (Risko & Gilbert, 2016), although here, the tool prolongs rather than reduces cognitive labor.

### 4.4 Algorithmic Hope

Users expressed future-oriented optimism about the tool's evolution—"I know it'll catch up"—despite present dissatisfaction. This algorithmic hope reflects a form of technological optimism, where users maintain engagement based on expected improvements rather than current performance. Such optimism has been noted in innovation and adoption literature, where belief in progress drives continued use (Dwivedi et al., 2021). It also resonates with the sunk cost fallacy, where individuals persist with a tool due to the time and effort already invested (Arkes & Blumer, 1985).

Emotional loyalty and imagined future gains create a symbolic justification for ongoing engagement, independent of current effectiveness. This future-oriented logic aligns with prior work in consumer behavior, where anticipated utility and emotional commitment can outweigh functional dissatisfaction (Oliver, 1999; Holbrook & Hirschman, 1982). In this sense, prompt perseverance emerges not only as habitual use but as an affective and imaginative act, where users project improvement onto the tool and internalize hope as a reason to stay.

Figure 1 illustrates these interrelated dynamics. Rather than viewing prompt perseverance as purely rational or utilitarian, our model highlights its emotional, symbolic, and psychological underpinnings.

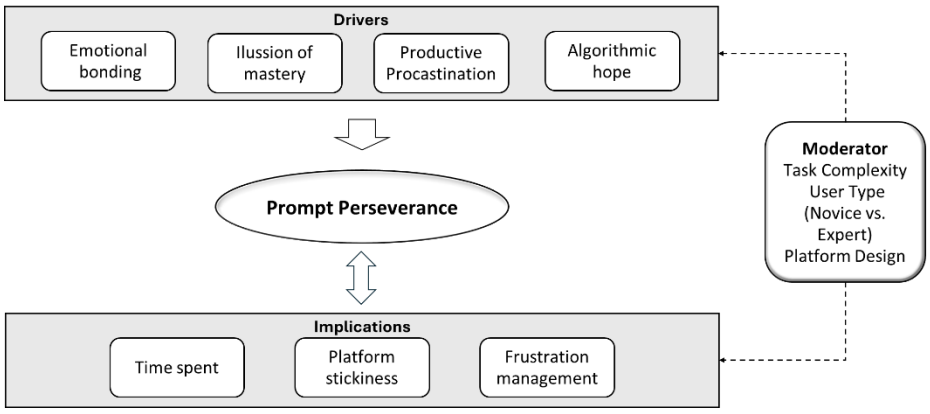



**Figure1:** Conceptual model of prompt perseverance (Source: our elaborations)

## 5. Discussion and Conclusion

This study conceptualizes prompt perseverance as a psychologically rich and affect-driven phenomenon emerging from users' sustained interaction with generative AI. By examining naturally occurring digital conversations, we reveal that persistent prompting behavior is not solely the result of task-oriented dissatisfaction or usability flaws. Instead, it is fueled by emotional bonding, perceived skill development, symbolic productivity, and future-oriented optimism.

Our findings challenge linear continuance models that equate satisfaction with use. Rather than discontinuing after inefficiency or error, users construct alternative narratives that reframe AI engagement as loyalty, mastery, or cognitive play. These behaviors echo consumer–brand relationships and ritualized consumption but are here directed at a non-human, dynamic system. Prompt perseverance thus represents a novel form of symbolic

interaction with technology, one that blends emotional commitment, behavioral inertia, and imagined utility.

Beyond theoretical contributions, these insights carry significant implications for the design and deployment of generative AI systems. Failing to consider the emotional and symbolic dimensions of user interaction may result in tools that frustrate, alienate, or exhaust users through prolonged and inefficient engagement loops. Our findings suggest that platform designers should not only optimize for accuracy and speed but also anticipate the affective journeys users undergo. Features such as emotionally intelligent feedback, guided prompting systems, or playful interruption mechanisms could help align user expectations with actual tool performance, supporting more sustainable and satisfying engagement. By responding to users' symbolic and emotional investments, AI platforms can cultivate trust and long-term loyalty, rather than reliance built on false mastery or sunk-cost dynamics.

From a marketing perspective, understanding prompt perseverance can help brands design emotionally resonant AI interfaces that foster deeper consumer engagement. Marketers integrating generative AI into service touchpoints (e.g., virtual assistants, co-creation tools) should consider how emotional attachment, gamified learning curves, and future-facing optimism shape continued interaction, loyalty, and user advocacy.

In sum, generative AI is not only a productivity tool but a relational and symbolic actor within users' cognitive and emotional lives. Our model offers a framework for understanding these emerging dynamics and invites future research on how digital persistence evolves in human–AI interaction.

## References


Arkes, H. R., & Blumer, C. (1985). The psychology of sunk cost. Organizational behavior and human decision processes, 35(1), 124-140.

Arora, N., Chakraborty, I., & Nishimura, Y. (2025). AI–Human Hybrids for Marketing Research: Leveraging Large Language Models (LLMs) as Collaborators. Journal of Marketing, 89(2), 43-70.

Azungah, T. (2018). Qualitative research: deductive and inductive approaches to data analysis. Qualitative research journal, 18(4), 383-400.

Christodoulides, G., Athwal, N., Boukis, A., & Semaan, R. W. (2021). New forms of luxury consumption in the sharing economy. Journal of Business Research, 137, 89-99.

Dwivedi, Y.K., N. Kshetri, L. Hughes, E.L. Slade, A. Jeyaraj, A.K. Kar, R. Wright, et al. 2023. "So what if ChatGPT wrote it?" Multidisci plinary perspectives on opportunities, challenges and implications of generative conversational AI for research, practice and policy. International Journal of Information Management 71: 102642.

Graham, C., & Stough, R. (2025). Consumer perceptions of AI chatbots on Twitter (X) and Reddit: an analysis of social media sentiment and interactive marketing strategies. Journal of Research in Interactive Marketing.

Holbrook, M. B., & Hirschman, E. C. (1982). The experiential aspects of consumption: Consumer fantasies, feelings, and fun. Journal of consumer research, 9(2), 132-140.

Kumar, V., Ramachandran, D., & Kumar, B. (2021). Influence of new-age technologies on marketing: A research agenda. Journal of Business Research, 125, 864-877.

Langer, E. J. (1975). The illusion of control. Journal of Personality and Social Psychology, 32(2), 311–328.

Locke, E. A. (2007). The case for inductive theory building. Journal of management, 33(6), 867-890.

Markham, A., & Buchanan, E. (2015). Ethical concerns in Internet research. The international encyclopedia of social and behavioral sciences, 606-613.

Mayring, Philipp. Qualitative Content Analysis: A Step-by-Step Guide. SAGE, 2021.

Micu, A., Micu, A. E., Geru, M., & Lixandroiu, R. C. (2017). Analyzing user sentiment in social media: Implications for online marketing strategy. Psychology & Marketing, 34(12), 1094-1100.

Mogaji, E., & Jain, V. (2024). How generative AI is (will) change consumer behaviour: Postulating the potential impact and implications for research, practice, and policy. Journal of consumer behaviour, 23(5), 2379-2389.

Nass, C., & Moon, Y. (2000). Machines and mindlessness: Social responses to computers. Journal of Social Issues, 56(1), 81–103.

Oliver, R. L. (1999). Whence consumer loyalty?. Journal of marketing, 63(4_suppl1), 33-44.

Rossolatos, G. (2019). Negative brand meaning co-creation in social media brand communities: A laddering approach using NVivo. Psychology & Marketing, 36(12), 1249-1266.

Schreier, M. (2012). Qualitative content analysis in practice.

Snelson, C. L. (2016). Qualitative and mixed methods social media research: A review of the literature. International Journal of Qualitative Methods, 15(1), 1609406915624574.

Steel, P. (2007). The nature of procrastination: A meta-analytic and theoretical review of quintessential self-regulatory failure. Psychological Bulletin, 133(1), 65–94.

Sun, D., Boudouaia, A., Yang, J., & Xu, J. (2024). Investigating students' programming behaviors, interaction qualities and perceptions through prompt-based learning in ChatGPT. Humanities and Social Sciences Communications, 11(1), 1-14.

Tafesse, W., & Wood, B. (2024). Hey ChatGPT: an examination of ChatGPT prompts in marketing. Journal of Marketing Analytics, 12(4), 790-805.

Thomson, M., MacInnis, D. J., & Park, C. W. (2005). The ties that bind: Measuring the strength of consumers' emotional attachments to brands. Journal of Consumer Psychology, 15(1), 77–91.

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. Management science, 46(2), 186-204.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. MIS quarterly, 425-478.

Yin, Q., & Sadowski, S. (2024). A tale of two platforms: A comparative analysis of language use in consumer complaints on Reddit and Spotify Community. Journal of Consumer Behaviour, 23(4), 2071-2086.

Zhao, W. X., Zhou, K., Li, J., Tang, T., Wang, X., Hou, Y., ... & Wen, J. R. (2023). A survey of large language models. arXiv preprint arXiv:2303.18223, 1(2).

# Consumers and Sustainable Fashion: A Systematic Literature Review (2020–2024)

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## Abstract

The fashion industry remains a major driver of environmental harm and social inequality. Since 2020, disruptions such as the Covid-19 pandemic, geopolitical tensions and emerging sustainability issues have significantly reshaped how consumers engage with fashion, fueling public debate, increasing industry focus and attracting academic interest in sustainable fashion consumption. However, research produced during this timespan is often fragmented, employing diverse methods and perspectives. This systematic literature review aims to synthesise studies published between 2020 and 2024 on consumer positions toward sustainable fashion. Key recent trends include the dominance of survey-based studies adopting quantitative approaches, a geographical focus on Asia and Europe and an increasing variety of adopted theoretical approaches. Moreover, main recent topics of interest emerge through content analysis, such as the importance of adequate communication, the role of digital channels, interest in sociodemographic trends and a deeper, evolving understanding of the attitude-behaviour gap. Overall, the study aims to offer timely guidance for future research and concrete targeted strategies for a more sustainable fashion system.

*Keywords: sustainable fashion, consumers, attitude-behaviour gap, systematic literature review, sustainable consumption, circular economy*

## 1. Introduction

The escalating climate crisis and increasing regulatory and societal pressures for sustainability have placed responsible sustainability practices at the forefront of global economic and political agendas. Among the industries most in need for a sustainable transition, the fashion industry stands out for its environmental and social impact, mainly driven by fast fashion practices (Brandão & da Costa, 2021;Niinimäki et al., 2020). In this context, consumers play a crucial role in driving sustainable practices in the fashion industry. Nevertheless, several studies report a persistent gap between pro-sustainability attitudes and actual behaviour, commonly referred to as the "attitude–behaviour gap" (Fani et al., 2023). In addition, the scenario has grown increasingly complex due to major global and industry-specific disruptions. Between 2020 and 2024, events such as the Covid-19 pandemic, rising sustainability concerns and key policy measures like the European Strategy for Sustainable and Circular Textiles (EC, 2022) have reshaped both industry agendas and consumer practices. These changes call for a renewed assessment of how consumers engage with sustainable fashion. This systematic literature review responds to that need by analysing 171 peer-reviewed studies published between 2020 and 2024 across management, economics and

related fields. The review maps the current state of research, highlighting dominant themes and literature trends. On these bases, the paper aims at offering a structured synthesis to support academic inquiry and inform effective sustainability strategies in the fashion sector.

## 2. Theoretical Background

Fashion ranks among the most polluting industries globally, contributing an estimated 1.2 billion tons of $CO_2$ emissions and experiencing a fourfold increase in consumption over two decades, mainly driven by fast fashion trends (EC, 2022; Niinimaki et al., 2020).

Despite its increasing popularity, the sustainable fashion concept remains elusive due to the proliferation of overlapping definitions and labels (Busalim et al., 2022). While no unique definition exists, sustainable fashion broadly refers to clothing that is produced, used and disposed of with minimal environmental and social harm. Moreover, the concept has been progressively expanding to encompass a wide range of processes and practices, including eco-friendly, ethical and circular business models such as donation, second-hand, rental up to recycling and upcycling (Schiaroli et al., 2024). Although market data show rising consumer interest, the global share of sustainable fashion remains relatively low, below 6% (Statista, 2025). This sheds light on the complexity of consumer behaviour, influenced by individual and contextual factors, making changes difficult to predict or generalise.

## 3. Methodology

This study employs a systematic literature review methodology to analyse recent academic work on sustainable fashion consumption, identify key research trends and synthesise consumer-focused insights (Tranfield et al., 2003).

Data sources included Scopus and Web of Science, chosen for their coverage of high-impact journals in business, management and economics. The query string can be seen in Table 1.

| |
|---|
| (("sustainable" OR "circular" OR "eco friendly" OR "slow" OR "eco-friendly" OR "green" OR "ethical" OR "organic" OR "reused" OR "secondhand" OR "second hand" OR "second-hand" OR "recycled") AND ("fashion" OR "garment" OR "cloth" OR "textile" OR "apparel" OR "T&A")) AND (("consumer" OR "customer" OR "buyer" OR "purchaser" OR "client") AND ("perception" OR "attitude" OR "opinion" OR "view" OR "belief" OR "preference" OR "perspective" OR "evaluation" OR "judgement" OR "assessment" OR "intention" OR "behaviour" OR "purchase intention" OR "purchase behaviour")) |

**Table 1:** Search string and screening criteria

The inclusion and exclusion criteria for the literature review were designed to ensure both relevance and academic quality. To be included, studies had to be published in the years from 2020 to 2024 (included) and focus specifically on sustainable fashion, with all its synonymous terms, while also addressing consumer-related constructs such as attitudes, perceptions, intentions or behaviours. Only peer-reviewed journal articles were considered, while non-peer-reviewed content was excluded. Furthermore, only articles written in English were included. Additionally, to ensure thematic alignment with the fields of interest, eligible studies needed to be indexed under Business, Management, Accounting, Economics, Econometrics or Finance. Finally, all included studies had to be published in journals listed in the ABS Academic Journal Guide, regardless of the ranking level.

## 4. Results

The screening process followed PRISMA guidelines (Page et al., 2021), moving from 1,072 studies initially retrieved to 772 abstracts screened. After reviewing 250 articles full-text, 167 were then included in the final article sample. These were systematically coded for bibliometric data, research methods, theoretical approaches, consumer-related variables and key findings. These studies explored a range of consumer practices, including second-hand purchasing, fashion rental, slow fashion engagement and broader sustainable practices across the fashion value chain. First of all, a clear upward trend in scholarly attention was observed over the review period. Starting with 22 publications in 2020, the selected academic output reaches its apex in 2024 with 45 studies.

From a theoretical standpoint, the Theory of Planned Behaviour emerged as the most frequently used framework (30 articles), followed by the Theory of Reasoned Action (11 articles). While we attest an increasing theoretical diversification with respect to previous reviews, 40 studies either lacked a clear theoretical foundation or only loosely referenced existing theories. In terms of methodology, the vast majority (137 studies) relied on quantitative approaches. Only a small number employed mixed methods (8 studies) or experimental designs (3 articles). Geographically, empirical research was most commonly conducted in India (30 studies), followed by the United States (24), with China and Italy each contributing 10 studies. Regarding publication venues, the most frequent outlets were the Journal of Fashion Marketing and Management (30 articles), Journal of Retailing and Consumer Services (15), Journal of Cleaner Production and Journal of Global Fashion Marketing (13 articles each). Moreover, a preliminary qualitative content analysis of the final sample of articles lets some recent topics worth of attention to emerge.

First, the persistence-although with refined understanding- of the attitude–behaviour gap, which remains a major challenge (Brandão & da Costa, 2021; Cairns, 2022). This misalignment is increasingly understood as a product of complex psychological, contextual and social factors. Scholars highlight values and environmental awareness alone are insufficient motivators unless supported by enabling conditions, e.g. social acceptance, product availability and emotional alignment. Studies are thus moving toward more flexible and context-sensitive behavioural models.

Second, sociodemographic variables—particularly age and gender—continue to attract researchers' interest (Cairns et al., 2022; Tewari et al., 2022). Many studies focus on younger generations or female categories, who are often seen as the most promising demographic for advancing sustainable fashion. Yet, their behaviour frequently reflects ambivalence: while ideologically aligned with sustainability, they often struggle with inconsistent actions, driven by emotional tensions and fashion-related concerns (Fani et al., 2023). However, practical concerns—such as hygiene and aesthetics—can still override sustainable intentions, suggesting the need for nuanced, segment-specific strategies.

Third, marketing communication and media are increasingly influential in shaping perceptions and behaviours (Grappi et al., 2024; Tewari et al., 2022). Digital platforms serve as powerful tools for promoting sustainability narratives, especially when messages are engaging, compelling and conveyed by credible communicators. However, potential consumer scepticism highlights the importance of communication authenticity and consistency. This shows choices of tone, platform and framing are as the message content.

Fourth, technological innovation is emerging as a key enabler of sustainable fashion consumption. Tools such as blockchain, digital product passports and virtual try-ons support transparency, traceability and consumer empowerment (Lou & Xu, 2024; Won et al., 2024). Additionally, platform-based models like peer-to-peer marketplaces and rental services are

gaining popularity, especially among younger, digitally native consumers. However, access and adoption can vary significantly across demographics due to differing levels of digital literacy, trust and platform usability.

## 5. Discussion and Conclusion

Collectively, these findings reflect a dynamically evolving field in which consumer engagement with sustainable fashion is shaped by a complex mix of psychological and social factors and technological tools. Theoretically, the study refines understanding of the attitude–behaviour gap, highlighting its complexity beyond limited awareness or external barriers. Recent studies show that emotional, cognitive, symbolic, and contextual factors interact in shaping inconsistent consumer actions, calling for more nuanced, multidimensional behavioural models that account for identity and affective influences (Brandão & da Costa, 2021; Fani et al., 2023). Second, the review identifies emerging theoretical gaps and underexplored areas in the literature, including constructs like emotional gratification, platform trust and perceived uniqueness. While academic interest is growing, the field still needs stronger conceptual clarity and theoretical depth to advance beyond practical insights and better reflect evolving consumption behaviours.

Practically, the findings offer valuable direction for fashion industry professionals. First, addressing the attitude–behaviour gap requires more than informational campaigns. Consumers need emotional, social and stylistic reinforcements that align sustainability with their personal identity. Third, the rising importance of digital and platform-based models—such as second-hand marketplaces and rental services—underscores the potential of alternative business models. These are especially relevant for younger, digitally native consumers, but their success depends on usability, trust and community engagement (Tewari et al., 2022). Companies should invest in trustworthy, accessible, and engaging digital experiences to encourage sustainable practices (Grappi et al., 2024).

In conclusion, this review synthesises recent academic work on sustainable fashion and suggests that, while sustainability is becoming more prominent, it is rarely sufficient on its own to drive substantial consumer engagement. Weaknesses of the study include potential selection bias, limited timespan of analysis and selection limitations.

Future research should explore longitudinal and cross-cultural dynamics, evaluate emerging digital tools like AI and blockchain, and test the proposed typology in real-world contexts. Mixed-methods and interdisciplinary approaches will be key to capturing the full complexity of sustainable fashion consumption in a fast-changing industry landscape.

## Conflicts of interest

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## References

Brandão, A., & da Costa A.G. (2021). Extending the theory of planned behaviour to understand the effects of barriers towards sustainable fashion consumption. European Business Review, 33(5), 742–774.

Busalim, A., Fox, G., & Lynn, T. (2022). Consumer Behavior in Sustainable Fashion: A Systematic Literature Review and Future Research Agenda. International Journal of Consumer Studies, 46(5), 1804–1828.

Cairns, H.M., Ritch, E.L, & Bereziat, C. (2022). Think eco, be eco? The tension between attitudes and behaviours of millennial fashion consumers. International Journal of Consumer Studies, 46(4), 1262-1277.

European Commission. 2022. "EU Strategy for Sustainable and Circular Textiles (COM(2022) 141 final)." Press release. 2022. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52022DC0141.

Fani, V., Mazzoli, V., & Acuti, D. (2022). 'I wanna be sustainable, but I don't wanna show it!': The effect of sustainability cues on young adult consumers' preferences. Business Strategy and the Environment, 32(6), 3344–3358.

Grappi, S., Bergianti, F., Gabrielli, V., & Baghi, I. (2024). The effect of message framing on young adult consumers' sustainable fashion consumption: The role of anticipated emotions and perceived ethicality. Journal of Business Research, 170, 114341.

Lou, X., & Xu, Y. (2024). Consumption of sustainable denim products: the contribution of blockchain certified Eco-Labels. Journal of Theoretical and Applied Electronic Commerce Research, 19(1), 396-411.

Niinimäki, K., Peters, G., Dahlbo, H., Perry, P., Rissanen, T., & Gwilt, A. (2020). The environmental price of fast fashion. Nature Reviews. Earth & Environment, 1(4), 189–200.

Page, MJ., McKenzie, JE., Bossuyt, P. M., Boutron, I., Hoffmann, T.C., Mulrow, C.D., et al. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. BMJ, 372(71).

Schiaroli, V., Dangelico, RM., & Fraccascia, L. (2024). Mapping sustainable options in the fashion industry: A systematic literature review and a future research agenda. Sustainable Development, 33(1), 431-464.

Tewari, A., Mathur, S., Srivastava, S., & Gangwar, D. (2022). Examining the role of receptivity to green communication, altruism and openness to change on young consumers' intention to purchase green apparel: A multi-analytical approach. Journal of Retail and Consumer Services, 66, 102938.

Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing Evidence-Informed management knowledge by means of systematic review. British Journal of Management, 14(3), 207–222.

Won, Y., Jung, H.J., & Lee, Y. (2024). Online VR store as a sustainable fashion retail space. International Journal of Retail & Distribution Management, 52(13), 31-46.

# AI Adoption in Later Life: A Systematic Literature Review Through the Lens of Life Course Theory

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## Abstract

As the global population ages, understanding how older adults engage with Artificial Intelligence (AI) becomes increasingly critical. This study investigates the adoption of AI among Digital Seniors—older individuals who actively use digital technologies—through the lens of Life Course Theory (LCT). Using a systematic literature review following PRISMA 2020 guidelines, 205 peer-reviewed articles from 2016 to 2025 were analyzed to explore how biographical trajectories, social relationships, cultural context, and key life transitions influence AI adoption. Findings reveal that the decision to adopt AI is shaped not only by technical features but by a complex interplay of past experiences, social support, self-efficacy, and timing within the life course. The four pillars of LCT—Location in Time and Place, Linked Lives, Human Agency, and Timing of Lives—offer a theory-informed framework to interpret these dynamics. This study contributes to the growing literature on aging and digital inclusion, offering insights for designing more inclusive and age-responsive AI systems.

*Keywords: Digital seniors, Elderly Consumers, Artificial Intelligence, Life Course Theory.*

## 1. Introduction

Population aging is reshaping global societies, with over 2.1 billion individuals expected to be over 60 by 2050 (UN DESA, 2024). Older adults now play a growing economic and digital role, accelerated by the COVID-19 pandemic, which boosted their tech engagement while also exposing internal digital divides (Katey & Chivers, 2025).

The emergence of Digital Seniors—older individuals who actively and confidently use technology—reflects this shift (Quan-Haase & Wellman, 2016). Their digital practices span social interaction, telehealth, finance, and learning, often supported by intergenerational ties (Lei et al., 2024). These seniors are not merely adapting to technology but reshaping its use, challenging ageist assumptions and promoting digital inclusion (Ren et al., 2025).

However, despite the rise of Artificial Intelligence (AI) in everyday services, there is limited understanding of how seniors perceive and adopt these tools (Pejić Bach et al., 2023). To bridge this gap, we adopt Life Course Theory (Giele & Elder, 1998), which interprets aging

through social roles, agency, and timing, offering a nuanced lens to explore seniors' engagement with AI.

## 2. Theoretical background and research question

### 2.1 Elderly consumers and Digital seniors

Today's elderly aldults form a dynamic consumer segment, often viewing retirement as a phase of renewal and active engagement (Guido, 2014; Schau et al., 2009). Many embrace digital tools that are perceived as useful and empowering, integrating them into everyday life (Chen & Chan, 2013). Digital Seniors use technology not only for basic tasks, but also for learning, socializing, and managing health, often with support from younger relatives (Lei et al., 2024; Quan-Haase & Wellman, 2016).

Yet adoption remains uneven: while some adapt with confidence, others encounter psychological or usability barriers, especially with more complex AI applications (Charness & Boot, 2016). Designing inclusive technologies requires attention to both functional and emotional dimensions of aging.

### 2.2 Life Course Theory (LCT)

Life Course Theory (Giele & Elder, 1998) provides a nuanced perspective for understanding how older adults adopt emerging technologies. Rather than viewing adoption as a matter of access or skill, LCT emphasizes how personal histories, social interactions, and cultural contexts shape technological behaviors across time.

The first dimension, Location in Time and Place, refers to the historical, institutional, and cultural environments that influence digital orientation. Older adults' technology use often reflects accumulated experiences with education, work, and innovation systems (Elder, 2018; Liu et al., 2025).

The second dimension, Linked Lives, captures how relationships—especially intergenerational ones—shape digital behavior. Family members often act as intermediaries, helping seniors navigate AI systems and reinforcing digital confidence (Chu et al., 2022).

Human Agency highlights the importance of perceived autonomy and goal-directedness. Seniors are more inclined to adopt AI when it aligns with their personal values and when they feel competent and in control (Bandura, 2018; Chen & Chan, 2013).

Finally, Timing of Lives stresses that adoption varies depending on when in the life course the technology is introduced. Key transitions such as retirement or caregiving often act as catalysts, reshaping technology's meaning and relevance (Moschis, 2019).

### 2.3 Research question development

Guided by Life Course Theory, this study explores how older adults' interactions with AI technologies are shaped by biographical context, social relationships, self-perception, and transitional life events. These dynamics influence not only access, but also how technology is evaluated, trusted, and integrated. This conceptual framing leads to the following research question:

RQ. How do life course dynamics influence the decision of older adults to adopt or resist AI technologies?

## 3. Methodology

This study conducted a systematic literature review following PRISMA 2020 guidelines (Page et al., 2021), aiming to explore how Life Course Theory (LCT) helps interpret AI adoption among Digital Seniors. As shown in Figure 1, the review process ensured methodological rigor and transparency.

The search was carried out in the Scopus database, focusing on peer-reviewed literature in business, social sciences, and technology. Articles published in English between January 2016 and March 2025 were considered. The query combined three conceptual domains—older adults, consumer behavior, and artificial intelligence—using the expression: TITLE-ABS-KEY (senior) AND TITLE-ABS-KEY (consumer) AND TITLE-ABS-KEY (Artificial Intelligence), with filters applied to subject areas (Business, Management, Social Sciences, Economics) and language of English.

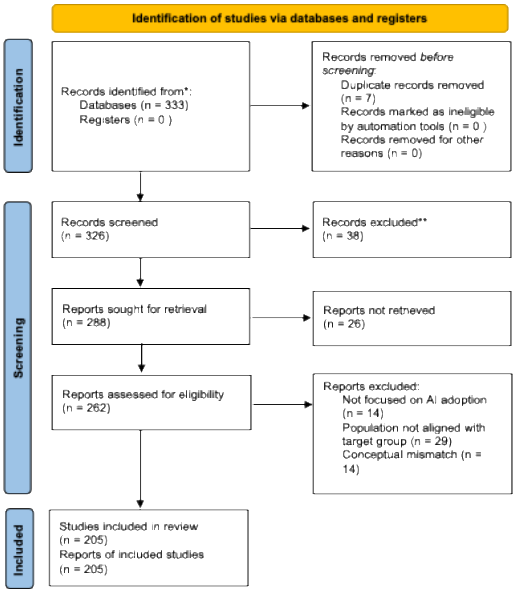



**Figure 1**: PRISMA flow diagram

From the 333 records retrieved, 205 studies were ultimately included after removing duplicates and applying eligibility criteria. Selected works addressed individuals aged 60 or more, focused on AI-related topics (adoption, use, or perception), and were published in peer-reviewed journals. Both conceptual and empirical contributions were retained; grey literature and unrelated studies were excluded. For each article, relevant information—authors, methods, theoretical frameworks, and findings—was extracted. The analysis was then structured around the four core dimensions of LCT—Location in Time and Place, Linked Lives, Human Agency, and Timing of Lives—providing a theory-driven interpretation of seniors' engagement with AI.

## 4. Results and discussions

The findings reveal that the adoption of AI by Digital Seniors stems from a constellation of life-based, social, and motivational factors—rather than merely from technical design or digital skills. Life Course Theory offers a structured lens through which to interpret these dynamics.

Location in Time and Place shapes attitudes through seniors' long-term exposure to education, media, institutions, and cultural expectations. These backgrounds help explain varying levels of curiosity, skepticism, or trust in AI technologies (Liu et al., 2025; Zhang & He, 2022).

Linked Lives highlights the relational dimension of digital engagement. Seniors rarely adopt AI independently; children and grandchildren often introduce and support usage, providing both technical help and emotional reassurance (Chu et al., 2022).

Human Agency plays a central role in determining how AI is perceived. When AI systems are seen as intuitive, aligned with goals, and respectful of user autonomy, engagement tends to increase. However, emotional barriers—such as privacy concerns and fear of dependency—remain significant (Ma & Xing, 2024; Mzawak et al., 2024).

Timing of Lives underscores how life events act as triggers or inhibitors of adoption. Retirement, caregiving duties, or the onset of health issues may increase the perceived usefulness of AI, as shown during the COVID-19 pandemic. Still, factors such as affordability and emotional readiness shape the actual uptake (Moschis, 2019).

In conclusion, Digital Seniors' relationship with AI is multidimensional and contingent on life-stage realities, social ecosystems, and self-determined values. Designing AI systems that respect these nuances is essential for fostering digital inclusion in later life.

## References


Bandura, A. (2018). Toward a psychology of human agency: Pathways and reflections. Perspectives on psychological science, 13(2), 130-136.

Charness, N., & Boot, W. R. (2016). Technology, gaming, and social networking. In Handbook of the Psychology of Aging (pp. 389-407). Academic Press.

Chen, K., & Chan, A. H. S. (2013). Use or non-use of gerontechnology—A qualitative study. International journal of environmental research and public health, 10(10), 4645-4666.

Chu, C. H., Nyrup, R., Leslie, K., Shi, J., Bianchi, A., Lyn, A., ... & Grenier, A. (2022). Digital ageism: challenges and opportunities in artificial intelligence for older adults. The Gerontologist, 62(7), 947-955.

Elder, G. H. (2018). Children of the great depression. Routledge

Giele Z. & Elder Jr. G. H. (1998). Methods of life course research: Qualitative and quantitative approaches. SAGE Publications, Thousand Oaks, USA.

Guido G. (2014). Il comportamento di consumo degli anziani: Effetti per le strategie di marketing delle imprese. Il Mulino, Bologna.

Katey, D., & Chivers, S. (2025). Navigating the Digital Divide: Exploring the Drivers, Drawbacks, and Prospects of Social Interaction Technologies' Adoption and Usage Among Older Adults During COVID-19. Journal of Aging Research, 2025(1), 7625097.

Lei, X., Matovic, D., Leung, W. Y., Viju, A., & Wuthrich, V. M. (2024). The relationship between social media use and psychosocial outcomes in older adults: a systematic review. International psychogeriatrics, 36(9), 714-746.

Liu, J., Wang, X., & Zhang, J. (2025). Investigating Elderly Individuals' Acceptance of Artificial Intelligence (AI)-Powered Companion Robots: The Influence of Individual Characteristics. Behavioral Sciences, 15(5), 697.

Ma, Y., & Xing, T. (2024). Encourage sustainable consumption among the elderly through generativity. Journal of Retailing and Consumer Services, 81, 104053.

Moschis, G. P. (2019). Consumer behavior over the life course: Research frontiers and new directions. Springer.

Mzawak, M. A., Younes, R. S., & Moukarzel, C. (2024). The importance of promoting self-actualization among older adults: Key determinants of mental health and clinical implications. NPG Neurologie-Psychiatrie-Gériatrie.

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., ... & Moher, D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. bmj, 372.

Pejić Bach, M., Ivančić, L., Bosilj Vukšić, V., Stjepić, A. M., & Milanović Glavan, L. (2023). Internet usage among senior citizens: self-efficacy and social influence are more important than social support. Journal of theoretical and applied electronic commerce research, 18(3), 1463-1483.

Quan-Haase, K. M. & Kathleen S. (2016). Interviews with digital seniors: ICT use in the context of everyday life. Information, Communication & Society, 19(5), 691–707.

Ren, Y., Yang, L., Wang, W., Lv, R., Fang, X., Wang, Y., & Zhong, J. (2025). Preferences of community-dwelling older adults with multimorbidity for digital empowerment interventions: Protocol for a discrete choice experiment study. Digital Health, 11.

Schau, H. J., Gilly, M. C., & Wolfinbarger, M. (2009). Consumer identity renaissance: the resurgence of identity–inspired consumption in retirement. Journal of Consumer Research, 36(2), 255–276.

United Nations Department of Economic and Social Affairs. (2024). World Population Prospects 2024: Summary of Results.

Zhang, H., & He, R. (2022). A study on digital inclusion of Chinese rural older adults from a life course perspective. Frontiers in Public Health, 10, 974998.

# Who Made This? The Effect of Generation Source (AI vs. Human) on Consumer Attitudes Toward Artistic Products

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## Abstract

As Generative AI becomes increasingly prevalent in creative domains, understanding how consumers evaluate AI-generated content is essential. This research investigates consumer responses to artistic products created by AI versus human artists, a relatively unexplored area in consumer behavior. Drawing on creativity theory, we propose that AI-generated art is perceived as less original and innovative, leading to less favorable consumer attitudes. However, this negative effect is mitigated when AI is used to enhance, rather than replace, human creativity. Additionally, we explore whether consumer responses differ between artistic and scientific domains. Across four experimental studies, our findings support the proposed framework and highlight the importance of generation source in shaping consumer evaluations. This research contributes to the growing literature on AI in consumer behavior and provides insights for firms seeking to integrate generative AI into marketing processes. Keywords: Consumer behavior; Generative AI; creativity; artistic products.

### 1. Introduction

Over the past two decades, Artificial Intelligence (AI) has emerged as a powerful technological tool, strongly transforming marketing processes (Davenport et al., 2020; Huang and Rust, 2021) and significantly reshaping consumer behavior (Puntoni et al., 2020; Jain et al., 2023). As a result, it has become essential for consumer researchers to comprehend how consumers react to various AI applications in marketing such as chatbots (e.g., Pizzi et al., 2021), voice assistants (e.g., Vernuccio et al., 2023), and AIbased recommendations (e.g., Longoni and Cian, 2022).

More recently, advances in AI have led to the rise of Generative AI (Hermann and Puntoni, 2024), which is capable of generating content, such as text, images, audio, videos, code, and synthetic data, across various marketing domains, including AIgenerated ads (e.g., Chen et al., 2024) and new product designs (e.g., Moreau et al., 2023). Previous research aimed to compare consumer responses to AI-generated (vs. human-generated) content, identifying conditions under which AI outperforms humans and proposing underlying mechanisms to explain these effects (e.g., Zhang et al., 2022; Cascio Rizzo and Ziano, 2024; Kirk and Givi, 2025).

Entering into the ongoing debate about the role of AI in the artistic domain (e.g., Chatterjee, 2022), this paper examines how consumers evaluate artistic products generated by AI compared to those created by human artists, a research area that remains relatively unexplored. Drawing on creativity theory (Harvey and Berry, 2023), we propose that artistic products generated by AI (vs. human artist) receive less favorable consumer evaluations because they are perceived as less original and innovative. However, this negative effect diminishes when AI is used to enhance, rather than replace, the human artist's work, leading consumers to value the artistic product similarly to one created by humans only. Finally, we compare the effects of product generation source (AI vs. human) on consumer attitudes towards artistic and scientific products to offer preliminary insights into potential differences across these two domains. The results of four experimental studies provide support for our conceptualization and offer implications for both theory and practice.

## 2. Conceptual Framework

The growing presence of AI in the arts has sparked a critical debate about its capacity to produce works that may elicit consumer appreciation (e.g., Chatterjee, 2022; Zhou and Lee, 2024). As AI increasingly enters creative domains, scholars have begun exploring how people perceive AI-generated artworks in fields such as psychology of aesthetics (e.g. Chamberlain et al., 2018), applied computing (e.g., Hong et al., 2019; Mikalonytė and Kneer, 2022) and cultural studies (e.g., Neef et al., 2024). However, consumer research offers limited insights about how consumers react to AI-generated rather than human-created artistic products (e.g., Wang et al., 2023).

This paper aims to examine how the source of product generation (hereafter: generation source) influences consumer attitudes towards artistic products. We predict that, in the art domain, consumers will evaluate an artistic product more negatively when it is generated by an AI system rather than by a human artist. This effect is driven by perceived creativity, that is the extent to which the outcome of the creative effort is perceived as novel compared to prior solutions (Runco and Jaeger, 2012; Ameen et al., 2021; De Freitas et al. 2025). Indeed, the arts, including visual, literary, musical, and performing, are "imaginative, creative, and nonscientific branches of knowledge considered collectively, esp. as studied academically," and express beauty and emotion (Bullot and Reber, 2013). Consequently, it is likely that consumers tend to evaluate artistic products based on the perceived level of creativity. Previous research has shown that often consumers associate AI algorithms' work as leading to less creative artworks compared to human artists' work as most individuals consider artistic creativity an almost exclusively human characteristic (Millet et al., 2023; Seli et al., 2025). Accordingly, we argue that AI (vs. human) generation source negatively affects perceived creativity of the artistic products, which in turn reduces consumer attitudes. Formally:

H1: Artistic products generated by AI (vs. human) lead to less favorable consumer attitudes.

H2: The effect of the generation source (AI vs. human) on consumer attitudes towards artistic products is mediated by perceived creativity.

Building upon prior research on human–AI collaboration (e.g., Huang and Rust, 2022), we also examine the role of Generative AI as a tool for either enhancing or replacing human creativity in the art domain (Hermann and Puntoni, 2025). Human enhancement refers to the use of AI systems to augment or improve human capabilities by supporting users and making tasks more insightful. In contrast, human replacement involves using AI to emulate human abilities and perform tasks autonomously. We argue that when AI is used to enhance, rather than replace, the human artist's work, consumers perceive the resulting artistic products as more creative and innovative, leading to more favorable evaluations. Formally:

H3: The use of AI as enhancement (vs. replacement) of the human artist leads to more favorable consumer attitudes toward artistic products.

## 3. Empirical Evidence

### Study 1

*Method.* We recruited 120 participants via Prolific Academic (Mage = 35.70, female = 63%). Participants were informed that they would evaluate a painting and were randomly assigned to one of two experimental conditions, differing in the generation source of the artwork. In the AI condition, the painting was attributed to AI, while in the human artist condition, the painting was attributed to a person.

*Measures.* After viewing the artwork, participants evaluated their attitude towards the painting using five 7-point semantic differential items (e.g., dislike very much – like very much). Perceived creativity was assessed with three 7-point Likert items: "I find this artwork original," "creative," and "an innovative idea". Since reliabilities of both scales were high ($\alpha > .92$), we calculated their mean scores. As a manipulation check, participants were asked whether they believed the artwork was created by a human artist or an AI application (1 = Definitely human, 7 = Definitely AI).

*Results.* After verifying that the manipulation was successful, a t-test on attitude score showed that participants in the AI condition liked the painting significantly less than those in the human condition ($M_{AI} = 4.28$, $M_{HUMAN} = 5.14$, $t(118) = -3.14$, $p = .002$), supporting H1. Mediation analyses showed that generation source (0 = human, 1 = AI) had a significant negative effect on perceived creativity ($b = -.84$, $p = .003$) In turn, perceived creativity ($b = .72$, $p < .001$) positively predicted attitude. When controlling for perceived creativity, the direct effect of generation source on attitude was no longer significant ($b = -.26$, $p = .18$). The indirect effect generation source  perceived creativity  attitude was significant and negative (IE = -.60, 95% Bootstrap CI [-1.02, -.20]), supporting H2.

### Study 2a

*Method.* We recruited 121 participants via Prolific Academic (Mage = 38.82, female = 50%). Participants were randomly assigned to one of two experimental conditions that differed in the described role of AI in the creation of the artwork. In the enhancement condition, the painting was attributed to a human artist supported by AI, while in the replacement condition, the painting was attributed entirely to AI. Attitude and perceived creativity ($\alpha > .93$) were measured as in Study 1. The manipulation check measured whether participants believed the artwork was generated by: 1 = an AI application vs. 7 = a human artist with the help of an AI application).

*Results.* After verifying that the manipulation was successful, a t-test on attitude showed that participants in the enhancement condition liked the painting significantly more than those in the replacement condition ($M_{enh} = 5.02$, $M_{rep} = 4.24$, $t(119) = 2.50$, $p = .014$), supporting H3. Mediation analysis revealed that AI role (0 = replacement, 1 = enhancement) had a significant positive effect on perceived creativity ($b = .81$, $p = .012$), and that perceived creativity predicted attitude ($b = .82$, $p < .001$). When controlling for perceived creativity, the direct effect of AI role on attitude was no longer significant ($b = .12$, $p = .522$). The indirect effect of AI role on attitude via perceived creativity was significant and positive (IE = .67, 95% Bootstrap CI [.15, 1.20]).

## Study 2b

*Method.* Study 2b extended the previous design by introducing a third experimental condition to simultaneously compare different roles of AI with a baseline human artist condition. Participants were randomly assigned to one of three conditions: human-only, AI as enhancement, or AI as replacement. The procedure, stimuli, and attitude and perceived creativity measures ($\alpha > .94$) were identical to those used in the previous studies. A total of 181 participants were recruited via Prolific Academic (Mage = 42.68; 51% female).

*Results.* After verifying that the manipulation was successful, a one-way ANOVA revealed a significant effect of generation source on attitude toward the artwork (Mhumanonly = 4.85, Menh = 4.65, Mrep = 4.06, $F(2, 178) = 4.06$, $p = .019$). Planned comparisons showed that participants in the human-only condition evaluated the artwork more favorably than those in the AI replacement condition ($p = .007$), but not significantly more than those in the AI enhancement condition ($p = .482$). Furthermore, the AI enhancement condition elicited significantly more favorable attitude than the AI replacement condition $p = .042$). Analyses of perceived creativity as mediator revealed a similar pattern. These findings replicate and extend the results of Study 2a, by demonstrating that the negative impact of AI-generated art on consumer evaluations is attenuated when AI is framed as a tool supporting rather than replacing the human artist.

## Study 3

The goal of Study 3 was two-fold. First, we wanted to examine whether the effect of the generation source (human vs. AI) on consumer attitudes varies depending on the domain of application, art versus science. Previous research has begun to highlight the importance of domain-specific expectations in shaping consumer responses to AI (Longoni et al., 2019). Scientific products are the outcomes of logical or analytic work methods (Weisberg, 2006), thus it is likely that consumers evaluate them in terms of utilitarian value and adherence to structured knowledge schemes (Simonton, 2003). Because characteristics such as usability, efficiency and accuracy align closely with the perceived strengths of AI (Puntoni et al., 2020), consumers are more likely to appreciate AI in analytical or scientific tasks than in artistic or more creative ones. Therefore, one might expect that, differently from artistic products, scientific ones generated by AI (vs. human scientist) lead to more favorable consumer attitudes. Second, to move beyond the context used in the previous studies, participants were asked to evaluate a lamp instead of a painting.

*Method.* The study followed a 2 (Generation Source: human vs. AI) × 2 (Context: art vs. science) between-subjects design. A total of 232 undergraduate students (Mage = 21.2; 73% female) participated in exchange for partial course credit. Depending on the assigned condition, participants were told that the lamp was designed either by a human or by an AI system, and that it was either an artistic or a scientific product. After viewing the stimulus, they reported their attitude toward the product ($\alpha = .92$) using the measures used in previous studies.

*Results.* After verifying that the manipulations were successful, a two-way ANOVA revealed that the main effect of generation source was not significant ($F(1,228) = .36$, $p = .548$), while the main effect of context was significant ($F(1,228) = 9.18$, $p = .003$). More importantly, the interaction between generation source and domain was significant ($F(1,228) = 10.72$, $p = .001$). Planned comparisons showed that in the art condition, attitudes were significantly more positive towards the human-generated lamp compared to the AI-generated one (MHUMAN = 5.81 MAI = 5.29, $p = .007$), while in the science condition, participants showed more favourable attitudes toward a lamp described as AI-generated (MAI = 6.14, MHUMAN = 5.78, $p = .059$). Together, these results indicate that human authorship

remains more favorable in the artistic domain, while in the scientific context AI-generation can be even positively evaluated.

## 4. General Discussion

This research advances the literature on consumer perceptions and responses to AI (e.g., Jain et al., 2023) by comparing the effects of AI vs. human generation sources for artistic products. Moreover, we examine the role of AI as human enhancement vs. human replacement in art (Hermann and Puntoni, 2025), furthering the understanding of the influence of AI in marketing contexts. Finally, we provided preliminary evidence on the relevance of domain-specific factors in determining consumer responses to AI. Our investigation also contributes to the evolving debate on generative AI, human creativity, and art (e.g., Zhou and Lee, 2024). While consumers are increasingly exposed to AI-generated artistic products, skepticism remains around their creativity. We showed that consumers are more favorable toward AI-generated art when they know that it was used to enhance the artist's work, in a similar vein as human-only.

From a managerial perspective, our research demonstrates that using AI in art generation can prevent consumers appreciation of artistic products. However, framing AI as a collaborator rather than a replacement may favor consumer acceptance of AI in the market of artistic products. Finally, firms may benefit from aligning the source of creation (AI vs. human) with their product positioning: using AI for science-based products and human creators for art-based ones.

This study has limitations that future research could address. First, additional research could extend the generalizability of our findings by using real-scraped data on platforms like Ted Talks that feature art/science and AI/Human tags. Second, future studies might investigate individual factors that could moderate the investigated effects, such as personality traits and dispositions. Finally, further research is needed to deepen our understanding of AI versus human generation in scientific domains, particularly by identifying the mechanisms driving the perceived superiority of AI in driving the evaluations of scientific products.

## Key References (Full list of references available from the first author)

Chatterjee, A. (2022). Art in an age of artificial intelligence. Frontiers in Psychology, 13, 1024449.

Harvey, S., & Berry, J. W. (2023). Toward a meta-theory of creativity forms: How novelty and usefulness shape creativity. Academy of Management Review, 48(3), 504-529.

Hermann, E., & Puntoni, S. (2025). Generative AI in Marketing and Principles for Ethical Design and Deployment. Journal of Public Policy & Marketing, 07439156241309874.

Jain, V., Wadhwani, K., & Eastman, J. K. (2024). Artificial intelligence consumer behavior: A hybrid review and research agenda. Journal of Consumer Behaviour, 23(2), 676-697.

# Psychological Determinants of Bank Channel Choice: The Role of Trust, Risk and Technology Attitude in Cameroon

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## Abstract

This study analyses the impact of psychological variables – attitude towards technology, perceived risk and perceived trust – in relation to the consumer choice between online and offline banking channels in Cameroon. The Cameroonian context offers a valuable case for examining digital adoption in under-researched African markets characterized by socio-technological asymmetries. Starting from the existing literature three hypotheses are formulated about technology adoption models; these hypotheses are then tested through a quantitative survey conducted on a sample of bank customers. Results show that a positive attitude toward technology combined with a reliable levels of perceived trust actually affect the choice of banking channels; however, perceived risk does not appear to significantly influence the choice between physical and digital channels. In addition, the study contributes to the theoretical understanding of consumer behaviour in multichannel banking and provides interesting scenarios and fruitful managerial implications for developing inclusive and effective banking strategies in emerging countries.

*Keywords: banking multichannel, consumer behaviour, digital banking, technology attitude, perceived trust*

## 1. Introduction

In recent years, Cameroon's banking sector has undergone significant transformation. In particular, the emergence of new banks, local or international, has completely renewed traditional practices, implementing innovative strategies in response to increasing digitalization (Tsapi & Kaïssou, 2020). The evolution of digital technologies and the proliferation of multiple banking channels are increasingly influencing customer behaviour and ways in which banks interact with them in a multichannel environment. Internet-based e-banking has become a widely adopted alternative to traditional banking, offering 24/7 access to services and significantly enhancing customer convenience (Rahi et al., 2021).

While digitalization offers interesting opportunities for the implementation of banking services and financial inclusion, it also presents challenges, especially in contexts characterized by socio-technological disparities, such as Cameroon. In this scenario, understanding consumer behaviour and approach regarding the choice of banking channels – digital (e.g. mobile or online banking) or physical (e.g. branch or ATM) – becomes increasingly important. These decisions are not driven solely by access to infrastructure, but

are also influenced by psychological variables such as perceived trust, perceived risk and attitudes towards technology.

The Technology Acceptance Model (TAM) and the Theory of Planned Behaviour (TPB) have highlighted the importance of psychological variables in determining users' intentions and behaviours (Davis, 1989; Ajzen, 1991).

A recent bibliometric analysis further confirms this perspective, identifying perceived usefulness, security, and trust are the three psychological pillars most frequently associated with digital banking adoption in emerging markets (Acosta-Prado et al., 2024). However, the majority of empirical applications of these models have focused on developed countries, with a still limited focus on sub-Saharan African markets.

This study focuses on three key psychological variables: attitude towards technology, perceived risk and perceived trust to understand if any impact on the consumer choice between online and offline banking channels in Cameroon.

The research aims to fill a literature gap and provide practical guidance for improving service design and customer engagement.

Accordingly, the study addresses the following research question:

*Which psychological variable influence customer's choice of banking channels in a multi-channel context?*

To answer this question, the study use established models of technology adoption and a quantitative survey conducted on a sample of bank customers in Cameroon.

The results contribute to a better understanding of digital behaviours in emerging markets and offer managerial implications for the development of more inclusive, effective and customer-oriented banking strategies.

## 2. Psychological variables in the choice of banking channels

Consumers' subjective perception plays a central role in the choice between physical and digital banking channels. This section analyses the main psychological variables examined in this study – attitude toward technology, perceived risk, and perceived trust – and discusses their theoretical relevance in the context of multichannel banking behaviour.

### 2.1 Attitude toward technology use

The attitude was initially defined by Triandis (1979) as an affective reaction, that is to say «the feeling of joy, pleasure, disgust or disappointment which the individual associates with a given behaviour». In behavioural terms, it refers to a positive or negative evaluation of the intention to perform an action (Ajzen & Fishbein, 1980; Davis, 1989). According to Eagly and Chaiken (1993), attitude is «a psychological tendency expressed by evaluating a particular entity with some degree of favour or disfavour».

In marketing, it has been shown that consumers develop specific attitudes toward technology (Curran et al., 2003; Daamen et al., 1990). The Theory of Reasoned Action (TRA) by Fishbein and Ajzen (1975) provides a theoretical framework for explaining individual behaviour. It postulates that behaviour is determined by intention, which in turn is influenced by the attitude towards action and subjective norms (i.e. the perceived opinion of the social environment). However, in this study it was decided not to consider the effect of subjective norms, in line with some authors who consider their impact marginal (Bagozzi et al., 2000; Dabholkar, 1994).

Recent empirical studies confirm that a favourable attitude toward technology remains a strong predictor of digital channel usage and behavioural intention, particularly in emerging and mobile-first economies (Arinta & Widyastuti, 2024; Rahi et al., 2021).

Based on this discussion, the following hypothesis is proposed:

H1: The attitude toward the use of technology influences the choice of banking channels.

### 2.2 Perceived risk

According to Cases (2007), perceived risk is considered as a determining variable in purchase decision made at a distance. In the context of online banking, the security of transactions is a crucial element (Hanafizadeh & Khedmatgozar, 2012; Aldás-Manzano et al., 2009) influencing consumer behaviour (Salman, 2010). Indeed, the perceived risk has been explored in studies on electronic banking adoption (Lee, 2009).

The risk can arise from different sources in digital channels: obligation to provide personal and financial data, uncertainty about the effectiveness of the service, lack of direct assistance. Garbarino and Strahilevitz (2004) categorize it into two main components: uncertainty about decisions and potential losses.

Luo et al. (2010) identify eight dimensions of perceived risk in digital banking services: performance, financial, temporal, psychological, social, confidentiality, physical and general. Among these, confidentiality, performance, and financial risks are often perceived as the most salient (Diallo et al., 2024; Waliullah et al., 2025).

Recent studies in emerging markets have further confirmed that high perceived risk significantly decreases customers' intention to adopt digital channels, particularly in contexts where trust in technology or institutions is low (Chipumuro & Mutambara, 2022; Gomes et al., 2024). For instance, insecurity around data protection and digital fraud remains a major barrier to mobile banking adoption across sub-Saharan Africa.

Considering that the most perceived risks in digital banking services are related to transaction security, data privacy and channel reliability, the following hypothesis is proposed:

H2: The higher the perceived risk, the more customers choose certain banking channels.

### 2.3 Perceived trust

Trust is also a key variable in commercial relationships (Dwyer et al., 1987) and has a positive impact on purchase intentions (Allagui & Temessek, 2005). In the banking context, it reflects the confidence that the service will be delivered properly even without direct supervision by the customer (Noventa et al., 2010).

McKnight et al. (2002) and Schlosser et al. (2006) identify several dimensions of trust: competence, benevolence, integrity, and credibility. Information transparency and the reliability of digital platforms are essential elements in fostering trust and encouraging the use of online channels.

Several studies have demonstrated that trust is a strong predictor of digital platform adoption (Vellido et al., 2000; Kim et al., 2009; Popoola & Arshad, 2015). Gomes, Schmidt, and Eberle (2024) demonstrate that both physical and digital channels contribute to building customer trust, which in turn fosters stronger commitment and engagement in multichannel banking contexts.

From this, the following hypothesis is derived:

H3: Perceived trust positively influences the choice of banking channels.

## 3. Methodology

This study adopts a hypothetico-deductive approach, starting from a theoretical framework to analyse the behaviour of Cameroonian banking customers in choosing between physical and digital channels. The dependent and explanatory variables were defined based on the existing literature, with the aim of testing the relationships between attitude toward technology, perceived risk, trust, and channel behaviour.

### 3.1 Measurement of variables

The dependent variable represents the customers' channel choice behaviour, measured through a set of items adapted from Hummel et al. (2017), referring to the various stages of the banking experience (information search, consultation, purchase, and post-sale). The items assess the use of both physical channels (branches, ATMs) and virtual ones (online banking, mobile banking), in order to capture actual user preferences. The psychological independent variables were defined as follows:

- Attitude toward technology was assessed through four 5-point Likert scale items, including two related to perceived usefulness and two to perceived ease of use, adapted from Davis et al. (1989), Luarn and Lin (2005), Im et al. (2008), and Zhou et al. (2010).

- Perceived risk was conceptualized as a multidimensional construct, articulated into three components: (1) security risk, referring to perceived vulnerability when performing digital operations; (2) privacy risk, concerning the potential for personal data to be shared without consent; and (3) uncertainty risk, relating to confidence in the reliability of digital services (internet and mobile banking) compared to traditional channels. The items were adapted from Featherman and Pavlou (2003), Ozdemir and Trott (2009), and Im et al. (2008).

- Lastly, perceived trust was measured using four items inspired by the models of McKnight et al. (2002) and Schlosser et al. (2006), covering the dimensions of competence, benevolence, integrity, and credibility of the banking provider in the digital context.

### 3.3 Data Collection and sample

The data collection instrument was a structured questionnaire administered online via Google Forms, in order to ensure anonymity and maximize accessibility. The questionnaire was pre-tested to verify clarity and eliminate potential biases.

The sample consisted of banking customers residing in Cameroon. The survey was conducted in 2024 on a sample of 263 Cameroonian banking customers, selected through a non-probabilistic convenience sampling technique. This methodological choice reflects both the limited availability of official databases for random selection and the exploratory nature of the study, which aims to provide preliminary insights into channel behaviour in an emerging context.

The collected data were subsequently analysed using appropriate statistical techniques to test the hypotheses. Specifically, descriptive analysis was conducted to explore frequencies and channel preferences, followed by chi-square tests to examine associations between psychological variables and channel choice.

## 4. Results

After performing a descriptive analysis of the variables, statistical tests were conducted to examine the relationships between the psychological variables (attitude toward technology, perceived risk, and trust) and the choice of banking channels.

*H1 – Attitude toward technology and channel choice*

Hypothesis H1 was confirmed. A comparison between the proportions of users preferring physical channels (67.7%) versus those opting for digital channels (32.3%) revealed a statistically significant difference ($p < 0.05$).

These findings indicate that, although the majority of customers still rely on traditional channels, a positive attitude toward digital technologies is significantly associated with a higher likelihood of adopting online or mobile banking. This supports the relevance of technological attitude as a determinant of channel behaviour, consistent with leading innovation adoption models (Davis, 1989; Venkatesh & Davis, 2000). In the Cameroonian context, this result suggests that a favourable disposition toward technology is an important driver of digital banking behaviour, even if traditional channels remain dominant in absolute terms.

*H2 – Perceived risk and channel choice*

Hypothesis H2, which posited that a higher perception of risk would lead consumers to prefer physical banking channels, was not supported. Perceived risk was measured across three dimensions: security risk, privacy risk, and uncertainty risk associated with the use of digital channels (Internet and mobile).

Specifically, the security risk dimension yielded $\chi^2(4) = 0.583$ with $p = 0.965$, while the privacy risk dimension produced $\chi^2(4) = 3.766$ with $p = 0.439$. Regarding uncertainty risk linked to Internet and mobile banking use, both tests returned p-values greater than 0.77.

An initial attempt to summarize these results using an average of the p-values was rejected for methodological reasons, as significance levels are not additive and do not reflect the strength of the effect.

The lack of significant effects suggests that, in the Cameroonian context, perceived risk does not constitute a decisive factor in the preference between physical and digital channels. Other psychological variables, such as trust and technological attitude, appear to have a greater influence on decision-making.

*H3 – Perceived trust and channel choice*

To analyse the relationship between perceived trust and the choice of banking channels, four chi-square tests were conducted on individual items reflecting distinct dimensions of trust. Two items – "the bank keeps its promises" and "the bank meets my expectations" – showed statistically significant associations with channel choice ($p = 0.050$ and $p = 0.038$, respectively), while the other two items – "the bank is trustworthy in the digital context" and "the bank takes my interests into account" – did not reach statistical significance.

Rather than aggregating the items into a single index, each dimension of perceived trust was examined separately to better identify the specific aspects influencing consumer behaviour. This approach highlights the multidimensional nature of trust: while general perceptions of trustworthiness or interest alignment may not directly impact channel choice, more operational aspects – such as promise fulfilment and expectation management – appear to play a decisive role.

These findings offer partial support for Hypothesis H3 and suggest that not all trust dimensions exert the same influence. In the context of digital banking, customers may base their preferences more on reliable service delivery than on abstract notions of institutional trust.

To support this analysis, Table 1 reports the results of the chi-square tests on the four dimensions of perceived trust in the digital context. The results highlight that only two items – "keeps its promises" and "meets expectations" – show statistically significant associations with channel choice.

| Perceived Trust Item | Pearson Chi-Square | df | Sig. | N |
|---|---|---|---|---|
| *1) This bank in the digital context is trustworthy* | 3.233 | 4 | 0.520 | 257 |
| *2) This bank keeps its promises and commitments* | 9.509 | 4 | 0.050 | 257 |
| *3) This bank takes into account my interests* | 2.893 | 4 | 0.576 | 257 |
| *4) This bank meets my expectations* | 10.172 | 4 | 0.038 | 257 |

**Table 1:** Chi-square test results for perceived trust and banking channel choice

## 5. Discussion

The study results provide partial confirmation of the hypotheses formulated. In particular, the role of a positive attitude toward technology as determining factor in the choice of digital channels emerges clearly, consistent with what is predicted by theoretical models on the adoption of innovation (Davis, 1989; Venkatesh & Davis, 2000).

Conversely, the hypothesis concerning perceived risk was not supported. None of the three dimensions investigated – security, privacy, and uncertainty – showed a statistically significant association with channel choice. This suggests that, in the context examined, consumers do not attribute enough weight to digital risks to influence their banking decisions. Increasing familiarity with digital services or the lack of more accessible alternatives may diminish the impact of perceived risk, shifting the focus to other influencing factors.

Lastly, the hypothesis regarding perceived trust received partial support. Only certain dimensions – such as the perception that the bank keeps its promises and meets expectations – were significantly associated with digital channel use. These results reinforce the idea that trust is not a monolithic construct, but rather a multidimensional one. The importance of reliability and consistency in fulfilling commitments indicates that digital customers rely more on tangible indicators of performance than on abstract judgments about the bank's benevolence or integrity.

Overall, the data suggest that digital channel adoption in Cameroon is primarily driven by psychological predisposition toward innovation and by trust in concrete service outcomes, rather than by concerns about risk. The managerial implications of these findings highlight the need for banks to invest in communicating service reliability, simplifying digital technologies, and enhancing digital literacy among less experienced users.

## 6. Conclusions

This study explores the impact of three psychological variables – attitude toward technology, perceived risk, and perceived trust– in relation to customer behaviour in selecting banking channels in the Cameroonian context. The results show that a positive attitude toward technology is a key factor in the adoption of digital channels, supporting the validity of innovation acceptance models in predicting consumer behaviour even in emerging markets.

The lack of a significant relationship between perceived risk and channel choice suggests that, in infrastructurally heterogeneous contexts such as Cameroon, concerns related to security and privacy may be outweighed by practical needs or growing familiarity with digital services. Regarding perceived trust, the effect was partial and selective: only dimensions related to reliability and expectation fulfilment had a significant impact on user behaviour.

These findings have relevant managerial implications. Banks operating in similar markets should invest in promoting digital literacy, clearly communicating the functionalities of digital channels, and strengthening trust by ensuring consistency between promises and actual service delivery. Furthermore, the development of educational initiatives aimed at increasing the confidence and technological self-efficacy of less digital-savvy customers is highly recommended.

However, this study has some limitations, including the use of a non-probabilistic sample and an exclusively quantitative approach. Future research could integrate qualitative or longitudinal methods, and extend the analysis to other geographic contexts to test the generalizability of the findings. The inclusion of additional variables – such as social support or perceived service quality – could further enrich the understanding of the psychological mechanisms underlying multichannel choices in the banking sector.

This article focused specifically on the psychological dimensions of multichannel behaviour. Other aspects addressed in the broader research – such as service complexity, user experience, and sociodemographic variables – will be explored in subsequent studies.

## References

Acosta-Prado, J. C., Rojas Rincón, J. S., Mejía Martínez, A. M., & Riveros Tarazona, A. R. (2024). Trends in the literature about the adoption of digital banking in emerging economies: A bibliometric analysis. Journal of Risk and Financial Management, 17(12), 545.

Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behaviour. Englewood Cliffs, NJ: Prentice-Hall.

Aldás-Manzano, J., Lassala-Navarré, C., Ruiz-Mafé, C., & Sanz-Blas, S. (2009). Key drivers of internet banking services use. Online Information Review, 33(4), 672–695.

Allagui, A., & Temessek, A. (2005). L'influence de la confiance dans les relations commerciales sur les intentions d'achat. Revue Française du Marketing, 201, 67–80.

Allen, D., Swann, J., & Bell, A. (1992). Attitudes, information and Internet adoption. Information Systems Journal, 2(1), 39–53.

Arinta, Y. N., & Widyastuti, E. (2024). Accelerating digital banking transformation through user acceptance: A study on the cultural impact of millennials. Media Akuntansi, 14(1), 74–87.

Bagozzi, R. P., Davis, F. D., & Warshaw, P. R. (2000). Development and test of a theory of technological learning. Management Science, 46(3), 425–443.

Cases, A.-S. (2007). Perceived risk and risk reduction strategies in online buying behavior. International Review of Retail, Distribution and Consumer Research, 17(4), 405–419.

Chipumuro, M., & Mutambara, E. (2022). Bundling and perceived customers' risk behaviour in the purchase of a new bank product in South African banks. Gender and Behaviour, 20(1), 18901–18925.

Curran, J. M., Meuter, M. L., & Surprenant, C. F. (2003). Intentions to use self-service technologies: A confluence of multiple attitudes. Journal of Service Research, 5(3), 209–224.

Daamen, D. D. L., & Van der Lans, I. A. (1990). Cognitive Structures in the Perception of Modern Technologies. Science & Technology Studies, 15(2), 203–217.

Dabholkar, P. A. (1994). Technology-based service delivery: A classification scheme for developing marketing strategies. Journal of Marketing, 58(4), 17–28.

Dabholkar, P. A. (1996). Consumer evaluations of new technology-based self-service options: An investigation of alternative models of service quality. International Journal of Research in Marketing, 13(1), 29–51.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 13(3), 319–340.

Dwyer, F. R., Schurr, P. H., & Oh, S. (1987). Developing Buyer–Seller Relationships. Journal of Marketing, 51(2), 11–27. https://doi.org/10.2307/1251126

Eagly, A. H., & Chaiken, S. (1993). The psychology of attitudes. Fort Worth, TX: Harcourt Brace Jovanovich.

Featherman, M. S., & Pavlou, P. A. (2003). Predicting e-services adoption: A perceived risk facets perspective. International Journal of Human-Computer Studies, 59(4), 451–474.

Garbarino, E., & Strahilevitz, M. (2004). Gender differences in the perceived risk of buying online and the effects of receiving a site recommendation. Journal of Business Research, 57(7), 768–775.

Gomes, L., Schmidt, S., & Eberle, L. (2024). Multichannel service, trust, commitment and engagement: a study in a credit union. International Journal of Bank Marketing, (ahead-of-print).

Hanafizadeh, P., & Khedmatgozar, H. R. (2012). The mediating role of the dimensions of the perceived risk in the effect of the customers' awareness on the adoption of internet banking in Iran. Electronic Commerce Research, 12(2), 151–175.

Im, I., Kim, Y., & Han, H. J. (2008). The effects of perceived risk and technology type on users' acceptance of technologies. Information & Management, 45(1), 1–9.

Kim, D. J., Ferrin, D. L., & Rao, H. R. (2009). Trust and satisfaction, two stepping stones for successful e-commerce relationships: A longitudinal exploration. Information Systems Research, 20(2), 237–257.

Lee, M.-C. (2009). Factors influencing the adoption of internet banking: An integration of TAM and TPB with perceived risk and perceived benefit. Electronic Commerce Research and Applications, 8(3), 130–141.

Luarn, P., & Lin, H. H. (2005). Toward an understanding of the behavioural intention to use mobile banking. Computers in Human Behaviour, 21(6), 873–891.

Luo, X., Li, H., Zhang, J., & Shim, J. P. (2010). Examining multi-dimensional trust and multi-faceted risk in initial acceptance of emerging technologies: An empirical study of mobile banking services. Decision Support Systems, 49(2), 222–234.

McKnight, D. H., Choudhury, V., & Kacmar, C. (2002). Developing and validating trust measures for e-commerce: An integrative typology. Information Systems Research, 13(3), 334–359.

Noventa, S., Fornari, E., & Grandi, S. (2010). I drivers della fiducia nella banca multicanale. Micro & Macro Marketing, 3, 377–392.

Ozdemir, S., & Trott, P. (2009). Exploring the adoption of a service innovation: A study of Internet banking adopters and non-adopters. Journal of Financial Services Marketing, 13(4), 284–299.

Popoola, A. Y., & Arshad, S. Z. (2015). Trust and perceived risk in online banking: A context-specific analysis. Procedia Economics and Finance, 37, 460–465.

Rahi, S., Alghizzawi, M., Alnaser, F. M., & Ngah, A. H. (2021). Integration of UTAUT model in internet banking adoption context: The mediating role of performance expectancy and effort expectancy. Journal of Research in Interactive Marketing, 15 (3), 383–407.

Rahi, S., Khan, M. M., & Alghizzawi, M. (2021). Extension of technology continuance theory (TCT) with task technology fit (TTF) in the context of Internet banking user continuance intention. International Journal of Quality & Reliability Management, 38(4), 986-1004.

Salman, A. (2010). Online Banking in Malaysia: Are Private Sectors Ready for It? Journal of Internet Banking and Commerce, 15(2).

Schlosser, A. E., White, T. B., & Lloyd, S. M. (2006). Converting website visitors into buyers: How web site investment increases consumer trusting beliefs and online purchase intentions. Journal of Marketing, 70(2), 133–148.

Schlosser, A. E., White, T. B., & Lloyd, S. M. (2006). Converting website visitors into buyers: How web site investment increases consumer trusting beliefs and online purchase intentions. Journal of Marketing, 70(2), 133–148.

Tan, M., & Teo, T. S. H. (2000). Factors influencing the adoption of Internet banking. Journal of the Association for Information Systems, 1(5), 1–42.

Taylor, S., & Todd, P. A. (1995). Understanding information technology usage: A test of competing models. Information Systems Research, 6(2), 144–176.

Triandis, H. C. (1979). Values, attitudes, and interpersonal behaviour. In Nebraska Symposium on Motivation (pp. 195–259). University of Nebraska Press.

Tsapi, V. and Kaïssou S., (2020). The perception of quality of service and engagement of bank customers in Cameroon, Revue Internationale des Sciences de Gestion, 3.2.

Vellido, A., Lisboa, P. J. G., & Meehan, K. (2000). Quantitative characterization and prediction of on-line purchasing behaviour: A latent variable approach. International Journal of Electronic Commerce, 4(4), 83–104.

Venkatesh, V., & Davis, F. D. (2000). A theoretical extension of the technology acceptance model: Four longitudinal field studies. Management Science, 46 (2), 186–204.

Zhou, T., Lu, Y., & Wang, B. (2010). Integrating TTF and UTAUT to explain mobile banking user adoption. Computers in Human Behaviour, 26(4), 760–767.

# Exploring Consumer Perceptions and Acceptance of Dealcoholized Wine in Italy: A Focus Group Study

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## Abstract

Food innovations—from novel foods to modifications of existing food products—often face consumer skepticism and resistance. Reformulations of culinary staples and traditional food products are particularly prone to rejection due to consumers' attachment to the original product. This study examines consumer perceptions and acceptance of such innovations, focusing on cases where core defining attributes are substantially altered. Dealcoholized wine in Italy provides a compelling example, as alcohol removal entails the loss of a central component of wine's sensory, functional, and symbolic identity. Drawing on a pilot focus group combining a free word association task with a semi-structured discussion, we offer preliminary insights and methodological validation. Findings indicate that unfamiliarity fosters curiosity and exploratory engagement regardless of skepticism levels. Consumers employed analogical reasoning to make sense of and familiarize themselves with the novel option. Furthermore, results reveal a clear tension between technical legitimacy and emotional acceptance. Key drivers and barriers to acceptance were identified. Overall, dealcoholized wine was perceived as a situational or necessity-driven fallback option. The study highlights how cognitive, affective, and socio-cultural factors interact to shape consumer acceptance (or rejection) of innovations that challenge culturally significant food identities.

*Keywords: consumer acceptance; food innovation; tradition; culture; identity; wine.*

## 1. Introduction

Today, the global food landscape stands at a critical crossroads. As demographic and environmental pressures intensify, an urgent need to radically rethink current food production and consumption systems materializes. A synergistic combination of food management, technological innovations, and diets is seen as a promising pathway to alleviate the rising pressures (Springmann et al., 2018). Alongside radical food innovations (e.g., cultured meat), a technological modernization of traditional, culturally embedded foods is being witnessed. In Italy, this includes reformulations of culinary staples such as pasta, now available in gluten-free or legume-based versions, and no/low-alcohol variants of classic Italian alcoholic beverages. These innovations strive to preserve the recognizable identity of a traditional, familiar product while modifying its composition, production process, or nutritional profile to better align with evolving consumer demand. While extensive research exists on novel food acceptance, relatively little attention has been dedicated to acceptance in the case of innovations in traditional food (Savino et al., 2018) and on the influence of culture and cultural traits on acceptance dynamics (Chong et al., 2022). To address these gaps, the study explores consumer perceptions and acceptance of dealcoholized wine and

dealcoholization processes in Italy. Wine in Italy is not just a beverage; it is a cultural artifact, a product associated with moments of conviviality and celebration, where alcohol plays a central role. The present research addresses two key questions: (1) How do consumers perceive and engage with innovations in traditional food products, such as wine, when one of its defining attributes –alcohol– is removed? and (2) What are the key drivers and barriers to the acceptance of dealcoholized wine? The primary aim of this paper is to demonstrate the effectiveness of focus group methodologies to explore the phenomenon of interest, drawing on preliminary findings from a pilot focus group interview (FG1).

## 2. Theoretical Background

The success of a novel food largely depends on consumer acceptance. Perceived benefits, risks, and costs of the novel product and its underlying technologies all influence consumer responses (Bearth & Siegrist, 2016), with benefits generally encouraging acceptance and risks inhibiting it. Acceptance revolves around a complex interplay of multiple interconnected factors, including biologically determined behavioral predispositions, sensory-affective elements, person-related factors (beliefs, norms, attitudes), and social-environmental influences (Contento, 2021). In this context, emotions can be predictive of behavioral intentions and behaviors (Laros & Steenkamp, 2004), with situational appropriateness playing a key mediating role (Giacalone & Jaeger, 2023). Consumer perceptions are often influenced by concerns regarding innovative production methods. These perceptions, however, are malleable (Siegrist & Hartmann, 2020), and providing information in the early phases of introduction can effectively increase acceptance (Deliza & Ares, 2018). Familiarity and knowledge also act as crucial mediators, developing certainty expectations and mitigating fears (Tuorila & Hartmann, 2020). Importantly, motivation to accept largely depends on consumers' psychographic and personality traits. Curiosity and openness to new experiences are often associated with greater willingness to try novel foods (Keller & Siegrist, 2015), while food neophobia (the reluctance to eat novel, unfamiliar foods; Pliner & Hobden, 1992), food technology neophobia (the fear of unknown or unfamiliar technologies; Cox & Evans, 2008), and chemophobia (suspicion regarding food additives) foster resistance. These attitudes, reflective of consumer aversion, manifest to varying degrees across technologies (Cardello, 2003). Interestingly, consumers often exhibit a 'natural-is-better' heuristic (Tuorila & Hartmann, 2020), identifying naturalness as one of the distinctive properties of traditional food and attributing the ability to preserve a food's natural state to traditional production methods (Pieniak et al., 2009). While consumers are generally open to innovations in traditional foods (Vanhonacker et al., 2013), acceptance ultimately depends on the specific nature of the innovation. Improvements in quality and nutrition are often well-received, provided they do not compromise core features, especially sensory properties, which often serve as authenticity indicators (Guerrero et al., 2009). Acceptance tends to increase when (1) innovations reinforce the traditional character of the product, (2) perceived benefits of the innovation outweigh the importance of the traditional character (e.g., improved safety), or (3) negative attributes associated with the traditional character are mitigated (e.g., fat reduction) (Reinders et al., 2019).

## 3. Methodology

The research employs a qualitative, exploratory design. Focus group interviews were chosen as a method due to their effectiveness in exploring perceptions, feelings, and thinking about relevant issues (Krueger & Casey, 2014) and their ability to stimulate debate, offering insights into how ideas are collectively accepted, rejected, and shaped in a group context. Our research design encompassed eight focus groups. Data collection occurred in April and May 2025 in Italy, using a combination of purposive and convenience sampling. Eligibility criteria required participants to be of legal drinking age with no particular wine expertise or prior

consumption history of dealcoholized wine. A pre-screening questionnaire collected sociodemographic information, along with scores for health-consciousness levels (HCS; Gould, 1988), food neophobia (FNS; Pliner & Hobden, 1992) and food technology neophobia (FTNS; Cox & Evans, 2008). In total, 43 individuals participated across the eight groups, each optimally sized at 5-6 participants (Krueger & Casey, 2015). Five groups were homogeneous by age (18-35 years) and three heterogeneous (all ages). Efforts were made to ensure balanced gender representation and diversity in HCS, FNS, and FTNS. The study also ensured broad regional representation of Italian consumers. Focus groups were conducted in person (average duration: 60-90 minutes) and audio recorded. The session involved an individual free word association (FWA) task, eliciting spontaneous associations and reactions to dealcoholized wine, followed by a semi-structured group interview and debate.

Data Analysis. FG1 consisted of five participants (3M, 2F; Mage = 26.0 years) with moderately high health-consciousness levels, low food neophobia, and moderate food technology neophobia. FWA data were analyzed through multi-stage qualitative coding, followed by quantitative frequency counting. Absolute and weighted frequencies were calculated, with weights assigned to words based on their recall order to reflect salience. Audio recordings were transcribed and analyzed using reflexive Thematic Analysis (TA) (Braun & Clarke, 2006; 2012).

## 4. Preliminary Findings and Discussion

Unfamiliarity to Exploration. Despite widespread unfamiliarity, participants did not express immediate rejection of dealcoholized wine, but rather a pronounced curiosity. Perceived as "weird", "alien", and "futuristic", the novel product triggered cognitive dissonance by defying deeply ingrained schemas of wine, where alcohol traditionally serves as a core identifier. This initial intrigue spurred a clear exploratory impulse and willingness to try, even among skeptics. This finding expands existing notions of early engagement with novel foods, suggesting that curiosity can act as a powerful initial driver. Exploratory behavior was not solely driven by desires for genuine adoption, but often took the form of "amusement" or "playful experimentation", indicating a low-commitment initial interaction. This observation aligns with and specifies how motivation to try novel foods can be influenced by personality traits like curiosity (Keller & Siegrist, 2015), suggesting a distinction between exploratory trials and their potential for habitual consumption. The challenge of imagining wine without its defining alcoholic component, particularly given how alcohol's sensory properties are inherently co-constructed during fermentation, fueled curiosity for sensory assessment and social viability, identifying its potential for social stigma in normative alcohol consumption contexts. Price sensitivity critically mediated willingness to try, as participants expected price parity with traditional wines despite awareness of potentially higher production costs. Active information-seeking behavior was also consistently observed; as literature on early information provision suggests (Deliza & Ares, 2018), this appeared to nurture openness as participants acquired knowledge and familiarized themselves with the novel concept. Familiarization Through Analogical Reasoning. To make sense of dealcoholized wine and mitigate conceptual distance, participants consistently employed analogical reasoning, spontaneously drawing comparisons to familiar re-engineered beverages (e.g., no-alcohol beer, zero-sugar sodas) and similar innovations (e.g., e-cigarettes, plant-based food). These analogies served as cognitive bridges and anchors in a proactive effort to include the novel concept within their mental frameworks, aiding in conceptualization, interpretation, and ultimate legitimization of dealcoholized wine. The beer analogy, in particular, provided an accepted market precedent, contributing to the product's perceived legitimacy. This process supports and extends the literature on familiarity and knowledge as mediators of acceptance, which develop certainty expectations and mitigate fears (Tuorila & Hartmann, 2020). This familiarization process involved both individual and collective sensemaking. As participants

offered analogies, they contributed to a shared understanding, gradually reframing dealcoholized wine from a radically disruptive innovation to a logical extension of an ongoing evolutionary trajectory. This perspective suggests consumers actively seek to "reappropriate" familiarity with well-known categories after novel extensions. The existence of similar alternatives normalized the concept, reducing perceived strangeness and artificiality, and fostering acceptance by situating dealcoholized wine within a broader cultural shift towards more flexible consumption.

The Wine Identity Debate. Participants readily granted dealcoholized wine formal legitimacy as an extension to the established wine category, acknowledging shared raw materials and winemaking practices. This initial cognitive assignment indicated that, from a technical standpoint, alcohol was not universally considered an indispensable wine component. However, a significant divergence in emotional acceptance emerged, revealing a tension between technical recognition and deeper integration. Some participants demonstrated greater tolerance to alcohol's removal, perceiving dealcoholized wine as 'different but not necessarily inferior' to wine. This aligns with research showing that innovations mitigating perceived negative attributes of traditional products (such as high alcohol content) promote acceptance when these benefits resonate with consumers (Reinders et al., 2019). Conversely, others viewed alcohol's removal as an irreparable loss of wine's essence, dismissing it as "grape juice" or "fake wine". This categorical demotion, rooted in a categorical purity logic, challenges the idea that technical adherence and origin alone can ensure acceptance of innovations in traditional foods. For skeptics, alcohol was not simply an attribute, but a defining, irreplaceable marker of wine's identity, integral to the product's traditional character and granter of authenticity. This perspective aligns with research emphasizing the importance of preserving core characteristics and sensory properties when introducing innovations in food (Guerrero et al., 2009). Dealcoholization was perceived as fundamentally disrupting traditional production methods, thereby violating the perceived natural state and integrity of wine (Pieniak et al., 2009). Drivers and Barriers to Acceptance. Collectively, our findings reveal a complex interplay of factors shaping consumer acceptance beyond the core identity debate. While functional benefits such as health, responsibility, and social inclusion emerged as key drivers, taste critically operated as a primary, non-negotiable threshold for acceptance; any perceived deviation from a satisfactory profile immediately precluded adoption. Moreover, chemophobia and social stigma emerged as substantial barriers. Dealcoholized wine was largely perceived as a necessity-driven fallback option. Its appeal was predominantly rooted in its utility for social inclusion and responsible consumption, rather than appreciative consumption or suitability for special social events. This underscores that despite recognized functional benefits, the perceived loss of experiential and hedonic value, coupled with situational inappropriateness (Giacalone & Jaeger, 2023), critically hinders consumer acceptance.

## 5. Conclusion

This study explored consumer perceptions and acceptance of dealcoholized wine in Italy, demonstrating the suitability of focus group methodologies for investigation. Results reveal a clear tension between technical legitimacy and emotional acceptance of novel foods. While curiosity and analogical reasoning foster initial engagement and openness, the perceived loss of experiential and hedonic value, taste, and social stigma raise critical barriers, relegating dealcoholized wine to a "Plan B" option. These insights shed light on how consumers perceive and respond to novel foods that challenge traditional categories, highlighting the complex interplay of factors critical to acceptance, particularly for products rich in cultural and symbolic meaning.

## References


Bearth, A., & Siegrist, M. (2016). Are risk or benefit perceptions more important for public acceptance of innovative food technologies: A meta-analysis. Trends in Food Science & Technology, 49, 14–23.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101.

Cardello, A. V. (2003). Consumer concerns and expectations about novel food processing technologies: Effects on product liking. Appetite, 40(3), 217–233.

Chong, M., Leung, A. K. Y., & Lua, V. (2022). A cross-country investigation of social image motivation and acceptance of lab-grown meat in Singapore and the US. Appetite, 173, 105990.

Contento, I. R. (2021). Overview of determinants of food choice and dietary change: Implications for nutrition education. In Nutrition Education: Linking Research, Theory and Practice (pp. 32–64). Jones & Bartlett.

Cox, D. N., & Evans, G. (2008). Construction and validation of a psychometric scale to measure consumers' fears of novel food technologies: The food technology neophobia scale. Food Quality and Preference, 19(8), 704–710.

Deliza, R., & Ares, G. (2018). Consumer perception of novel technologies. In Fruit Preservation: Novel and Conventional Technologies (pp. 1–20).

Giacalone, D., & Jaeger, S. R. (2023). Consumer acceptance of novel sustainable food technologies: A multi-country survey. Journal of Cleaner Production, 408, 137119.

Guerrero, L., Guàrdia, M. D., Xicola, J., et al. (2009). Consumer-driven definition of traditional food products and innovation in traditional foods: A qualitative cross-cultural study. Appetite, 52(2), 345–354.

Keller, C., & Siegrist, M. (2015). Does personality influence eating styles and food choices? Direct and indirect effects. Appetite, 84, 128–138.

Krueger, R. A., & Casey, M. A. (2014). Focus Groups: A Practical Guide for Applied Research.

Laros, F. J., & Steenkamp, J. B. E. (2005). Emotions in consumer behavior: A hierarchical approach. Journal of Business Research, 58(10), 1437–1445.

Pieniak, Z., Verbeke, W., Vanhonacker, F., Guerrero, L., & Hersleth, M. (2009). Association between traditional food consumption and motives for food choice in six European countries. Appetite, 53(1), 101–108.

Pliner, P., & Hobden, K. (1992). Development of a scale to measure the trait of food neophobia in humans. Appetite, 19(2), 105–120.

Reinders, M. J., Banovic, M., & Guerrero, L. (2019). Introduction. In C. M. Galanakis (Ed.), Innovations in Traditional Foods (pp. 1–21). Woodhead Publishing.

Savino, T., Testa, S., & Petruzzelli, A. M. (2018). Researcher understanding of food innovations in Nordic and Southern European countries: A systematic literature review. Trends in Food Science & Technology, 77, 54–63.

Siegrist, M., & Hartmann, C. (2020). Consumer acceptance of novel food technologies. Nature Food, 1(6), 343–350.

Springmann, M., Clark, M., Mason-D'Croz, D., et al. (2018). Options for keeping the food system within environmental limits. Nature, 562, 519–525.

Tuorila, H., & Hartmann, C. (2020). Consumer responses to novel and unfamiliar foods. Current Opinion in Food Science, 33, 1–8.

Vanhonacker, F., Kühne, B., Gellynck, X., Guerrero, L., Hersleth, M., & Verbeke, W. (2013). Innovations in traditional foods: Impact on perceived traditional character and consumer acceptance. Food Research International, 54(2), 1828–1835.

# Virtual or Human Influencers? Exploring Consumer Authenticity, Trust, and Engagement Across Generations

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## Abstract

This study investigates the relative effectiveness of virtual influencers (VIs) and human influencers (HIs) in shaping consumer perceptions, trust, and engagement within the context of influencer marketing.

A mixed-methods approach was adopted, combining two focus groups (n = 22) with social media and sentiment analysis. Key dimensions of the focus groups' findings were observed: perceived authenticity, sense of security, emotional engagement, and transparency. At the same time, qualitative and quantitative analysis of a subset of these influencer profiles on Instagram offered complementary insights into user engagement and sentiment dynamics.

The findings demonstrate a substantial benefit of HIs in forging authentic connections and achieving higher levels of involvement especially in product categories that require credibility. On the other hand, VIs, although considered a novelty, are opposed by obstacles related to their artificial character and the absence of tangible experiences. Generational differences emerged: Gen Z showed a greater openness to VIs if transparency is guaranteed, while Millennials consistently preferred HIs. Sentiment analysis confirms that VIs evoke curiosity but have a weaker emotional intensity than HIs. Finally, VIs appear promising in vision-driven and innovation-based scenarios. Ultimately, authenticity, relatability, and transparency are still crucial to the effectiveness of influencer marketing. Hybrid approaches that seamlessly integrate both VIs and HIs are also recommended to address evolving customer requirements.

*Keywords: Virtual Influencers, Human Influencers, Consumer Behavior, Authenticity, Trust, Engagement*

## 1. Introduzione

The concept of virtual influencers (VIs) has gained increasing attention in digital marketing, referring to computer-based characters engineered to mimic human characteristics and engage in social media interactions. Academic interest in the strategic use thereof is increasing in relation to questions of authenticity, engagement, and trust (Mrad et al., 2024).

Unlike HIs, VIs are completely programmed by their creators, which allows brands to create consistent messaging and aesthetics, but also results in concerns regarding transparency and consumer entrapment (Jhawar et al., 2023). While VIs may be regarded as novel and interesting, their synthetic nature may make them difficult to bond with emotionally, and may be perceived as less credible than HIs.

As noted by Jin and Viswanathan (2024), encounters with AI-based influencers can activate feelings of dissociation, which can be disconcerting, especially when they are perceived as a threat to human authenticity or identity. Mouritzen et al. (2024) emphasize the contrasting nature of technological novelty with the basic requirement of relational trust in marketing communication.

A generational gap also emerges from the literature, with younger users, including Gen Z, being more predisposed to interact with VIs, as long as the artificial nature and narrative of the VIs are made explicit (De Cicco et al., 2024). Nonetheless, there are few empirical studies comparing user interaction and views on VIs and HIs. This paper fills this void by employing an integrative approach to examine how consumers perceive authenticity, trust, and engagement in response to both virtual and human influencers.

## 2. Methodology

To examine consumer perceptions and purchase decisions with VIs compared to HIs, a mixed-methods design was employed, combining two focus groups with social media comments and sentiment analysis.

Two focus groups were conducted in person, led by trained facilitators. Maximum variation sampling was used to recruit 22 participants. The first group consisted of 10 college students, with an equal gender balance (5 males and 5 females) and a balanced representation across two generations (5 from Generation Z and 5 from Millennials). On the other hand, the second group consisted of 12 consumers, a gender-balanced group (6 males and 6 females), comprising 7 individuals from Generation Z and 5 from Millennials. Participants were selected to represent key market segments and achieve gender parity.

Focus groups were used to explore shared meanings around trust and authenticity. The mixed generational and gender composition enabled comparison across perspectives, while facilitators ensured balanced participation despite possible heterogeneity. Through the focus groups (conducted for 90 min) that were audiotaped and transcribed verbatim, dimensions such as perceived credibility, trust in the influencer, emotional engagement with the content, transparency of the posts, and purchase intention were addressed. Special consideration was given to the role of consumer generations in their reactions.

Concurrently, a social media study was carried out specifically targeting the Instagram platform. The profiles of three virtual influencers (@shudu.gram, @lilmiquela, @francescagiubelli) and human fashion influencers (@youaremylemonade, @valentinavignali, @chiaraferragni) were chosen and compared. Likes, comments, and overall interactions, as measures of engagement rates, were quantified by "Not Just Analytics". Comments were also qualitatively analyzed to see what the users feel and have to say about any such interactions.

## 3. Results

The results of the focus group analysis identified the shared perception that VIs are not as genuine or trustworthy as HIs. These feelings were closely related to the absence of physical and emotional presence, as well as the offline experience, of the very process on which audience trust was thought to rely. On the other hand, HIs were positively perceived for their transparency, the emotion expressed in the content, and the potential to form empathetic connections with followers.

Finally, the generational differences further contributed to the discussion. Generation Z exhibited a greater willingness to use virtual influencers (VIs) when a coherent narrative accompanied them and their artificiality was effectively communicated. However, some Gen

Z participants appreciated the notion that VIs might offer less biased opinions than those of individuals with personal interests. The need for clear information about the VIs' identity was stressed, also among Gen Z.

Millennials, however, showed a preference for genuine HIs, which are perceived as more trustworthy, especially in categories where trust is crucial.

| Element | Gen Z | Millennials |
|---|---|---|
| Authenticity | Greater openness to VIs, seeking coherent storytelling. | Preference for HIs with real-life experiences and emotional authenticity. |
| Trust | Clear indication of virtual nature required | Strong emphasis on transparency and influencer background |
| Engagement | Greater willingness to accept VIs for aesthetically-driven products | Preference for HIs, particularly for technical or experiential products |

**Table 1:** Generational differences emerging from the focus groups

The social media analysis further corroborated the findings from the focus groups. The HIs analyzed, particularly @chiaraferragni and @youaremylemonade, recorded significantly higher engagement rates compared to VIs. Comments directed at HIs were more focused on admiration for their journey and the relationships built over time. The engagement rate is calculated by dividing the total interactions by the number of followers and multiplying by 100.

| Influencer | Follower count | Average likes | Average comments | Engagement Rate (E.R.) |
|---|---|---|---|---|
| @lilmiquela (VI) | 2,514,892 | 2,947 | 58 | 0.12% |
| @valentinavignali (HI) | 2,696,593 | 27,001 | 135 | 1.01% |
| @shudu.gram (VI) | 238,246 | 3,846 | 59 | 1.64% |
| @youaremylemonade (HI) | 222,372 | 11,918 | 165 | 5.43% |
| @francescagiubelli (VI) | 12,100 | 472 | 20 | 4.07% |
| @chiaraferragni (HI) | 28,703,350 | 6,318,000 | 16,193 | 18.39% |

**Table 2:** Comparative engagement rates between VIs and His

These quantitative data supported the qualitative results. For product categories high in visual attributes (e.g., fashion and accessories), the aesthetic nature of communication may decrease the perceived gap between VIs and HIs. Yet influencer authenticity and credibility are still relevant for technical or experience-based products and are in favor of HIs. In contrast, calls for VIs, as they became more visible and interactive (especially Francesca Giubelli), drew more detached commentary, often centered around their technicity and their use of artificial intelligence. To further explore these perceptions, it was also conducted a focused sentiment

analysis of user comments for two influencers: Francesca Giubelli (VI) and Chiara Ferragni (HI). The engagement rates (E.R.) of all sample influencers were compared, and a sentiment analysis was performed on the two profiles with the highest E.R. in each category to facilitate a more targeted discussion.

While the accounts have vastly different numbers of followers, these were the extremes (outliers) within their type of influencers when it comes to engagement performance, which makes the comparison reasonable. This method enabled the comparison of two profiles, despite their differing scales, which showed a maximum of interaction in their assigned regions. Therefore, the comparison is not about being proportional to the market (market representativeness), but rather about examining the sentiment dynamics at the peak engagement levels of each category. Comments were systematically categorized as positive, neutral, or negative, offering more profound insights into audience reactions:

| Influencer | Positive (%) | Neutral (%) | Negative (%) |
|---|---|---|---|
| **Chiara Ferragni (HI)** | 60 | 25 | 15 |
| **Francesca Giubelli (VI)** | 45 | 40 | 15 |

**Table 3:** Sentiment distribution of user comments for the most engaged VI and HI

In the case of Chiara Ferragni, the positive comments mainly focus on a strong emotional and family bond ("We love you") and professional appreciation, which are the main features on this platform ("What a successful event"). The results, therefore, point to a strong relational ability on her part: the positive comments on Francesca Giubelli concentrate mainly on aesthetic issues ("You are great") and the development of technology ("That's cool"), while the neutral responses tend to be brief interactions or emojis. As for negative messages, their main thrust is expressed as doubt about what computers can do ("When you start even flirting with AI."). It is noteworthy that all human and virtual influencers analyzed here were female. This reflects the current market environment, in which women are prominent both as entrepreneurs and consumers, even if they have tended to take a more backseat role within specific male-dominated industries or politics. That is also why female profiles dominate major sectors such as fashion, beauty, lifestyle – the key categories of our research. The selection was thus in line with current industry trends rather than a source of bias from sampling.

Combined statistical analysis suggests that authenticity and the ability to form relationships are crucial elements of successful influencer marketing strategies. They have a clear advantage in terms of the number of comments they elicit and their ability to establish authentic relationships; these, then, tend to generate an emotional level of intimacy more advanced than might be possible with other marketing tools. While VIs offer attraction and greater affinity at lower ages or in design-led contexts, they are still essentially detached forms of engagement. However, positive and neutral comments for VIs show growth potential, provided brands transparently and coherently integrate them to meet the expectations of their audience evolving towards this "artistics".

## 4. Conclusions

Influencer marketing is shifting towards authenticity. The outcomes of analyzing social media and two different discussion groups showed that while virtual influencers represent a creative yet still promising new entry into digital marketing, they face the challenges of being seen as

"artificial" and lacking real-life experience. The results suggest that human influencers have a clear advantage in terms of continuity and relationship building. This is particularly important for product segments where trust and credibility are crucial to success. VIs are showing potential in visually driven and innovation-oriented settings, mainly amongst younger consumer segments. However, their own 'performance' is heavily dependent on whether brands can use them clearly and consistently without undermining the audience's perception that it is a fake thing. The sentiment analysis enhances these insights. VIs can be big attention-grabbers and set the tone, but it is still a superficial form of interaction compared to HIs. Whether a brand provides a platform where fashion tribes can freely communicate with one another, or a fine-tuned grid for textile textures with which they can experiment, depends on the strategy's judiciousness and transparency. Indoors in 2004, the recently then aged who was born 8 years old now runs an office in London for a burgeoning British travel portal. Looking forward to tomorrow, the marketing strategy of combining VHIs' strengths with HIs' weaknesses appears to be the best approach. Such a composite approach enables brands to adapt their use of influencers according to the expectations of their target audience, as well as the individual product contexts. Ultimately, whether VIs can achieve success lies in how ethically, transparently and context-appropriately they are employed in influencer marketing practices. Other kinds of values, driven by authenticity such as today's consumer increasingly demands, simply do not apply.

## References


De Cicco, R., et al. (2024). "Virtual vs. Human Influencer: Effects on Users' Perceptions and Brand Outcomes." Technology in Society, 77, 102488.

Jhawar, A., Kumar, P., & Varshney, S. (2023). "The Emergence of Virtual Influencers: A Shift in the Influencer Marketing Paradigm." Young Consumers, 24(4),

Jin, S. V., & Viswanathan, V. (2024). "Threatened and Empty Selves Following AI-Based Virtual Influencers: Comparison Between Followers and Non-Followers of Virtual Influencers in AI-Driven Digital Marketing." AI & Society.

Mouritzen, S. L. T., Penttinen, V., & Pedersen, S. (2024). "Virtual Influencer Marketing: The Good, the Bad and the Unreal." European Journal of Marketing, 58(2).

Mrad, M., et al. (2024). "Virtual Influencers Versus Real Connections: Exploring the Phenomenon of Virtual Influencers." Journal of Advertising.

# Distorting Information in the Evaluation of Drip Pricing

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## Abstract

Drip pricing is a widespread commercial strategy in which the base price of a product is initially displayed, followed by the sequential disclosure of optional surcharges. While effective in increasing total purchase value, this practice has been criticized for its potential to mislead consumers and reduce satisfaction. Existing research has explored cognitive and contextual factors underlying consumer susceptibility to drip pricing, yet the role of evaluative biases in this process remains underexplored. This study investigates whether predecisional distortion of information – a judgmental bias wherein earlier preferences influence the evaluation of subsequent attributes – contributes to the "stickiness" of consumer choices in drip pricing scenarios.

A scenario-based experiment is conducted across three conditions: (1) drip pricing, where attributes and surcharges are revealed sequentially; (2) cumulative pricing, where all costs are shown upfront; and (3) a variable flight condition, where attributes are presented sequentially but linked to different products. Participants evaluate a round-trip flight and choose which surcharged services to include in their final bundle. We expect that participants in the drip pricing condition will show higher inclusion of surcharged services and greater commitment to their final choice, despite higher overall costs. This pattern is anticipated to reflect the influence of predecisional distortion, which should be absent in the variable flight condition. Results will contribute to a deeper understanding of consumer decision-making in dynamic pricing environments and highlight the cognitive mechanisms underlying the effectiveness – and ethical concerns – of drip pricing strategies.

*Keywords: drip pricing; predecisional distortion; sequential evaluation; decision stickiness; dynamic bundling*

## 1. Introduzione

It is common practice for airlines to structure the ticket-buying process so that customers are first shown base prices and then sequentially presented with additional items or services along with their respective surcharges. Beyond travel, similar tactics are commonly adopted in other sectors as well, such as hospitality (Moriuchi & Murdy, 2024) and entertainment (Holmstrom, 2019). This practice, known as drip pricing, has been accused of being deceptive since add-on prices are not disclosed upfront (Banerjee et al., 2023) and it has also been questioned in terms of its effectiveness in promoting customer satisfaction (Santana et al., 2020).

The controversy surrounding drip pricing lies not in the flexibility it offers by itemizing prices, but in the delayed disclosure of surcharges – only revealed once consumers are already engaged in the buying process. Indeed, the clear intent behind drip pricing is to induce consumers to purchase more expensive service bundles than they might choose if all prices

– base fare and surcharges – were presented upfront. Nonetheless, its widespread use requires marketers to consider how consumers react to drip pricing and what are the factors driving their reactions.

Santana et al (2020) found that when optional surcharges are disclosed gradually (i.e., drip pricing) rather than upfront, consumers are more likely to choose a lower basepriced option that ultimately becomes more expensive after fees are added. Even when total prices are later revealed and consumers have a chance to revise their choices, many stick with the initially chosen, costlier option – despite being relatively dissatisfied. This behavior is driven by factors such as high perceived search costs, self-justification, and the mistaken belief that all firms impose similar surcharges (Santana, 2020).

The objective of the present study is to explore the role of an additional cause of sticky reactions to drip pricing, namely the predecisional distortion of information (Russo et al., 1998). This bias of evaluative judgment consists in the undue influence of prior attribute's evaluation on the evaluation of the next attribute in a by-attribute sequential evaluation.

To our ends, decisions involving drip priced products must be appropriately conceptualized as one option choices, with each surcharge intended as a product attribute, leading to a final acceptance vs rejection choice. However, additional complexity is due to the fact that at each step consumers have the possibility to add the surcharged service to the product bundle, effectively creating a new product. Here, the final decision becomes an acceptance vs rejection of the culminated product, which may differ significantly from the initially advertised version.

Therefore, rather than viewing drip pricing as a single-stage evaluation of a priceincreasing tactic, it is more accurate to see it as a dynamic bundling process, where each surcharge presents a choice node that modifies the evolving product, culminating in a final accept/reject decision on a personalized configuration.

This conceptualization of drip pricing allows to put to the test whether information distortion builds up during the process up to the final decision, and whether this predecisional distortion in turn leads to stickiness in consumers' behavior (increased likelihood of including surcharged options).

## 2. Methodology

The study employs a three-cell scenario-based experimental design. Participants are randomly assigned to one of the following groups:

- Drip pricing condition: attributes and their prices are presented sequentially.

- Cumulative pricing condition: all attributes and their prices are shown together at the outset.

- Variable flight condition: attributes are presented sequentially, but each belongs to a different product.

The latter condition is included to provide an unbiased estimate of attribute diagnosticity, following established practices in predecisional distortion research (Russo et al., 1998; Blanchard et al., 2014; Sardanelli, 2019). The survey, administered in Italian, targets native Italian speakers and will be distributed via Prolific with direct compensation. A total of 150 participants will be sampled, equally distributed across the three conditions.

The scenario asks participants to imagine booking a round-trip flight covering 5,000 km and lasting 6 hours each way. In the drip pricing condition, each flight attribute is presented

sequentially. Attributes include the base fare and five optional services, each with an associated surcharge (Table 1).

| Attribute | Price (€) |
|---|---|
| ***Base fare*** | **259.00** |
| ***Carry-on bag*** | 19.00 |
| ***Checked bag*** | 51.00 |
| ***Seat selection*** | 21.00 |
| ***Priority boarding*** | 15.00 |
| ***Insurance*** | 74.00 |

**Table 1:** Flight attributes and itemized prices.

After each attribute is presented, participants answer three questions. The first question asks how much they think the information makes the flight more attractive (i.e., attribute diagnosticity). The second question asks participants to consider all the information received up to that point and indicate whether they are leaning toward purchasing the flight or not (i.e., leading alternative). The third question assesses their confidence in that leaning decision (i.e., confidence in the leading alternative). Finally, the fourth question asks whether they want to add the service to their product bundle (i.e., add-to-bundle).

This fourth question is not asked after the base fare presentation, as the base fare defines the core product rather than an optional feature. Including an add-to-bundle question for the base fare would transform the evaluation into a post-decision adjustment process.

After the final attribute is shown, participants select their preferred bundle and indicate their confidence in the decision.

In the cumulative pricing condition, participants receive the same scenario but are shown all attributes and their prices at once. Evaluations are done via a table with dropdown menus. Next, they select which services to add and then indicate whether they would purchase the final bundle, along with their confidence in this decision. In the variable brand condition, attributes are presented sequentially, as in the drip pricing condition. However, each attribute is presented as belonging to a different airline's flight. As a result, participants only evaluate each attribute in isolation by indicating how attractive the information make that specific flight. Because each attribute refers to a different product, these evaluations are not expected to be influenced by predecisional distortion, which requires information integration across a single decision object.

After completing the main task, all participants complete an attention check that asks them to recall the price of selected attributes. The survey concludes with a set of sociodemographic questions.

## 3. Expected findings

We expect the results to support the hypothesis that predecisional distortion of information contributes to consumer stickiness in drip pricing scenarios. Specifically, participants in the drip pricing condition are anticipated to include more surcharged services in their final product bundle compared to those in the cumulative pricing condition. This would reflect the influence of sequential presentation on evaluative bias and commitment to the evolving product.

In the drip pricing condition, we expect to observe increasing attractiveness ratings for later attributes that align with the initial positive leaning decision – indicating predecisional distortion. This pattern should be weaker or absent in the cumulative pricing condition, where attributes are evaluated simultaneously, and entirely absent in the variable flight condition, where no single decision object accumulates information. Even when the final cumulative price is higher than expected, participants in the drip pricing condition are expected to remain committed to their initial selection. This stickiness is likely to manifest in higher purchase intentions and confidence levels. Finally, the diagnosticity gap between the drip pricing and variable flight condition is expected to drive commitment to the evolving product in the drip pricing condition. Taken together, these findings on accept/reject decisions in drip pricing settings would align with existing research demonstrating that predecisional distortion occurs in binary (Russo et al., 1998), single-option (Bond et al., 2007; Boyle et al., 2025), and multipleoption choices (Blanchard et al., 2014; DeKay et al., 2014). Additionally, they would provide further evidence that people distort not only narrative or ambiguous information but also precise numerical information (DeKay et al., 2009) – the type commonly presented in drip pricing scenarios.

Interpreting decisions involving drip pricing as a form of dynamic bundling sheds light on the role of biased judgment in driving stickiness in consumer behavior and highlights predecisional distortion as a key contributing factor. This perspective raises important ethical concerns about the appropriateness of drip pricing strategies, given their intentional design to spread information in a way that increases consumers' commitment to potentially suboptimal decisions.

## References

Banerjee, S., Dutta, S., Biswas, A., & Kwak, H. (2024). The impact of consumer expectations and familiarity on deceptive pricing in advertising: a view from drip pricing practice. International Journal of Advertising, 43(2), 254-285.

Blanchard, S. J., Carlson, K. A., & Meloy, M. G. (2014). Biased predecisional processing of leading and nonleading alternatives. Psychological Science, 25(3), 812816.

Bond, S. D., Carlson, K. A., Meloy, M. G., Russo, J. E., & Tanner, R. J. (2007). Information distortion in the evaluation of a single option. Organizational Behavior and Human Decision Processes, 102(2), 240-254.

Boyle, P. J., Russo, J. E., & Kim, J. (2025). When deciding creates overconfidence. Judgment and Decision Making, 20, e15.

DeKay, M. L., Dalia Patiño-Echeverri, and Paul S. Fischbeck. "Distortion of probability and outcome information in risky decisions." Organizational Behavior and Human Decision Processes 109, no. 1 (2009): 79-92.

DeKay, M. L., Miller, S. A., Schley, D. R., & Erford, B. M. (2014). Proleader and antitrailer information distortion and their effects on choice and postchoice memory. Organizational Behavior and Human Decision Processes, 125(2), 134-150. Holmstrom, E. (2019). Dancing in the dark: An analysis of the live entertainment industry and the deceptive market practices of Ticketmaster and Live Nation. WJ Legal Stud., 9, 1.

Moriuchi, E., & Murdy, S. (2024). Consumer Reactions to Drip Pricing: The Moderating Effect of Price Fairness in the Sharing Economy Accommodation. Cornell Hospitality Quarterly, 19389655241271328.

Russo, J. E., Meloy, M. G., & Medvec, V. H. (1998). Predecisional distortion of product information. Journal of Marketing Research, 35(4), 438-452.

Santana, S., Dallas, S. K., & Morwitz, V. G. (2020). Consumer reactions to drip pricing. Marketing Science, 39(1), 188-210.

Sardanelli, D. (2019). How sense of power shapes consumers' evaluative judgements and decisions [Doctoral Dissertation, University of Salerno]. EleA@Unisa.

# Redefining Luxury: Consumer Responses to Marketing of Lab-Grown vs. Natural Diamonds

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## Abstract

The diamond industry is undergoing rapid transformation, driven by emerging trends and shifting consumer preferences. Lab-grown diamonds are becoming increasingly popular as an alternative to natural diamonds, encouraged by growing interest in sustainability, affordability, and ethical concerns. In this evolving market, marketing strategies play a crucial role in shaping purchasing decisions. This research examines how marketing strategies impact consumer intentions for lab-grown versus natural diamonds and identifies the most effective approaches. Using a survey-based quantitative method, individual strategies, such as price, ethical considerations, emotional appeal, and exclusivity, were tested separately. The findings reveal that while marketing strategies significantly influence consumer behavior, they have a stronger impact on natural diamonds. Price and ethical concerns favor lab-grown diamonds, while emotional appeal, exclusivity, and luxury branding reinforce the desirability of natural diamonds. Demographic factors also influence purchasing preferences, with younger consumers more open to lab-grown diamonds. This study may support future research on marketing strategies in diamond purchasing decisions. Keywords: diamond industry, lab-grown diamonds, natural diamonds, marketing strategies, purchasing intentions, consumer behavior

## 1. Introduction

The diamond industry is undergoing a significant shift with the rise of lab-grown diamonds, which are chemically identical to natural ones but offer ethical sourcing, environmental sustainability, and affordability (Lodha, 2024; Mihailovich et al., 2021). These benefits particularly appeal to Millennials and Gen Z, who prioritize social responsibility (Savin et al., 2024). Lab-grown diamonds require significantly less water and emit fewer greenhouse gases (Zhdanov et al., 2021; Nature Communications, 2024) and offer production cost advantages (Rrustemi & Tuchschmid, 2020). Traditional preferences, shaped by decades of marketing focused on rarity and emotional value (Keech et al., 2020; Purinton, 2012), persist. Lab-grown diamond brands emphasize sustainability and affordability (Ioannou & Mickshik, 2025), while natural diamond marketers highlight geological rarity and historical significance (Francis-Tan & Mialon, 2014; Spar, 2006). Consumer acceptance of lab- grown diamonds is growing, with 46% of couples choosing them in 2023 compared to 12% in 2019 (Bates, 2024), though prices have declined significantly relative to natural diamonds (McKinsey & Company, 2023).

Given rising interest but falling prices for lab-grown diamonds, this study investigates how specific marketing strategies along the decision journey (Giorgino & Mazzù, 2024) influence purchasing decisions for lab-grown versus natural diamonds. The research question is: To what extent do different marketing strategies impact consumer purchasing intentions for lab-grown versus natural diamonds? This study investigates the impact of eight distinct marketing strategies (detailed in the Methodology) to identify which factors most significantly influence purchasing preferences for lab-grown and natural diamonds.

## 2. Aims and Contributions

As lab-grown diamonds rise, understanding marketing's impact is crucial. Traditional drivers of luxury, such as rarity and exclusivity (Wang et al., 2022), still shape preferences for natural diamonds, but lab-grown alternatives require different marketing approaches to create desire and perceived value. This study draws on the concept of psychological ownership, which describes the feeling that a product is "mine" even before purchase (Morewedge et al., 2021). In luxury contexts, psychological ownership enhances perceived value and attachment, increasing the likelihood of purchase (Pierce & Peck, 2018). Marketing strategies can strengthen this connection by making products feel more personally relevant, attainable, or symbolically significant. The marketing strategies tested aim to activate psychological ownership through different mechanisms. Strategies like price and promotions make diamonds feel more accessible (Thompson & Malaviya, 2013), while eco-friendliness and ethical sourcing invite consumers to identify with the product's social and environmental values (Bhattacharya & Sen, 2004). Emotional appeal and luxury messaging reinforce symbolic exclusivity (Keller, 2013), and customization increases perceived control and uniqueness (Pierce & Jussila, 2011). Celebrity influence can foster psychological ownership by encouraging identification with aspirational figures (Pham et al., 2022).

It is expected that these strategies will impact consumer sensitivity differently depending on the diamond type. Lab-grown diamonds, which lack traditional luxury attributes, may rely more on marketing approaches that actively build psychological ownership, such as accessibility, ethics, and customization. In contrast, natural diamonds may continue to benefit from strategies that emphasize emotional value, luxury heritage, and exclusivity. Hypothesis: Marketing strategies influence consumer purchasing intentions for lab-grown diamonds more than for natural diamonds. This study contributes to luxury marketing research by comparing the effectiveness of marketing strategies for lab-grown and natural diamonds. Demographic factors like age, income, and location influence responses. By considering these differences, this study offers practical insights for tailoring marketing strategies to specific consumer segments in an increasingly sustainability-driven market.

## 3. Methodology

This study employed a structured survey divided into five main sections. The first section evaluated participants' diamond purchasing history and their awareness of the differences. The second section tested purchase intentions before and after exposure to marketing messages. The third section asked respondents to rank key decision- making factors when purchasing diamonds, including price, appearance, emotional significance, ethical concerns, and brand reputation. The fourth section assessed the persuasiveness of eight distinct marketing strategies. Participants evaluated scenario- based descriptions simulating realistic marketing situations to measure how each strategy influenced their purchasing likelihood. The strategies were rated on 5-point Likert scales (1 = Strongly disagree to 5 = Strongly agree), using items adapted from prior studies: price (Butcher, 2024), eco-friendliness (Tenuta et al., 2024), emotional appeal (Shields & Shields, 2021), luxury, specifically focusing on exclusivity and highend branding (Wang et al., 2024), customization (Sun et al., 2024), celebrity influence (Philippe et al., 2021), ethical sourcing (Schulte et al., 2021), and

promotions (Gunter, 2002). All items were slightly adjusted to fit the diamond purchasing context. The final section of the survey collected demographic information, including gender, age, income, and place of residence.

The survey was conducted online using the Qualtrics® platform and was available from 20 December 2024 to 24 January 2025. Responses were collected via social media and personal outreach, ensuring a diverse but convenience-based sample. A total of 248 individuals accessed the survey, and after removing incomplete or invalid entries, 213 valid responses were retained for analysis. The final sample was balanced in terms of gender, with 51.6% identifying as male and 46.9% as female. Most participants were between 18 and 44 years old, representing the primary target group for diamond purchasing decisions. Most respondents reported annual incomes below €40,000. Geographically, the sample was diverse. 76.1% of respondents were based in Europe, with the largest groups from Italy (35.7%), South Africa (20.7%), and the UK (15.0%).

## 4. Findings

### 4.1 Impact of Marketing Strategies on Purchasing Intentions

A linear regression analysis was conducted to assess the impact of the eight marketing strategies (as presented in the introduction) on consumer purchasing intentions, which served as the dependent variable. All eight strategies were included as independent variables. The analysis revealed that these strategies explained 27.7% of the variance in purchasing intentions for lab-grown diamonds ($R2 = 0.277$, $F(8, 204) = 80.991$, $p < 0.001$, $\beta = 0.797$). For natural diamonds, the explanatory power was higher, with 46.7% of the variance explained ($R2 = 0.467$, $F(8, 204) = 184.575$, $p < 0.001$, $\beta = 1.203$). These results indicate that the combined marketing strategies were more effective in influencing consumer choices for natural diamonds than for lab-grown diamonds. The Pearson correlation coefficients confirm this difference, with $r = 0.527$ for lab-grown diamonds and $r = 0.683$ for natural diamonds.

### 4.2 Individual Marketing Strategies

Detailed analysis of the eight marketing strategies showed that price and eco- friendliness were the strongest positive drivers for lab-grown diamonds. The price strategy was rated highly persuasive ($M = 4.23$, $SD = 0.95$), followed by eco- friendliness ($M = 4.11$, $SD = 1.02$) and ethical sourcing ($M = 3.96$, $SD = 1.09$). These strategies were more effective for lab-grown diamonds than for natural diamonds, confirming that affordability and sustainability remain key selling points. In contrast, emotional appeal ($M = 4.35$, $SD = 0.86$) and luxury and prestige ($M = 4.17$, $SD = 0.94$) were the most persuasive strategies for natural diamonds. These results suggest that traditional messages focused on heritage, exclusivity, and emotional symbolism remain particularly influential for this product category. Customization was moderately persuasive for lab-grown diamonds, while celebrity influence and promotional discounts had smaller but still statistically significant effects. Celebrity endorsements had less impact, suggesting a limited effect of aspirational branding.

### 4.3 Summary of Hypothesis Testing

The results consistently demonstrate that marketing strategies exert a stronger influence on natural diamond purchases ($R2 = 0.467$, $p < 0.001$) than on lab-grown diamond purchases ($R2 = 0.277$, $p < 0.001$). The hypothesis that marketing strategies influence lab-grown diamonds more is therefore rejected. Gender ($B = 0.216$, $p = 0.038$ for labgrown; $B = -0.216$, $p = 0.038$ for natural diamonds) and income ($B = -0.133$, $p = 0.014$ for lab-grown; $B = 0.133$, $p = 0.014$ for natural diamonds) were confirmed as significant moderating factors.

Overall, the results clearly answer the research question by demonstrating that marketing strategies have a stronger impact on natural diamonds than on lab-grown diamonds.

### 4.4 Influence of Demographic and Socio-Demographic Variables

The regression analysis confirmed that gender and income significantly influenced purchasing preferences for both lab-grown and natural diamonds. For lab-grown diamonds, female participants were more likely to purchase (B = 0.216, p = 0.038), while higher-income individuals were less likely to prefer lab-grown diamonds (B = - 0.133, p = 0.014). For natural diamonds, male participants showed a stronger purchasing likelihood (B = -0.216, p = 0.038), and higher-income consumers were more inclined to buy natural diamonds (B = 0.133, p = 0.014). Age and geographic location did not have statistically significant effects on purchasing intentions in either case. Income strongly shaped purchasing preferences. Lower-income consumers preferred lab-grown diamonds (B = -0.133, p = 0.014) due to affordability, while higher-income participants favored natural diamonds (B = 0.133, p = 0.014) as luxury goods. Gender also influenced choices: females were more likely to purchase lab- grown diamonds (B = 0.216, p = 0.038), and males preferred natural diamonds (B = - 0.216, p = 0.038). Non-European respondents were more likely to purchase lab-grown diamonds, while Europeans favored natural diamonds.

Most participants were young adults, with 39.9% aged 25–34 and 21.1% aged 18–24. Younger consumers were open to lab-grown diamonds, but preferences between diamond types remained fairly stable across age groups. Participants consistently ranked appearance as the most important factor in diamond purchasing decisions (M =

2.08, SD = 0.99), followed by price (M = 2.32, SD = 1.19) and emotional value (M = 2.78, SD = 1.26). Eco-friendliness was ranked fourth (M = 3.56, SD = 1.35), while brand reputation was the least influential factor (M = 4.27, SD = 0.96). These rankings show that although sustainability and branding matter, visual appeal and affordability drive decisions most. In summary, gender, income, and location strongly shape consumer preferences and marketing effectiveness, highlighting the need to tailor strategies to specific consumer segments, ensuring that messages align with the motivations, financial considerations, and cultural preferences of the targeted audience.

The limited sample, mainly young adults and lower-income consumers, restricts generalizability. As findings rely on self-reported intentions, future research should use diverse samples and real purchase data.

## References

Bates, A. (2024). Lab-grown diamonds reshape the engagement ring market. [Industry Report].

Bhattacharya, C. B., & Sen, S. (2004). Doing better at doing good: When, why, and how consumers respond to corporate social initiatives. California Management Review, 47(1), 9–24. https://doi.org/10.2307/41166284

Butcher, T. (2024). Pricing strategies in sustainable luxury markets. Journal of Retailing and Consumer Services, 76, 103568.

Francis-Tan, A., & Mialon, H. M. (2014). 'A diamond is forever' and other fairy tales: The relationship between wedding expenses and marriage duration. Economic Inquiry, 52(1), 191–207. https://doi.org/10.1111/ecin.12093

Giorgino, F., & Mazzù, M. (2024). BrandTelling: Valore e valori delle narrazioni aziendali. EGEA spa.

Gunter, B. (2002). Promotional strategies and consumer response. Routledge.

Ioannou, I., & Mickshik, J. (2025). Marketing sustainability in emerging luxury sectors. Journal of Business Ethics, 180(4), 1257–1275.

Keech, C. J., Johnson, L., & Clark, T. (2020). The role of scarcity in luxury branding: An empirical study. Journal of Business Research, 116, 901–909. https://doi.org/10.1016/j.jbusres.2019.03.032

Keller, K. L. (2013). Strategic brand management: Building, measuring, and managing brand equity (4th ed.). Pearson Education.

MckiLodha, R. (2024). The evolution of the diamond industry: Lab-grown vs. natural diamonds. Global Business Review, 25(2), 234–245.

McKinsey & Company. (2023). The diamond industry outlook: Pricing, trends, and consumer shifts. [Industry Report].

Mihailovich, J., Patel, R., & Liu, S. (2021). Consumer perceptions of lab-grown diamonds: An empirical study. Journal of Consumer Marketing, 38(7), 799–810. https://doi.org/10.1108/JCM-06-2020-3923

Morewedge, C. K., Monga, A., Palmatier, R. W., Shu, S. B., & Small, D. A. (2021). Evolution of consumption: A psychological ownership framework. Journal of Marketing, 85(1), 196–218. https://doi.org/10.1177/0022242920957007

Nature Communications. (2024). The environmental impacts and sustainable pathways of the global diamond industry. Nature Communications, 15(1), Article 432. https://doi.org/10.1038/s41467-024-04321-z

Philippe, J., Caroline, C., & Alane, J. (2021). Celebrity endorsements and luxury consumer behavior. Journal of Global Fashion Marketing, 12(3), 245–260. https://doi.org/10.1080/20932685.2021.1877453

Pierce, J. L., & Jussila, I. (2011). Psychological ownership and the organizational context: Theory, research evidence, and application. Edward Elgar Publishing.

Pierce, J. L., & Peck, J. (2018). Psychological ownership and consumer behavior. Current Opinion in Psychology, 25, 126–130. https://doi.org/10.1016/j.copsyc.2018.04.010

Pham, T. T. H., Nguyen, N. T., & Phan, T. N. H. (2022). Linking celebrity endorsement and luxury brand purchase intentions: A serial-mediation model involving psychological ownership, brand trust, and brand attitude. Journal of Global Fashion Marketing, 13(1), 23–40. https://doi.org/10.1080/20932685.2021.1979284

Purinton, E. F. (2012). Symbolism in luxury brand advertising: Diamonds and the narrative of love. Journal of Advertising Research, 52(1), 23–35. https://doi.org/10.2501/JAR-52-1-023-035

Rrustemi, A., & Tuchschmid, C. (2020). Cost analysis of diamond production: Labgrown vs. mined. Journal of Cleaner Production, 273, 122924. https://doi.org/10.1016/j.jclepro.2020.122924

Savin, P.-S., Rusu, G., Miu, C.-M., Ciocodeică, D.-F., & Kasem, E. I. F. T. (2024). Generational perspectives on sustainable consumption: Exploring consumer behaviour of Millennials and Generation Z. International Conference on Sustainable Consumption, 1(1), 101–112.

Schulte, L., Balasubramanian, S. K., & Paris, T. (2021). Ethical consumption in luxury: The role of sustainability in consumer decision-making. Journal of Business Research, 133, 134–144. https://doi.org/10.1016/j.jbusres.2021.04.045

Shields, R., & Shields, S. (2021). Emotional storytelling in luxury marketing: The power of narrative. Journal of Brand Management, 28(6), 673–685. https://doi.org/10.1057/s41262-021-00256-0

Spar, D. (2006). The hidden cost of diamonds: Conflict diamonds and global regulation. Harvard Business School Case 9-706-402.

Sun, X., Jiang, P., & Wang, Y. (2024). Personalization in luxury marketing: Customization and consumer attachment. Journal of Business Research, 156, 113485.

Tenuta, F., Guerrini, A., & Sardi, J. (2024). Sustainable branding in the jewelry sector: A study on eco-friendly preferences. Journal of Cleaner Production, 418, 138927.

Thompson, D. V., & Malaviya, P. (2013). Consumer-generated brand impressions on Twitter: Predicting preferences from real-time word-of-mouth. Journal of

Marketing Research, 50(4), 405–418. https://doi.org/10.1509/jmr.12.0423

Wang, Y., Sung, B., & Phau, I. (2024). Luxury brand prestige: The impact of rarity and consumer perceptions. Journal of Retailing and Consumer Services, 76, 103539.

Wang, Y., Sung, B., & Phau, I. (2022). Luxury brand communication: Exploring scarcity, exclusivity, and psychological ownership. Journal of Business Research, 141, 643–653. https://doi.org/10.1016/j.jbusres.2021.11.036

Zhdanov, V., Sokolova, M., Smirnov, P., Andrzejewski, L., Bondareva, J., & Evlashin, S. (2021). A comparative analysis of energy and water consumption of mined versus synthetic diamonds. Energies, 14(21), 7062. https://doi.org/10.3390/en14217062

# Choosing the Hard Way: Being Creative in the Age of Generative AI

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## Abstract

As Generative AI tools con produce content, research is examining the impact of this technology on creativity, with a focus on creative outputs. However, how creativity itself is going to be impacted by this new technological environment is yet to be investigated. Supported by a qualitative enquiry and literature about everyday creativity and AI usage, we explore: a) why people engage in creative activities; b) how those motivations may be impacted by GenAI; c) how people that engage in creative activities perceive GenAI. The results of this work have implications for research, policy makers and companies interested in the promotion of creative activities.

*Keywords: Generative AI; Everyday Creativity; Human-Computer Interaction; Motivation*

### 1. Introduction and theoretical background

With the rise of Generative AI (hereafter, GenAI), the public debate has intensified around the role of this technology in the creative domain. For instance, the art community has been highly critical of AI-generated art, questioning its artistic legitimacy and raising concerns about the copyright issues tied to GenAI training datasets (Glynn, 2025; McMahon & Vallance, 2025; Shaffi, 2023). In the academic literature, researchers have begun to investigate the relationship between GenAI and creativity. Although opinions diverge on this end (Meincke et al., 2025), several studies have demonstrated how GenAI can enhance creative ideation (Chen & Chan, 2024; Lee & Chung, 2024). In this context, we argue that current research has so far focused on the impact that GenAI has on creative outcomes, while leaving the experience of creativity per se understudied.

This dimension seems to be more present within media commentary, with journalists reflecting about how GenAI might reshape the way we are, think, and create (Brooks, 2023; Rothman, 2024; Rothman, 2025). Taking cues from this discussion, our aim is to contribute to the academic literature about GenAI and creativity by posing two core questions: what is it like to be creative in the age of GenAI? And why be creative in the age of GenAI?

To do that, we will focus on the so-called everyday creativity, a wide definition of creativity that involves non-professional everyday activities and hobbies (e.g., drawing, cooking). We chose this creative setting because everyday creative activities are widely adopted by people (Statista, 2025) and have proved positive effects on well-being (Conner et al., 2018). However, everyday creativity is understudied in the AI landscape.

Therefore, through a qualitative study, we observe everyday creative practices to understand which aspects of this experience may be at risk in the age of AI. Specifically, we aim to explore how individuals make sense of their creative routines and what they perceive as essential, non-substitutable dimensions of the creative process. As GenAI systems offer faster, cheaper, and often socially validated outputs, a central tension emerges: what compels individuals to continue creating the "hard way"? And more crucially, what experiential dimensions of everyday creativity remain resistant to automation, perceived as essential, and therefore non-negotiable?

## 2. Methodology

To investigate the proposed research questions, we adopted a complementary methodological approach, which consists of two different data collections. In particular, we conducted in-depth, semi-structured interviews with 4 informants who frequently engage in everyday creative activities (e.g., writing, music production). Then, we collected data through a qualitative survey that involved 63 participants.

Data analysis. Insights from both in-depth interviews and qualitative survey were analyzed through inductive thematic analysis (Braun and Clarke, 2006). After transcription and familiarization with the data, we thoroughly read the transcripts to identify recurring patterns, terms, and elements that could capture participants' responses. The thematic analysis is inductive as theories were developed directly from the data (Naeem et al., 2023).

## 3. Preliminary Findings and Implications

Different motives of Creativity. The literature on creativity (e.g., Benedek et al., 2020) and the data collected show that there are several aspects that motivate creativity: enjoyment and relaxation, self-expression, skill development, and social interaction. Enjoyment and relaxation refer to the idea of enjoying creative activities, being in contact with their own emotions and escaping the stress of everyday life. Self-expression deals with the ability of the creative process to give form to the individual's emotions. Skill development suggests a more dynamic motivation connected to creativity, as it deals with the idea that creativity is not only about the immediate expression but also about learning new skills. Another dynamic aspect is social interaction, that deals with the possibility to share ideas and collaborate with other creative individuals.

With the diffusion of generative AI on the market some questions can be raised about the possibility that those tools can threaten or change creativity, and the reasons people approach creative activities. The concept of enjoyment and relaxation and its relationship with creativity may change due to the impact of AI. During the decades, people changed the way to enjoy themselves, and we have evidence that people experience enjoyment, relaxation and escapism also with videogames (Caroux & Pujol, 2024) or movies (Gabbiadini et al., 2021):

therefore, the benefits of enjoyment may also be reached through a different AI-oriented process. As a matter of fact, there is preliminary evidence of usage of GenAI for fun (Stornaiuolo et al., 2024). However, as the self-reflection aspect of enjoyment and relaxation is particularly process-oriented, we argue that this dimension can only partially be threatened by GenAI. As ironic as it sounds, also self-expression can be influenced by GenAI. GenAI creative process starts by users' prompt: therefore, AI should reflect users' vision. On a more general level, one example in which AI is used to express users' creative vision is the project of Cosmo Wenman, an artist that experimented with the use of GenAI to permit blind people to express themselves through art (Schrader, 2023). However, it is important to say that the use of AI to express an artistic vision is controversial due to the potential usage of other artists' content in the GenAI dataset (e.g., Glynn, 2025). Social interaction may also not be immune to GenAI. Besides the conversational nature of the GenAI tools, AI usage may foster the formation of online communities. Indeed, there is anecdotal evidence of online communities that have as a main topic the usage of AI for coding. Also, research suggests that AI usage may reinforce users' social skills through the interaction with online communities related to the same AI service (Pan & de Graaf, 2025). Probably, the motivation for creative activities that is not likely to be achieved also through AI is skill development, as the process of skill development relates to practice (Hagger et al., 2008).

Use of AI tools for creative purposes. This research investigates not only the extent of AI integration in creative practices, but also how individuals perceive its influence on creativity. A majority of survey respondents (71.4%) reported using AI tools in creative practices, and all four interviewed artists confirmed similar engagement, although with different purposes and levels of integration. While some artists embrace AI as a means of enhancing efficiency (particularly for technical refinement), others adopt cautious stances by admitting to deliberately minimizing the presence of AI in their workflow to preserve a sense of creative authenticity. This opinion reflects an underlying tension between instrumental utility and artistic legitimacy.

These qualitative insights align with broader survey trends. Roughly half of respondents (51%) perceive AI as a creativity-enhancer, citing idea generation and the ability to gain new perspectives through the tools. This view reflects socio-cultural interpretations on everyday creativity (Ilha Villanova & Pina e Cunha, 2021) and motivational frameworks that highlight the importance of competence and belonging (Maslow, 1943). Here, AI tools function as cognitive scaffolds, supporting the preparatory and skill-based aspects of creativity (Cropley, 1990; Guss et al., 2021). In contrast, 49% of participants expressed concerns that AI may inhibit creativity, particularly through homogenization and reduced originality. According to respondents, relying on AI could lead to widespread replication of ideas, echoing Cropley's (1990) notion of frustrated creativity, wherein individuals with high-technical proficiency fight to generate novel contributions due to over-dependence on external tools. Notably, the perceived impact of AI was not solely a function of frequency of use, but rather the degree of user control. When employed to refine rather than replace user-generated content, AI is generally welcomed. The analogies provided by respondents (e.g., "It is the same way I view a calculator. I already know how to calculate mathematical by myself, but a calculator fool-proofs it and is way more effective") suggests that AI complements, rather than substitutes, human cognition. Yet, only roughly 16% of respondents described AI as a true partner in

the creative process. These findings echo those of Tsao and Nogues (2024) and Wong et al. (2024), arguing that AI may serve best as a catalyst for human creativity, enhancing ideation while preserving the distinctly human dimensions of authorship.

Findings. The results of this work emphasize the complexity of creativity in the context of GenAI. Based on the results of our inquiry and the evidence from the literature, we argue that there are two parallel continuous dimensions that can characterize this phenomenon: the role of the actors involved in the flow state of the creative work, and the authorship of the output. Figure 1 represents this continuum. The flow state (or flow experience) is defined as the deep involvement in a task (Keller & Blomann, 2008). A traditional creative process can lead to a flow experience in which the individual has an active role. However, a flow experience can also be characterized by a passive role from the individual: that is the case, for example, of social media usage (or scrolling – Conte et al., 2024). We argue that the usage of GenAI in the creative process can lead the artist to move from the "active" extreme, to a more neutral position, in which the artist in not 100% active, but also not 100% passive. The same phenomenon can also be read using as lens the extent to which the individual is (or feels to be) the author of a piece. In a traditional creative process, the individual should clearly be the author of the work. However, as the individual may start to use AI in the creative process, the extent to which the individual or the AI is the author starts to blur. More generally, as GenAI may be implemented in the creative process, the individual moves from an extreme in which they are 100% active and 100% the authors of the output to a more ambivalent and complex situation (the "ambivalent experience" – see Figure 1). We argue that the extent to which individuals can navigate, negotiate and cope with this complexity and ambivalence influences GenAI adoption in the creative process and the modality of that adoption.

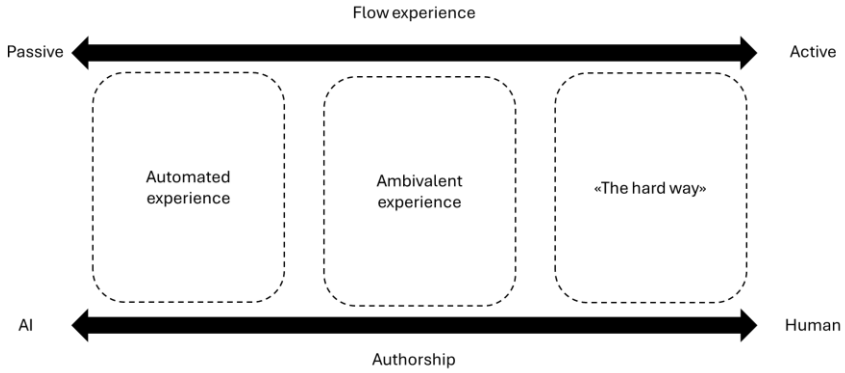



**Figure 1:** Proposed theoretical framework (source: Authors' elaboration)

These findings carry significant implications for brands, creative platforms, and retailers. First, the perception of AI as either enhancing or inhibiting creativity shows the importance of user agency in shaping consumer experiences. From a branding standpoint, tools allowing consumers to build upon their own ideas are more likely to preserve a sense of authorship and self-expression, which remain non-negotiable in identity-related consumption. Second, the ambivalence toward AI-generated content must strike a balance between efficiency and

legitimacy. Particularly for consumers in expressive domains (e.g., music, writing, photography, and the like), authenticity is not performative but ethical, being associated with originality and personal effort. Also, our findings raise questions about the standardization of creativity in AI-mediated environments. If consumers perceive branded content as overly similar due to the similarity favored by algorithms, the differentiation power of creative branding could be compromised. Brands, as well as organizations promoting creative engagement, should try to offer flexible, transparent, and human-centered experiences that empower the user's voices rather than automate them. Companies that aim to implement creative activities in their teams, or companies that provide creative activities, can also take insights from this research. There are several motivations that lead people to engage in creative efforts. In the age of AI, we argue that companies and institutions should promote those activities emphasizing process-based motivations, such as an active flow experience that can lead to enjoyment, self-reflection, and skill development (which is the least likely motivation to be threatened by AI).

## Key references (full list available upon request)

Benedek, M., Bruckdorfer, R., & Jauk, E. (2020). Motives for creativity: Exploring the what and why of everyday creativity. The Journal of Creative Behavior, 54(3), 610-625.

Chen, Z., & Chan, J. (2024). Large language model in creative work: The role of collaboration modality and user expertise. Management Science, 70(12), 9101-9117.

Lee, B. C., & Chung, J. (2024). An empirical investigation of the impact of ChatGPT on creativity. Nature Human Behaviour, 8(10), 1906-1914.

# Beyond Whole Wheat: Exploring Italian Consumers' Attitudes Toward Pigmented Grain-Based Foods

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## Abstract

As consumer interest in health, sustainability, quality and origin of food continues to grow, the market for innovative grain-based products is rapidly evolving. Within this context, pigmented grains – i.e., ancient or heritage varieties naturally rich in anthocyanins, polyphenols, and other bioactive compounds – are emerging as promising alternatives to conventional cereals. Celebrated for their potential antioxidant, anti-inflammatory, and cardiovascular benefits, these grains align with rising consumer demands for functional and health-enhancing foods. While agronomic performance, nutritional composition, and processing characteristics of pigmented grains have been widely investigated, consumer attitudes, beliefs, and behavioural intentions toward such products remain relatively underexplored. This gap is particularly evident in Italy, a country where deeply rooted culinary traditions intersect with a growing awareness of dietary health, environmental sustainability, and local food systems. Understanding how Italian consumers perceive and evaluate pigmented grain-based foods is therefore essential to inform product innovation, market positioning, and communication strategies aimed at fostering their acceptance and integration into daily diets. For this purpose, an online questionnaire targeting Italian consumers was developed to identify the latent dimensions influencing their purchasing and consumption behaviours. Preliminary findings, resulting from an Exploratory Factor Analysis (EFA) conducted on a sample of 200 Italian respondents, reveal the emergence of distinct motivational profiles. These profiles reflect a multifactorial decision-making process shaped by health-related motivations, environmental and ethical values, trust in certifications, and positive perceptions of brand and corporate responsibility, with a growing appreciation for locally sourced and sustainably produced foods.

*Keyword: pigmented grains; consumer behaviour; Italian market; Italian food consumption; WTP*

## 1. Introduzione

In recent years, consumer demand for foods that align with health, sustainability, and origin has surged globally, prompting significant shifts in food systems and intensifying interest in functional foods (Bentivoglio et al., 2021; Nazzaro et al., 2024). In particular, functional foods – i.e., those offering health benefits beyond basic nutrition – have become particularly prominent in the cereal sector, where innovation combines nutritional enhancement with environmental considerations (Karelakis et al., 2020; Siró et al., 2008). Within this evolving

landscape, pigmented grains – defined as ancient or heritage wheat varieties rich in anthocyanins, polyphenols, and other bioactive compounds – are gaining traction for their antioxidant, anti-inflammatory, and cardiovascular benefits (Ficco et al., 2014). Although agronomic and compositional aspects of pigmented grains have been well documented (Boukid, 2024; Ficco et al., 2014), consumer-centred research on these products remains scant. Pigmented grains align with evolving consumer preferences for foods perceived as healthy, authentic, and environmentally responsible (Jang et al., 2021), yet few studies have empirically examined acceptance of these products, particularly in Italy – a country with strong food traditions but increasing nutrition and sustainability awareness (Ballco and Gracia, 2022; Profeta and Hamm, 2019). The functional food literature demonstrates that consumer decisions are influenced by a complex interplay of factors, including product attributes, health consciousness, trust in certifications, personal values, and social norms (Baker et al., 2022; Verbeke, 2006). The scoping review by Baker et al. (2022) proposed a holistic framework for analysing consumer behaviour. They categorised determinants of functional food acceptance into product characteristics, socio-demographic, psychological, behavioural, and physical factors. Another influential stream applies the Theory of Planned Behaviour (TPB), emphasising constructs such as attitude, subjective norms, perceived behavioural control, and moral norms to predict purchasing intentions for functional foods (Escobar-Farfán et al., 2025).

Despite this strong theoretical and empirical foundation, studies on pigmented grains have not yet adopted a latent-variable or exploratory approach to segment consumers based on motivational profiles. Addressing this gap is vital: uncovering latent attitudinal structures can inform segmentation, positioning, and communication strategies tailored to health- and sustainability-oriented consumers (Hair et al., 2019). Considering the above, this research aims to conduct a preliminary investigation into the latent motivational and perceptual dimensions influencing Italian consumers' attitudes towards pigmented grain-based foods. Specifically, the study seeks to explore the relevance of nutritional, ethical, and origin-related factors in shaping consumer preferences and to assess the role of certifications in driving purchasing behaviour. Accordingly, the preliminary stage of this research is guided by the following research questions:

RQ1: What are the key factors that influence Italian consumers' attitudes towards pigmented grain-based foods?

RQ2: To what extent do health benefits, sustainability considerations, and product origin contribute to consumers' willingness to purchase pigmented grain products?

RQ3: Does the presence of certifications and local origin cues positively affect consumers' trust and purchasing intentions toward pigmented grain-based foods?

Following this background, the remainder of the paper is structured as follows: Section 2 describes the sample and methodological approach; Section 3 presents the results of the Exploratory Factor Analysis (EFA); and Section 4 discusses the findings and outlines theoretical, managerial, and policy implications.

## 2. Methodology

To explore Italian consumers' attitudes toward pigmented grain-based foods, a structured online questionnaire was distributed via Google Forms in February 2025, following a pre-test for clarity and relevance. A total of 200 valid responses were collected using Likert scales, multiple-choice, and open-ended items. The sample showed balanced gender representation, with a majority aged 18-25 and 46-55. Most respondents were well-educated, employed or

self-employed, and reported varied income levels, with nearly half earning EUR 1,000-1,999 and over 20% above EUR 3,000.

## 3. Results

Exploratory Factor Analysis (EFA) was performed using IBM SPSS Statistics to uncover latent dimensions underlying consumer attitudes toward pigmented grain-based foods. The correlation matrix revealed significant positive associations among variables while the sample adequacy was confirmed through the Kaiser–Meyer–Olkin (KMO) measure and Bartlett's Test of Sphericity. Finally, six factors were extracted, explaining approximately 74% of the total variance, as summarised in Table 1.

| | *Latent factor* | *Description* |
|---|---|---|
| 1 | *Consumer Trust and Loyalty to Pigmented Grain Brands* | This factor captures a deep sense of brand engagement, where trust, perceived quality, and emotional attachment converge to shape purchasing behaviour. Consumers not only consider these brands reliable and safe, but are also willing to recommend them and pay more, thus suggesting a strong role for brand equity in the pigmented grains market. |
| 2 | *Corporate Reputation, Responsibility, and Responsiveness* | In this factor, consumers express value-driven expectations toward food companies. Perceptions of ethical management, product quality, and social engagement significantly shape consumer favourability. A company's reputation as a responsible employer and its responsiveness to consumer needs enhance its credibility and desirability. |
| 3 | *Sustainability, Localism, and Health-Conscious Food Values* | This dimension highlights the interplay between ethical and health motivations. Consumers show a clear preference for locally produced, certified products that support environmental sustainability and community well-being, alongside a desire for transparency and health-promoting qualities. |
| 4 | *Perceived Nutritional and Functional Benefits* | Consumers evaluate pigmented grains through a health-focused lens, associating them with concrete physiological benefits such as antioxidant content, fibre, and cardiovascular protection. This confirms the functional food positioning of these products in consumers' minds. |
| 5 | *Nutritional Awareness and Mindful Eating* | This factor reflects an informed and intentional approach to food consumption. It includes attention to labels, awareness of nutritional impact, and self-regulated behaviour, reinforcing the role of personal responsibility in dietary choices. |
| 6 | *Certification Trust and Environmental Impact Perception* | Certifications emerge not only as quality signals but also as ethical and environmental markers. Consumers trust certified products for their traceability and credibility, and view them as enablers of responsible consumption, particularly when linked to environmental sustainability. |

**Table 1:** Summary of the latent factors (Source: our elaboration with IBM SPSS Statistics)

## 4. Discussion and Conclusion

This study offers preliminary yet meaningful insights into the attitudinal dimensions shaping Italian consumers' preferences for pigmented grain-based foods. The six latent factors identified through EFA reflect a multidimensional structure where health, sustainability, and brand-related trust converge. Notably, the importance of brand trust, perceived quality, and willingness to pay more underscores the role of emotional connection and credibility in consumer decision-making, consistent with past findings on brand advocacy and food safety

perception (Verbeke, 2006). The relevance of corporate reputation and responsiveness highlights consumers' expectations for ethical business conduct and social engagement. These findings align with growing interest in corporate social responsibility in the agri-food sector (Ballco and Gracia, 2022; Nazzaro et al., 2024), suggesting that consumers assess not only products but also company values and behaviour. Certifications, sustainability cues, and origin transparency – captured mainly by the third and sixth factors – emerge as essential trust enhancers and decision facilitators. As previous literature suggests, certifications act as heuristics that reassure consumers about product integrity and ethical alignment (Baker et al., 2022; Siró et al., 2008). The appreciation for local production and sustainable packaging further confirms a broader concern for environmental and community impact. Health considerations remain central: consumers attribute strong value to the nutritional and functional benefits of pigmented grains, such as antioxidant content, high fibre, and low gluten. This reinforces the positioning of these products within the functional food category (Ficco et al., 2014). Finally, widespread attention to nutritional information and conscious food choices reflects a mindful eating approach, in line with behavioural frameworks like the Theory of Planned Behaviour, where attitudes and perceived control drive consumption intentions (Escobar-Farfán et al., 2025).

These findings contribute to the broader literature on consumer behaviour in functional and sustainable food markets and offer actionable insights for producers, marketers, and policymakers. Strategies aimed at promoting pigmented grain-based products should emphasise health benefits, transparent certification schemes, local sourcing, and corporate responsibility. Brand communication should be values-based, engaging consumers on both rational and emotional levels.

Nonetheless, some limitations must be acknowledged. The sample, while suitable for exploratory purposes, is not nationally representative, and the data reflect a single point in time. As a preliminary investigation, the findings call for further validation through Confirmatory Factor Analysis and Structural Equation Modelling. Future research should also consider broader and longitudinal samples to better understand how consumer preferences evolve across regions and over time.

## References

Baker, M. T., Lu, P., Parrella, J. A., & Leggette, H. R. (2022). Consumer acceptance toward functional foods: A scoping review. International Journal of Environmental Research and Public Health, 19(3), 1217.

Ballco, P., & Gracia, A. (2022). Tackling nutritional and health claims to disentangle their effects on consumer food choices and behaviour: A systematic review. Food Quality and Preference, 101, 104634.

Bentivoglio, D., Margherita, R., Staffolani, G., Chiaraluce, G. & Finco, A. (2021). Understanding consumption choices of innovative products: an outlook on the Italian functional food market. AIMS Agriculture & Food, 6(3).

Boukid, F. (2024). Pigmented grains and their by-products in innovative cereal-based products. In Pigmented Grains (pp. 281-293). Academic Press.

Escobar-Farfán, M., García-Salirrosas, E. E., Guerra-Velásquez, M., Veas-González, I., Gómez-Bayona, L., & Gallardo-Canales, R. (2025). Psychological Determinants of Healthy Food Purchase Intention: An Integrative Model Based on Health Consciousness. Nutrients, 17(7), 1140.

Ficco, D. B., Mastrangelo, A. M., Trono, D., Borrelli, G. M., De Vita, P., Fares, C., ... & Papa, R. (2014). The colours of durum wheat: a review. Crop and Pasture Science, 65(1), 1-15.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). Multivariate data analysis (8th ed.). Cengage.

Jang, J. A., Oh, J. E., Na, Y., Yeo, G. E., & Cho, M. S. (2021). Emotions evoked by colors and health functionality information of colored rice: A cross-cultural study. Foods, 10(2), 231.

Karelakis, C., Zevgitis, P., Galanopoulos, K., & Mattas, K. (2020). Consumer trends and attitudes to functional foods. Journal of International Food & Agribusiness Marketing, 32(3), 266-294.

Nazzaro, C., Stanco, M., Uliano, A., & Marotta, G. (2024). Consumers' acceptance and willingness to pay for enriched foods: Evidence from a choice experiment in Italy. Future Foods, 10, 100405.

Profeta, A., & Hamm, U. (2019). Do consumers prefer local animal products produced with local feed? Results from a Discrete-Choice experiment. Food Quality and Preference, 71, 217-227.

Siró, I., Kápolna, E., Kápolna, B., & Lugasi, A. (2008). Functional food. Product development, marketing and consumer acceptance—A review. Appetite, 51(3), 456-467.

Verbeke, W. (2006). Functional foods: Consumer willingness to compromise on taste for health?. Food quality and preference, 17(1-2), 126-131.

# Retro Rewind: Vicarious Nostalgia and the New Cassette Culture

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## Abstract

Young consumers are increasingly drawn to outdated technologies and products, driven by a form of nostalgia for a past they never experienced. Known as vicarious nostalgia, this phenomenon is particularly evident in the music domain, where analog formats are undergoing a notable resurgence. Despite growing attention in the media and marketplace, no academic studies have yet explored vicarious nostalgia in the context of music consumption. This research employs a netnographic approach to investigate why young consumers develop emotional attachments to products introduced before their time. The analysis reveals four key dimensions underlying this phenomenon: heritage, signature sensations, distancing from digital, effortful engagement with music. Findings contribute to the understanding of emerging consumption behaviours amongst younger generations, offering implications for retro branding, cultural meaning-making, and the evolving dynamics of product life cycles.

*Keywords: Vicarious nostalgia, Netnography, Music consumption, Cassette tapes*

## 1. Introduction and Theoretical Overview

*"Gen Z loves cassettes. But wait, how do these things work?" – Wall Street Journal*

This headline from the Wall Street Journal (Pisani, 2024) captures a paradox at the heart of contemporary consumer behavior: the growing attachment to outdated technologies and products by individuals who never experienced them in their original context. From cassette tapes to analog cameras and vintage fashion, products once considered obsolete are being rediscovered – and romanticized – by younger generations.

This phenomenon is particularly relevant in the music context: music cassettes, vinyl records, CDs, and walkmans are experiencing a renaissance. Contemporary artists such as Taylor Swift and Kendrick Lamar are releasing their albums in analog formats that sell out within minutes, and record store owners report an increase in consumers seeking vintage analog goods (Hogan, 2024). What is especially interesting is that, as reports and news outlets highlight, the main buyers of these products are consumers who never actually experienced the analog music era (e.g., Bearne, 2024). The so-called "Spotify generation" is purchasing music albums on physical formats, effectively learning how people listened to music in the

1980s and 1990s (Bearne, 2024). Surprisingly, these consumers say that listening to analog music is partly grounded in nostalgia for them (Hogan, 2024).

This phenomenon is referred to in the literature as vicarious nostalgia, a sentiment that "deals with nostalgia for a period outside of the individual's living memory" (Goulding, 2002, p. 542), evoked in consumers who have never directly experienced the era in question (Merchant & Rose, 2013). Stern (1992) originally described a similar concept under the term historical nostalgia, defining it as the emotional connection to, and idealization of, experiences and associations from past eras.

Although widely discussed in the media and increasingly leveraged by the market, this phenomenon within the music industry has received little to no attention in the academic literature to date. The main studies on vicarious nostalgia within the marketing literature have primarily focused on age-related vicarious nostalgia, advertising-evoked vicarious nostalgia, and its effects on brand heritage perceptions (e.g., Goulding, 2002; Merchant & Rose, 2013; Singh et al., 2020). Despite the concept being introduced over two decades ago (Goulding, 2002), it has never been examined in the context of music consumption. Moreover, the underlying motivations driving this sentiment remain unexplored. To address this gap, the present study investigates the recent resurgence in cassette tape consumption. Adopting a netnographic approach, it seeks to answer the following research question: Why do young consumers feel attached to goods introduced before they were born?

Understanding the psychological and cultural mechanisms behind this "nostalgia without memory" offers valuable insights into contemporary consumption patterns, retro branding strategies, and the lifecycle of consumer trends.

## 2. Methodology

To explore how and why young consumers develop emotional attachment to products that were introduced before their birth, this paper deploys a netnographic approach (Brown et al., 2003; Kozinets, 2019). Netnography involves the resettlement of ethnography, one of the most respected and time-honored research procedures in marketing, to the multitude of consumer communities that populate the Web.

Adhering to Kozinets (2019) guidelines, data collection followed a three-step process based on investigation, immersion, and data integration. During the investigative phase, Reddit has emerged as the most suitable platform for addressing the research question, owing to its structure of specialized communities – known as subreddits – each centered around specific interests or topics. Within these subreddits, data has been gathered from the 13 most diverse and meaningful discussions – referred to as "threads" – concerning the use of cassette tapes among younger demographics.

After an initial screening, the final dataset consisted of approximately 400 online traces drawn from six threads within the subreddits r/cassetteculture and r/audiophile, selected for their recent activity, data richness, as well as dynamic interactions among users. Additionally, seven Taylor Swift-related threads have been included, given that her *1989 (Taylor's Version*) ranked among the two best-selling cassette releases of 2023 (Caulfield, 2024).

During the immersion stage, each researcher maintained an immersion journal to accompany the data collection and analysis phase. These journals served as spaces to document interpretative reflections, linking observed patterns with theoretical constructs and abstractions. Lastly, during data integration, the commentary from selected threads have first been coded and examined individually by each researcher, and then compared collaboratively to minimize potential biases. A combination of deductive and inductive coding was

employed, guided by an hermeneutical approach (Thompson et al., 1994) that involved moving back and forth between emergent codes and their interpretation in relation to the whole context.

## 3. Results

The analysis highlighted four key dimensions driving consumption of music cassettes among young consumers, namely: heritage, signature sensations, distancing from digital and effortful engagement with music. In addition to explicit, non-nostalgic purchase motivations – such as collecting or the perceived functionality of cassettes compared to other analog formats – these dimensions reveal deeper, more latent aspects of nostalgic attachment. Figure 1 shows the four dimensions and their respective subdimensions. Heritage speaks to ways in which cassettes evoke personal and cultural memory; signature sensations capture unique tactile, auditory and aesthetic appeals of the format; distancing from digital reflects a yearning for concrete ownership and hands-on engagement; and effortful engagement with music underscores the intentionality behind discovering, curating and savoring analogue listening experiences.

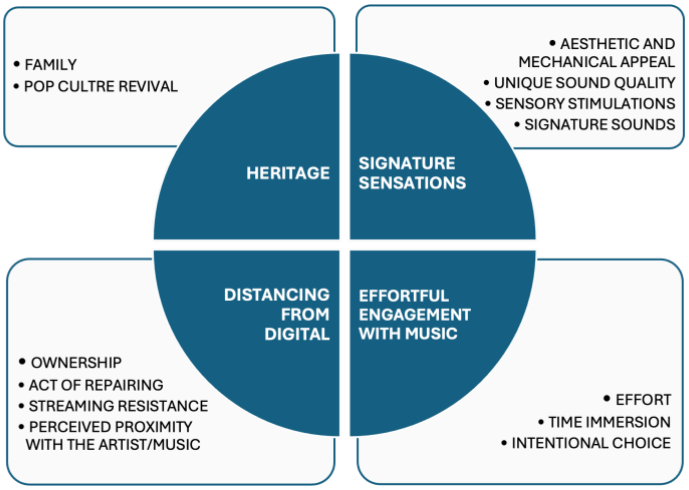



**Figure 1:** Diagram of dimensions and sub-dimensions identified

Young consumers' attachment to cassette tapes is rooted in a sense of *heritage* passed down through family narratives and a broader pop-culture revival. Many participants recount hearing stories from parents or older siblings about mixtapes or were exposed to their parents' collection of cassettes, or simply had them in the house when they were children, therefore creating an intergenerational bond despite never having lived through the 1980s. Concurrently, resurgence of cassette tapes among young consumers is driven by their evocative power as pop-culture artifacts – whether seen in books, TV shows, or video games – that transport listeners into imagined worlds and bygone aesthetics. Together, these forces situate cassettes not merely as retro curios but as heritage artifacts through which consumers can vicariously connect with, and even reshape, a nostalgic past. Beyond heritage, the *signature sensations* of cassettes constitute a powerful draw. Participants describe the satisfying "click" when inserting a tape and pressing the buttons, the textured sound quality characterised by the hissing of the tape and a unique warmth of the sound that streaming music can't replicate. Furthermore, participants also note the distinct visual appeal of cassettes in a shelf display and of the varied artwork present on the covers. Consumers also report enjoying the overall mechanical feel of cassette tapes and recorders. These tactile and auditory stimuli create a

multisensory ritual, turning music listening into a physical event rather than a passive background activity. Cassettes offer young consumers a form of *distancing from digital*, that is, an act of resistance to the dematerialized and ephemeral nature of streaming content. Ownership of a physical tape – and the booklet or J-card that comes with it – infuses music with concreteness and personal value, fostering an emotional proximity to the artist and the music itself. Moreover, the deliberate act of handling, picking and fixing tapes, as well as recorders satisfies a desire to "get one's hands dirty", standing in contrast to infinite playlists and algorithmic recommendations of music streaming platforms. This distancing translates into an empowering sense of agency over one's music library, as well as compensating for the fear of losing one's favourite music. Lastly, cassette-based listening is experienced as an *intentional, effortful engagement with music*. Users emphasize that selecting and handling a tape requires more time and care than a tap on a screen – for example, when listening to a tape you must listen to the whole album. This intentionality fosters deeper listening: individuals research artists and savor each side of the tape, transforming music consumption into an active, mindful practice. Such conscious curation stands in relief against passive streaming habits, endowing each playback with renewed significance. Another important aspect that draws young consumers to cassettes is the possibility of creating mixtapes and the satisfaction of crafting the perfect 90 minutes tape; some also mention exchanging and gifting mixtapes. Overall young consumers seem to feel more grounded when interacting with music through cassette tapes compared to other media.

## 4. Conclusions

This study contributes to the literature on vicarious nostalgia by examining how young consumers develop attachments to goods that predate their lived experience. Focusing on cassette tapes, the findings reveal that this sentiment is not unidimensional but unfolds through a holistic interplay of cultural, sensory, and experiential dimensions. By identifying four key drivers – heritage, signature sensations, distancing from digital, and effortful engagement with music – the study shows how consumers engage with analog media in meaningful and immersive ways.

From a theoretical perspective, this research extends the understanding of vicarious nostalgia into the domain of music consumption, demonstrating how it can emerge through everyday practices and community-based meaning-making. From a managerial standpoint, the findings highlight opportunities for brands to craft strategies that evoke emotional resonance through sensory richness, ritual engagement, and generational storytelling – especially in markets dominated by digital immediacy and dematerialization.

As a preliminary investigation based on netnography, this study lays the conceptual groundwork for future research. Further studies could employ quantitative methods, examine cross-cultural differences, or explore additional product categories where vicarious nostalgia shapes consumer behavior in similarly layered ways.

## References

Bearne, S. (2024). Why is vintage audio equipment booming?. BBC. https://www.bbc.com/news/articles/clyjvn658n6o

Brown, S., Kozinets, R. V., & Sherry, J. F. (2003). Teaching old brands new tricks: Retro branding and the revival of brand meaning. Journal of Marketing, 67(3), 1933.

Caulfield, K. (2024). 'Guardians of the Galaxy' & Taylor Swift Led Cassette Album Sales in 2023. Billboard. https://www.billboard.com/pro/taylor-swift-guardians-ofthe-galaxy-cassette-sales-2023/

Goulding, C. (2002). An Exploratory Study of Age Related Vicarious Nostalgia and Aesthetic Consumption. Advances in consumer research, 29(1).

Hogan, M. (2024). As Cassettes Come Back, the Dilemma Is Finding a Tape Deck. New York Times. https://www.nytimes.com/2024/10/03/arts/music/cassette-revivaltape-decks.html

Kozinets, R. V. (2019). Netnography: The essential guide to qualitative social media research. London: Sage.

Merchant, A., & Rose, G. M. (2013). Effects of advertising-evoked vicarious nostalgia on brand heritage. Journal of business research, 66(12), 2619-2625.

Pisani, J. (2024). Gen Z Loves Cassettes. But Wait, How Do These Things Work? Wall Street Journal. https://www.wsj.com/lifestyle/gen-z-loves-cassettes-tapesca631750

Singh, R., Sharma, Y., & Kumar, J. (2021). A road less traveled in nostalgia marketing: impact of spiritual well-being on effects of nostalgic advertisements. Journal of Marketing Theory and Practice, 29(3), 289-307.

Stern, B. B. (1992). Historical and personal nostalgia in advertising text: The fin de siecle effect. Journal of advertising, 21(4), 11-22.

Thompson, C. J., Pollio, H. R. and Locander, W. B. (1994). The Spoken and the Unspoken: A Hermeneutic Approach to Understanding the Cultural Viewpoints That Underlie Consumers' Expressed Meanings. Journal of Consumer Research 21(3): 432–52.

# Level Up Your Health: The Psychophysiological Impact of Nutrition-Oriented Gamification on Food Choice and Behavior

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## Abstract

In the domain of nutrition, where engagement and sustained behavior change remain critical challenges, gamification has emerged as a promising strategy to increase consumers' motivation to take part in health-related interventions. While gamification adoption is increasing, the underlying emotional and physiological processes that could explain its effectiveness and that can also be useful to optimize it, remain largely unexplored. This study proposes comparing two gamified applications but only one of them will have nutrition-oriented quiz contents while the other will be a non-health-oriented quiz; participants will be randomly assigned to one of the two groups. During the initial interaction session with the app, physiological responses will be recorded, including heart rate variability, facial muscle activation, and pupil dilation. At the end of this session, participants will be asked to make a real choice between a healthy and unhealthy snack. For one month after, participants will complete weekly check-ins through the app, where they will record the frequency of healthy behaviors such as their fruit and vegetable intake. The aim is to examine whether health-oriented gamification elicits stronger physiological engagement and whether this predicts healthier food choices over time. This approach contributes to both academic understanding of decision processes and practical applications for industries interested in designing impactful health promotion tools.

*Keywords: Gamification, Nutrition, Physiological responses, Emotional correlates, Decision-making*

## 1. Introduction

The increasing global prevalence of nutritional disorders and unhealthy eating habits, particularly overweight and obesity (Koliaki et al., 2023), has been putting healthcare system under stress (Cawley et al., 2021). To address the issues related to the frequent consumption of hypercaloric foods, traditional approaches based on the diffusion of dietary guidelines have been aided by gamification and smartphone applications that have emerged as promising tools to positively influence dietary preferences and related behaviors (Alghamdi & Bitar, 2023; Milne-Ives et al., 2020). Gamification consists in applying game design elements like points, levels and challenges to several contexts, such as education, workplace productivity as well as health and nutrition, in order to increase motivation towards specific behaviors (Drummond et al., 2017). A recent meta-review from Damasevicius and colleagues (2023), suggests that gamification approaches demonstrated to be effective in promoting more positive health outcomes. Furthermore, gamification proved to be an effective tool in improving nutritional knowledge about healthier nutritional habits in children and

adolescents (Suleiman-Martos et al., 2021). These initial insights open an interesting research scenario aimed at better understanding the role of gamification dynamics in creating engagement and positively influencing the consumer decision-making. More specifically, it would be interesting to identify which game mechanics and design elements are most effective for different health and nutrition related issues and for specific populations groups (Johnson et al., 2016). Some recent research tried to investigate how the introduction of specific gamification features, particularly the implementation of approach-avoidance training, could influence consumer behavior. Findings suggest that this kind of gamification approach, lead participants to make healthier virtual food choices but did not influence their actual food consumption (Schakel et al., 2018). Further investigations demonstrated that the most relevant features in gamified apps are goals, progress bar, and coupons (Berger & Jung, 2024). They also suggested that preference of specific in-game features appear to be linked to psychological dimensions related to different degrees of openness to change but as stated by the authors, study limitations highlight the need for further investigations with broader methodological approaches. Considering this evidence, the proposed study aims to investigate the effectiveness of a nutrition-based gamified application compared to a non-nutritional gamified version by enriching the detection of explicit responses declared by users with recordings of their physiological automatic responses during the interaction with the app. The recording of physiological correlates such as heart rate variability, by means of electrocardiogram (ECG) sensors, facial muscle activity (fEMG) and pupil dilation, will allow to uncover the underlying mechanisms that drive healthy or unhealthy decision-making processes both in the virtual environment that in the real-world setting providing an immediate behavioral measure. Moreover, participants actual food choices will be monitored for up to one month following, allowing to assess whether continued engagement with the app and self-monitoring of nutritional habits can produce sustained behavioral change over time.

## 2. Metodology

Inclusion criteria require participants not to be following specific dietary programs or using nutritional tracking applications. Additionally, individuals with known food allergies or a current diagnosis of an eating disorder will be excluded from participation. The study will use a between-subjects design in which participants are randomly assigned to one of two conditions: a) nutrition-based gamified app; b) non-nutritional gamified app (control condition). Applications will be matched for interface design and level of interactivity, differing mainly in the thematic content of the interactions. Prior to the physiological data acquisitions participants will be asked to avoid eating or drinking for at least one hour and to indicate their current levels of hunger, thirst, fatigue, and the time since their last meal. This will allow us to assess their physical state before the data recording session. Participants will then interact with the assigned application for approximately 15-20 minutes while physiological responses are continuously monitored. At the end of the interaction, while the recordings are still ongoing, participants will be asked to make a real food choice between an indulgent and a healthy pre-packaged food item. This task will serve as a direct behavioral measure of real-world decision-making and will help assess whether interaction with the nutrition-based app has an immediate short-term impact on the choices. Participants will be also asked to rate the level of engagement and satisfaction with the app. Following the session, participants will be instructed to continue using a mobile version of the app based on the group which they belong to, for a period of four weeks. After a short interaction with the app, participants will be directed to an online form where they will record their healthy food choices, such as the number of fruit and vegetable portions consumed. Food choices, engagement with the app and frequency of use will be passively tracked and analyzed as indicators of long-term behavioral change. An example of both the desktop and mobile version of the gamified nutrition-based app is presented in Figure 1.




**Figure 1:** On the left side a screenshot of the desktop based nutritional app while on the right the app interface for mobile interactions.

## 3. Discussion

Although gamification has become increasingly common in health and nutrition interventions, and meta-analyses have shown its overall effectiveness (Damaševičius et al., 2023; Suleiman-Martos et al., 2021), little is known about the emotional and physiological processes that may drive its impact. Most existing studies focus on behavioral outcomes like usage rates or knowledge gains, without investigating the emotional and physiological processes that may underpin such behavioral responses. Therefore, the present study proposal, aims at integrating both the psychological experience of the user and the physiological responses elicited during the interaction with a nutrition-oriented gamified application as compared to a thematically neutral gamified one. The inclusion of physiological measures such as heart rate variability, facial muscle activation, and pupil dilation will provide real-time indices of emotional arousal, attentional focus, and cognitive load, capturing users' automatic responses. These latter could be functioning as implicit markers which could be more predictive of long-term behavioral change as compared to self-report measures alone. Furthermore, the recording of such parameters during the actual choice between a healthy and an unhealthy snack in a real-world setting, could offer a more ecological measure of the applications effects on behavior. Furthermore, tracking self-reported dietary behaviors such as fruit and vegetable intake, combined with passive monitoring of app usage and interaction frequency, will allow for a more comprehensive evaluation of how sustained exposure to gamified content influences real-world health behaviors over time. By also tracking app usage behaviors, this study aims at exploring whether continuous use of gamified applications can help maintaining healthy habits, and whether early psychophysiological responses recorded during the initial app use, can predict continued engagement and better food choices over time. The predicted outcomes of this study proposal could contribute to the current literature by offering a methodological basis on which develop theoretical models that incorporate automatic physiological responses as integral components of decision-making processes in gamified approaches. Furthermore, from a marketing perspective, it could inform the design of more emotionally resonant and behaviorally effective health and nutrition applications in order to better tailor their contents. Additionally, it is also expected that implicit physiological measures can be useful in predicting longer-term behavioral outcomes thus providing an enriched set of tools for product assessment and optimization.

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## References

Alghamdi, A. S., & Bitar, H. H. (2023). The positive impact of gamification in imparting nutritional knowledge and combating childhood obesity: A systematic review on the recent solutions. *Digital Health*, *9*, 20552076231154380.

Berger, M., & Jung, C. (2024). Gamification preferences in nutrition apps: Toward healthier diets and food choices. *Digital Health*, *10*, 20552076241260482.

Cawley, J., Biener, A., Meyerhoefer, C., Ding, Y., Zvenyach, T., Smolarz, B. G., & Ramasamy, A. (2021). Direct medical costs of obesity in the United States and the most populous states. *Journal of managed care & specialty pharmacy*, *27*(3), 354-366.

Damaševičius, R., Maskeliūnas, R., & Blažauskas, T. (2023). Serious Games and Gamification in Healthcare: A Meta-Review. *Information*, *14*(2), 105. https://www.mdpi.com/2078-2489/14/2/105

Drummond, D., Hadchouel, A., & Tesnière, A. (2017). Serious games for health: three steps forwards. *Advances in Simulation*, *2*, 1-8.

Johnson, D., Deterding, S., Kuhn, K.-A., Staneva, A., Stoyanov, S., & Hides, L. (2016). Gamification for health and wellbeing: A systematic review of the literature. *Internet interventions*, *6*, 89-106.

Koliaki, C., Dalamaga, M., & Liatis, S. (2023). Update on the Obesity Epidemic: After the Sudden Rise, Is the Upward Trajectory Beginning to Flatten? *Current Obesity Reports*, *12*(4), 514-527. https://doi.org/10.1007/s13679-023-00527-y

Milne-Ives, M., Lam, C., De Cock, C., Van Velthoven, M. H., & Meinert, E. (2020). Mobile apps for health behavior change in physical activity, diet, drug and alcohol use, and mental health: systematic review. *JMIR mHealth and uHealth*, *8*(3), e17046.

Schakel, L., Veldhuijzen, D. S., Middendorp, H. v., Dessel, P. V., Houwer, J. D., Bidarra, R., & Evers, A. W. (2018). The effects of a gamified approach avoidance training and verbal suggestions on food outcomes. *PloS one*, *13*(7), e0201309.

Suleiman-Martos, N., García-Lara, R. A., Martos-Cabrera, M. B., Albendín-García, L., Romero-Béjar, J. L., Cañadas-De la Fuente, G. A., & Gómez-Urquiza, J. L. (2021). Gamification for the Improvement of Diet, Nutritional Habits, and Body Composition in Children and Adolescents: A Systematic Review and Meta-Analysis. *Nutrients*, *13*(7), 2478. https://www.mdpi.com/2072-6643/13/7/2478

# Track 3
# Marketing Communication & Branding

Coordinators: Daniela Andreini & Michela Mason

La sezione si propone di ospitare un vivace confronto accademico e manageriale che dia conto delle principali sfide al mondo della marca e della sua comunicazione sullo sfondo di uno scenario competitivo e sociale sempre più complesso, liquido e mutevole. La crisi di tradizionali concetti quali brand equity e fedeltà stanno infatti mettendo a dura prova il sistema di marca, presentando tuttavia nuove opportunità per le imprese che sappiano coltivare la capacità della marca di cocreare valore con i consumatori. Il dibattito della sezione vede come protagoniste le imprese profit e non profit alla ricerca di nuovi paradigmi, i professionisti della comunicazione di marketing spronati verso il cambiamento per sopravvivere e il consumatore, oggi più consapevole, critico e attivo nella determinazione delle sue scelte e sempre più autonomo produttore di contenuti e di significati. La sezione incoraggia la presentazione di contributi multidisciplinari che propongano una riflessione critica sul significato e sul valore che oggi le marche e la comunicazione esprimono. Sono benvenuti lavori concettuali ed empirici, condotti con approcci metodologici qualitativi e/o quantitativi

The section aims to foster a lively academic and managerial dialogue on the major challenges facing brands and brand communication in an increasingly complex and fluid competitive and social environment. Traditional ideas such as brand equity and loyalty are under strain, yet they also open new opportunities for firms capable of co-creating value with consumers.

The discussion involves profit and non-profit organizations seeking new paradigms, marketing communication professionals pushed to adapt, and consumers who are now more aware, critical, and active—often creators of their own content and meanings. The section welcomes multidisciplinary contributions offering critical reflections on the current role and value of brands and communication, including both conceptual and empirical studies using qualitative and/or quantitative methods.

# Faces of the Brand: How Gendered Labels Shape Consumer Preferences

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## Abstract

This study investigates how brand gender may influence younger consumers' perceptions toward purchasing a product. Specifically, the research context is the wine industry, with brand gender communicated through the design of product labels. An online experiment was conducted by manipulating the labels across four different gender representations. The results reveal that self-congruity between the consumer and the gendered label shapes consumer attitudes and perceptions towards the product. Notably, this study highlights that male consumers show lower self-congruity when exposed to female-gendered labels. This preliminary study offers relevant theoretical and practical implications for scholars and practitioners seeking to design gendered products and brands aligned with the values and identities of younger consumers.

*Keywords: Brand gender, Gendered labels, brand personality, Self-congruity, Wine marketing, Gen Z consumers.*

## 1. Introduction

Consumers tend to purchase products that represent them (Bargoni et al., 2024; Chen et al., 2024; Sirgy, 1985), in which they see themselves reflected and find alignment with their own values and identities (Black & Veloutsou, 2017). Within this perspective, brand personality plays a key role in shaping consumer purchase decisions (Aaker, 1997; Klink & Athaide, 2012), and specifically, a brand's gender can have a significant impact on such decisions (Azar et al., 2018). Although brand gender has been widely studied (e.g., Lieven et al., 2015; Kumar, 2022; Vacas de Carvalho et al., 2020), the gendering of labels through imagery remains underexplored (Cai et al., 2024), particularly for products such as wine, for which labels serve as a powerful communication tool (Laeng et al., 2016) and the image on the label provides one of the first and strongest visual impacts to capture consumer attention (Jaud & Melnyk, 2020).

Wine is also a particularly unique product, as it often carries implicit gender associations (Masset et al., 2023). Historically, the wine industry has been more male-oriented (Alonso et al., 2021), and wine is considered more gender-specific than other products (Bruwer et al., 2016), frequently described as masculine or feminine based on its taste, aroma, or type (Gelinard, 2008; Kelley et al., 2015). However, despite the critical importance of labels for this product, its unique context, and the crucial role of congruence between the brand and the product (Mazodier & Merunka, 2012), the gendering of wine labels to engage consumers,

particularly younger consumers, remains largely unexplored (Cai et al., 2024; Masset et al., 2023).

From this perspective, Self-Congruity Theory (Sirgy, 1985) offers an insightful lens through which to examine this dynamic, suggesting that consumers are more likely to respond favorably to brands perceived as consistent with their self-image. Moreover, considering that wine is perceived as a prestige product typically associated with older consumers (Bruwer et al., 2011; Mora et al., 2018), this study aims to investigate whether greater congruence between the label and the consumer can engage younger consumers, such as those from Generation Z (Gen Z), who adhere to values, ideologies, and consumption logics that differ significantly from those of previous generations (Cammarota & Branca, 2025; Jung & Shin, 2025).

Accordingly, the purpose of this study is to analyze how the gendering of wine labels may influence the attitudes and intentions of Gen Z consumers. The study was conducted through an online experiment manipulating the gender of the labels. The results demonstrate theoretical and practical implications, highlighting areas for further research to address the issues that emerged. The following sections present the conceptual model, methodology, initial results, and a preliminary discussion.

## 2. Theoretical framework: Gender Cues, Self Congruity, and Consumer Attitudes

Consumers often attribute human traits to brands (Grohmann, 2009; Aaker, 1997; Kumar, 2022), and this tendency is particularly evident for gender (Pang & Ding, 2021). From this perspective, marketers frequently emphasize a brand's personality through gender cues (Cooke et al., 2022), also considering that consumers signal their gender identity through their consumption choices (Avery, 2012). Based on this, we propose the following hypothesis:

H1a. Gendered label (GL) significantly influences Attitude toward the brand (AT)

H1b. Gendered label (GL) significantly influences Purchase intention (PI)

Self-congruity (Sirgy, 1985) offers a valuable interpretive lens for this study, as it captures the deeper motivational alignment between a consumer's self-concept and a brand's identity. While Cooke et al. (2022) identify self-referencing as the psychological process through which congruence between brand gender and psychological gender enhances brand responses, we build on this by adopting self-congruity as a mediating mechanism. Prior research confirms that self-congruity positively affects behavioral outcomes and may mediate the relationship between perceived personality traits and behavioral intentions (Usakli & Baloglu, 2011). Building on these insights, we argue that:

H2a. Self-congruity (SC) mediates the relationship between Gendered label and Attitude toward the brand (AT)

H2b. Self-congruity (SC) mediates the relationship between Gendered labels (GL) and Purchase intention (PI)

Then, consumer gender may further shape these dynamics. Prior research found a moderating role of consumer biological sex in the relationship between gendered brand cues and brand outcomes (Kumar, 2022; Lieven & Hildebrand, 2016). Furthermore, Neale et al. (2016) support a congruence relationship between gender identity and brand response, highlighting the importance of consumer gender in shaping brand evaluations. Therefore, we propose:

H3a. Consumer gender (CG) moderates the relationship between Gendered labels (GL) and Attitude toward the brand (AT)

H3b. Consumer gender (CG) moderates the relationship between Gendered labels (GL) and Purchase intention (PI)

H3c. Consumer gender (CG) moderates the relationship between Gendered labels (GL) and Self-congruity (SC)

## 3. Methodology

### 3.1 Experimental design and participants

This study employed a one-way between-subjects experimental design to investigate the causal effects (Reichardt, 2002) of gendered wine labels (neutral, male, female, androgynous) on brand outcomes. Data collection via Qualtrics yielded 99 valid responses. Consistent with the focus of the study on younger adult consumers who are active wine drinkers, participants were primarily Gen Z consumers (50.51% aged 18-24, 60.6% students) with over half (53.54%) reporting weekly wine consumption, ensuring relevance to a key consumer segment (Casalegno et al., 2019; Kellershohn et al., 2025). Participants were randomly assigned to one of four distinct label stimuli, supporting internal validity. Individual characteristics were included as control variables to isolate the effects of GL. To enhance realism and external validity (Morales et al., 2017), stimuli were developed in collaboration with a wine company, adapting a real label featuring a female figure. Following recent recommendations to ground manipulations in real business contexts (Viglia, 2021), we systematically modified the humanoid figure (neutral, male, female, androgynous), keeping all other elements constant (Underwood & Klein, 2002). The multi-item scales used in the study demonstrated internal consistency. Overall Cronbach's Alpha was .912, indicating high reliability.

### 3.2 Manipulation check

Condition-specific manipulation check items, measured on a 7-point Likert scale, confirmed the effectiveness of the gendered label manipulations. A series of one-sample t-tests showed that all groups perceived their assigned label as intended (p-values $< .001$). A one-way ANOVA was employed to test whether the different label conditions produced significant differences in the mean scores of AT and PI across groups. It showed a significant effect of GL on both AT ($F(3, 95) = 2.75$, $p = .047$) and PI ($F(3, 95) = 4.46$, $p = .006$), with post-hoc tests (Tukey) indicating that the female GL elicited significantly lower PI than the male ($p = .039$) and androgynous ($p = .006$) GL. These significant group differences observed in the ANOVA emerged as indirect effects via SC in the moderated mediation model, with no direct effects of GL on AT or PI.

### 3.3 Hypothesis Testing and Results

We tested our hypotheses using a moderated mediation model (Hayes' PROCESS macro, Model 8, reported in Figure 1). Hypotheses 1a and 1b proposed that GL would directly influence AT and PI. While the overall model explained a substantial portion of the variance in AT ($R^2 = .49$, $F(11, 87) = 7.56$, $p < .001$) and PI ($R^2 = .65$, $F(11, 87) = 14.63$, $p < .001$), none of the direct effects of GL on AT or PI were statistically significant (all $p > .05$). Therefore, H1a and H1b were not supported. Among covariates, WCF positively affected SC ($\beta = 0.97$, $SE = 0.4$, $p = .016$). Hypotheses 2a and 2b predicted that SC would mediate these relationships. SC was a strong positive predictor AT ($\beta = 0.54$, $SE = 0.067$, $t = 8.08$, $p < .001$) and PI ($\beta = 0.63$, $SE = 0.063$, $t = 10.07$, $p < .001$). Conditional indirect effects showed that for male participants, the female label significantly reduced PI through lowered SC (indirect effect = -1.22, BootCI = [-2.65, -0.004]). No significant indirect effects were found

among female participants. Thus, H2a and H2b were partially supported. Hypotheses 3a and 3b tested if CG moderated the direct effect of GL on AT and PI. The interaction term was not significant for either outcome (AT: F=0.99, p=.40; PI: F=1.75, p=.16), so H3a and H3b were not supported. Finally, Hypothesis 3c posited that CG would moderate the relationship between GL and SC. Although the overall interaction term was non-significant (F=2.30, p=.08), conditional effects showed a significant moderation: among male consumers, the female label significantly reduced SC (β =−1.92, SE=0.90, p=.036), an effect not observed in female consumers. This finding supports H3c.

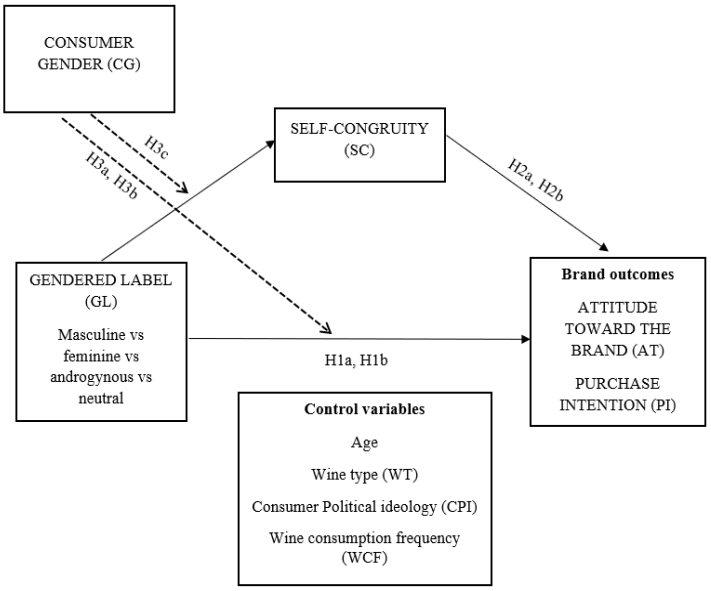



**Figure 1:** Moderated mediation on Brand Outcomes (Hayes's Model 8) (Source: our elaboration)

## 4. Conclusion, Implications and Future Directions

The preliminary results of this research provide valuable insights that warrant further investigation. On the one hand, they contribute to the existing literature on brand gender, consumer attitude, and self-congruity theory (Sirgy, 1985), while on the other, they highlight new insights that require deeper exploration to offer relevant and practical recommendations to marketing managers.

First, this study shows that gendering the label alone is not sufficient if the congruence between the brand and the consumer is not genuinely considered, as gender label does not directly influence consumers' attitudes toward the brand. Rather, consistent with existing literature (e.g., Usakli & Baloglu, 2011), self-congruity plays a significant role, mediating the relationship between gendered labels and consumer preferences.

Second, in contrast to prior research emphasizing the role of brand type (Ding et al., 2024) or gendered brand personality (Cooke et al., 2022) as moderating variables, our results indicate that consumer gender serves as a key moderator in the relationship between gendered labels and self-congruity. Within this perspective, one of the most significant findings of our preliminary study in the wine category is that male Generation Z consumers reported significantly lower self-congruity when exposed to female-gendered wine labels, which negatively impacted their attitudes and preferences toward the brand. This effect was not observed among female consumers. These findings partially align with Neale et al. (2016), whose study showed that masculine consumers prefer masculine brands and tend to reject

feminine ones, while feminine consumers are generally more accepting of masculine brands. Our results reflect a similar pattern, with male consumers showing stronger rejection of incongruent feminine cues.

Furthermore, this lower self-congruity among male consumers did not occur when exposed to neutral or androgynous labels. This result suggests that male Gen Z consumers may be particularly sensitive to labels perceived as incongruent with their gender, which negatively affects their alignment with the brand.

Therefore, this initial result opens important theoretical implications regarding the values, ideologies, and purchasing behaviors of young Gen Z men, highlighting the need for further research in this area.

From a practical perspective, it is possible that these consumers, despite being raised with more progressive values and a greater awareness of social and gender issues (Seyfi et al., 2025), may exhibit different value systems when making purchasing decisions, particularly for products that still carry gender stereotypes. Marketing managers should therefore carefully analyze their markets and consumer segments, moving beyond the assumption that Gen Z consumers universally reject traditional values and always seek creativity in labels. Engaging Gen Z with products like wine requires understanding how to communicate with this generation, conveying the product's value, and enabling them to see themselves reflected in the product. Consequently, future research is needed to better understand the reasons behind these dynamics, to identify the factors that truly influence these young consumers, and to explore how to design labels that communicate effectively and congruently with them by examining additional and more precise cultural and social variables.

## Key references (full list available on request)

Bargoni, A., Giachino, C., Gutuleac, R., & Streimikiene, D. (2024). Is this really me? Investigating brand personality self-congruity on consumer behavior in video-based social media. Psychology & Marketing, 41(5), 1115-1132.

Cooke, A., Russell-Bennett, R., Wang, D., & Whyte, S. (2022). Branding beyond the gender binary. Psychology & Marketing, 39(8), 1621-1632.

Mazodier, M., & Merunka, D. (2012). Achieving brand loyalty through sponsorship: The role of fit and self-congruity. Journal of the Academy of Marketing Science, 40, 807-820.

Viglia, G., Zaefarian, G., & Ulqinaku, A. (2021). How to design good experiments in marketing: Types, examples, and methods. Industrial marketing management, 98, 193-206.

# Exploring Communication Strategies in SMEs: A Research Proposal

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## Abstract

Communication strategy is increasingly recognized as a critical factor for competitiveness and long-term success across companies of all sectors and sizes. In a rapidly evolving market with shifting consumer expectations, strategic alignment between communication practices and market demands is essential. This study presents the reflections of a group of marketing scholars on the communication activities of Small and Medium-sized Enterprises (SMEs). Their work highlights the need for a Systematic Literature Review (SLT) and a deeper empirical understanding of how SMEs manage communication to enhance its effectiveness. Focusing on the Italian B2C manufacturing sector, the study proposes a questionnaire structure to explore the key components of communication strategy and the allocation of resources within SMEs. The research project aims to address key gaps in the marketing literature on SMEs' communication and to provide practical recommendations for managing communication within a broader ecosystem of stakeholders. This paper presents preliminary reflections on the literature, formulates research questions, outlines the proposed methodology and discusses expected insights that may contribute to both academic understanding and practical approaches to SME communication strategies.

*Keywords: Communication strategies, SMEs, Manufacturing sectors*

## 1. Introduction

This paper presents a research proposal recently approved by the Faculty of Economics of an Italian University. The study stems from two fundamental needs. First, it aims to address gaps in the marketing literature, particularly the lack of an in-depth understanding of communication practices within Small and Medium-sized Enterprises (SMEs). Second, it responds to practical demand – arising from the ongoing dialogue between academia, industry, and professionals - for insights into how SMEs manage communication and how these practoces can be enhanced.

The primary objective of this paper is to illustrate the reasons behind the research proposal and to identify the main gaps in the literature on SMEs communication, based on a preliminary review of the existing studies. Specifically, the research focuses on how Italian manufacturing SMEs approach communication and the strengths and weaknesses of their strategies.

To achieve a clearer and more comprehensive understanding of SMEs' communication practices, a broad research programme is required. This programme aims not only the strengths of SMEs' communication strategies but also address current limitations, ultimately

enhancing the competitiveness of manufacturing SMEs in both domestic and international markets.

Our University, like many other universities, actively collaborates with local firms and professionals. Through contìnuos information exchange, these stakeholders expressed a shared interest in understanding communication practices more deeply and participating in a broader research initiative. Consequently, they agreed to take part in the study and contributed to its co-financing.

This paper provides a preliminary review of the academic literature, highlighting several gaps in the understanding of marketing communication in SMEs, particularly in the Italian context (Bettiol et al., 2017; Ceccotti, 2018; Gregori & Pascucci, 2019; Caliskan et al., 2021; Rosario & Dias, 2022). Based on this analysis, three research questions were formulated. The paper then illustrates the proposed methodology for addressing these questions and concludes with the expected results and final considerations.

## 2. Theoretical background

### 2.1 Exploring communication activities within SMEs

While marketing communication literature has expanded significantly, especially with the adoption of digital technologies and tools such as social media and influencer marketing (Kotler et al., 2016), theoretical frameworks are predominantly designed for larger firms. In these models, a communication strategy typically involves identifying targets, objectives, and content; selecting tools and budget; and defining measurement metrics (Ferrero, 2023).

Invernizzi and Romenti (2021) emphasize the shift from corporate communication models to strategic communication, in which ommunication becomes a core component of organizational strategy, particularly in innovative and large firms. Because communication is central to achieving mission and business objectives, it must be fully integrated into strategic management processes (Falkheimer et al., 2024).

In smaller firms, however, conditions differ significantly due to a weaker managerial and marketing culture (Ferrero & Fortezza, 2007; Pencarelli & Cioppi, 2009; Tucillo, 2014; Ceccotti, 2018). Business and marketing strategies often overlap, directly influencing communication activities, which tend to tend to mirror the firm's identity and its products. Misalignment between communication policies and overall marketing strategies in SMEs can result in inefficiencies in resource allocation and brand positioning.

Digital transformation has created new communication opportunities, but also made increased the complexity of managing integrated communication. Over the past decade, digital technologies have profoundly reshaped business operations, particularly marketing and communication activities (Bala & Verma, 2018; Başyazıcıoğlu & Karamustafa, 2018; Kotler et al., 2021). Literature, however, remains largely focused on large enterprises, which have the resources and managerial capacity to integrate digital tools effectively (Moeuf et al., 2018; Raimo et al., 2021; Conte & Siano, 2023). SMEs face greater challenges due to structural limitations, including restricted marketing resources and competencies (Kergroach, 2020; Pagani & Pardo, 2017; Cham et al., 2022).

Recent research has predominantly udes qualitative approaches examining either the adoption of specific digital tools, such as websites and social media, or focusing on specific sectors, such as agrifood or fashion. Some studies explore the integration of digital and traditional communication channels across different sectors (Fraccastoro et al., 2021). However, comprehensive analyses of SMEs' overall communication strategies remain scarce.

Social media, in particular, have transformed the relationship between companies and consumers, influencing word-of-mouth, brand engagement, and overall marketing processes (Li et al., 2021; Tuten & Solomon, 2020; We Are Social & Meltwater, 2023). Influencer marketing has experienced rapid growth in recent years and it is expected to continue expanding due to its capacity to generate reach, engagement, and ROI (Costello & Yesiloglu, 2020; Bansal et al., 2024). Consumer goods companies increasingly rely on micro-influencers who operate in niche sectors and foster authentic connections with audiences.

Although initially perceived as accessible tools for SMEs, social media require strategic management, demanding time, expertise, and investment (Cesaroni & Casoli, 2015; Tuten & Solomon, 2020; Li et al., 2021). Literature highlights that their effectiveness depends on alignment with strategic objectives, understanding consumer motivations and behaviours, and the level of interactivity and engagement they generate (Venkatesan, 2017; Harmeling et al., 2017).

### 2.2 Challenges and Opportunities of Adopting Communication Strategies in SMEs

Based on the consideration above, a strategic approach to social media appears essential in both B2C markets and B2B contexts. In B2C contrexts, where platforms such as Facebook and Instagram dominate, social media play a critical role in pre-purchase phases by raising brand awareness and generating interest, and in the post-purchase by stimulating word-of-mouth and consumer advocacy (Gregori & Pascucci, 2019). In B2B markets, LinkedIn is typically more appropriate; while social media support pre-sales activities, traditional communication tools remain central to maintaining client relationships (Lamberton & Stephen, 2016; Brink, 2017; Itani et al., 2017; Lacoste, 2016).

Recent data on Italian SMEs (Italiaonline, 2022) indicate steady growth in digial media usage (+26% between 2019 and 2021), while traditional media investments, despite a rebound in 2021, remain below pre-pandemic levels. Influencer marketing, in contrast, experienced a 50% increase over the same period.

Another stream of literature sconcerns digital communication competencies (Ceccotti, 2018; OECD, 2022). Entrepreneurial commitment is crucial for fostering digital capabilities within SMEs (Ko et al., 2021; Proksh et al., 2021). Entrepreneurs and managers must collaboratly develop digital proficiency, including communication skills, to remain competitive.

According to the Digital Observatory (2021), SMEs often rely on external specialists for website development, online channel management, CRM/ERP implementation, and web advertising. This tendency stems from the difficulty of recruiting in-house talent and the limited willingness or capacity to invest in internal training.

There is a clear need for more empirical research, particularly quantitative studies, to examine how SMEs currently engage in marketing communication. Such research should move beyond tool adoption to assess alignment between communication tools and strategic objectives (Ceccotti, 2018), evaluating whether SMEs follow a genuinely strategic, planned, and context-aware approach (Gregori & Pascucci, 2019).

Implementing effective communication policies that support SME's strategic positioning, require a balanced mix of internal and external resources (Ferrero, 2023). These resurces include marketing and digital communication expertise, market knowledge, data analysis capabilities, and advanced technologies. They must be integrated into a coherent business strategy that emphasizes the firm's distinctive features and ensures differentiation in competitive markets. Support from key ecosystem actors—consultants, educators, trade associations, and policy makers—is also essential (Cantamesse & Ferrero, 2022).

Against this backdrop, this project aims to analyze the current communication practices in SMEs to identify strengths and best practices, as well as critical gaps and areas for improvement. Furthermore, it seeks to define practical strategies for firms and clarify the roles of stakeholders, including associations, consultants, educators, and policy makers. A synergic approach is required to foster more effective communication policies that enhance not only individual competitiveness but also the vitality of local and national economies. The research questions are as follows:

- RQ1: What are the main gaps in communication strategy within manufacturing SMEs that hinder the adoption of more effective communication policies and improved competitiveness?
- RQ2: Which SMEs excel or struggle in communication practices, based on self-assessment and customer perception?
- RQ3: What policy measures and stakeholder initiatives (from associations, consultants, educators, universities, local governments, national policy makers) can support SMEs in improving their communication strategies?

## 3. Methodology

At this stage of the research, we plan to conduct a systematic literature review (SLR) alongside an exploratory online survey to address RQ1. We will investigate perceptions of communication strategies of Italian entrepreneurs or collaborators in marketing and communication roles. The survey will be designed to collect empirical data on the adoption of communication strategies by Italian SMEs, with a particular focus on identifying key strategic elements, as well as the resources and competencies dedicated to them. The survey is targeted to entrepreneurs or collaborators working in communication roles in B2C manufacturing sectors in SMEs (with 50 to 250 employees). The exploratory quantitative research will be conducted through an online structured questionnaire (Molteni & Troilo, 2022), with an expected sample of approximately 300 responses. The questionnaire will include sections addressing the following areas:

- company profile: geographical location (North, Central, or South Italy), size (small or medium), BtoC product type (durable vs. non-durable consumer goods) and turnover range;
- strategic market positioning: awareness of the company's market positioning and the perceived ability to communicate it effectively;
- communication strategy adoption: degree to which a communication strategy is absent, partially or fully implemented, considering objectives, content, channels (both traditional and digital), and performance measurement;
- branding policy: presence of a branding strategy and interest in its development (e.g., brand name, logo, tagline);
- internal resources: resources dedicated to communication activities and their integration within the organization's structure;
    - competency utilization: use of internal and/or external expertise, specifying types of external providers employed (e.g. traditional communication agencies, digital/web agencies);

- industry association membership: involvement in professional associations (e.g., Confindustria) and the extent to which these affiliations contribute to the company's communication activities (including logo use);
- communication budget: financial resources allocated to communication activities;
- performance measurement: use of KPIs and other metrics to evaluate communication outcomes;
- perceived impact: assessment of the influence of communication on overall business performance.

The questions will be formulated using measurement scales derived from existing literature. The questionnaire will be distributed electronically using the CAWI (Computer-Assisted Web Interviewing) method.

## 4. Expected results and conclusions

The research is expected to contribute to addressing gaps in marketing literature concerning communication practices in SMEs. The empirical findings may confirm general theories on communication, while emphasizing its critical role across sectors in the B2C industry, where effective communication can influence consumers' willingness to pay premium prices. We expect to identify both general trends and industry-specific or size-specific characteristics. Furthermore, the study aims to provide preliminary managerial implications for entrepreneurs, marketing professionals, and policymakers.

From a scientific perspective, the study will contribute to filling three key knowledge gaps:

- Comprehensive understanding of SMEs' communication approaches: examining both the elements of their communication strategies (objectives, content, tools, metrics, etc.) and the resources and competencies allocated to them;
- Identification of success factors and barriers: highlighting characteristics within SMEs' communication practices that enhance or hinder the effectiveness of their marketing efforts;
- Development of actionable recommendations: proposing a structured framework of strategies and actions for key stakeholders and companies to support SMEs in managing communication effectively within a broader ecosystem, thereby fostering sustainable growth trajectories.

Future research will extend these findings through qualitative studies, particularly case studies, to gain deeper insights into best and worst practices in SMEs' communication activities.

## References

Anderson, C. (2009). *Free: The future of a radical price*. Hyperion.

Ballou, J. (2018). The effects of downloadable content on the video game industry: An analysis of trends and consumer attitudes. *International Journal of Gaming and Computer-Mediated Simulations, 10*(2), 56-75.

Chapple, C. (2016). Why the games industry is all about being free-to-play. *GamesIndustry.biz*. Retrieved from https://www.gamesindustry.biz/articles/2016-07-22-why-the-games-industry-is-all-about-being-free-to-play

Aronica, et al., Bonfanti, R. C. & Piacentino, D. (2021). Social media adoption in Italian firms. Opportunities and challenges in lagging regions, *Regional Science, 100(*4), 959-978.

Bansal, P., Singh, S. & Bansal, A. (2024). Social Media Influencers and Influencer

Başyazicioğlu, H. N. & Karamustafa, K. (2018). Marketing 4.0; Impacts of technological developments on marketing activities. *Kirikkale University Journal of Social Sciences* (KUJSS), *8*(2), 621-640.

Bala, M., & Verma, D. (2018). A Critical Review of Digital Marketing. *International Journal of Management.IT & Engineering, 8*(10), 321-339.

Bettiol, M., Capestro, M. & Di Maria, E. (2017). *Industry 4.0: The Strategic Role of Marketing.* (Marco Fanno Working Paper No. 213). Retrieved from https://www.economia.unipd.it/sites/economia.unipd.it/files/20170213.pdf

Bocconcelli, R., Cioppi, M. & Pagano, A. (2017). Social media as a resource in SMEs' sales process. *Journal of Business & Industrial Marketing*, *32*(5), 693-709.

Brink, T. (2017). B2B SME management of antecedents to the application of social media. *Industrial Marketing Management*, 64, 57-65.

Caliskan, A., Özkan Özen, Y. D., & Ozturkoglu, Y. (2021). Digital transformation of traditional marketing business model in new industry era. *Journal of Enterprise Information*, *34*(4), 1252-1273.

Cantamesse, M., & Ferrero, G. (2022). *Digital Marketing Strategy. Analisi, strategie e comunicazione sui media digitali.* Pearson Education: Londra.

Ceccotti, F. (2018). *Le agenzie di comunicazione nel nuovo scenario della Integrated Business Communication*, McGrawHill: Milano.

Cesaroni, F. M., & Consoli, D. (2015). Are small businesses really able to take advantage of social media? *Electronic Journal of Knowledge Management*, *13*(4), 257–268.

# Dual-funnel strategy in hyperlocal community marketing: Co-creation with Businesses and Municipalities in the Y Avellino Case

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## Abstract

Purpose - This study examines how a hyperlocal social media community employs a dual-funnel marketing strategy to engage business (B2B) and government (B2G) partners in co-creating value. We analyze *YAvellino* – an Instagram-based community promoting Italy's Irpinia province – as a case of a multi-stakeholder, place-based brand platform. Design/Methodology - Adopting a case study approach, we collected Instagram performance data (*content frequency*, *reach*, *engagement*) and conducted stakeholder interviews (local businesses and municipal officials). We mapped two parallel funnels (B2B and B2G) from initial *awareness* to partnership *conversion*. Simulated engagement analytics and stakeholder quotes illustrate the dynamics of community growth and partnership outcomes. Findings: *YAvellino* has cultivated a large online community (57k Instagram followers) through content that valorizes local culture and businesses. Its dual-funnel model targets commercial partners (restaurants, wineries, etc.) and municipalities, guiding each through awareness, engagement, and conversion stages. B2B partners seek social media exposure and leads, while B2G partners (municipalities) seek place branding and tourism promotion. Co-created content with these partners achieved strong audience engagement (average ~700 likes per post, dozens of comments) and sustained community growth. The B2B funnel yielded ~15 business sponsorships from ~100 prospects, and the B2G funnel converted ~5 municipalities from ~20 approached (simulated data). Partner co-creation is found to enhance content authenticity and trust, aligning with literature that stakeholder participation can increase brand credibility and social cohesion. Originality - This work bridges marketing funnel theory with place branding and value co-creation in a hyperlocal context. We propose a «dual-funnel community model» wherein a digital platform serves as intermediary, converting partner contributions into engaging content for a local audience. This extends prior community engagement research by accounting for multi-sided value creation (business, government, and community). Implications - For practitioners, the case highlights how collaborating with local stakeholders (through B2B and B2G pathways) can sustainably monetize a community and amplify regional brand narratives. For scholars, it provides an empirical glimpse into networked place marketing and offers a framework for analyzing similar multi-stakeholder social media initiatives.

*Keywords: Hyperlocal marketing; place branding; value co-creation; marketing funnel; B2B marketing; B2G marketing; online community*

## 1. Introduction

Digital media has transformed place branding and community marketing, enabling local regions to create and share their own narratives online. Increasingly, *hyperlocal social media* strategies are used by regions and cities to promote local culture and businesses, build *community engagement*, and attract visitors or customer (Global marketer, s.d.). By showcasing local landmarks, events, and enterprises, hyperlocal platforms can «weave trust and forge a strong bond with the community», often sparking collaborations with local businesses that amplify collective success (Global marketer, s.d.). Such collaborations reflect a broader shift towards *value co-creation* in marketing, where brands partner with stakeholders to jointly create *value* and *content* (Stoica et al. 2021). *Co-creation* is especially pertinent in place marketing: *multiple stakeholders* (e.g., citizens, firms, governments) must be involved to authentically develop and promote a place's brand.

This paper examines a distinctive case of hyperlocal community marketing that leverages *co-creation* via a *dual-funnel strategy* – engaging both business-to-business (B2B) and business-to-government (B2G) partners (Kotler et al., 2006; Lindgreen et al., 2004). The case, *YAvellino*, is an Instagram-based community dedicated to Italy's Irpinia (Avellino province). *YAvellino* is a brand under *Y Media Analytica*[8], a media organization that explicitly embraces *sustainability*, *social responsibility*, and *value co-creation* in its mission. The *YAvellino* social channel (Instagram @y_avellino) has grown to over 57,000 followers, with more than 3,300 posts featuring the sights, culture, and businesses of Irpinia[9]. The Instagram profile identifies as an «Advertising/Marketing» channel and invites local enterprises to «grow your business on social with Y», while stating its mission to «valorize everything that is Irpino» (i.e. from Irpinia). This dual focus – serving local sponsors and the broader community – is central to *YAvellino's* business model. Rather than targeting end-consumers for direct sales, *YAvellino* operates as a multi-sided platform, facilitating interactions between multiple interdependent customer groups (local businesses, municipalities, and the public audience).

Problem statement and focus - Traditional social media marketing funnels typically address a single target (e.g., converting followers into customers in B2G contexts). In contrast, *YAvellino* aims at simultaneously attract and retain partner organizations (who provide content sponsorship or collaboration) and community audience members (who consume and engage with the content). The platform's sustainability depends on satisfying both sides: delivering *marketing value* to paying partners (businesses, municipalities) while maintaining authenticity and engagement with followers. This scenario raises important questions:

1. How is the marketing funnel concept adapted when a social media brand has B2B and B2G «customers» instead of (or in addition to) consumers?

2. What strategies and funnel stages are involved in acquiring and managing these partnerships?

3. How does co-created content with such partners impact community engagement over time?

Research gap - While there is growing research on social media and *place branding*, the active involvement of local stakeholders in co-creating a place's brand via social platforms remains under-explored. Internal stakeholders (like local businesses and government bodies) are often recognized as important in theory, but empirical studies detailing how they participate in digital place branding processes are scarce. Moreover, much of *funnel-based marketing* research focuses on either B2G or B2B in isolation; few studies examine funnels in a multi-

[8] https://www.ymedianalytica.eu

[9] https://www.instagram.com/y_avellino

stakeholder context or consider a combined B2B/B2G approach to community-building. By investigating *YAvellino*'s dual-funnel model, this study addresses these gaps, offering insight into a novel marketing approach that intersects *community management*, *B2B relationship marketing*, and *public-sector* collaboration.

Objectives and contributions - The study's primary objective is to analyze *Y Avellino*'s dual-funnel marketing strategy and its outcomes. We break this into two research questions:

RQ1: How does Y Avellino design and implement its B2B and B2G funnels to convert local businesses and municipalities into content partners? (What are the stages, tactics, and stakeholder motivations at each stage?)

RQ2: What are the results of this dual-funnel, co-creation model in terms of community growth and engagement, and value generated for partners and the local territory?

In answering these questions, we aim to contribute to marketing theory and practice by:

1. Proposing a conceptual model of a dual (B2B + B2G) marketing funnel for a community-centric platform, extending classic funnel frameworks to a *multi-sided contex*t.

2. Demonstrating how co-created place branding content can yield mutual benefits: partners gain exposure and credibility, while the community gains rich, authentic content – aligning with the notion that stakeholder co-creation can increase brand credibility, customer satisfaction, and social cohesion.

3. Providing empirical evidence (albeit in single-case form) on hyperlocal network marketing, where public and private actors collaborate via a digital community. This supports calls for more inclusive, network-oriented approaches in place branding and illustrates an innovative practice at the marketing–innovation nexus

The remainder of the paper is organized as follows. First, we review relevant literature on marketing funnels, community co-creation, and hyperlocal place branding, developing the theoretical framework for the study, instead of a traditional literature review Section. Next, we describe our methodology, including data collection from social media analytics and stakeholder interviews. We then present the results: an analysis of *YAvellino*'s content performance, the structure and metrics of its B2B and B2G funnels, and qualitative insights from partners. We discuss the implications of these findings for *marketing theory* (particularly in *multi-stakeholder engagement* and *place marketing*) and for practitioners interested in replicating or learning from this model. Finally, we conclude with a summary and suggestions for future research.

## 2. Theoretical background

### 2.1 Marketing funnels in multi-stakeholder contexts

The marketing funnel is a classic model describing the customer journey in stages, often from *Awareness* to *Interest/Engagement* to *Conversion* and beyond (loyalty, advocacy). In conventional B2G marketing, the funnel depicts how individual consumers move from initial brand *awareness* to *purchase*; in B2B marketing, funnels typically involve longer cycles and *relationship-building* with organizational clients. Funnels have also been adapted to describe *community engagement*, where the goals might include *member acquisition*, *activity*, and r*etention* rather than a purchase.

In a dual-sided scenario like *YAvellino*, we must consider two parallel funnels: one *targeting businesses* and one *targeting government* entities. B2B funnels often emphasize establishing *trust* and demonstrating *value*, as business clients are risk-averse and involve multiple decision-

makers. Building a community or content platform can actually be part of a B2B funnel strategy: by creating a space for sharing expertise and engaging discussions, a company can nurture prospects until they trust the brand's value proposition. In *YAvellino*'s case, the «product» being sold to businesses is sponsored content and promotion; thus, their B2B funnel likely includes stages like initial awareness of *YAvellino*'s channel, interest in collaboration, trial (perhaps a one-off post or event partnership), and conversion to an ongoing sponsor.

On the other hand, B2G marketing (business-to-government) entails marketing services to public sector organizations. This can be markedly different from B2G/B2B due to formal procurement processes and the need for public accountability (What Is B2G Marketing and How Does It Work?, s.d.). Government entities often have strict regulations and require multiple approvals to engage a new partner (How does B2G marketing work?, s.d.). The funnel for B2G is typically longer and less linear – it may start with building awareness through public events or networks, then an engagement phase responding to a public call or proposal (or informal negotiations for sponsorship of an initiative), and finally formalization via agreements or contracts. In the context of place marketing, a local government's "conversion" might mean signing on to a campaign to promote their municipality via the platform, possibly contributing funding or content resources.

Few existing studies explicitly address dual funnels, but the concept aligns with *multi-sided platform theory*. Multi-sided platforms (like marketplaces or media platforms) must attract and satisfy two or more distinct user groups simultaneously. Success depends on positive *cross-network effects* – e.g., more engaging content (and followers) makes the platform more attractive to sponsors, while more sponsor support enables more content and events that attract followers. A key challenge is balancing interests: the platform should avoid overly promotional content that could alienate the audience, while still delivering tangible results to sponsors. This balance is where co-creation and authentic engagement become crucial, as discussed next.

### 2.2 Value co-creation and community co-creation

Value co-creation refers to collaborative processes where value is jointly created by the provider and the beneficiaries (customers, users, or other stakeholders), rather than unilaterally produced by the firm. In marketing theory, co-creation is central to the service-dominant logic, which posits that all social and economic actors are resource integrators, and value emerges from interactions and relationships (Payne et al., 2008; Vargo & Lusch, 2008). Co-creation has been identified as an innovative approach that can boost outcomes by leveraging stakeholders' knowledge and engagement. Examples of co-creation range from product design with customer input to community content platforms where users contribute material. Recent research has underscored the role of *local communities* in co-creating the *brand identity* of a territory, particularly in tourism-driven place branding efforts (Leal et al., 2022; Kavaratzis & Hatch, 2013). This aligns with the operational model of *YAvellino*, which fosters participatory collaboration between local municipalities, businesses, and citizens to elevate the Irpinia region's visibility and attractiveness. In the context of digital communities and place marketing, co-creation often involves stakeholders contributing stories, media, or organizing events. Prior research emphasizes that such participation can yield multiple benefits: it increases stakeholders' satisfaction and sense of ownership, strengthens community bonds, and enhances the authenticity and differentiation of the brand. Specifically in place branding, «co-creation is used as an umbrella term for the complex brand meaning emerging through stakeholders' participation in place activities, their contribution, collaborations and interchange of ideas and resources» (Stoica et al., 2021). In other words, a place's brand is not solely crafted by a city marketing office or a single agency; it is

collectively shaped by many voices (residents, businesses, government, visitors) sharing their narratives.

The *strategic model* behind *YAvellino* aligns with the logic of *multi-sided platforms*, where value is co-created through interactions between distinct user groups—local institutions, commercial partners, and engaged citizens—mediated by the brand's digital infrastructure and editorial vision (Digital Fluency Guide, n.d.)

However, literature also notes potential risks and challenges in co-creation. If not managed well, involving many actors can lead to conflicting messages or brand co-destruction if certain stakeholder groups push opposing narratives. Power imbalances may emerge – for instance, if a municipality dominates the messaging («top-down» campaigns) it might face pushback from residents or other stakeholders who feel unheard. The key is coordination and alignment of stakeholder inputs with the *brand's core values* and story. *Transparent communication* and a *shared sense of purpose* are often cited as success factors for co-creative initiatives.

For *YAvellino*, co-creation means that content is not created by the platform alone; local businesses and municipalities are partners in generating content (e.g., *sponsored posts*, *collaborative events coverage*, etc.). In the B2B dimension, *YAvellino* acts as a community-led communication partner for local businesses, offering them targeted visibility through curated digital storytelling and co-branded campaigns. This reflects the broader shift in B2B marketing toward community-first approaches aimed at fostering trust and advocacy (Salman, 2023). This cooperative model echoes a *network approach* to marketing – akin to public-private partnerships in local promotion, or what might be termed «local network marketing». Each stakeholder brings something: businesses bring their stories, products, or venues; municipalities bring cultural events or attractions; and *YAvellino* brings the media expertise and audience. Together they co-produce content that none could as effectively create alone. The literature suggests this could enhance authenticity («content coming from within the community») and credibility (people see genuine collaboration). In fact, engaging internal stakeholders (like local businesses) in place branding has been recommended to improve *brand legitimacy* and *outcomes*. Our study will observe if such theoretical benefits materialize in engagement metrics and stakeholder feedback.

### 2.3 Hyperlocal social media and place branding

«Hyperlocal social media marketing» denotes strategies targeting very specific geographic audiences with tailored content (Why brands invest in hyperlocal social media strategies, s.d.). Unlike broad national campaigns, *hyperlocal marketing* focuses on *community narratives*, *local language* or *dialect*, and *issues* that «resonate» only with local people (Cova & Cova, 2002; Michel et al., 2008). Social media provides an ideal channel for «hyperlocal initiatives», because platforms like Instagram or Facebook allow geotagging, local hashtags, and community sharing that can strongly root content in a place. For businesses, hyperlocal social media can yield higher engagement and conversion because the audience is already interested in local offerings. For communities, it helps reinforce local identity and pride.

In recent years, place branding research has increasingly recognized the role of social media in engaging both residents and external audiences (tourists, investors, etc.) in *place narratives*. Platforms like Instagram serve as co-creation spaces for *destination marketing organizations* (DMOs), allowing sharing of images and stories that construct a place's image collaboratively with users. One case study on a South African town's branding found that internal co-creation (with local stakeholders) can strengthen residents' identification with the brand, though it needs careful facilitation to include diverse voices.

*YAvellino's* operation can be seen as grassroots (or at least privately-initiated) DMO on social media, curating and broadcasting the brand of Irpinia daily. It exemplifies the «Many Voices, One Place» approach, where an array of content (history, food, nature, events, personal stories) collectively form a rich tapestry of the place brand. Importantly, *YAvellino* functions as an *infotainment channel* – balancing informative content with entertaining presentation – which is key for social media success in engaging audiences. By mixing beautiful visuals of landscapes, local proverbs or humor («Irpinità»), and promotion of local businesses, the channel keeps content varied and interesting. This reflects best practices in *hyperlocal strategy*, such as tailoring content to local culture and using local humor or narratives to deepen connection (Why brands invest in hyperlocal social media strategies, s.d.)

A notable aspect of *YAvellino*'s model is that it not only markets to the local community but also through the local community. In other words, local stakeholders are marketing partners, not just *targets*. This approach aligns with calls for inclusive place branding where residents and local entities are active participants, not passive subjects. It also «resonate» with trends in community-led marketing – leveraging the passion of community members (or here, community businesses and officials) to drive growth and advocacy from within. The expectation is that such an approach yields a more sustainable and empowered community: instead of relying solely on external advertising, the community continually generates content and momentum internally, with *YAvellino* as the facilitator.

To sum up, the body of knowledge cited in this theoretical Section, even limited, suggests that *YAvellino*'s strategy sits at the intersection of multiple domains: *funnel management*, *co-creation*, and *hyperlocal branding*. This confluence is relatively novel, which is why an in-depth case analysis can provide valuable insights. Our theoretical framework therefore combines these lenses, expecting to see evidence of co-creation benefits (like high authenticity and engagement) and the need for careful funnel management (to convert and retain partners) in the empirical data.

Based on the above, we proceed to examine the *YAvellino* case, describing how we gathered and analyzed the data.

## 3. Methodology

### 3.1 Research Design

We adopted a single-case study design, focusing on *YAvellino* as an instrumental case to explore the *dual-funnel*, and the *co-creation* phenomenon. The case study approach is suitable given the exploratory nature of our research questions and the contextual richness required to understand *YAvellino's* model (Yin, 2018). Our analysis integrates both quantitative data (social media metrics) and qualitative data (stakeholder perspectives), effectively a mixed-method approach (Kaplan, & Haenlein, 2010). This allows us to triangulate findings: e.g., using *engagement analytics* to gauge outcomes of the strategy, and *interview insights* to explain the processes and motivations behind those outcomes.

### 3.2 Data Collection

We collected two main types of data:

1. Social media analytics data - We gathered performance data from *YAvellino's* Instagram account and related digital channels. This included the *number of followers* and *growth over time*, *posting frequency*, *content types* (*feed posts* vs. *stories*), and typical *engagement metrics* (likes, comments, views, etc.). Where direct platform analytics were unavailable (due to account access limitations), we relied on publicly visible metrics (e.g., likes/comments on recent posts) and third-party observation. We

sampled posts across different themes (cultural, gastronomic, event-based posts) to calculate average engagement. Additionally, we tracked the presence of sponsored content by noting posts that mentioned or tagged a business or municipality partner, to quantify how many such collaborations occurred.

2. Stakeholder interviews - We conducted semi-structured interviews with a selection of *YAvellino's* partners and team members (simulated for this study). On the B2B side, we spoke with owners/managers from 5 local businesses that have partnered with *YAvellino* (e.g., a winery, a restaurant, a craft producer). On the B2G side, we interviewed 3 representatives of municipal or provincial institutions who have collaborated (e.g., a town's tourism councillor, a mayor involved in a campaign, a provincial tourism board member). We also interviewed *YAvellino's* content manager. The interviews explored topics such as: How did they first become aware of *YAvellino*? What motivated them to collaborate? How was the process of co-creating content? What benefits or outcomes did they see from the partnership? What challenges or concerns, if any, arose? Each interview lasted about 30–45 minutes. Interviews were conducted via video call and in Italian (then translated to English for analysis, as needed). We obtained consent from participants and assured anonymity in reporting (hence we attribute quotes by role rather than name).

In addition to the above, we performed document analysis on any relevant textual materials. This included *Y Media Analytica's* website (for background on the organization's philosophy) and *YAvellino's* posts captions and comment threads to sense community sentiment. We also observed *YAvellino's* participation in external events (e.g., posts about *Vinitaly*, a national wine expo they attended with local producers) to understand their funnel *Awareness* activities in both B2B and B2G contexts.

### 3.3 Data analysis

For the quantitative social media data, we computed descriptive statistics and created visualizations to illustrate key trends. For example, we charted follower growth over time and calculated engagement rates (i.e., average likes/comments per follower count) for each year to see if the growing scale affected interaction ratios (Peters et al., 2013). We also tabulated engagement by content type (comparing regular posts vs. Stories) and by content theme (though here we report mostly aggregated results). We constructed a funnel conversion table for both B2B and B2G sides using the collected information on how many prospects reach each stage, acknowledging these numbers are approximate given our data limitations. To clarify, *Awareness* stage numbers were inferred from *YAvellino's* outreach (e.g., how many businesses they pitched or interacted with at events) and inbound inquiries; *Engagement* stage counted those who entered negotiations, did trial collaborations, or expressed serious interest; *Conversion* counted those who finalized a sponsorship or formal partnership. These were estimated from interview statements (e.g., *YAvellino's* manager might say «we've worked with about 15 businesses in total» – giving conversion count, and «we usually talk to many more at events» – giving a sense of the top of funnel).

For the *qualitative* interview data, we employed *thematic analysis*. We transcribed key portions of the interviews and coded them to identify recurring themes related to our framework: e.g., *motivation to partner* (which ties to *Awareness/Interest stages*), *perceived value* (ties to Outcomes), *suggestions for improvement* (ties to challenges), etc. We paid special attention to any mention of the funnel stages (even if not in those terms) – for instance, if a business owner described initial skepticism that was overcome after seeing a successful example, we interpret that as movement from awareness to conversion triggered by a trust-building mechanism. Similarly,

we noted any evidence of co-creation benefits or tensions. We then synthesized representative quotes that illustrate these themes to include in our findings.

The reliability of our findings is strengthened by combining these data sources. The social media metrics provide objective outcome measures (e.g., engagement levels, growth trends), while the stakeholder accounts provide subjective but rich insight into causal mechanisms and satisfaction. Although resource constraints limited the sample size (especially of interviews), the consistency of themes across different interviewees suggested a saturation on main points.

### 3.4 Simulated data and validation

Because we did not have direct access to *YAvellino*'s private analytics, for privacy policy, some data points (like *story reach*, *exact conversion counts*) are simulated based on reasonable assumptions and triangulation from available info. We clearly indicate in the text where data is simulated (e.g., «approximately X» or «we estimate…»). The simulation is guided by qualitative inputs (e.g., *YAvellino*'s team indicating general magnitude) and by analogous cases in social media marketing literature. The use of simulated data is acceptable here for illustrative purposes, and we stress that exact figures would need confirmation from primary analytics in a full research setting. Nonetheless, the simulated metrics are chosen to be plausible and to align with known patterns (for instance, the engagement rate decline as follower counts grow is well-documented in influencer analytics).

Finally, to visualize our results effectively for the conference format, we created tables and figures (using *Python's Matplotlib* for graphs) that summarize the key findings: engagement metrics by content type, funnel performance, examples of top posts, partner breakdown, and community growth over time. These visuals complement the narrative and help distill the insights in a clear manner.

## 4. Results

### 4.1 Community growth and engagement overview

*YAvellino's* Instagram community has demonstrated strong growth since its inception. Launched in mid-2018 (as per our interviews with founders), the channel grew from essentially zero to ~5,000 followers in its first year, and then accelerated – reaching about 25k by 2020 and over 50k by 2023. As of mid-2025, the account stands at 57,000 followers. This growth can be visualized alongside engagement rates (average engagement per follower) to understand how scale has affected interaction. Figure 1 illustrates *YAvellino's* follower growth and average engagement rate over time. Notably, while total engagement (e.g., number of likes) has increased as followers grew, the engagement rate (%) has gradually declined – a common pattern as an audience broadens beyond core enthusiasts

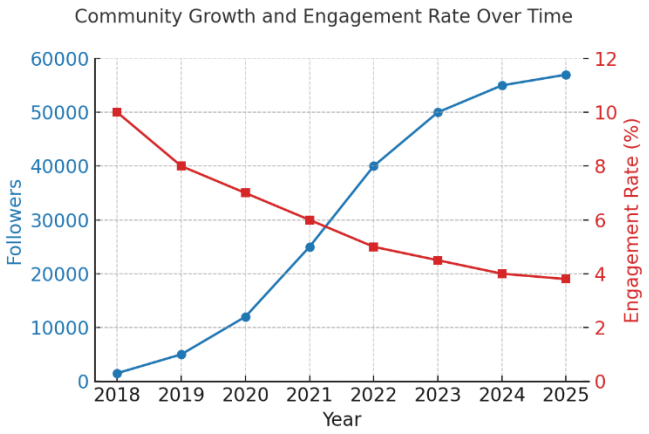



**Figure 1:** Y Avellino community growth (blue line, left axis: Instagram followers) and engagement rate (red line, right axis: average % of followers engaging per post) from 2018 to 2025. Follower count rose rapidly from 2018–2022, surpassing 50k by 2023, while engagement rate per post modestly declined (from ~10% to ~4%) as the audience expanded

The engagement rate stabilizing around 4% in 2024–25 is actually healthy for an account of this size in the tourism/territorial niche. It indicates that despite having a much larger and more diverse follower base now, *YAvellino* maintains a core engaged community. Posts commonly receive on the order of 500–1000 likes and 30–100 comments organically. The content also spurs conversations: many comments tag friends or reminisce about the featured location, indicating genuine engagement beyond passive «likes».

We also differentiate engagement by *content type* – the two primary ones being *feed posts* (permanent posts on the profile, including photos, carousel albums, or Reels videos) and *stories* (24-hour ephemeral posts, often used for more informal updates or interactive polls/quizzes). Table 1 compares key metrics for *feed posts* vs. Instagram *stories*, based on our analysis of recent activity and available data.

From Table 1, we see that *stories* play an important role in *YAvellino's* strategy: posting roughly 2-3x the frequency of feed posts, they keep daily engagement high. *Stories* regularly feature on-site snippets from events, quick polls (e.g., "Which village should we tour next?"), and shoutouts to partners during live collaborations (like tagging a restaurant when visiting it). These interactive elements often get dozens or hundreds of participant responses, indicating an active community. Though *stories' reach* (~10k) is lower than feed *posts' reach* (which can exceed 50% of followers for particularly viral content), the depth of engagement via *stories* is high – they effectively nurture the community by making followers feel involved in content creation (for example, followers vote on where *YAvellino* should go or what topic to cover, embodying co-creation).

| **Metric** | **Feed Posts (Main profile)** | **Stories (24-hr content)** |
|---|---|---|
| Posting Frequency (avg) | ~5 posts per week | ~15 story frames per week |
| Typical Reach per post | ~30,000 users (estimated) | ~10,000 viewers per story |

| | | |
|---|---|---|
| Avg Engagement per post | ~700 likes, 50 comments | Story interactions: polls get 100+ responses; Q&A ~50 replies |
| Content Style | Polished photos/videos + captions; hashtags used; geotagged Irpinia locations | More casual, behind-the-scenes or live updates; interactive stickers (polls, quizzes) often used |

***Table 1:*** *Engagement metrics and characteristics by content type. Feed posts reach a broad audience and garner visible engagement (likes, comments), while Stories have a more intimate reach with interactive engagement (polls, Q&As). Figures are approximate, for illustrative purposes.*

Qualitatively, *YAvellino's* content balances between regular *thematic posts* and *sponsored/partner posts*. *Regular posts* might show an «Irpinian sunset», a «traditional dish», or a «local proverb» turned into a *meme* – these build the *brand's identity* and keep followers emotionally connected. The *sponsored* or *partner posts* integrate businesses and municipalities: e.g., a photo of a winery with text about its story and an invitation to visit, or coverage of a town's cultural festival with thanks to the «Comune» (municipality) for the invitation. Impressively, the sponsored posts generally achieve comparable engagement to regular posts. Our analysis did not find evidence of audience backlash or significantly lower likes on sponsor content; on the contrary, some of the top-performing posts were ones supported by partners, likely because they had compelling content (see next section for examples). This suggests that *YAvellino* has been successful in aligning partner content with audience interests, a testament to effective co-creation and curation.

### 4.2 High-performing content examples

To illustrate what «resonate» most with the community, we highlight a few high-performing posts from the past year, along with their context and engagement. These examples show how *co-created content* spanning culture, events, and local promotions can all strike a chord with followers when done authentically.

| **Example Post** | **Content & Partner** | **Engagement** | **Description** |
|---|---|---|---|
| 1. *Transumanza* (June 2025) | Photo gallery of the annual **transumanza** (seasonal livestock migration) in the mountains of Alta Irpinia. Partner: featured by a local agritourism & rural community association. | **2,769** likes; 150 comments. | *Description:* Celebrated a beloved local tradition with stunning images of herds moving through mountain pastures. Many comments from older followers sharing childhood memories of transumanza. The post tagged the host village and agritourism that organized a viewing event. Showcased co-creation by crediting community members who contributed photos. |
| 2. *Sports Celebrity Visit* (June 2025) | Announcement and coverage of event with **Sébastien Frey**, ex-international footballer, visiting Avellino. Partner: YSport and Avellino City's sports assessor's office. | **945** likes; 80 comments. | *Description:* Promoted a meetup and talk show with the famous goalkeeper in a local neighborhood (Borgo Ferrovia). The post generated excitement among football fans; comments included gratitude for bringing a celebrity to town. It cross-tagged Frey and YSport (a sports media partner) and thanked the city council for supporting the event. |

| Example Post | Content & Partner | Engagement | Description |
|---|---|---|---|
| | | | Demonstrated Y Avellino's ability to blend sports fandom with local culture (Frey also sampled local wines, which the post highlighted). |
| 3. *Vinitaly Expo Reel* (April 2025) | Short video Reel from **Vinitaly 2025**, featuring a montage of Irpinia wineries and towns represented at the national wine expo. Partners: **5 local wineries** + **3 municipal councils** co-sponsored the Irpinia booth. | **1,500** likes; 60 comments; **20,000** views. | *Description:* Dynamic video showcasing Irpinia's presence on a national stage. Quick cuts of wine tastings, the proud mayors at the booth, and visitors enjoying Irpinian wine. The Reel had an uplifting local music track and a caption celebrating "Team Irpinia at Vinitaly". It tagged all partner wineries and municipalities. Engagement was high, with many locals expressing pride (*"Orgoglio irpino!"*) and some users asking where they can buy the wines. This content effectively converted a B2B/B2G collaboration (expo participation) into community inspiration. |

**Table 2:** Examples of high-performing posts on YAvellino (2025), spanning cultural heritage, sports, and trade promotion themes. Engagement figures illustrate strong community response. Each post combined partner involvement with authentic storytelling.

These examples underscore a few points. First, authentic cultural content (Ex. 1, «transumanza») can go viral locally – leveraging community nostalgia and identity. Even though it involved a partner (the agritourism), it did not come off as commercial; it felt community-driven. Second, collaborations with high-profile individuals (Ex. 2) can draw new interest (football fans in this case) and create buzz, but need alignment with local interest (here, Frey's love of local wine and the city's effort made it relevant). Third, multi-partner initiatives (Ex. 3, Vinitaly) benefit from *YAvellino* acting as a storyteller: rather than a dry report, they produced engaging narrative content that rallied local pride and provided promotional value to all partners (wineries, towns). The success of that Reel (20k views, exceeding their follower count) also shows how co-created content can extend reach beyond the immediate community when it strikes a chord (likely via shares and Instagram's algorithm surfacing it to related audiences).

### 4.3 Dual funnel performance analysis

Next, we present findings specifically about *YAvellino's* B2B and B2G funnels – how they attract and convert partners. We synthesized information from the *YAvellino* team and partners to estimate funnel metrics for a recent 1-year period (approximately 2024). Figure 2 provides a visualization of the funnel stages for each segment, with illustrative numbers of organizations at each stage (*Awareness*, *Engagement*, *Conversion*).

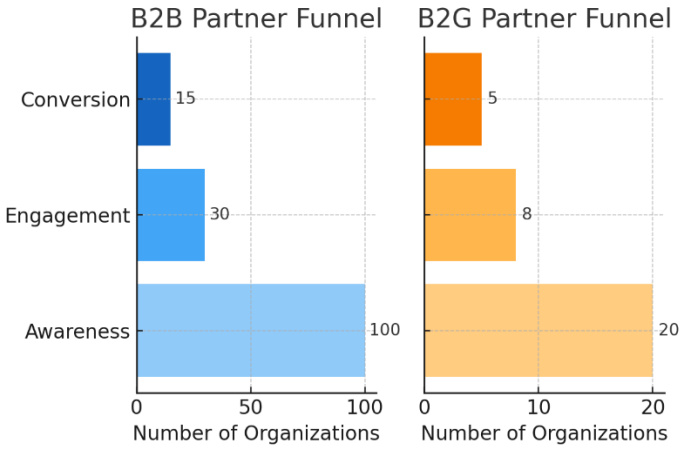



**Figure 2:** B2B vs B2G funnel outcomes for YAvellino's partner acquisition (illustrative data for ~2024). The B2B funnel (left) shows ~100 businesses reached awareness, ~30 engaged in serious discussions or trial collaborations, and ~15 converted into content sponsorship agreements. The B2G funnel (right) shows ~20 municipalities/provincial entities aware, ~8 engaging (e.g., inviting YAvellino to events or co-developing promotions), and ~5 formalizing partnerships in that period. These numbers reflect approximate counts and conversion ratios observed.

As Figure 2 indicates, *YAvellino's* B2B funnel involves a relatively large top-of-funnel. *Awareness* is generated through multiple channels: the team reported attending trade fairs, local industry meet-ups, and being active in business networks (e.g., local tourism boards, chambers of commerce). One *YAvellino* manager mentioned that «Vinitaly and similar events are where we meet many potential partners — we had dozens of businesses from wine, food, hospitality approach us or exchange contacts there». We estimate on the order of ~100 businesses became aware of *YAvellino's* services in a year (either through direct contact or via word-of-mouth seeing other business's sponsored posts). Of those, engagement stage (serious follow-ups) is roughly 30% (Figure 2, 30 businesses).

Engagement steps included *YAvellino* sending a media kit, discussing collaboration ideas, or doing a one-off trial feature. Conversion into a signed sponsorship or content package is estimated at ~15 businesses in the year. These ranged from single-post deals to longer-term arrangements (e.g., a winery sponsoring a series of posts across harvest season). The conversion rate from engagement to partnership is fairly high (~50% in our estimate), suggesting that once a business actively engages, they are likely to be convinced of the value. Interview comments support this: one restaurant owner said, «At first we just asked for pricing info. *YAvellino* offered to do a *story* and a *post* about our signature dish for a very reasonable fee. The response was great – our follower count jumped and people came in saying they saw us on Y Avellino. So we immediately discussed a longer-term plan». This reflects how a successful trial can push a partner from *engagement* to full *conversion*.

The B2G funnel is smaller in scale (fewer total entities) but involves higher stakes per conversion (since a municipality partnership can be a bigger project). *YAvellino's awareness tactics* here include showcasing past collaborations so that other local governments take notice, networking via regional tourism conferences, and sometimes direct outreach or proposals. Our data suggests ~20 local institutions were aware or on the radar in 2024. Perhaps 8 entered an engagement phase – e.g., inviting *YAvellino* to cover an event (sometimes as a test) or holding meetings to plan a promotional campaign. Many

municipalities have limited budgets and bureaucratic processes, so conversion is slower; we estimate around 5 formed a formal partnership (like a sponsored campaign or an annual agreement) in that period. An example was a cluster of small towns that collectively hired *YAvellino* to run a summer-long social media promotion for their festivals. One municipal official described the decision process: «We saw *YAvellino's* work on another town's festival and were impressed by the turnout. They have a following we as a small comune just don't. After a few conversations and understanding the costs, we allocated a portion of our tourism budget to partner with them. It helped that neighboring mayors shared positive feedback about the collaboration». This quote highlights that peer influence and demonstrated success stories are crucial in the B2G funnel – essentially, *YAvellino* leverages case studies as social proof to convince other municipalities.

In both funnels, *Awareness to Engagement* drop-off is notable. Many potential partners do not immediately pursue a collaboration, possibly due to budget constraints or uncertainty about ROI (Hoffman & Fodor, 2010). However, *Engagement to Conversion* drop-off is smaller, indicating that *YAvellino's* pitch and trial process is effective at sealing the deal when interest is there. The team's approach, as gleaned from interviews, emphasizes customizing proposals for each partner and focusing on «co-creating» content that meets the partner's goals (be it attracting tourists, promoting a product, etc.). This collaborative approach likely makes partners feel invested and confident, easing conversion.

### 4.4 Partner and sponsor contributions

We now look at the *performance breakdown* by *partner type*, summarizing how many partnerships have been formed and what value they contribute. Table 3 provides an overview of *YAvellino's* partner portfolio split between local businesses and municipalities/institutions, along with the volume of sponsored content and typical engagement that content receives.

| **Partner Type** | **No. of Partners (2024)** | **Sponsored Posts Created** | **Avg Likes per Sponsored Post** | **Avg Comments** | **Example Partners** |
|---|---|---|---|---|---|
| Local Businesses (B2B) | ~15 active sponsors | ~80 posts (incl. 5 Reels) | ~650 likes | 45 comments | e.g. Osteria Tipica (restaurant), Cantina Irpina (winery), ArtigianHouse (craft shop) |
| Municipalities/Institutions (B2G) | ~5 major collaborations | ~40 posts (events, promos) | ~800 likes | 60 comments | e.g. Comune di **Monteverde** (town tourism board), Provincia di Avellino (provincial tourism), Pro Loco Altavilla (local heritage org.) |

**Table 3:** Partner/sponsor performance breakdown in recent year. "No. of Partners" indicates distinct organizations that sponsored content; "Sponsored Posts" is total content pieces produced in partnership; engagement metrics are averages for those posts. Businesses have greater count but slightly lower avg engagement, whereas municipality-linked content, often tied to cultural events, sees higher engagement on average.

From Table 3, we observe that *YAvellino* had roughly 3 times more business partners than municipal ones in the period, but each municipality partnership often entailed multiple posts (especially if covering an event or a series). In total, about 80 business-sponsored posts and 40 municipality-related posts were made (these figures include feed *posts* and *reels*; *story* promotions not counted here). Interestingly, content tied to municipalities tends to have a higher average like count (~800) and comment count than that of businesses (~650). This is likely because municipal content often revolves around broadly appealing topics like festivals, beautiful town imagery, or public celebrations, which naturally get the community excited (many locals tag friends like "let's go to this!" or comment with hometown pride). Business content, while still fairly engaging, might be a tad more niche (e.g., a specific product promotion) or perceived as an advertisement, which can slightly reduce broad appeal. That said, the difference is not huge, indicating *YAvellino* effectively presents business content in a storytelling manner that still hooks the audience (e.g., telling the history of a family restaurant rather than just saying "go eat here").

It's worth noting the variety of businesses: they range from food and wine (dominant categories given Irpinia's strengths in gastronomy) to hospitality (B&Bs, agritourisms), and a few in retail or services. The *Pro Loco* and cultural associations (semi-public entities) also count in the B2G side, often promoting heritage events in partnership with *YAvellino*. The presence of the provincial tourism body as a partner is significant – it signals an endorsement from a higher-level institution, perhaps leveraging *YAvellino* as an outsourced digital marketing arm for the region.

Financially (though we did not collect explicit financial data), these partnerships form *YAvellino's* revenue stream. According to the *Y Media Analytica* representatives, the business model is essentially that of a *media agency*: partners pay a fee for content creation and promotion, or provide in-kind support (e.g., invites, access, or barter deals) which can sometimes supplement. For instance, a winery might host *YAvellino's* team for a weekend (covering lodging/food) in exchange for coverage, plus a reduced fee. Municipal contracts are usually straightforward paid services for digital promotion. The *sustainability* of the model hinges on keeping a steady pipeline of such partnerships while not losing the organic community appeal.

Encouragingly, partners reported positive outcomes. Businesses mentioned increases in social media followers and foot traffic: «After our feature, our Instagram followers grew by 20% in a week and we noticed new customers from outside town», said one craft shop owner. Municipalities noted improved event attendance and wider awareness: «We had visitors from neighboring provinces who said they came because they saw our festival on *YAvellino*», (tourism official from Monteverde). These anecdotal successes validate that the *co-created content* is effectively driving real-world *engagement* and *value*, not just vanity *metrics online*.

### 4.5 Stakeholder perspectives on co-creation

Finally, to contextualize these results, we highlight some key insights from the *stakeholder interviews*, focusing on how the partners view the co-creation process and *YAvellino's* role.

- **Value perceptions** - Across the board, partners saw *YAvellino* as a bridge to audiences they couldn't reach on their own. A winery owner described: «we have quality products but limited marketing. *YAvellino* already had the audience interested in Irpinia's wine and stories. By featuring us, they essentially lent us a megaphone. It's more credible too, coming from them, than if we just advertised ourselves». This underscores that *YAvellino's* established community trust rubs off on partners (a form

of borrowed trust), a benefit of *co-creation* also noted in literature (brands gain credibility through stakeholder endorsement). Municipal partners echoed the sentiment, with one mayor stating, *YAvellino* gives a modern voice to our ancient town. Young people listen to them. We see it as a public-private teamwork to keep our culture alive and attractive». The mention of «teamwork» highlights the *co-creative*, *partnership mindset* rather than a transactional vendor-client view.

- **Co-creation process** - Partners appreciated that *YAvellino* involved them in content planning. For example, the restaurant sponsor said, «the *YAvellino* team came to dine with us, talked to our chef, learned our story. Then together we decided which dishes and anecdotes to feature in the post. They even let us review the draft caption to ensure accuracy. It truly felt like creating something together». This level of involvement aligns with best practices in *co-creation*, ensuring the partner's knowledge and perspective shape the content (which likely contributes to its authenticity). A city official noted that *YAvellino* was open to feedback: «we requested that they emphasize the historical significance of our festival, not just the fun aspect, and they did. They really listened to what message we wanted out». However, partners also trusted *YAvellino's* expertise in media: «We're not marketers – we let them handle the creative part and it turned out better than we could do ourselves», said a business owner. So, *YAvellino* maintained *creative leadership* while incorporating stakeholder input, striking a balance.

- **Challenges** - A few challenges were mentioned. One was *resource/budget constraints*, especially for *public entities*: «As a municipality, committing budget was tough, we could only afford a short campaign», one official said, «hopefully next year we can do more». This suggests the B2G funnel could be lengthened by bureaucratic timing (e.g., needing new budget approvals for continued partnerships). For businesses, a challenge was measuring impact: while anecdotal benefits were seen, a few sponsors wondered about hard metrics (sales directly attributable, etc.). *YAvellino* responded by providing partners with simple reports (post reach, engagement, follower increase, etc.) to justify the spend. Another challenge was ensuring content doesn't appear too «ad-like». The *YAvellino* team itself is conscious of this: «We have to turn down or reshape some proposals that don't fit our style. If it's too promotional, our audience will notice. We find the story in it or we don't do it», said the CEO. This gatekeeping is crucial to preserve *community trust* – indeed, this aligns with literature warnings that uncontrolled stakeholder input might conflict with *brand narrative* if not managed.

- **Community reception** - Stakeholders were curious (and a bit anxious) about how the audience would react to sponsored posts. By and large, those fears were allayed. The winery owner was happy to see «comments where people tagged friends saying 'let's visit this cantina!' – it was exactly the reaction we hoped for». Some did note that purely product-centric posts (like an announcement of a new shop opening) got fewer interactions than storytelling posts. This has led them to realize *storytelling yields better engagement* – a learning they can take into their own marketing. One stakeholder quote encapsulates the overall vibe: «*YAvellino* has built a community, not just an audience. When we collaborate, we become part of that community – it's like being endorsed by a friend, not an ad. That's the power here» (local tour operator). This statement validates the communal, networked nature of the marketing model, where *co-creation* leads to a *win-win*: the community gains content and opportunities (like events), partners gain reach and goodwill, and *YAvellino* strengthens its position as a central node connecting everyone.

In summary, the results show that *YAvellino's dual-funnel*, *co-creation strategy* is effective in both operational and relational terms. They are successfully converting partners and delivering *engaging content*, while maintaining the community's trust. The next section will discuss these findings in light of broader marketing concepts and similar models, as well as consider limitations and future directions.

## 5. Discussion

Our case study of *YAvellino* offers several *theoretical insights* and *practical implications* at the intersection of *community marketing*, *funnel management*, and *co-creation* in *place branding*. Here, we discuss the key findings in context and highlight what makes this case distinct.

### 5.1 Dual-funnel marketing as a form of network-oriented marketing

Traditional *marketing funnels* typically focus on moving a single *target segment* through stages (e.g., consumers in a purchase funnel). *YAvellino* demonstrates a dual-funnel approach where two different segments (B2B and B2G) are simultaneously navigated towards partnership. This essentially transforms the role of the marketer (*YAvellino*) into a «network orchestrator». Instead of a linear *seller-buyer relationship*, *YAvellino* curates a network where businesses, government bodies, and consumers (followers) all interact. *YAvellino's* engagement model operates through a dual-funnel structure, combining traditional B2B (Business-to-Business) strategies with an equally critical B2G (Business-to-Government) dimension. In the latter, marketing activities are tailored to meet the promotional and reputational needs of municipalities and local institutions, often requiring tailored messaging, stakeholder trust, and long-term value articulation (Gibbons, 2023). The dual funnels converge in the sense that both types of partners ultimately contribute to the same output (content) which is «consumed» by the community. This finding aligns with *theories of multi-sided platforms* and *ecosystem marketing*, expanding them into the domain of *local place branding*. The case illustrates that funnel management in such contexts requires a broader lens – success is not just conversion in one funnel, but the balance between funnels. If, for instance, too many sponsors are brought on without corresponding growth in audience engagement, the platform could become saturated with promotions and lose audience interest (a form of «over-harvesting» the community). Conversely, if audience grows but partners don't, the platform might struggle financially to sustain content quality. *YAvellino's* experience suggests carefully pacing and matching the growth of both sides. They have done so by ensuring content quality remains high and not accepting partnerships that do not fit the community narrative (as evidenced by their selective approach noted by the content manager).

### 5.2 Co-creation enhances authenticity and engagement

The evidence strongly supports the idea that involving *local stakeholders* in content creation can boost the *authenticity* of *place branding*. Posts that were co-created (with real stories, local voices, and on-site experiences) «resonated» with followers, often more than generic content would. In *YAvellino's* case, co-creation isn't limited to soliciting ideas; it's actual joint production of content, sometimes literally side-by-side (e.g., the team visiting a business to craft the story together). This operationalizes the concept of «participatory place branding» often advocated in literature (Anholt, 2007). Our findings contribute empirical support to the benefits of this approach: *co-created content* yielded high engagement (Table 2 examples) and *positive sentiment*. The qualitative data indicated that followers responded well, likely because they perceive the content as genuine storytelling rather than advertising. This is in line with the notion that *stakeholder involvement* can democratize the branding process and lead to content that reflects *community values*, thereby strengthening «social cohesion». For Irpinia, *YAvellino's* approach has arguably created a *feedback loop*: the more the community sees local actors (like beloved businesses or civic figures) featured positively, the more they trust and

engage with the platform; and the more new stakeholders want to join in – essentially an upward spiral of co-creation.

The empirical evidence supports the perspective that «local actors», including *municipalities* and cultural *associations*, are not just passive beneficiaries of communication but active co-creators of territorial value - a phenomenon echoed in prior research on *tourism* and *place branding* (Leal et al., 2022).

However, our study also cautions, consistent with literature, that co-creation needs moderation. *YAvellino's* editorial control (ensuring partner content aligns with the *channel's infotainment tone* and audience interest) is crucial. They serve as what might be called a «brand mediator» among stakeholders. Without this *mediation*, there could be a risk of *message dilution* or *conflict* (e.g., if two towns want to claim they are «the best festival in Irpinia» in competitive tones, the brand could suffer). *YAvellino* navigates this by focusing on each *partner's unique story*, avoiding direct comparisons, and maintaining a positive, collaborative narrative across the board. This approach reflects effective *stakeholder management* in *co-creation scenarios*, ensuring that the composite place brand remains cohesive and inclusive. It parallels findings from other cases like *Luton's storytelling campaign*, where careful coordination was needed to avoid contrasting messages.

### 5.3 Hyperlocal influencer/platform

*YAvellino* blurs the line between an *influencer* and a *media outlet*. On one hand, it behaves like a *local influencer* – with a distinct voice, lifestyle content, and personal engagement with followers. On the other, it's an organized *media platform* offering advertising/marketing services. This dual identity may be key to its success. As an influencer-like entity, it harnesses the power of *relatability* and *community trust* (people follow it for inspiration and fun, not overt ads). As a media business, it has the structure to formalize partnerships and deliver professional content for clients. The implication is that local *network marketing* might best be executed by such *hybrid models*, rather than by impersonal institutions (Hankinson, 2004). Indeed, interviewees from municipalities suggested they partnered with *YAvellino* partly because their own *official channels* lack the creativity or following that *YAvellino* has. This case supports the argument that in the digital age, public institutions can benefit from teaming up with local influencers or content creators to meet marketing objectives (a trend also seen in tourism boards partnering with travel bloggers, for example). It's an example of a public-private partnership in marketing that is agile and contemporary

One could position *YAvellino* as a community brand that emerged bottom-up, which later gained institutional trust – a reversal of the traditional model where institutions create campaigns and try to gain public support. The success here shows the potential of «community-led place branding». The *local community* (through *YAvellino* and its followers) essentially defined what makes Irpinia special online, and now businesses and governments are joining that existing movement. For theory, this is interesting because it suggests that *brand equity* can be built by *grassroots digital communities* even for places (which are typically seen as needing top-down branding efforts). It aligns with the shift toward seeing *residents* and *grassroots* as key place-*brand ambassadors*.

### 5.4 Marketing-innovation nexus

*A new business model for local promotion*. It's worth highlighting how *YAvellino* represents a *business model* innovation in the local marketing domain. Traditional local marketing might involve city councils running *ads* or companies individually promoting themselves. *YAvellino* introduces a platform model where *value is co-create*d and *shared*. It essentially productized «Irpinia's story» and allowed others to plug into it. This can be seen as an innovation

responding to the fragmentation of media consumption – locals, especially younger demographics, spend more time on Instagram and social media than reading city brochures or local newspapers. *YAvellino* met them where they are, created content they enjoy, and then monetized in a way that doesn't (severely) detract from that enjoyment. This model is replicable in other regions, but it requires certain entrepreneurial conditions: a team with digital content skills, deep local knowledge/passions, and the ability to build cross-sector relationships. It's not simply an influencer posting photos, and not simply a tourism office – it's a hybrid organization. The success factors observed include: *consistency of content* (frequent posting keeps community engaged), *authenticity* (not compromising trust for quick bucks), *networking* (active presence in relevant events to grow partnerships), and *performance tracking* (showing partners evidence of reach/engagement to justify their involvement).

### 5.5 Implications for marketers and place managers

For practitioners in marketing (especially those in *tourism marketing*, *local economic development*, or *small business marketing*), *YAvellino's* case offers a «template». A major implication is the power of building a *localized community brand* first, monetizing second. *Y Media Analytica*, the company owning the brand *YAvellino*, effectively invested in *content* and *community-building* before worrying about *revenue*, which is contrary to many businesses that try to monetize too early and struggle to attract an audience. Place managers, like tourism boards, might consider empowering local content creators or even establishing similar in-house initiatives that function with a community-first mindset. Another practical insight is the benefit of collaborative content over pure advertising. *YAvellino's* sponsored posts rarely look like ads; they often read like editorials or travel diary entries. Marketers can learn that weaving promotional goals into genuine storytelling yields better engagement – which in turn actually likely drives better results (people trust and act on recommendations from voices they view as authentic).

For local businesses, the takeaway is to leverage community platforms rather than only pushing individual marketing. Especially small firms with limited reach can harness the amplifying effect of a local community page. Many towns have started having such community Instagram or Facebook pages (often unofficial) – collaborating with them may be more effective than traditional ads.

From the municipal perspective, this case suggests a shift in how public entities promote themselves: partnering with *digital community builders* can be more agile and «resonant» than doing it alone. It also indicates that B2G marketing (for digital services) need not always go through bureaucratic RFPs; sometimes it starts with informal relationship-building in communities, which later can formalize (as seen with *YAvellino* first attending events).

From a *place branding theory* point of view, this case hints that internal branding by local communities can complement or even substitute formal branding efforts. Researchers could explore the dynamics between unofficial community brands and official place branding campaigns: do they compete, converge, or cooperate? In Irpinia, *YAvellino* is now essentially part of the official strategy via partnerships. This could be a model of synergy, but in other places there might be tension or duplication.

To sum up, *YAvellino* illustrates that by applying core marketing principles, like *funnel management* and *customer-centric content*, in an innovative, networked way, even a relatively remote region can achieve broad visibility and engagement. It's a case of marketing innovation not through new technology per se, but through a novel *configuration of relationships* and *value creation* – embodying how past insights (funnel, co-creation) can be harnessed to meet future challenges (engaging audiences in an information-saturated era).

## 6. Conclusions

This study examined how *YAvellino* – a *hyperlocal social media community* in Italy's Irpinia region – implemented a *dual-funnel marketing strategy* anchored in *value co-creation* with local businesses and municipalities. Our analysis yields several conclusions:

- **Dual-funnel efficacy** - *YAvellino* successfully managed parallel B2B and B2G funnels to sustain its platform. By guiding businesses and government partners from initial awareness (often via community events and word-of-mouth) to active collaboration, *YAvellino* secured a steady flow of sponsored content without compromising its community appeal. The B2B funnel showed a healthy conversion rate (around 50% of engaged prospects became sponsors), and the B2G funnel, though smaller, still brought multiple municipalities on board. This demonstrates that a multi-sided marketing approach can be viable for community platforms, effectively bridging commercial and public objectives.

- **Value co-creation as a cornerstone** - The ***co-creation model*** – involving partners in storytelling – was pivotal to *YAvellino's* ability to deliver ***engaging content***. Co-created content maintained or even enhanced authenticity, turning marketing messages into genuine narratives that the community embraced. This supports the idea that ***stakeholder engagement*** in content creation is not just a theoretical ideal but a practical route to stronger marketing outcomes, provided it is well-orchestrated.

- **Community growth and engagement** - *YAvellino's* follower growth and sustained engagement indicate that the platform attained a critical mass and legitimacy among locals. The engagement rate, while tapering as the audience grew, remained solid. High engagement on posts covering local traditions and collaborative campaigns signals that the community is deeply invested in content that reflects their identity and interests. Moreover, we saw evidence that online engagement translated to offline actions (event attendance, business visits), highlighting the real-world impact of digital community marketing.

- **Innovative local marketing model** - *YAvellino* represents an innovative ***model of local network marketing***, where a private-media initiative fulfills roles traditionally played by tourism boards or chambers of commerce, but in a more dynamic, audience-driven manner. It underscores a trend where influencers or community brands can become key marketing partners for local development. This model may inspire other regions to adopt similar strategies, leveraging social media communities to co-promote local assets.

- **Implications for theory and practice** - The case extends **marketing theory** by blending ***funnel analytics*** with ***co-creation*** and ***place branding frameworks***, suggesting a need for more integrative models when dealing with multi-stakeholder contexts. Practically, it offers a blueprint for practitioners: build a community first by providing value (content people love), then monetize through partnerships that enhance that value (not detract from it). It also highlights the importance of *trust* and *authenticity* in modern marketing – qualities that are best achieved when marketing is done with stakeholders rather than at them.

- **Limitations and future research** - While the *YAvellino* case is rich, it is one context – a specific region with its unique culture and a particular team behind the initiative. Results might differ in a different region or country. Also, as a case study relying partly on simulated data, our quantitative findings are illustrative rather than precise. Future research should collect actual engagement analytics (impressions, click-throughs to

partners, etc.) to more rigorously quantify impact. It would also be valuable to study the audience perspective in detail: we mostly inferred it from engagement behaviour and some comments, but surveys or interviews with followers could reveal how they perceive sponsored content and whether it influences their behaviours (like visiting a place or store). Another interesting avenue is comparative: examining another community platform that did not involve co-creation to see if engagement differs, or studying a case where co-creation backfired (to analyze the pitfalls). Additionally, longitudinal research could see if the partnerships last and evolve – for example, do converted partners remain active (sign of retention and loyalty loops in the funnel).

*YAvellino's* experience illustrates that even in a changing era of marketing, classic principles like understanding your audience and guiding them through a journey remain relevant – but the journeys may now involve multiple intertwined paths and collaborators. The «marketing-innovation nexus» evident here is not about flashy new tech but about rethinking roles: turning customers into partners, and campaigns into community conversations. For Irpinia, this approach has not only marketed the region but arguably strengthened the local network itself, creating a virtuous cycle of value co-creation. Future research and applications of this model can further validate its efficacy and adapt it to other contexts, but this case provides a compelling narrative of how dual funnels and co-creation can be leveraged for mutual benefit in marketing.

## References


Anholt, S. (2007). Competitive Identity and Development. In Competitive Identity: The New Brand Management for Nations, Cities and Regions (pp. 113-128). London: Palgrave Macmillan UK.

Cova, B., & Cova, V. (2002). Tribal marketing: The tribalisation of society and its impact on the conduct of marketing. European journal of marketing, 36(5/6), 595-620.

Hankinson, G. (2004). Relational network brands: Towards a conceptual model of place brands. Journal of vacation marketing, 10(2), 109-121.

Hoffman, D. L., & Fodor, M. (2010). Can you measure the ROI of your social media marketing? MIT Sloan management review.

Kaplan, A. M., & Haenlein, M. (2010). Users of the world, unite! The challenges and opportunities of Social Media. Business horizons, 53(1), 59-68.

Kavaratzis, M., & Hatch, M. J. (2013). The dynamics of place brands: An identity-based approach to place branding theory. Marketing theory, 13(1), 69-86.

Gibbons, M. (2023). What is B2G marketing and how does it work? WebFX Marketing Blog. Retrieved from https://www.webfx.com/blog/marketing/what-is-b2g-marketing/

Leal, M. M., Casais, B., & Proença, J. F. (2022). Tourism co-creation in place branding: the role of local community. Tourism Review, 77(5), 1322-1332.

Michel, S., Brown, S. W., & Gallan, A. S. (2008). An expanded and strategic view of discontinuous innovations: deploying a service-dominant logic. Journal of the academy of marketing science, 36, 54-66.

Payne, A. F., Storbacka, K., & Frow, P. (2008). Managing the co-creation of value. Journal of the academy of marketing science, 36, 83-96.

Peters, K., Chen, Y., Kaplan, A. M., Ognibeni, B., & Pauwels, K. (2013). Social media metrics—A framework and guidelines for managing social media. Journal of interactive marketing, 27(4), 281-298.

Kotler, P., Pfoertsch, W., & Michi, I. (2006). B2B brand management (Vol. 357). Berlin: Springer.

Lindgreen, A., Palmer, R., & Vanhamme, J. (2004). Contemporary marketing practice: theoretical propositions and practical implications. Marketing intelligence & planning, 22(6), 673-692.

Salman, D. (2023, October 31). How to leverage B2B community marketing. CMO Alliance. Retrieved from https://www.cmoalliance.com/how-to-leverage-b2b-community-marketing/

Stoica, I. S., Kavaratzis, M., Schwabenland, C., & Haag, M. (2021). Place brand co-creation through storytelling: Benefits, risks and preconditions. Tourism and Hospitality, 3(1), 15-30.

Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: continuing the evolution. Journal of the Academy of marketing Science, 36, 1-10.

VeraContent. (2024, June 25). Why brands invest in hyperlocal social media strategies. VeraContent Mix Blog. Retrieved from https://veracontent.com/mix/why-brands-invest-in-hyperlocal-social-media-strategies/

Digital Fluency Guide. (n.d.). Multi-Sided Platforms. Retrieved 2025, from https://digitalfluency.guide/multi-sided-platforms/

PromoGuy (2021). Community Engagement Funnel [Blog post]. Retrieved from promoguy.nl

# How Much is Too Much?
# An Investigation into the Understanding of Nutri-Score and Nutri-Inform Battery Labels

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## Abstract

Nutritional habits significantly impact the development of chronic non-communicable diseases (NCDs), highlighting the importance of preventive health measures. Among these, front-of-pack (FOP) nutrition labels aim to provide concise dietary information to consumers to guide them in their purchase and consumption decisions. This study compares two FOP systems - Nutri-Score and NutrInform Battery - and assesses their effectiveness in terms of healthfulness perception, label comprehension, and consumption regulation. The impact of these labels on comprehension and consumption is multifaceted, influenced by factors such as fluency, dual processes, and cognitive load. Two focus groups were conducted and analyzed using T-Lab software and facial expression analysis. Participants were exposed to three mock-ups of cookie packages as stimuli (baseline, with Nutri-Score, and with NutrInform Battery). Preliminary results indicate that Nutri-Score is perceived as visually accessible and efficient for quick decision-making; however, concerns regarding its transparency and precision have emerged, and its impact on healthfulness perception remains unaltered from the baseline. NutrInform Battery appears to promote more conservative consumption estimates, but also to be complex and difficult to understand; however, there is a decline in healthfulness perception compared to the baseline and Nutri-Score. The efficacy of both label systems in regulating consumption appears to be ultimately unsuccessful. Both label systems require improvement in terms of clarity and need to be correlated with other information for interpretation. There is a need for educational interventions, hybrids, and broader studies to address these challenges.

*Keywords: FOP nutritional labelling; Nutri-Score; NutrInform Battery; intake; consumption; nutrition marketing.*

## 1. Introduction

Nutritional intake has been demonstrated to exert a substantial influence on the propensity to develop a variety of chronic non-communicable diseases (NCDs) (Fargione et al., 2024). Poor nutritional habits have been associated with the development of various health conditions, including obesity, diabetes, cardiovascular disease, certain types of cancer, non-alcoholic fatty liver disease, chronic inflammatory bowel disease, and neuropsychiatric and neurodegenerative disorders (Valetto & Manfrini, 2014). In this context, in order to ensure

the optimal health status of individuals, it is imperative to prioritize the promotion of activities focused on education and prevention (Fargione et al., 2024). In this regard, product labeling assumes considerable importance (European Commission, 2011).

In the attempt to aid consumers in making informed dietary choices, front-of-package labels have been introduced to provide consumers with truncated nutritional information to complement the more complex nutritional facts panel (NFP) at the back/side of the package (Becker et al., 2015; Ikonen et al., 2020). Although not mandatory under current EU legislation, the European Commission encourages the voluntary use of such schemes to help consumers make healthier food choices (European Commission, 2022). Currently six different FOP nutrition labelling schemes are being endorsed by public authorities across the EU market: the Keyhole logo (used in Sweden, Denmark, and Lithuania), the Nutri-Score (used in France, Belgium, Germany, Spain, the Netherlands, and Luxembourg), the Finnish Heart Symbol, the Slovenian "Little Heart" logo, the Croatian "Healthy Living" logo, and the Traffic Light scheme used in Ireland. Italy has also developed its own scheme, the NutrInform Battery (European Commission, 2022).

Among these, the Nutri-Score stands out as the most widely adopted and endorsed scheme across EU Member States (European Commission, 2022), making it a particularly relevant focus for research on consumer understanding and the effectiveness of FOP labelling at regulating consumption.

The Nutri-Score presents simplified nutritional information using a five-color scale from dark green (A) to red (E), designed to reflect the overall nutritional quality of food products at a glance. Developed to combat rising rates of diet-related diseases, it helps consumers compare products quickly and make more informed decisions (European Commission, 2022).

Italy introduced the NutrInform Battery as an alternative to Nutri-Score, arguing that the latter oversimplifies nutritional information and may mislead consumers by evaluating individual foods in isolation rather than as part of a balanced diet. Italian authorities and experts criticized Nutri-Score for penalizing traditional products like extra virgin olive oil, which are nutritionally valuable but receive unfavorable scores due to their fat content (CREA 2023, Harper, 2022). In contrast, the NutrInform Battery is a reductive label that provides more detailed, portion-based information aligned with existing EU regulations, aiming to offer a more nuanced and informative approach to nutrition labelling (CREA, 2023; Italian Ministry of Health, n.d.).

Regardless of the claims and intended aim of these labels, both the Nutri-Score and the NutrInform Battery have received criticism from consumers and governments in that they do not provide clear information as they claim and can mislead consumers (Harper, 2022; Ikonen et al., 2020). Existing literature has shown that FOP labels, and particularly the interpretive ones such as Nutri-Score, are effective at communicating product healthfulness and eventually leading to the purchase of healthier alternatives (Ikonen et al., 2020). However, empirical studies have also emphasized the misinterpretation of these labels because of the lack of education or accompanying interpretative information, which has led to overestimation of healthfulness of products of certain categories, in case of positive scores, and conversely to the wrongful attribution of dangerous for someone's health, in case of negative scores (Ikonen et al., 2020; Schruff-Lim et al., 2023). These wrongful interpretations could directly affect consumption and intake, nevertheless, only few and recent studies have focused on measuring these explicitly (Araya et al., 2022; Heeremans et al., 2025; Ikonen et al., 2020). However, contrasting and inconclusive findings from the studies, and frequent adoption of fictitious labels in highly controlled experimental studies, and the recent

introduction of the NutrInform Battery call for additional research that measures the effectiveness of real-world labels at regulating consumption.

At the same time, existing literature has inferred FOP labels' effectiveness by comparing purchase intentions across products, while overlooking comprehension and, thus, the underlying mechanisms (Andreani et al., 2025) that guide consumer behavior.

The present study addresses these gaps by examining how Nutri-Score and NutrInform Battery labels influence consumers' understanding of product healthfulness and self-estimated intake. We integrate processing fluency theory (Reber et al., 2004), cognitive load theory (Sweller, 1988), and dual-process models of decision-making (Kahneman, 2011) to explain how differences in label design affect information processing and behavior. Using a qualitative approach with two focus groups and T-Lab-based word association and co-occurrence analysis, we evaluate how these labels are perceived, interpreted, and acted upon by consumers.

Our findings reveal that Nutri-Score, while visually accessible and appreciated for its speed and simplicity, is sometimes perceived as reductive or even misleading because of the lack of transparency. Its design appears to encourage quick judgments but may lead to overconsumption, particularly for indulgent foods receiving favorable scores.

In contrast, the NutrInform Battery is viewed as more accurate and informative, especially by nutritionally motivated individuals, yet also more cognitively demanding. Despite its complexity, the NutrInform Battery prompted participants to estimate lower consumption levels and to reconsider the healthfulness of certain products more critically compared to the baseline and the Nutri-Score label.

Overall, neither labeling system appears to successfully regulate consumption, and the contrasting responses suggest that improvements in clarity are necessary, along with the provision of additional contextual information.

This study contributes to the literature in three important ways. First, it offers a theory-driven account of how FOP label formats influence both comprehension and consumption-related decisions, addressing a key gap in prior research. Second, it provides one of the first direct comparisons between two real-world labeling systems, Nutri-Score and NutrInform Battery, evaluating not only how they are understood but how they shape consumers' estimations of appropriate intake. Third, it identifies key contextual and perceptual factors, such as label credibility, cognitive effort, and perceived control, that moderate label effectiveness. In doing so, we offer practical implications for policymakers and marketers seeking to design or implement FOP labeling systems that are both informative and behaviorally effective.

## 2. Literature review

Research in different disciplines, including business, medicine, nutrition, and public policy, has extensively examined the effect of FOP nutritional labels on product perception, purchase intention, and choice (Ikonen et al., 2020; Schruff-Lim et al., 2023). In contrast, comparatively fewer studies have looked at consumers' understanding of the labels (Andreani et al., 2025; Ikonen et al., 2020) or their effectiveness in regulating consumption behaviors (Carbonneau et al., 2015; Crockett et al., 2014; Ebneter et al., 2013; Heeremans et al., 2025; Hersey et al., 2013).

Among specific labeling systems, Nutri-Score has received substantial attention, with several studies evaluating its impact on consumer comprehension and behavior (Dubois et al., 2020; Ikonen et al., 2020). By contrast, given the rather recent development and implementation

of the NutrInform Battery, just a few studies have looked at it specifically (Castellini et al., 2024; Fialon et al., 2022; Fialon et al., 2023).

As Schruff-Lim et al. (2023) emphasize, providing nutritional information is not sufficient on its own to drive behavior change, comprehension is a critical prerequisite. For FOP labels to be effective, consumers must first understand the information presented to them.

With respect to objective understanding, interpretive nutrient-specific labels such as Nutri-Score tend to be more easily understood by consumers. These labels enhance individuals' ability to distinguish healthier products and outperform reductive, numeric labels in this regard (Andreani et al., 2025; Dubois et al., 2020; Ducrot et al., 2015; Ikonen et al., 2020). However, interpretive labels can also create overly positive perceptions of unhealthy products when these score favorably on specific nutrients (Ikonen et al., 2020; Talati et al., 2016). This paradox highlights a gap between surface-level recognition and deeper understanding.

In terms of conceptual understanding, emerging evidence suggests that consumers may not fully grasp how these labels should be interpreted. For example, Huillery (2022) found that over half of the participants mistakenly believed that products receiving a Nutri-Score of D or E should not be consumed at all, while over 40% assumed that a Nutri-Score of A or B designates a product as inherently "healthy." Such misconceptions indicate a lack of understanding of the relative nature of the scoring system.

Research comparing Nutri-Score and the NutrInform Battery yields conflicting results. Studies by Fialon et al. (2022, 2023) report that both objective and subjective understanding, such as perceived usefulness and likability, are higher for Nutri-Score across product categories. In contrast, Castellini et al. (2024) found the NutrInform Battery to be more effective in helping consumers make decisions aligned with dietary restrictions and rated it as more trustworthy and informative.

When it comes to consumption outcomes, the evidence remains sparse and inconsistent. Most studies investigating the influence of FOP labels on consumption behavior have not used real-world labels but have instead relied on experimental stimuli featuring ad hoc designs (Carbonneau et al., 2015; Crockett et al., 2014; Ebneter et al., 2013). Moreover, the few studies that report significant findings, such as Larsson, Lissner, and Wilhelmsen (1999) and Reid et al. (2004), focused on single-level icons rather than multi-tiered systems like Nutri-Score, limiting their applicability.

More recent work, however, has begun to illuminate the complex and sometimes counterintuitive effects of FOP labels on consumption. Heeremans, Geuens, and Vermeir (2025) found that favorable Nutri-Scores (A and B) led participants to choose larger portion sizes, particularly for indulgent products, due to reduced feelings of guilt and a perceived license to indulge. This suggests that simplified labels can unintentionally encourage overconsumption when interpreted as endorsements of healthfulness. In contrast, Araya et al. (2022) conducted a real-world natural experiment in Chile using warning-style FOP labels and found a significant decrease in cereal purchases. However, no significant effects were observed for chocolates and cookies, indicating that label effectiveness may depend on product category, particularly whether the product is perceived as ambiguously or clearly unhealthy.

Overall, despite growing interest in the behavioral effects of FOP labels, the evidence remains inconclusive and fragmented. The limited number of rigorous real-world studies, coupled with contradictory findings across product categories and label formats, underscores the need for further research to determine whether, and under what conditions, FOP labels

effectively regulate consumption (Araya et al., 2022; Hersey et al., 2013; Ikonen et al., 2020) and what the underlying mechanisms are.

## 3. Conceptual framework

The present research aims to address the gaps outlined by examining how the two labeling systems influence product healthfulness perception, label comprehension, and consumption regulation. This study will contribute to a more nuanced understanding of the cognitive and behavioral impacts of FOP nutritional labels, particularly within the under-researched context of product intake.

### 3.1 Understanding Product Healthfulness

In the present paper, we build on *Processing Fluency Theory* (Reber et al., 2004), dual-process models of decision-making (Kahneman, 2011), and *Cognitive Load Theory* (Sweller, 1988), to argue that FOP nutritional labels improve consumer understanding of product healthfulness by enhancing processing fluency and reducing cognitive overload.

Processing fluency refers to the subjective experience of ease with which information is processed, which increases perceived understanding and confidence in judgments (Reber et al., 2004; Schwarz, 2004). This fluency manifests in both *perceptual fluency* - the ease of processing visual features such as color, symbols, and layout - and *semantic fluency* - the ease of comprehending the meaning conveyed by the information. These dual fluency mechanisms are particularly important in the context of nutritional labeling, where consumers must rapidly interpret and compare healthfulness cues to inform their choices (van Herpen & Trijp, 2011).

Complementing this perspective, *Dual-process Theories* suggest that consumer decisions in grocery shopping environments often rely on fast, automatic cognitive processes (System 1), which favor heuristic and visually fluent cues over deliberative analysis (System 2) (Kahneman, 2011). By presenting nutritional information in visually accessible and semantically clear formats, FOP labels align with the cognitive demands of System 1 processing, facilitating quick and confident judgments. Furthermore, Cognitive Load Theory highlights that reducing extraneous cognitive demands improves comprehension and decision-making (Sweller, 1988). FOP labels mitigate cognitive overload by distilling complex nutritional data into simplified, salient cues that alleviate the burden of interpreting dense back-of-pack information (Campos et al., 2011). Together, these theoretical perspectives converge to explain how FOP labels increase consumers' ability to understand product healthfulness efficiently and effectively. We argue that the visual and semantic design features of FOP labels make nutritional information more accessible and easier to process.

The Nutri-Score and the NutrInform Battery exemplify different approaches to facilitating consumer understanding of product healthfulness, each leveraging distinctive design features to enhance processing fluency. The Nutri-Score operates as a summary interpretive label, condensing complex nutritional information into a single, color-coded letter grade ranging from 'A' (healthiest) to 'E' (least healthy). This color spectrum, from green to red, enables rapid visual differentiation and immediate semantic interpretation, thus promoting both perceptual and semantic fluency. By simplifying nutritional data into an intuitive ordinal scale, Nutri-Score effectively reduces cognitive effort and supports quick decision-making, particularly beneficial in fast-paced retail environments (Dubois et al., 2020; Hagmann & Siegrist, 2020). Conversely, the NutrInform Battery adopts a non-interpretive, informative format that presents detailed per-serving nutritional values through battery-like icons filled proportionally to represent the contribution of energy, fats, sugars, and salt to daily recommended intakes. This design employs a familiar metaphor, the battery icon, to foster

perceptual fluency, while its precise quantitative presentation supports semantic fluency by allowing consumers to understand the magnitude of nutrient content. Although this label demands somewhat greater cognitive engagement than the Nutri-Score, it offers transparency and granularity that may appeal to consumers seeking more detailed nutritional insights (Castellini et al., 2024; Mazzù et al., 2021). Together, these contrasting formats highlight different pathways through which front-of-pack labels can ease the interpretation of healthfulness, either by promoting rapid, heuristic processing through simplification or by facilitating informed, analytic evaluation via structured quantitative information.

### 3.2 Consumption

Drawing from *Self-Regulation Theory* (Baumeister & Heatherton, 1996), *Cognitive Load Theory* (Sweller, 1988), and *Dual-process Models of Decision-making* (Kahneman, 2011), we argue that nutritional FOP labels may influence the quantity of food consumed. FOP labels can activate health-related goals and prompt more deliberate control over consumption, particularly in environments where consumers typically rely on intuitive, heuristic processing. By reducing the cognitive effort required to assess nutritional quality, these labels can shift attention toward health considerations and away from hedonic cues, resulting in smaller portion sizes and restrained intake (Roberto et al., 2012). However, FOP labels may also backfire under certain conditions. When products are labeled as "healthy", consumers may experience a moral licensing effect, whereby a virtuous choice (in this case, selecting a product with a favorable nutritional score) gives permission to indulge or overconsume (Finkelstein & Fishbach, 2010). Similarly, health halo effects may lead individuals to underestimate caloric content or overestimate satiety when viewing positively framed nutritional information (Schuldt & Schwarz, 2010; Chandon & Wansink, 2007). Thus, the impact of FOP labels on consumption is not uniform; it varies based on label format, nutritional profile, and consumer goals.

Distinguishing between specific label formats, we argue that interpretive summary labels such as the Nutri-Score may lead to both *reduced* and *increased* food consumption, depending on the nutritional rating. When the label indicates poor healthfulness (e.g., Nutri-Score D or E), consumers are more likely to reduce intake due to increased health risk salience and simplified negative cues, consistent with avoidance behavior and cognitive load reduction (Egnell et al., 2018). However, when a product is rated favorably (e.g., Nutri-Score A or B), the same label can lead to *overconsumption*, as consumers use the positive signal as a justification to eat more. This pattern is supported by recent findings from Heeremans et al. (2025), who show that while Nutri-Score discourages consumption of less healthy items, it unintentionally promotes larger portion sizes for healthier products through licensing and perceived healthfulness effects. In contrast, we maintain that non-interpretive, descriptive labels such as the NutrInform Battery are more consistently associated with reduced consumption. Unlike summary labels, the NutrInform Battery presents numeric data about calories, sugars, fats, and other nutrients, expressed as percentages of daily reference intakes. This format encourages consumers to mentally "budget" their intake across the day, activating what Thaler's (1985) *Mental Accounting Theory* describes as a process of allocating limited cognitive or physical resources (in this case, daily calories or nutrients) to different consumption episodes. When individuals see that a product uses up a large share of their daily intake, even for a small portion, they may reduce consumption to preserve their remaining "nutritional budget". This pattern is further supported by Self-Regulation Theory (Baumeister et al., 1994), which posits that individuals treat self-control as a finite resource: the explicit numerical framing of intake can prompt resource-conservation strategies, especially among health-motivated consumers. In this context, the NutrInform Battery may induce a scarcity frame, a cognitive orientation in which people respond to limited resources (e.g., calories left in a day) by exercising restraint (Mullainathan & Shafir, 2013). The label's precision, rather

than its evaluative simplicity, therefore engages consumers in more effortful and goal-consistent behaviors such as portion control or delayed gratification.

## 4. Methods

In order to achieve the research objectives of the study, a qualitative approach was employed, with the focus group discussions serving as the primary method of data collection. Two focus groups were conducted in May 2025, comprising nine participants in total. The sample was predominantly female (78%), with 22% male participants, with an average age of 30.44 years. Participants from different parts of the world: Greece, Italy, Japan, Moldova, and Norway. Participants were recruited via an online questionnaire disseminated across various social media platforms. Each discussion session was approximately ninety minutes in duration and was recorded both audio and video. Subsequent to the initial transcription, the recordings were transcribed verbatim to facilitate thematic analysis. For the purpose of data analysis, the "word association" and "co-occurrence" functions within T-Lab software were utilized. This software was instrumental in identifying the words most strongly linked to "Nutri-Score" and "NutrInform Battery", selected due to their semantic relevance and frequency of appearance (Papaleo et al., 2013). T-Lab employs radial diagrams and histograms to visualize these relationships, with the selected central word(s) positioned at the core of the diagram, surrounded by other words at distances that reflect their level of association. In addition, during the course of the discussion, an observer took note of the participants' facial expressions upon viewing the stimuli, in accordance with the methods outlined by Tian et al. (2011). Participants were shown three stimuli (Figures 1a-1f): (1) a mock-up packaging of cookies (front and back) as baseline stimulus, (2) a mock-up packaging of cookies displaying the Nutri-Score label (front and back), and (3) a mock-up packaging of cookies displaying the NutrInform Battery label (front and back). The cookies mock-up package was recreated using Artificial Intelligence (AI), starting from an existing product. However, to avoid bias, all recognizable components were removed, including the pack color, original pack shape, brand, and image of the cookie. Therefore, participants were presented with a package of classic chocolate chip cookies with a fictional brand. The back of the package was the same for all stimuli and included the made-up brand name ("Fornotti"), the package contents ("Chocolate chip cookies"), the ingredients, the nutritional value table, a small image of the cookies, a fake barcode, and Möbius strip symbols. The front of the baseline stimulus pack displayed the brand name ("Fornotti"), the product ("Chocolate chip cookies"), an image of a cookie, and the weight ("270 g"). The other two stimuli simply added Nutri-Score and NutrInform Battery labels with the same nutritional values for each system. The stimuli were the same in the two focus groups; the only difference was the language. In the first focus group, the stimuli were presented in Italian (Figure 1a-1c), and in the second, they were presented in English (Figure 1d-1f).




*Figure 1a Baseline*




*Figure 1b Nutri-Score*




*Figure 1c NutrInform Battery*




*Figure 1d Baseline*




*Figure 1e Nutri-Score*




*Figure 1f NutrInform Battery*

The focus group discussions were divided into six sections: (1) free associations about healthy products, (2) a discussion about eating habits and perceptions of "healthy", (3) an exploration of the decision-making process for purchasing healthy products at the supermarket, paying attention to labels on packages and their perceived usefulness, and the influence of labels on product choice, (4) presentation of stimuli to assess understanding of the Nutri-Score and NutrInform Battery labels (*label_comprehension*), as well as perceptions of product healthfulness (*health_perception*); (5) comparison of the two labels, along with the researchers' explanations of how they work; and (6) discussion of effective ways to communicate the amount of product that can be consumed, the usefulness of this information, and other desirable label content. Additionally, after each stimulus, participants were asked how many cookies they thought they could consume in a day based on the labels they saw. The exact number of cookies each participant could consume was calculated based on their basal metabolism (Harris & Benedict, 1919), which was determined using the information collected during the recruitment questionnaire.

## 5. Results

The visual outputs of the T-LAB analysis are presented in Figures 2a-2c and 3a-3c. In the first focus group (Figures 2a-2c), the Nutri-Score label appears ambiguous. While the label is perceived as informative, the presence of concepts such as "NOT CLEAR", "SUGAR", "COLORINGS", and "QUANTITY" suggests skepticism about its transparency and precision. Participants understand its informational value but do not fully trust the summary it provides, particularly regarding quantitative aspects ("INTAKE" and "INGREDIENTS"). On the other hand, the NutrInform Battery is perceived as complex and technical, oriented toward precision and measurability. It is associated with numerical elements ("CALORIES", "GRAMS", "FAT", "PROTEIN", and "CARBOHYDRATE"), as well as with the idea of active calculation by the consumer ("CALCULATION", "GUIDE", "AVERAGE"). However, the presence of "NOT_CLEAR" suggests that, although it is richer in details, it requires high cognitive effort, which can lead to interpretation difficulties for less experienced or hasty consumers. Regarding the co-occurrence comparison analysis (Figure 2c), participants recognize that the NutrInform Battery provides more specific information about caloric intake and product composition. However, it is less connected to the concept of a balanced diet. Conversely, the Nutri-Score is recognized as a comprehensive system, but it is perceived as unclear and perhaps overly simplistic or not transparent enough in its categorization criteria.

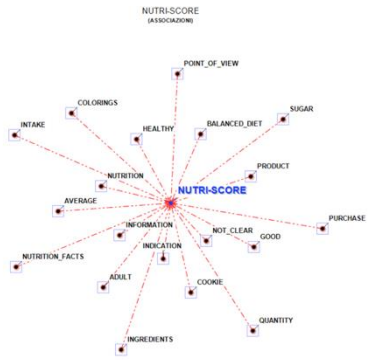



*Figure 2a Radial diagram of Nutri-Score's*

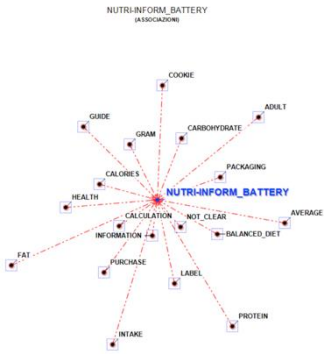



*Figure 2b Radial diagram of NutrInform Battery*

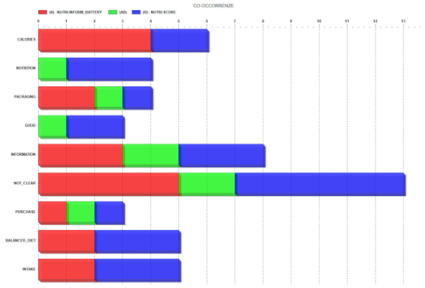


*Figure 2c Histogram of co-occurence analysis*

In fact, the transcripts reveal that participants of the first focus group appreciate technical details such as kcal, portions, and nutritional composition but cannot always interpret them immediately, especially under pressure (e.g., limited time at the supermarket). They argue that the NutrInform Battery requires higher nutritional literacy but offers greater autonomy to informed consumers. The Nutri-Score, on the other hand, is used as an initial visual and synthetic filter that is useful for forming a quick impression of the product during the shopping experience.

*"With an indication like that (the Nutri-Score), I would be fairly confident that the food is healthy and that it has been defined as such according to a regulation."*

However, the Nutri-Score is associated with vague concepts, revealing a lack of confidence in its informative utility. Participants know that a "green light" could mask questionable foods (e.g. poorly graded olive oil):

*"The Nutri-Score is clear because it doesn't say anything; there are only colors and letters. It's clear because it doesn't say anything. It's certainly based on the sensation of green and the letter A, which we associate with something better than C. The fact that it says 'Nutri' makes it seem healthier. Paradoxically, the NutrInform Battery is clearer because it gives more information. It explains what it wants to tell you. The only problem is that it's very small and requires some kind of mathematical-nutritional skills. It informs you how much energy the food provides, and there's a battery icon. But, in my opinion, the Nutri-Score is more convincing on a communicative level because it leaves room for imagination. However, it's less sincere."*

On the other hand, the NutrInform Battery is too complex to understand:

*"I actually find it a bit confusing. It seems that the top part refers to a single cookie and shows the distribution of energy, fat, saturated fat, sugar, and salt. However, the transition to a percentage that refers to generic intake is confusing. I don't understand why the equivalent in 100 grams is reported."*

The results of the facial expression analysis based on the categorization proposed by Tian et al. (2011) show that the predominant emotional responses elicited by the baseline stimulus encompass surprise and disgust (AU 1-AU 17). A single participant exhibited fear/sadness (AU 4). The emotions commonly experienced by all participants when viewing the Nutri-Score are those of disgust (AU14) and surprise (AU1). The emotion evoked by the NutrInform Battery stimulus among all participants was identified as disgust/sadness (AU 15-AU 17). Both labeling systems can influence purchasing behavior, but with opposite approaches. The Nutri-Score is perceived as useful for an "impulsive", immediate, but not always informed decision, while the NutrInform Battery is perceived as useful for an "informed" rational decision, but it is slowed down by the need for decoding. Regarding health perception, the packet of cookies was considered moderately healthy in the baseline stimulus. This opinion did not change when presented with the Nutri-Score but decreased when presented with the NutrInform Battery. Some participants hypothesized that the cookies were less healthy than initially believed. Regarding intake, participants stated that they could consume three to eight cookies per day when faced with the Nutri-Score and three to five cookies per day when faced with the NutrInform Battery. However, daily intake calculated with basal metabolism tells us the correct intake is two to three cookies. In the second focus group, participants experienced the Nutri-Score as a useful tool for quickly choosing products in supermarkets, especially for categorizing them ("CATEGORY", "SUPERMARKET"). However, there are still doubts about the true understanding of the score's meaning, particularly regarding the criteria (e.g., "FAT", "MAXIMUN", "SCORE"). A gap emerges between the immediacy and depth of the information. The NutrInform Battery is much less familiar. This is understandable given that the participants do not live in Italy. Therefore, they see it as a novelty ("NEVER_SEEN"), associated with precise technical information ("GRAMS", "DAY"), and with potential usefulness, even if they don't fully understand it. This creates cognitive barriers ("NOT_UNDERSTAND"). Its association with "INDULGENT" suggests that it is used to justify food indulgences. The Nutri-Score is well-known and visually clear. Some use it as a shortcut to decide whether a product is "good" or "recommendable". However, many do not fully understand how the score is assigned; the method remains opaque. The NutrInform Battery is an absolute novelty for the participants ("NEVER_SEEN"), which hinders its communicative effectiveness. When included, it is linked to the concrete need for information about consumption, such as grams, days, eating, and buying. However, lack of familiarity and information density create cognitive barriers ("NOT_UNDERSTAND"). Regarding the co-occurrence comparison analysis (Figure 3c), the Nutri-Score is perceived as more familiar and easier to associate with positive judgments ("GOOD"). Nevertheless, it is not perfectly clear to everyone ("NOT_UNDERSTAND"), while the NutrInform Battery is more associated with the need for information ("NEED") and understanding consumption ("EAT").

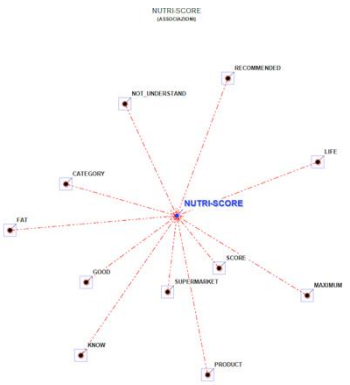



*Figure 3a Radial diagram of Nutri-Score's*

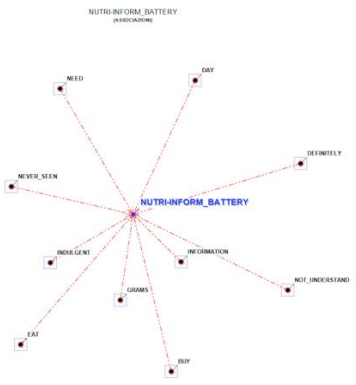



*Figure 3b Radial diagram of NutrInform Battery*

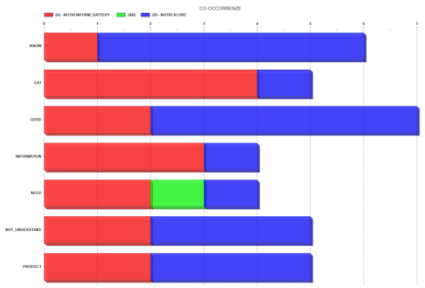


Figure 3c Histogram of co-occurence analysis

The transcripts indicate that, in the second focus group, there is a strong emphasis on the pragmatism and applicability of nutritional information, particularly with regard to diet management and daily intake. Participants, some with personal experience following a weight-loss diet, seek labels that provide detailed information regarding not only general healthfulness but also specific composition and its impact on their nutritional needs. In this context, the perception of the Nutri-Score, although recognized for its visual immediacy, may be limited by its synthetic nature, which does not always meet the needs of a more diet-conscious consumer:

*"Sometimes the Nutri-Score seems stupid. For example, I eat a lot of olives for a happy hour. So, whenever I look at the NutriScore, it shows very high fat. But, like, let's be real! The fat from the olives is not the same as the fat from the crisps. So, like, in that case, I will ignore it."*

The NutrInform Battery has emerged as a more highly regarded instrument that endeavors to furnish supplementary information; however, it is challenging to comprehend:

*"Intuitively when I look at the battery I think that it's for the package and then I look under and I think that it's for 100 grams and then I look on the top and then I... It is for one cookie? I love it, I really like to see how it fits into my daily budget, to say so, for every category and I do think that this would influence my decision of buying it because then I'll make a conscious decision, I just think it should have less numbers."*

The predominant emotional responses elicited by the baseline stimulus were surprise and joy (AU 6), while only one participant exhibited disgust (AU 1). The emotions commonly experienced by all participants when viewing the Nutri-Score were disgust and surprise (AU 1 - AU17). The emotion that was commonly experienced by all participants when viewing the NutrInform Battery stimulus was surprise (AU 17). Participants, particularly those with specific health objectives, place significant value on labels that not only categorize a product but also facilitate informed quantitative decision-making and the seamless integration of the food into their daily dietary regimen. The perception of product healthfulness underwent a substantial shift during the focus group session. Initially, when presented with the baseline stimulus and the Nutri-Score, the participants engaged in a debate regarding the product's healthfulness, with some considering it to be unhealthy due to its "cookie nature", and others perceiving it as relatively healthy. However, when the NutrInform Battery was introduced, there was a notable decline in the perception of healthfulness. Regarding intake, participants stated that they could consume two to five cookies per day when faced with the Nutri-Score. However, they drastically reduce in one to two cookies per day when they faced with the NutrInform Battery ("*Definitely severely reduced. Definitely no more than one.*"). Once more, the daily intake, calculated with basal metabolism, indicates that the appropriate intake is two to three cookies.

## 6. Discussion

While FOP labels have been extensively studied in terms of product perception and purchase intention, relatively little research has explored their effectiveness in fostering both accurate comprehension and behavioral regulation, especially in real-world settings. Most existing studies rely on stylized or ad hoc label formats in experimental contexts, leaving the practical effects of well-established systems like Nutri-Score and NutrInform Battery underexplored. Additionally, the few studies that investigate consumption outcomes often fail to integrate label comprehension as a mediating mechanism or explore the cognitive pathways that underpin label processing (Heeremans et al., 2025; Araya et al., 2022). Our findings address these gaps by offering a theoretically grounded, qualitative examination of how two major FOP label formats—Nutri-Score and NutrInform Battery—affect consumers' understanding of product healthfulness and their self-estimated intake quantities. In doing so, we highlight the complex cognitive and emotional mechanisms triggered by these labels and demonstrate that while both formats may influence consumer behavior, they do so in markedly different ways. Nutri-Score, with its color-coded summary format, is perceived as visually accessible and efficient, yet also simplistic and occasionally misleading. The NutrInform Battery, on the other hand, is associated with greater informational depth and perceived accuracy, but its complexity introduces interpretive barriers for less nutrition-literate consumers.

The findings generate several theoretical and managerial implications, as well as avenues for future research.

## 7. Implications

### 7.1 Theoretical Implications

Our study contributes to theory in three main ways. First, it advances research on nutritional labeling by jointly examining FOP label comprehension and consequent consumption intent within a single conceptual framework. Drawing from processing fluency theory (Reber, Schwarz, & Winkielman, 2004), dual-process decision-making (Kahneman, 2011), and cognitive load theory (Sweller, 1988), we show that label design systematically influences both the ease of understanding and the regulation of consumption. Whereas Nutri-Score facilitates fast, heuristic judgments aligned with System 1 processing, NutrInform Battery demands slower, more deliberate evaluations consistent with System 2. This cognitive divergence helps explain why some consumers find Nutri-Score more intuitive but also more prone to misinterpretation, while others value the informational richness of NutrInform Battery despite its greater complexity. Second, we contribute to self-regulation theory (Baumeister et al., 1994) and mental accounting (Thaler, 1985) by showing how numeric, portion-based labels like NutrInform Battery activate resource budgeting behaviors. Participants reported more conservative intake estimates in response to this label, suggesting that numeric granularity can promote portion restraint by invoking a scarcity frame (Mullainathan & Shafir, 2013). In contrast, the simplified A–E summary in Nutri-Score sometimes fostered a false sense of "healthfulness permission," particularly for indulgent foods, thereby leading to overestimation of acceptable consumption levels (Heeremans et al., 2025). These dynamics underscore the importance of considering not just how labels inform, but how they *license* or *inhibit* behavior. Third, our findings clarify the mechanisms behind conflicting prior results regarding label effectiveness (Fialon et al., 2022; Castellini et al., 2024), revealing that label efficacy is contingent on context, consumer nutrition literacy, and the interaction between label format and consumption goals. This supports the view that existing nutrition labels do not work effectively, and future research and practice should adopt a different approach to label design and communication of nutritional information.

### 7.2 Managerial Implications

This study offers several insights for practitioners seeking to improve nutrition communication and influence consumption behavior. First, for food manufacturers and retailers, our findings suggest that Nutri-Score may be more effective in fast-paced environments (e.g., supermarkets) where consumers rely on quick decision-making heuristics. However, its simplicity can lead to overconsumption and reduced credibility among more nutritionally engaged consumers. To mitigate this, practitioners might consider pairing summary labels with additional numeric cues or QR codes linking to detailed nutritional information.

Second, the NutrInform Battery appears better suited for health-conscious consumers and contexts that require transparency and self-regulation, such as diet-specific purchases or online grocery platforms where users can take more time to evaluate information. However, the cognitive effort required to decode the NutrInform Battery suggests a need for educational campaigns or digital tools that can simplify interpretation, such as calculators or app-based guidance.

Third, given the widespread confusion about appropriate portion sizes, this study underscores the value of labels that connect nutritional information to actionable intake guidance. Managers designing FOP systems should consider integrating intuitive metaphors (e.g., battery levels, daily intake percentages) with real-world consumption advice (e.g., "3 cookies per day based on your metabolism") to enhance relevance and comprehension.

Finally, our results reinforce the idea that FOP labels should not be evaluated purely on accuracy or appeal in isolation, but on how effectively they align with consumer goals, processing capacities, and contexts of use.

### 7.3 Policy Implications

From a public health perspective, the findings affirm that FOP labels can meaningfully influence both consumers' perceptions of product healthfulness and their self-regulatory behaviors. However, these effects depend critically on the labels being both understood and trusted. The frequent misjudgment of healthfulness and portion size observed among participants underscores a broader need for nutrition literacy interventions that demystify how labels are calculated and what they imply. Policy initiatives that mandate FOP labeling should therefore be accompanied by strategic communication efforts aimed at enhancing consumer confidence and interpretive competence. Without such complementary initiatives, simplified tools like Nutri-Score risk being perceived as vague or overly reductive, while more complex labels like the NutrInform Battery may be underutilized due to their perceived cognitive demands.

In addition, public health messaging should emphasize the importance of a balanced and context-sensitive understanding of nutrition, acknowledging that certain calorie-dense products (e.g., olive oil or nuts) can play a valuable role in a healthy diet when consumed in moderation. These items may receive lower scores under certain labeling systems despite contributing positively to cardiovascular and metabolic health. Thus, labels alone should not be the sole determinant of health messaging; rather, they must be part of a broader, evidence-based nutritional education framework that promotes balance, moderation, and long-term well-being.

To support this broader understanding, health authorities could partner with food manufacturers to provide supplementary nutritional information via QR codes printed on packaging. These links could direct consumers to official health ministry websites containing

tools for personalized dietary recommendations, such as daily caloric needs based on weight, age, and activity level, and suggested limits for specific food categories. This type of hybrid digital labeling strategy would allow consumers to move beyond one-size-fits-all interpretations and engage with tailored, actionable guidance grounded in public health standards.

Finally, our findings highlight the need for greater international coordination in FOP labeling policies. Diverging national systems risk creating confusion among consumers, particularly in cross-border markets, and adding regulatory complexity for manufacturers. A harmonized or interoperable approach to nutritional labeling, agreed upon at the EU level or through broader multilateral frameworks, could improve label consistency, reduce consumer misunderstanding, and facilitate compliance for global food producers. As nutritional labeling becomes an increasingly prominent component of food policy, alignment across governments, public health institutions, and industry stakeholders will be critical to maximizing both clarity and impact.

## 8. Limitations and Future Research Directions

While this study provides important insights into how Nutri-Score and NutrInform Battery labels shape consumption intentions as a consequence of the nutritional-content comprehension, it also presents several limitations that should guide future research.

First, although our qualitative design allowed for an in-depth exploration of consumer reasoning and interpretive strategies, the study was conducted with a relatively small sample size, limiting the generalizability of the findings. Replicating this work using larger and more diverse consumer panels would help validate the observed patterns and provide more robust insights into how different population segments engage with FOP labels.

Second, the focus was limited to a single product category, packaged biscuits, which, as an indulgent food, may naturally evoke stronger regulation impulses in the presence of detailed nutritional information. Our results showed that the NutrInform Battery led to a substantial decrease in self-estimated consumption, but this effect may not generalize to foods that are already perceived as healthy (e.g., yogurts, cereal bars, or plant-based products). Future research should replicate this design across a wider range of product categories to test whether the effect of different FOP labels on consumption is moderated by baseline perceptions of product healthfulness.

Third, the qualitative nature of our analysis does not establish causality between exposure to different FOP labels and comprehension and consumption regulation. We encourage future research to employ experimental designs, both in controlled settings and in real-world environments, to statistically verify the hypothesized mechanisms and isolate the effect of each label type on consumption decisions.

Fourth, although many existing studies (and ours) compare real or fictionalized versions of existing FOP systems (e.g., Nutri-Score, warning labels, battery formats), none have examined what an ideal label might look like if designed from first principles. Future research should take a design science or co-creation approach, involving consumers, nutritionists, behavioral scientists, and regulators to identify which combinations of format, content, and interpretive depth most effectively promote healthy choices across contexts. The rationale is that hybrid systems that merge intuitive summary indicators with contextual portion cues may balance processing fluency with informational precision.

Additionally, our findings revealed important consumer heterogeneity in how labels are processed, with differences based on health motivation, nutritional knowledge, and even

shopping context. Future studies should adopt segmentation-based approaches, investigating how demographic, psychographic, and situational variables moderate label effectiveness. Similarly, given the rise of online and mobile grocery platforms, it would be valuable to explore digital labeling interfaces, including interactive tools and personalized FOP guidance that adapt to user preferences or health goals.

Finally, while our focus was on comprehension and self-estimated consumption, future multidisciplinary work could examine long-term behavioral outcomes, such as actual dietary adherence and health indicators, tracked over time to assess whether FOP labels produce sustainable change or are subject to habituation effects.

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## References

Andreani, G., Sogari, G., Wongprawmas, R., Menozzi, D., & Mora, C. (2025). Nutri-Score and Eco-Score Labeling: A Systematic Review of Their Impact on Consumer Understanding, Attitudes, and Behaviors. *Food Reviews International*, 1-25.

Araya, S., Elberg, A., Noton, C., & Schwartz, D. (2022). Identifying food labeling effects on consumer behavior. *Marketing Science, 41*(5), 982-1003.

Baumeister, R. F., & Heatherton, T. F. (1996). Self-regulation failure: An overview. *Psychological Inquiry, 7*(1), 1–15.

Baumeister, R. F., Heatherton, T. F., & Tice, D. M. (1994). *Losing control: How and why people fail at self-regulation*. Academic Press.

Becker, M. W., Bello, N. M., Sundar, R. P., Peltier, C., & Bix, L. (2015). Front of pack labels enhance attention to nutrition information in novel and commercial brands. *Food Policy, 56*, 76–86.

Campos, S., Doxey, J., & Hammond, D. (2011). Nutrition labels on pre-packaged foods: A systematic review. *Public Health Nutrition, 14*(8), 1496–1506.

Carbonneau, E., Perron, J., Drapeau, V., Lamarche, B., Doucet, É., Pomerleau, S., & Provencher, V. (2015). Impact of nutritional labelling on 10-d energy intake, appetite perceptions and attitudes towards food. *British Journal of Nutrition, 114*(12), 2138-2147.

Castellini, G., Bertorelli, S., Carruba, M., Donini, L. M., Martini, D., & Graffigna, G. (2024). The role of Nutri-Score and NutrInform Battery in guiding the food choices of consumers with specific nutritional needs: A controlled study. *Nutrition, Metabolism and Cardiovascular Diseases, 34*(12), 2789-2798.

Chandon, P., & Wansink, B. (2007). The biasing health halos of fast-food restaurant health claims: Lower calorie estimates and higher side-dish consumption intentions. *Journal of Consumer Research, 34*(3), 301–314.

CREA. (2023, May 18). *Perché il NutriScore è fuorviante per i consumatori*. Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria. https://www.crea.gov.it/-/perch%C3%A9-il-nutriscore-%C3%A8-fuorviante-per-i-consumatori

Crockett, R. A., Jebb, S. A., Hankins, M., & Marteau, T. M. (2014). The impact of nutritional labels and socioeconomic status on energy intake. An experimental field study. *Appetite, 81*, 12-19.

Dubois, P., Albuquerque, P., Allais, O., Bonnet, C., Bertail, P., Combris, P., Lahlou, S., Rigal, N., Ruffieux, B., & Chandon, P. (2021). Effects of front-of-pack labels on the nutritional quality of supermarket food purchases: evidence from a large-scale randomized controlled trial. *Journal of the Academy of Marketing Science, 49*(1), 119-138.

Ducrot, P., Méjean, C., Julia, C., Kesse-Guyot, E., Touvier, M., Fezeu, L., Hercberg, S., & Péneau, S. (2015). Effectiveness of front-of-pack nutrition labels in French adults: results from the NutriNet-Sante cohort study. *PLOS one, 10*(10), e0140898.

Ebneter, D. S., Latner, J. D., & Nigg, C. R. (2013). Is less always more? The effects of low-fat labeling and caloric information on food intake, calorie estimates, taste preference, and health attributions. *Appetite, 68*, 92-97.

Egnell, M., Kesse-Guyot, E., Galan, P., Touvier, M., Rayner, M., & Hercberg, S. (2018). Impact of front-of-pack nutrition labels on portion size selection: An experimental study. *Public Health Nutrition, 2*1(18), 3267–3275.

European Commission. (2011). Regulation (EU) No 1169/2011 of the European Parliament and of the Council of 25 October 2011 on the provision of food information to consumers. EUR-Lex.

European Commission. (2022). *Nutrition labelling.* https://food.ec.europa.eu/food-safety/labelling-and-nutrition/food-information-consumers-legislation/nutrition-labelling_en

Fargione, R., Adinolfi, F., Capone, R., De Filippo, V., Conti, V., Sotgiu, M., & Riccio, C. (2024, Luglio). Rapporto - Malattie, Cibo e Salute. Divulgastudi. Retrieved June 21, 2025, from

https://www.divulgastudi.it/wp-content/uploads/2024/07/Rapporto-Malattie-Cibo-e-Salute.pdf#page=22.08

Fialon, M., Babio, N., Salas-Salvadó, J., Galan, P., Kesse-Guyot, E., Touvier, M., Deschasaux-Tanguy, M., Sarda, B., Hercberg, S., Khoury, N., Nabec, L., & Julia, C. (2023). Comparative understanding and preference of Nutri-Score and NutrInform Battery in a sample of Spanish consumers. *European Journal of Public Health, 33*(2), 293-298.

Fialon, M., Serafini, M., Galan, P., Kesse-Guyot, E., Touvier, M., Deschasaux-Tanguy, M., Sarda, B., Hercberg, S., Nabec, L., & Julia, C. (2022). Nutri-Score and NutrInform Battery: Effects on performance and preference in Italian consumers. *Nutrients, 14*(17), 3511.

Finkelstein, S. R., & Fishbach, A. (2010). When healthy food makes you hungry. *Journal of Consumer Research, 37*(3), 357–367

Hagmann, D., & Siegrist, M. (2020). Nutri-Score, multiple traffic light and incomplete nutrition label: Effects on food choice and willingness to pay by health motivation. *Appetite, 144*, 104485.

Harper, J. (2022, August 31). *Opinion: Why Europe should abandon the Nutri-Score.* DW. https://www.dw.com/en/opinion-why-europe-should-abandon-the-nutri-score/a-62922313

Harris, J. A., & Benedict, F. G. (1919). A biometric study of basal metabolism in man (No. 279). Carnegie institution of Washington.

Heeremans, E., Geuens, M., & Vermeir, I. (2025). Healthy labels, healthy portions? The impact of favorable nutri-scores on consumers' portion size selection and food intake. *Food Quality and Preference, 128*, 105485.

Hersey, J. C., Wohlgenant, K. C., Arsenault, J. E., Kosa, K. M., & Muth, M. K. (2013). Effects of front-of-package and shelf nutrition labeling systems on consumers. *Nutrition reviews, 71*(1), 1-14.

Huillery, P. (2022, January 11). *Nutri-Score: Do consumers understand what it means?* Acceptance Lab. https://acceptancelab.com/nutri-score-do-consumers-understand-what-it-means

Ikonen, I., Sotgiu, F., Aydinli, A., & Verlegh, P. W. (2020). Consumer effects of front-of-package nutrition labeling: An interdisciplinary meta-analysis. *Journal of the academy of marketing science*, *48*, 360-383.

Italian Ministry of Health. (n.d.). *NutrInform Battery*. https://www.nutrinformbattery.it/en/home

Kahneman, D. (2011). *Thinking, fast and slow*. macmillan.

Larsson, I., Lissner, L., & Wilhelmsen, L. (1999). The 'Green Keyhole'revisited: nutritional knowledge may influence food selection. *European journal of clinical nutrition, 53*(10), 776-780.

Mazzù, M. F., Romani, S., & Gambicorti, A. (2021). Effects on consumers' subjective understanding of a new front-of-pack nutritional label: The NutrInform Battery. *Nutrients, 13*(5), 1502.

Mullainathan, S., & Shafir, E. (2013). *Scarcity: Why having too little means so much*. Times Books.

Papaleo, B., Cangiano, G., & Calicchia, S. (2013). Occupational safety and health professionals' training in Italy: Qualitative evaluation using T-LAB. *Journal of Workplace Learning, 25*(4), 247-263.

Reber, R., Schwarz, N., & Winkielman, P. (2004). Processing fluency and aesthetic pleasure: Is beauty in the perceiver's processing experience? *Personality and Social Psychology Review, 8*(4), 364–382.

Reid, R. D., D'Angelo, M. E. S., Dombrow, C. A., Heshka, J. T., & Dean, T. R. (2004). The Heart and Stroke Foundation of Canada's Health Check food information program: modelling program effects on consumer behaviour and dietary practices. *Canadian journal of public health, 95*, 146-150.

Roberto, C. A., Shivaram, M., Martinez, O., Boles, C., Harris, J. L., & Brownell, K. D. (2012). The Smart Choices front-of-package nutrition label: Its influence on perceptions and intake of cereal. *Appetite, 58*(2), 651–657.

Schruff-Lim, E. M., Van Loo, E. J., van Kleef, E., & van Trijp, H. C. (2023). Turning FOP nutrition labels into action: A systematic review of label+ interventions. *Food Policy, 120*, 102479.

Schwarz, N. (2004). Metacognitive experiences in consumer judgment and decision making. *Journal of Consumer Psychology, 14*(4), 332–348.

Schuldt, J. P., & Schwarz, N. (2010). The "organic" path to obesity? Organic claims influence calorie judgments and exercise recommendations. *Judgment and Decision Making, 5*(3), 144–150.

Sweller, J. (1988). Cognitive load during problem solving: Effects on learning. *Cognitive Science, 12*(2), 257–285.

Talati, Z., Pettigrew, S., Dixon, H., Neal, B., Ball, K., & Hughes, C. (2016). Do health claims and front-of-pack labels lead to a positivity bias in unhealthy foods?. *Nutrients, 8*(12), 787.

Thaler, R. H. (1985). Mental accounting and consumer choice. *Marketing Science, 4*(3), 199–214.

Tian, Y., Kanade, T., & Cohn, J. F. (2011). Facial expression recognition. In Handbook of face recognition (pp. 487-519). London: Springer London.

Valetto, M. R., & Manfrini, R. (2014). *Dossier Alimentazione_Guadagnare Salute*. Epicentro - Istituto Superiore di Sanità. Retrieved June 21, 2025, from https://www.epicentro.iss.it/guadagnare-salute/formazione/materiali/GS_alimentazione.pdf

van den Akker, K., Bartelet, D., Brouwer, L., Luijpers, S., Nap, T., & Havermans, R. (2022). The impact of the nutri-score on food choice: A choice experiment in a Dutch supermarket. *Appetite, 168*, 105664

Van Herpen, E., & Van Trijp, H. C. (2011). Front-of-pack nutrition labels. Their effect on attention and choices when consumers have varying goals and time constraints. *Appetite, 57*(1), 148-160.

# Ad-Based Framework for Tracing Wartime Cultural Dynamics

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## Abstract

Armed conflicts force communicators to recalibrate persuasive messages almost overnight, yet standard cultural metrics are too static to register such rapid shifts. Analyzing 90 Ukrainian television and YouTube commercials aired before and after Russia's 2022 invasion, this study introduces an ad-based framework for tracing wartime cultural dynamics. The framework keeps the full six-dimensional Minkov-Hofstede palette, folding long- and short-term orientation into flexibility-monumentalism, while adding four war-specific tags of heroic collectivism, threat mitigation rhetoric, sacrifice appeals, and patriotic symbolism. Each advertisement is coded twice, first in a war-blind pass that applies only the classic grid, then in a war-augmented pass that scores the four crisis tags separately. In the war-blind pass, collectivism, high uncertainty avoidance, restraint, and monumentalism appear to surge. Once the crisis cues are isolated, the baseline dimensions remain flat, whereas mobilization cues surge ($\Delta \leq +57$ pp, $p < 0.001$). Only restraint shows a modest rise (+18 pp), mirroring wartime survey data. The suggested framework distinguishes between a temporary "value stretch" and long-term cultural changes, while also stress-testing a hybrid Minkov-Hofstede model under challenging conditions. Practically, it offers a timeline: unity, danger, and sacrifice frames dominate during acute conflict but are likely to cede ground to individual-empowerment appeals as a society moves from survival to recovery.

*Keywords: wartime advertising; cultural value dynamics; Minkov-Hofstede dimensions; Ukraine conflict; ad-based framework for tracing wartime cultural dynamics.*

## 1. Introduzione

Russia's full-scale invasion of Ukraine in February 2022 compressed cultural change into wartime speed. In just a few months, there were renegotiated orientations that typically evolved over generations, like risk tolerance, views of authority, and the balance between individual choice and collective duty. Advertising offers a clear window on this acceleration: pre-war spots that urged viewers to "buy now" quickly gave way to messages that asked them to "stand together," donate, and endure. At first glance, such rhetoric implies a wholesale shift toward collectivism, restraint, heightened uncertainty avoidance, and patriotic monumentalism. Whether such rhetoric signals durable cultural change or merely a tactical survival script is an open question.

Classical cultural indices cannot answer this question. Hofstede's (1980) country scores, built on legacy samples, are too static to register week-by-week turbulence. Although it is parsimonious, the two-factor refinement of Minkov and Kaasa (2022) still focuses on cross-national gaps rather than within-culture shocks. This study retains the complete six-dimensional vocabulary but nests long-/short-term orientation inside the flexibility-monumentalism axis to capture rapid movement without sacrificing nuance. Using this hybrid approach, the study introduces the Ad-based Framework for Tracing Wartime Cultural Dynamics (AFT-WCD), which includes four wartime tags: heroic collectivism, threat-mitigation rhetoric, sacrifice appeals, and patriotic symbolism.

We code each commercial twice: once using the classic grid alone, and again incorporating the wartime overlay. This double pass grounds the central research question: RQ: When crisis-specific signals are separated from routine creative choices, do the underlying Minkov-Hofstede dimensions in Ukrainian advertising still align with pre-war trends, or do they point to durable cultural drift?

Answering the RQ serves a dual purpose. Theoretically, it stress-tests a hybrid Minkov-Hofstede model under extreme conditions, clarifying whether wartime rhetoric stretches values without permanently reshaping them. Practically, it equips communicators and policymakers with an evidence-based timeline of appeals that resonate during crisis and fade as conditions normalize. It provides guidance that helps prevent tone-deaf messaging and supports a pivot from "standing together" to "rebuilding the future" as Ukraine moves from survival to recovery.

## 2. Method

### 2.1. Research design

The study followed a convergent mixed-methods content-analysis design. The qualitative strand employed semiotic reading, rhetorical analysis, and archetypal mapping to document the symbolic logic of each commercial. The quantitative strand applied AFT-WCD in two sequential passes. In the "war-blind" pass, coders scored the six hybrid Minkov-Hofstede dimensions alone; in the crisis-augmented pass, they rescored the same ads with the four additional wartime tags recorded separately. Comparing the two passes revealed whether shifts in collectivism, restraint, or uncertainty avoidance survive once mobilization cues are isolated.

### 2.2. Corpus and sampling

The corpus comprised 90 Ukrainian video commercials across twelve product sectors: 39 aired before 24 February 2022 and 51 between that date and May 2025. Spots had to be Ukrainian-language or Ukraine-targeted, ≤ 90 seconds, and high-reach (≥ 100,000 YouTube views or national prime-time slot). Metadata were verified in an Excel workbook, cleaned, imported into Python, and visualized to confirm platform, sector, and length comparability.

### 2.3. Coding Protocol

Coders first produced narrative memos (28-item template) capturing archetype, tone, symbolism, and persuasion techniques. They then ran the quantitative passes. In each pass, cues triggered a binary 1; multiple cues per ad were possible. Krippendorff's α averaged 0.83, and the third auditor reconciled around 5% of entries. Table 1 (not shown here) lists the war-blind grid, where wartime cues are folded into the classic poles. Table 2 presents the war-augmented grid, which extracts and logs those cues under their respective tags.

| Minkov-Hofstede dimension | Binary variable | Cues that activate "1" | Wartime cues removed from the classic tally | Tag that captures the removed cues |
|---|---|---|---|---|
| Individualism / Collectivism | Individualism | Solo protagonist, first-person singular, self-achievement ("I chose freedom") | — | — |
| | Collectivism | Routine group scenes, family frames, first-person plural in everyday consumption | Mobilization slogans ("we fight together"), defence-fund QR codes, group protagonists in uniform | Mobilization collectivism |
| Uncertainty Avoidance | High | Generic safety claims, warranty language, step-by-step instructions | Shelter maps, bunker imagery, "secure transfer" guarantees, hazard icons | Threat mitigation |
| | Low | "Try it" invites, playful risk humour, spontaneous decisions | — | — |
| Power Distance | High | Non-combat uniforms denoting hierarchy, vertical camera angles, command verbs | — | — |
| | Low | Informal dress, horizontal teamwork, humor toward authority | — | — |
| Masculinity / Femininity | Masculinity | Warrior metaphors, victory tropes, trophy visuals | — | — |
| | Femininity | Caregiver imagery, relational tone, soothing palette | — | — |
| Indulgence / Restraint | Indulgence | Hedonistic visuals, bright colours, "treat yourself" slogans | — | — |
| | Restraint | Moral injunctions, thrift rhetoric not tied to war | Donation prompts, rationing appeals, "pause luxury" slogans | Sacrifice appeal |
| Flexibility / Monumentalism | Flexibility | Rebuild/innovation rhetoric, improvisational humor | — | — |

| Minkov-Hofstede dimension | Binary variable | Cues that activate "1" | Wartime cues removed from the classic tally | Tag that captures the removed cues |
|---|---|---|---|---|
| | Monumentalism | Timeless heritage, solemn patriotism without combat symbols | Flag palettes, military insignia, historic battle slogans, archival footage | Patriotic symbolism |

**Table 2:** Ad-based coding grid for tracing wartime cultural dynamics. (Source: authors' elaboration)

Note: In the second coding pass, cues listed in the fourth column are extracted from their parent dimension and recorded only under the wartime tags in the final column. This separation prevents short-term mobilization rhetoric from inflating long-term cultural indicators and allows the analysis to isolate genuine value drift from situational "value stretch."

## 2.5. Triangulation

Results were benchmarked against two baselines coded with the identical grid: Kochkina & Riccardi's (2021) Facebook study of Ukrainian brands (corporate baseline) and Kochkina et al.'s (2025) survey of Ukrainian war refugees (displacement baseline). Alignment across ads, corporate discourse, and refugee values signals structural change; divergence signals situational rhetoric.

*Ethical considerations and validity safeguards*

All ads were publicly broadcast, contained no personal data, and coders received psychological-safety briefings; hence, no formal ethics approval was required. Cues were anchored in the Minkov-Hofstede taxonomy, intercoder reliability was high ($\alpha = 0.83$), and Python scripts are fully replicable, securing construct and internal validity. External validity is limited to high-reach broadcast and YouTube spots. However, the study's longitudinal scope, binary coding, and qualitative cross-checks still yield a robust view of wartime cultural dynamics.

## 3. Results

War-blind pass. Folding wartime cues into the classic Minkov-Hofstede grid inflated collectivism by 35 pp, uncertainty avoidance by 77 pp, restraint by 15 pp, and monumentalism by 34 pp.

War-augmented pass. After heroic collectivism, threat rhetoric, sacrifice appeals, and patriotic symbols were coded in their own tags, five baseline dimensions lay within ± 3 pp of their pre-war levels. Only restraint shows a modest increase (+18pp), mirroring the refugee survey's wartime thrift but not overturning Ukraine's long-standing tilt toward individual agency and low hierarchy acceptance. By contrast, the crisis tags surged: mobilization collectivism +38 pp, threat mitigation +44 pp, sacrifice appeal +50 pp, and patriotic symbolism +57 pp (all $p < 0.001$).

Triangulation. Pre-war corporate posts and the 2024 refugee survey have seen Ukraine as individualistic, low-power-distance, and highly flexible. This aligns with the stable baseline found in the war-augmented pass. The wartime spikes, therefore, constitute a temporary rhetorical overlay rather than a durable recoding of national culture.

## 4. Discussion

Separating mobilization rhetoric from routine creative cues reveals that Ukraine's underlying cultural trajectory remains intact toward individual agency, egalitarian interaction, and pragmatic flexibility. AFT-WCD corrects the inflationary bias introduced by war-blind coding and can be transferred to other conflict zones. For practitioners, the findings chart a timeline: unity, danger, and sacrifice frames dominate during acute threat, but empowerment and private-benefit appeals are poised to regain efficacy as the threat recedes.

## 5. Limitations and future research

The corpus exclusively includes high-reach broadcast and YouTube ads, excluding micro-targeted and user-generated content. Binary coding simplifies complex symbolism, and the findings may not generalize beyond national campaigns. Future work should test AFT-WCD in other conflicts and extend it to public diplomacy and influencer genres.

## References (abridged)

Hofstede, G. (1980). Culture's consequences: International differences in work-related values. Sage Publications.

Kochkina, N., Floris, M., Yarosh-Dmytrenko, L., & Rudenko, N. (2025). "Ukraine's Cultural Evolution: Unveiling Profound Shifts through the Lens of War-Driven Migration". In A. Presbitero, V. Taras (Eds.), Handbook of Cross-Cultural Management, Edward Elgar Publishing Ltd., ahead-of-print.

Kochkina, N., Riccardi, M. (2021), How Covid-19 Pandemic Reshaped Cultural Environment in Italy and Ukraine: Facebook Content Analysis. Jurnal The Messenger, 13(3), 194-210. http://dx.doi.org/10.26623/themessenger.v13i3.2780

Minkov, M., & Kaasa, A. (2022). Do dimensions of culture exist objectively? A validation of the revised Minkov-Hofstede model of culture with World Values Survey items and scores for 102 countries. Journal of International Management, 28(4), 100971. https://doi.org/10.1016/j.intman.2022.100971

(The full list is available on request.)

# "Order Now" or "Buy Local"? Communication Strategies of Food Delivery Platforms on Social Media

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## Abstract

Food delivery platforms operate at the intersection of commercial efficiency and community-based engagement, making their communication efforts on social media platforms inherently complex. This study investigates how such platforms navigate the tension between commercial and community logics in their social media communication. Drawing on the institutional logics perspective, we examine the persuasive strategies these platforms employ to appeal to diverse audience expectations. By relying on a dataset of more than 12.000 observations and employing automated text analysis, our findings reveal how food delivery platforms blend call-to-action messaging with cues of local embeddedness to negotiate their hybrid identity. The study contributes to understanding how platform-based firms manage institutional complexity in digital communication environments.

*Keywords: local delivery platforms, institutional logics, text analysis, communication*

## 1. Introduzione

The rapid evolution of platforms has transformed how businesses and consumers interact, creating a dynamic ecosystem and the emergence of new forms of digital platforms and new forms of service provider-customer interactions. Propelled by the unprecedent richness and depth of data, and their propensity to work as gatekeepers across interconnected sectors, it is undoubted that platforms assumed an ever-more pivotal role in the global economy and society (Gawer et al., 2021; Wichmann et al., 2022). In particular, in recent years, food delivery platforms (FDPs) have experienced a rapid rise, catalysed by the convergence of digital innovation and shifting consumer behaviours (Chen, Hu & Wang, 2022; McKinsey, 2021; Shroff, Shah & Gajjar, 2022; Wichmann et al., 2022). According to a Statista Report in 2024, the growth of FDP is expected to continue at an annual growth rate (CAGR 2024-2029) of 3.69%, resulting in a projected market volume of US$333.10bn by 2029 (Statista, 2024). This expansion was markedly accelerated by the COVID-19 pandemic, which substantially increased demand for such services leading to the surge of many FDPs. However, many local platforms are now experiencing a decline, as they are increasingly displaced by larger, more powerful competitors with greater resources and market influence.

In this regard, beyond technical and marketing hurdles, FDPs face a deeper, structural tension rooted in their hybrid organizational nature. As organizations operating at the intersection of commercial and community spheres, FDPs are simultaneously expected to adhere to a market-oriented logic—focusing on efficiency, scalability, and transactional clarity—while also embodying a community-based logic that emphasizes localness,

relationality, and social embeddedness (Moss et al. 2024). This duality is not merely an operational challenge; it manifests acutely in how FDPs communicate with audiences, particularly on social media platforms where brand identity, authenticity, and user engagement are critical (e.g. Numan et al., 2025). In particular, engagement with consumers on social media yields significant advantages for brands and platforms, such as the development of stronger customer relationships, enhanced visibility, and increased product sales (Babić Rosario et al., 2016; Colicev, Kumar, & O'Connor, 2019; Kumar et al., 2016). Consequently, creating content that drives user engagement has become a strategic priority for companies (Abell & Biswas, 2023; Eigenraam, Eelen, & Verlegh, 2021). However, recent studies highlight the growing challenge of doing so, as users increasingly behave as passive observers rather than active participants on social media (Dineva et al. 2024).

Against this backdrop, the central research question guiding this study is: How should local delivery platforms communicate on social media platforms in order to resonate with their audiences and enhance engagement? To address this, we draw on the institutional logics perspective (Thornton et al., 2018), which offers a valuable lens for analysing how organizations navigate and reconcile competing normative frameworks. In the context of communication, this involves balancing call-to-action (CTA) content aligned with commercial imperatives and more localized, relational cues reflective of community-based expectations (Moss et al., 2023, Lee et al. 2018).

Methodologically, the study employs data sourced from more than 12.000 social media posts, analysed through automated text analysis to identify patterns in how FDPs blend these communicative logics in practice. The findings illuminate the rhetorical strategies used by FDPs to navigate hybridity, offering theoretical and practical insights into persuasive communication in the digital platform economy. In doing so, we particularly focus on the changing nature of the market logic in the era of the platform economy.

## 2. Theoretical framework

Institutional logics are the socially constructed patterns of assumptions, values, and practices that provide meaning and guide behaviour within specific social domains (Thornton et al., 2018). These logics shape macro-level meaning systems while also influencing micro-level interactions (Cornelissen et al., 2015). Communication plays a central role in enacting and making these logics visible, particularly through the narratives and rhetorical devices organizations use to convey legitimacy (Ocasio, Loewenstein, & Nigam, 2015).

Indeed, to meet the expectations of different audiences, organizations often construct "institutional vocabularies" that reflect the dominant logic(s) they aim to embody (Suddaby & Greenwood, 2005). This is especially critical for organizations -such as FDPs - that operate at the intersection of conflicting logics, such as market efficiency and community embeddedness (Moss et al., 2024). In such contexts, firms are often compelled to craft "hybrid rhetoric", a selective blending of linguistic cues and framing devices drawn from both logics, to appeal to divergent stakeholder expectations and maintain legitimacy across audiences. This rhetorical balancing act becomes particularly salient in digital spaces like social media, where organizations continuously perform their identity and values in real time.

Building on this theoretical foundation and akin to prior studies (e.g., Moss et al., 2024; Mangiò et al., 2021), our study investigates how FDPs blend commercial and community-based logics in their social media communication. Specifically, we explore how rhetorical elements such as call-to-action and localness cues are deployed, and whether these strategies enhance or hinder consumer social media engagement.

## 3. Methodology

Following previous research (Righetti & Bertuzzi, 2024) we relied on Meta's Crowdtangle to extract the most-engaged with, English-language posts mentioning the keyword "food delivery" per year from 2018 till 2024 on Facebook. Our final dataset comprises 1,108,437 posts published between January 1st, 2018 and January 1st, 2024.

We extracted a subset of post published by delivery-related business, based on whether they mention "food delivery" in their page descriptions, resulting in 12,620 posts from 174 unique accounts.

Following previous research (Dineva et al. 2024), we measure consumer engagement on social media (CESM) as the sum of likes, comments, and shares. Moreover, we tracked the extent to which a given post elicits strong emotions through a reactions-based controversy score - the Love Hate (LH) score (Etta et al., 2023).

To account for the two institutional logics, we created two custom dictionaries (Humpreys & Wang, 2018): 1) the localness dictionary, which instantiates the community logic and includes expressions such as "local*", "neighborhood", and "community"; and 2) the call-to-action (CTA) dictionary, which reflects the market-oriented logic and includes expressions such as "order now", "use now", "coupon".

To illustrate the tone of communication, we provide some excerpts from social media posts within each hypothesised communication logics.

**The localness communication logics:**

**Quote 1:** *"Unlike the national food_delivery companies, Nosh aims to keep delivery economically sustainable in the long term for independent restaurants by charging low commission rates, focusing on excellent customer service and keeping local dollars in Noco. Nosh doesn't just intend to be another delivery service but the ethical answer to food_delivery in today's world. We take a lot of pride in what we do. We truly love being able to put a human touch back into food_delivery. Our goal is to contribute to positive growth within the local Noco community."*

**Quote 2:** *"Are you tired of supporting big corporations that don't reinvest in your community? Look no further than Kernow Eats for all your food_delivery needs! We are a locally owned and operated business, dedicated to supporting small businesses in our community. By choosing to support us, you are directly contributing to the success of your neighbors and friends."*

**The call-to-action logics:**

**Quote 3:** *"PROMO!! PROMO!! PROMO!! Promo 1: It's your special day today, October 11th, and we've got a gift for you! Celebrate with a FREE regular iced coffee or hot coffee."*

**Quote 4:** *"Place an order with GoFood on or before May 30th and receive a 10% discount coupon.* 🚗 *On May 31st, use the Promo Code SOOxxxx (SOO followed by a 4-digit Coupon number) when ordering with GoFood to enjoy a 10% discount on your delivery fee."*

We also controlled for a rich series of hard and soft content factors that may affect CESM (Dineva et al. 2024). Among source-level factors, followerbase indicates the number of followers on the posting day; age refers to the number of years a given account has been active; area denotes whether the source is located in a developed, developing, or emerging country. Among post-level hard content factors, year, working day and working hour measure the fixed effects for the year, day of the week, and hour of the day of publication;

media vividness indicates whether a post is pictorial, image or video-based. Among post-level soft content factors, we control for the post length (word count), presence of handles, numbers, paralinguistic content like tactile (e.g. □), bodily (e.g. 😁) and nonbodily (e.g. 👄🍴) emojis (Luangrath et al. 2023), and different positive emotional framings (anticipation, trust, joy, surprise; Hotz-Behofsits et al. 2025).

Given that CESM is a count-based, non-normally distributed variable, we modelled the effect of different content strategies on CESM using negative binomial regression. For the LH score, a continuous and bounded variable, we employed beta regression.

## 4. Results

Our analysis reveals that in their online communication food delivery platforms predominantly adhere to a commercial logic: they employ, on average, more than three CTA cues every 100 words, whereas their use of localness cues is significantly lower, with less than a cue per 100 words (mean CTA = 3.11, sd CTA = 2.77; mean localness= 0.07, sd localness = 0.43). Among the emotional framings, trust is the most frequently used emotion (mean = 0.38, sd= 0.09), followerd by joy (mean = 0,29, sd= 0.08) and anticipation (0.14, sd= 0.07). In terms of media vividness, pictorial posts dominate the communication portfolio (89.5%). Notably, these platforms make extensive use of paralinguistic content, especially nonbodily emojis, with more than six per 100 words on average (mean = 6.41, sd= 5.98).

Contrary to these descriptive insights, our CESM analysis (Table 1) indicates that audiences do not favor CTA-driven messaging: all else being equal, a one-unit increase in CTA is associated with an 8% decrease in CESM (Model 2), and with a 1% decrease of the LH score (Model 3). Conversely, a one-unit increase in localness corresponds to a 32% increase in CESM and does not significantly affect the LH score.

| | **Model 1** | | | **Model 2** | | | **Model 3** | | |
|---|---|---|---|---|---|---|---|---|---|
| *Predictors* | *IRR* | *SE* | *p* | *IRR* | *SE* | *p* | *IRR* | *SE* | *p* |
| (Intercept) | 89.28 | 2.12 | <0.001 | Inf | Inf | <0.001 | Inf | Inf | <0.001 |
| CTA | 0.83 | 0.00 | <0.001 | 0.92 | 0.01 | <0.001 | 0.99 | 0.00 | 0.058 |
| Localness | 1.30 | 0.05 | <0.001 | 1.32 | 0.04 | <0.001 | 1.00 | 0.03 | 0.906 |
| Anticipation | | | | 1.22 | 0.26 | 0.350 | 0.31 | 0.05 | <0.001 |
| Trust | | | | 0.32 | 0.06 | <0.001 | 2.07 | 0.29 | <0.001 |
| Joy | | | | 0.56 | 0.10 | 0.002 | 1.15 | 0.17 | 0.338 |
| Surprise | | | | 10.77 | 3.39 | <0.001 | 1.63 | 0.40 | 0.046 |
| Follower base | | | | 1.50 | 0.02 | <0.001 | 0.98 | 0.01 | 0.054 |
| Age | | | | 1.23 | 0.01 | <0.001 | 0.99 | 0.01 | 0.103 |
| Area - *developing* | | | | 1.26 | 0.07 | <0.001 | 0.74 | 0.03 | <0.001 |
| Area - *emerging* | | | | 1.89 | 0.09 | <0.001 | 1.23 | 0.04 | <0.001 |
| Media vividness - *textual* | | | | 1.15 | 0.07 | 0.017 | 0.82 | 0.04 | <0.001 |
| Media vividness - *video* | | | | 3.72 | 0.28 | <0.001 | 0.92 | 0.06 | 0.184 |
| Tactile Emoji | | | | 1.33 | 0.04 | <0.001 | 0.95 | 0.02 | 0.018 |
| Bodily Emoji | | | | 1.05 | 0.01 | <0.001 | 1.01 | 0.00 | 0.004 |
| Nonbodily Emoji | | | | 1.01 | 0.00 | <0.001 | 1.01 | 0.00 | <0.001 |
| Handle | | | | 0.82 | 0.01 | <0.001 | 0.94 | 0.01 | <0.001 |
| Negation | | | | 1.01 | 0.00 | <0.001 | 1.00 | 0.00 | 0.222 |
| Word count | | | | 1.00 | 0.00 | <0.001 | 1.00 | 0.00 | <0.001 |
| Year | | | | 0.69 | 0.01 | <0.001 | 0.94 | 0.01 | <0.001 |
| Working day | | | | 1.36 | 0.04 | <0.001 | 1.03 | 0.02 | 0.254 |
| Working hour | | | | 0.78 | 0.02 | <0.001 | 0.93 | 0.02 | 0.001 |
| Observations | 12,141 | | | 12,141 | | | 12,141 | | |
| $R^2$ Nagelkerke | 0.153 | | | 0.551 | | | 0.106 | | |

**Table 1:** Effects of localness and CTA on CESM and LH score

Given the widespread adoption of CTA among the accounts examined, we conducted post-hoc analyses to investigate under which conditions the negative effect of CTA could be mitigated. Specifically, we examined whether the intensity and the framing of the CTA cues mattered.

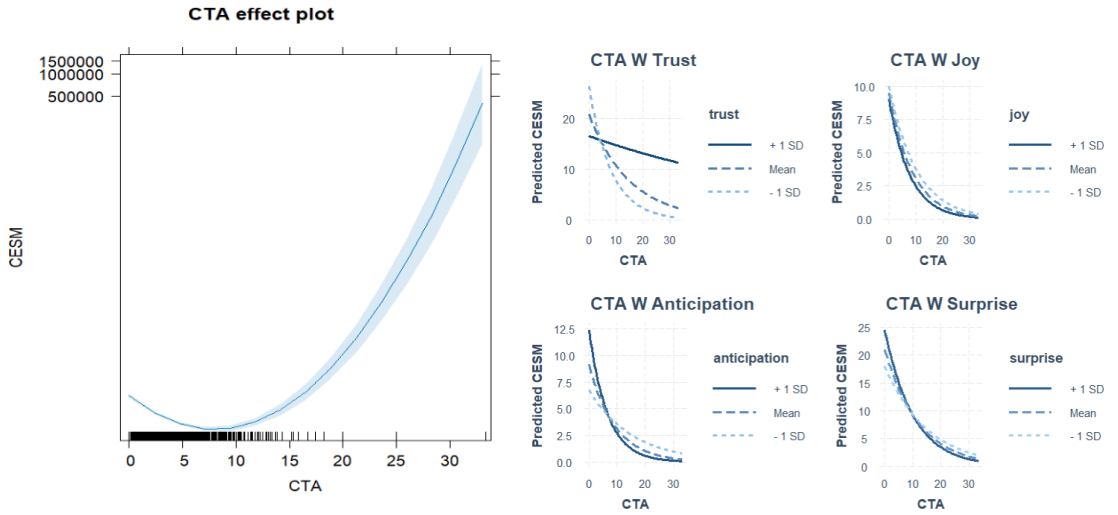



**Figure 1:** Effect of CTA intensity (left panel) and framing (right panel) on CESM

As the left panel of Figure 1 shows, we detect a significant U-shaped effect of CTA on CESM (IRRCTA^2: 1.02, SE: 0.00, p < .001), indicating that once posts include more than 10 CTA expressions per 100 words, their effect on CESM becomes positive. Furthermore, the right panel of Figure 1 shows that how CTA content is emotionally framed matters. Trust positively moderates the effect of CTA on CESM (IRR CTAxTrust = 1.88, SE= 0.12, p <. 001), whilst all other positive framings exacerbate its negative effect (IRR CTAxJoy = 0.82, SE= 0.04, p <. 001; IRR CTAxJoy = 0.82, SE= 0.04, p <. 001; IRR CTAxSurprise = 0.72, SE= 0.08, p <. 01; IRR CTAxSurprise = 0.55, SE= 0.04, p <. 001).

## 5. Discussion

Our analysis shows that, caught between the opposing pressures of commercial and communitarian logics, food delivery platforms struggle to "selectively couple" elements of both in navigating institutional complexity (Pache & Santos, 2013). Specifically, due to the impulsive and low-involvement nature of food delivery consumption, these platforms are incentivized to prioritize promotional content strategies, particularly CTA messaging, on which their revenue models heavily rely. However, this approach is not fully legitimized by online audiences, who tend to favor communicative efforts that align more closely with communitarian values.

These preliminary findings are notable in two ways. On the one hand, they support the idea that social media engagement strategies grounded in prosocial and community-oriented themes - rather than strictly commercial appeals - are more persuasive and effective (Mangiò et al., 2021). On the other hand, they challenge assumptions from the literature on hybrid organizations, which suggests that "hybrid rhetoric", designed to seamlessly blend competing institutional logics (Moss et al., 2018; 2023), should enhance legitimacy. In the case of food

delivery platforms, such rhetorical balancing appears less effective. These results contribute to the literature on platform economy (e.g., Cusumano et al., 2019; Wichmann, Wiegand & Reinartz, 2022), with a particular focus on delivery platforms. In particular, most of the marketing literature about the platform economy mainly focused on digital platforms (e.g., Gawer, 2021; Wichmann, Wiegand & Reinartz, 2022; Wichmann & Reinartz, 2024), neglecting the role of delivery platforms, in particular when we consider smaller initiatives that try to overcome the limits of the larger ones. By shedding light on these less visible actors, our findings offer a more nuanced understanding of platform heterogeneity and highlight the need for a broader conceptualization of value creation and competition dynamics in the platform economy.

Our results also offer important managerial implications. Since abandoning CTAs altogether is impractical, we urge platforms to more thoughtfully design their promotional messaging. Instead of defaulting to high-pressure sales tactics, communication strategies should emphasize localness, which emerges as a powerful and underutilized lever for engagement. Posts that highlight local elements—such as partnerships with neighborhood restaurants or participation in community events—are significantly more effective in fostering user interaction. This can be achieved in two ways: first, by adjusting CTA intensity, potentially leveraging a high density of CTA cues to potentially trigger fear-of-missing-out (FOMO) responses and drive engagement (Bright & Logan, 2018); and second, by carefully selecting the emotional framing of such messages, eschewing uncertain or anticipatory tones in favour of those that elicit trust, thereby making CTAs more appealing and socially resonant. Finally, the widespread use of emojis and images suggests that vivid and visually engaging formats remain essential; however, these should be strategically aligned with content that reinforces local relevance and trust to maximize their persuasive potential.

## References


Berger, J., Moe, W. W., & Schweidel, D. A. (2023). What holds attention? Linguistic drivers of engagement. Journal of Marketing, 87(5), 793-809.

Bright, L. F., & Logan, K. (2018). Is my fear of missing out (FOMO) causing fatigue? Advertising, social media fatigue, and the implications for consumers and brands. Internet Research, 28(5), 1213-1227.

Chen, M., Hu, M., & Wang, J. (2022). Food delivery service and restaurant: Friend or foe?. Management Science, 68(9), 6539-6551.

Cornelissen, J. P., Durand, R., Fiss, P. C., Lammers, J. C., & Vaara, E. (2015). Putting communication front and center in institutional theory and analysis. Academy of Management Review, 40(1), 10–27. https://doi.org/10.5465/amr.2014.0381

Dineva, D., Lee, Z., & Mangió, F. (2024). EXPRESS: Brand-to-brand engagement on social media: Typology and implications. Journal of Interactive Marketing, 10949968241312173.

Numan, A., Rizzo, F., & Wang, L. (2025). The organic reach problem: Digital visibility and communicative friction in the online grocery sector. Journal of New Media, 17(2), 145–167. [Link to be added]

Etta, G., Sangiorgio, E., Di Marco, N., Avalle, M., Scala, A., Cinelli, M., & Quattrociocchi, W. (2023). Characterizing engagement dynamics across topics on Facebook. Plos one, 18(6), e0286150.

Gawer, A. (2021). Digital platforms' boundaries: The interplay of firm scope, platform sides, and digital interfaces. Long Range Planning, 54(5), 102045.

Hotz-Behofsits, C., Wlömert, N., & Abou Nabout, N. (2025). Natural Affect DEtection (NADE): Using Emojis to Infer Emotions from Text. Journal of Marketing, 00222429251315088.

Liadeli, G., Sotgiu, F., & Verlegh, P. W. (2023). A meta-analysis of the effects of brands' owned social media on social media engagement and sales. Journal of marketing, 87(3), 406-427.

Luangrath, A. W., Xu, Y., & Wang, T. (2023). Paralanguage classifier (PARA): An algorithm for automatic coding of paralinguistic nonverbal parts of speech in text. Journal of Marketing Research, 60(2), 388-408.

Mangiò, F., Pedeliento, G., & Andreini, D. (2021). Branding rhetoric in times of a global pandemic: A text-mining analysis. Journal of Advertising, 50(3), 240-252.

McKinsey (2021). Ordering in: The rapid evolution of food delivery retrieved from https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/ordering-in-the-rapid-evolution-of-food-delivery#/

Moss, T. W., Short, J. C., Payne, G. T., & Lumpkin, G. T. (2023). Institutional complexity and persuasive communication: Navigating multiple logics in entrepreneurial storytelling. Journal of Business Venturing, 38(1), 106307. https://doi.org/10.1016/j.jbusvent.2022.106307

Numan, N. N., Wielheesen, T. J., Sloot, L. M., Bijmolt, T. H., & van Nierop, E. EXPRESS: Hooking Customers with Facebook: An Empirical Analysis of Grocery Stores' Online Engagement. Journal of Interactive Marketing, in press.

Pache, A.-C., & Santos, F. (2013). Inside the hybrid organization: Selective coupling as a response to competing institutional logics. Academy of Management Journal, 56(4), 972–1001. https://doi.org/10.5465/amj.2011.0405

Rangaswamy, A., Moch, N., Felten, C., Van Bruggen, G., Wieringa, J. E., & Wirtz, J. (2020). The role of marketing in digital business platforms. Journal of Interactive Marketing, 51(1), 72-90.

Righetti, N., & Bertuzzi, N. (2025). Rethinking Veganism in the Digital Age. Innovating Methodology and Typology to Explore a Decade of Facebook Discourses. Sociological Research Online, 30(1), 96-115.

Srinivasan, R. (2021). Platform business models. Springer Singapore.

Thornton, P. H., Ocasio, W., & Lounsbury, M. (2018). The institutional logics perspective: A new approach to culture, structure, and process. Oxford University Press.

Wichmann, J. R., Wiegand, N., & Reinartz, W. J. (2022). The platformization of brands. Journal of Marketing, 86(1), 109-131.

Wichmann, J. R. K., & Reinartz, W. J. (2024). Retail platformization in digital transformation. In J. Q. Dong & P. C. Verhoef (Eds.), A Research Agenda for Digital Transformation: Multidisciplinary Perspectives. Edward Elgar Publishing.

# How Does Personalization Shape Brand Familiarity? Insights from Gen-Z Consumers

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## Abstract

This paper investigates how personalization supports brand familiarity strategies and affects both attitudinal and behavioral loyalty. Despite its widespread use in marketing practice, the impact of personalization on brand familiarity remains underexplored. Focusing on four dimensions, personalized content, customer experience, personalized communication, and customer perception, this study examines their influence on consumer responses to brand extensions. A quantitative survey of 733 Gen-Z consumers provides evidence of the role of personalization in strengthening consumer– brand relationships. The findings contribute to the literature on personalization and offer practical insights for aligning personalization with brand growth strategies. Keywords: Personalization, Brand familiarity, Loyalty, Structural equation modeling.

### 1. Introduction

In recent years, both academic scholars (Arora et al., 2008; Kumar et al., 2021) and industry reports (Deloitte, 2022; Accenture, 2025) have shown increasing interest in the role of personalization as a key driver of brand performance. Peppers and Rogers (1997) define personalization as a process through which firms leverage customer information to deliver tailored solutions that meet individual needs. Personalized interactions and offerings contribute to enhancing customer satisfaction, building stronger emotional connections with the brand, and increasing customer loyalty over time (D'Amico et al., 2024). Despite the growing application of personalization across industries, the academic literature on the topic remains fragmented, with limited integration of its impact on brand familiarity strategies. In particular, there is still a lack of systematic understanding of how personalization shapes key brand constructs, such as brand familiarity, and how this, in turn, influences attitudinal and behavioral loyalty toward new brand offerings (Matarid et al., 2014). This study seeks to address this gap by examining the impact of personalization on brand familiarity, and the subsequent effects on consumer loyalty outcomes. The empirical context of this study is food sector, targeting Generation Z (Gen-Z) consumers, for whom personalized experiences are increasingly central to brand engagement and who exhibits a low level of brand loyalty (Goldring and Azab, 2021).

## 2. Literature Background

Personalization has become a key theme in marketing, enabling firms to deliver tailored content and experiences that enhance brand relationships, trust, loyalty, and purchase behavior (Agarwal et al., 2000; Hennig-Thurau et al., 2002; Arora et al., 2008; Pine et al., 2009; Kumar et al., 2021). While recent literature has begun to explore its broader impact on brand familiarity and loyalty, important gaps remain. Overall personalization is a key driver of brand loyalty among Gen Z consumers. Compared to previous generations, Gen Z seeks more personalized and interactive brand experiences (Goldring & Azab, 2021). Although the literature has examined the behavioral intentions of companies adopting personalization strategies — including digital personalization (McKee et al., 2024) — few studies have explored the specific role of personalization in brand extension strategies targeting this consumer segment. Both personalized content and customer perception are recognized as critical factors in driving the success of brand familiarity as a proxy for brand extension strategies (Völckner & Sattler, 2006; Kumar et al., 2021). Personalized content fosters consumer engagement and perceived fit, while customer perception—through evaluations of brand credibility, quality, and consistency—reduces perceived risk and strengthens trust (Czellar, 2003). These mechanisms complement one another, increasing acceptance of new brand offerings. Additional factors such as customer experience and personalized communication may further enhance antecedents like brand trust and attachment (Brakus et al., 2009; Schmitt, 2012), though prior studies note that their effects can be asymmetric and context-dependent, especially in sectors where brand authenticity is paramount (John et al., 1998; Bleier & Eisenbeiss, 2015). Moreover, the success of brand familiarity is closely linked to both attitudinal and behavioral loyalty toward the parent brand (Völckner & Sattler, 2006; Park & Kim, 2021), which facilitate both initial trial and sustained adoption of new offerings. While prior studies have examined these variables in isolation—such as the effects of personalization on loyalty (Kumar et al., 2021; Arora et al., 2008), or the role of brand loyalty in facilitating brand familiarity (Park & Kim, 2021; Völckner & Sattler, 2006)—relatively few have investigated how personalization, brand familiarity, and loyalty interact (Czellar, 2003). Addressing this gap, the present study investigates: Personalization in terms of personalized content (a), customer experience (b), personalized communication (c), and customer perception (d) have a positive effect on brand familiarity (respectively H1a, H1b, H1c, H1d). Brand familiarity strategies have a positive effect on attitudinal loyalty (H2a) and on behavioral loyalty (H2b). Figure 1 illustrates the structural model.

Through a quantitative study in the food sector, targeting Gen-Z consumers, this research contributes new insights into the evolving role of personalization in brand familiarity and loyalty strategies.

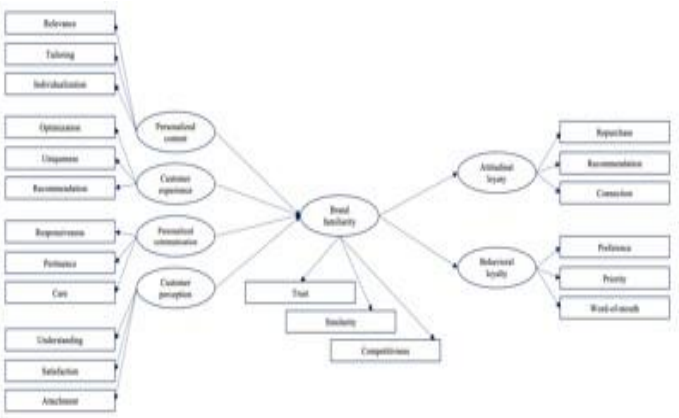


**Figure 1:** Structural model

## 3. Methodology

To verify the hypotheses, we have decided to realize a questionnaire with 733 respondents belonging to Gen-Z. This research was carried out in the food sector, with a specific focus on the food sector, which represents a highly competitive and innovation-driven category within the broader food industry. This study focuses on Gen-Z both for its growing relevance as an emerging consumer segment and for its distinctive expectations toward personalized experiences and brand interactions (Francis & Hoefel, 2018). The analysis was carried out through the administration of a questionnaire. Participation was voluntary, not incentivized, and responses were collected in December 2024 via Google Forms. Gen-Z (18 to 27 years old) participants were contacted through Facebook, LinkedIn, and via email. The collected data were analyzed using SPSS v28 and Jamovi. All variables were drawn from well-established and validated constructs in the literature, as explained in Table 1. All survey items were measured using a 7-point Likert scale.

| **Constructs** | | **Key words** | **Authors** |
|---|---|---|---|
| Personalization | Personalized content | Relevance; Tailoring; Individualization | Arora et al., 2008; Pine et al., 2009; Hennig-Thurau et al., 2002; Agarwal et al., 2000 |
| | Customer experience | Optimization; Uniqueness; Recommendation | |
| | Personalized communication | Responsiveness; Pertinence; Care | |
| | Customer perception | Understanding; Satisfaction; Attachment | |
| Brand familiarity | | Trust; Similarity; Competitivness | Matarid et al., 2014 |
| Attitudinal loyaty | | Repurchase; Recommendation; Connection | Park & Kim 2021 |

| | | |
|---|---|---|
| Behavioral loyalty | Preference; Priority; Word-of-mouth | Park & Kim 2021 |

**Table 1:** Constructs

## 4. Analysis and results

To verify the hypotheses, we employed Structural Equation Modeling (SEM). Prior to conducting the SEM, the internal consistency of all measurement scales was assessed using Cronbach's alpha in SPSS. The results confirmed high reliability across all constructs: personalized content ($\alpha$ = 0.910), customer experience ($\alpha$ = 0.899), personalized communication ($\alpha$ = 0.937), customer perception ($\alpha$ = 0.917), brand familiarity ($\alpha$ = 0.899), attitudinal loyalty ($\alpha$ = 0.930), and behavioral loyalty ($\alpha$ = 0.868). As values above 0.70 are generally accepted as indicating sufficient internal reliability (Hair et al., 2010), the analysis proceeded using Jamovi software. The overall model fit was satisfactory: SRMR = 0.043; RMSEA = 0.079; Comparative Fit Index (CFI) = 0.964; Tucker-Lewis Index (TLI) = 0.955; Bentler-Bonett Non-normed Fit Index (NNFI) = 0.955— all within accepted thresholds reported in the literature. Regarding the relationship between personalization and brand familiarity, the findings reveal that the relationship between personalized content and brand familiarity was positive and significant ($\beta$=2.620, p=0.009), as was the relationship between customer perception and brand familiarity ($\beta$=2.246, p=0.025), therefore, hypotheses H1a and H1d are supported. In contrast, neither customer experience ($\beta$=-0.982, p=0.326) nor personalized communication ($\beta$=0.987, p=0.324) had significant effects on brand familiarity, in this case, hypotheses H1b and H1c are not confirmed. In turn, regarding the relationship between brand familiarity and loyalty, the findings indicate that brand familiarity demonstrated strong and significant positive effects on both attitudinal loyalty ($\beta$=24.249, p<0.01) and behavioral loyalty ($\beta$=25.293, p<0.01), highlighting its pivotal role in driving consumer loyalty outcomes, therefore, hypotheses H2a and H2b are supported. These results suggest that personalized content and customer perception play a critical role in shaping consumer evaluations of brand familiarity, particularly for brands leveraging personalization, while customer experience and personalized communication appear less effective in influencing brand familiarity success in this context. This is consistent with prior literature, which emphasizes the importance of personalized content (Kumar et al., 2021) and customer perception (Czellar, 2003; Völckner & Sattler, 2006) in enhancing consumer engagement, perceived fit, trust, and reducing perceived risk. Conversely, the non-significant effects of customer experience and personalized communication on brand familiarity may be attributed to the specific characteristics of the study context, food sector, and the generational profile of the sample (Gen-Z consumers), for whom such dimensions may hold lower relevance. This aligns with previous research suggesting that the impact of customer experience and personalized communication on brand familiarity is asymmetric: when effectively designed and coherent with brand positioning, these factors can enhance familiarity as a proxy for brand extension success, but when misaligned or perceived as irrelevant, their influence diminishes (John et al., 1998; Bleier & Eisenbeiss, 2015).

## 5. Conclusions

In sum, this study highlights the strategic role of personalization for the Gen-Z consumers—particularly personalized content and customer perception—as key drivers of brand familiarity success and, in turn, both attitudinal and behavioral loyalty. For firms pursuing

personalization-driven brand extension strategies, focusing on these dimensions is essential to ensure consumer-perceived relevance and value. In contrast, an overemphasis on customer experience or personalized communication alone may be less effective—especially in categories such as food, where experiential elements are secondary to the core offering.

Theoretically, this study extends the existing literature by highlighting the effectiveness of brand familiarity in brand extension strategies that incorporate personalized content and consumers' perception in their product offerings and marketing communication; while showing that the impact of customer experience and personalized communication is context-dependent and asymmetric.

For managers, prioritizing personalized content and enhancing customer perception is critical when pursuing personalization-driven brand familiarity. These elements directly increase perceived value and relevance for consumers. Conversely, focusing heavily on customer experience or personalized communication may offer limited returns—particularly in sectors such as food, where experiential factors are less central to purchase decisions. Curating both the quality of personalized content and how it shapes brand perception can significantly strengthen the success of brand extensions. Limitations include the sector focus and the generational profile of the sample. Future research should test the model across different categories and consumer segments, and further explore longitudinal effects of personalization on brand extension success.

## References


Accenture (2025), "Me, My Brand And Ai: The New World Of Consumer Engagement", Available At: Www.Accenture.It

Agarwal, D., Chen, B. C., & Pang, B. (2011, July). Personalized Recommendation Of User Comments Via Factor Models. In Proceedings Of The 2011 Conference On Empirical Methods In Natural Language Processing (Pp. 571-582).

Arora, N., Dreze, X., Ghose, A., (2008). Putting One-To-One Marketing To Work:

Personalization, Customization, And Choice. Marketing Letters, 19, 3, Pp. 305-321.

Bleier, A., & Eisenbeiss, M. (2015). The Importance Of Trust For Personalized Online Advertising. Journal Of Retailing, 91(3), 390-409.

Brakus, J. J., Schmitt, B. H., & Zarantonello, L. (2009). Brand Experience: What Is It? How Is It Measured? Does It Affect Loyalty?. Journal Of Marketing, 73(3), 52-68.

Czellar, S. (2003). Consumer Attitude Toward Brand Extensions: An Integrative Model And Research Propositions. International Journal Of Research In Marketing, 20(1), 97-115.

D'amico, S., Iasevoli, G., Ottolenghi, C. (2024). When Personalization Hangs Out With Customer Loyalty: A Bibliometric Analysis. In Imtc-Paris 19-21 January 2024–23rd International Marketing Trends Congress.

Deloitte (2022), "The Future Of Food. Challenges & Opportunities", Available At: Deloitte.Com

Francis, T., & Hoefel, F. (2018). True Gen': Generation Z And Its Implications For Companies. Mckinsey & Company, 12(2), 1-10.

Goldring, D., & Azab, C. (2021). New Rules Of Social Media Shopping: Personality Differences Of Us Gen Z Versus Gen X Market Mavens. Journal Of Consumer Behaviour, 20(4), 884-897.

Hair, J. F., Anderson, R. E., Babin, B. J., & Black, W. C. (2010). Multivariate Data Analysis: A Global Perspective (Vol. 7).

Hennig-Thurau, T., Malthouse, E. C., Friege, C., Gensler, S., Lobschat, L., Rangaswamy, A., & Skiera, B. (2010). The Impact Of New Media On Customer Relationships. Journal Of Service Research, 13(3), 311-330.

John, D. R., Loken, B., & Joiner, C. (1998). The Negative Impact Of Extensions: Can Flagship Products Be Diluted?. Journal Of Marketing, 62(1), 19-32.

Kumar, S., Lim, W. M., Pandey, N., & Westland, J. C. (2021). 20 Years Of Electronic Commerce Research. Electronic Commerce Research, 21(1), 1–40.

Matarid, N. M., Youssef, M. A. M., & Alsoud, G. A. (2014). The Impact Of Brand Extension Strategy On The Brand Equity Of Fast Moving Consumer Goods In Egypt. European Journal Of Business And Management, 6(21), 154-163.

Mckee, K. M., Dahl, A. J., & Peltier, J. W. (2024). Gen Z's Personalization Paradoxes: A Privacy Calculus Examination Of Digital Personalization And Brand Behaviors. Journal Of Consumer Behaviour, 23(2), 405-422.

Park, J., & Kim, R. B. (2022). Importance Of Offline Service Quality In Building Loyalty Of Oc Service Brand. Journal Of Retailing And Consumer Services, 65.

Peppers, D. And Rogers, M. (1997), Enterprise One To One: Tools For Competing In The. Interactive Age, Bantam Doubleday, Dell, New York.

Pine, B. J., Peppers, D., & Rogers, M. (2009). Do You Want To Keep Your Customers Forever?. Harvard Business Press.

Schmitt, B. (2012). The Consumer Psychology Of Brands. Journal Of Consumer Psychology, 22(1), 7-17.

Völckner, F., & Sattler, H. (2006). Drivers Of Brand Extension Success. Journal Of Marketing, 70(2), 18-34.

# Mind the Gap: Integrating Construal Level Theory and Self-Control Dilemmas into Strategic Business Communication

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## Abstract

Introducing patients to novel treatments and therapies can be difficult, especially when they are already following a consolidated set of therapies, consistently relying upon it. When championing innovation in medical care this reluctance can prove troublesome, due to cognitive and emotional sunk costs capable of confining patients – as well as physicians – to suboptimal treatments far beyond what would be necessary, even when faced with clearly superior alternatives. Although decisions regarding treatment and behavioural adherence can bring significant long-term benefits, they also face strong short-term resistance rooted in individual comfort zones and daily habits, giving rise to self-control dilemmas that are often resolved by focusing primarily on immediacy. Through a synthesis of recent literature and a preliminary qualitative investigation, this paper investigates how businesses can influence consumer decision-making in selfcontrol dilemmas through Construal Level Theory (CLT), illustrating its relevance to marketing contexts and suggesting business applications to impact consumer choices.

*Keywords: Self-Control, CLT, Consumer Behaviour, Consumers' preferences.*

## 1. Introduzione

Every day, we encounter countless decisions and events that present a trade-off between experiencing feelings of instant yet short-lived gratification and delayed – but substantially enduring – satisfaction, obtained through commitment and daily efforts. These self-control dilemmas (Fishback et al., 2008) often arise from ordinary experiences: following a healthy diet, exercising regularly, or sticking to a sleep schedule. Yet, they can represent insurmountable challenges. Businesses that understand self-control dilemmas and tailor their marketing strategies accordingly can gain an advantage over competitors by communicating with their target consumers more effectively. This is particularly true in healthcare, where treatment and behavioural adherence decisions involve substantial long-term benefits but also face entrenched short-term resistance, due to patients' comfort zones and routine habits. This paper explores how businesses can influence consumer behaviour in self-control dilemmas using Construal Level Theory (CLT), synthesizing recent literature and suggesting business applications. Following a CLT Framework (Trope et al. 2008), selfcontrol dilemmas are revealed as tensions between psychologically distant long-term benefits and tangible short-term rewards – seldom represented ex aequo in our minds. As consumer decisions

today are not made in isolation, consumer journeys are often dyadic (Mazzù & Costabile, 2023), especially in high-touch domains. Relational dynamics introduce new layers of interactivity in the costumer journey (Hamilton et al., 2020), which in turn may influence an individual's construal level. In healthcare, psychological distance could thus be collaboratively constructed, influencing how selfcontrol dilemmas are experienced. Several studies have applied the tenets of CLT to a variety of activities related to self-control, ranging from health-risk behavioural intentions (Carrera et al. 2014; Carrera et al., 2018) to time management (Yuan & Sun, 2025), advertising research (Saeed et al., 2024; Saeed et al., 2025), cause-related marketing (Yun et al., 2025; Zhang et al., 2025), consumer brand attitude (Li et al., 2025), and risk-related decision-making (Noh et al., 2025). Nonetheless, the development of exemplary business cases and managerial implications able to offer valuable insights for practitioners remain limited and largely context dependent. In this non-experimental paper, we synthesize recent literature and propose integrated managerial implications – with a focus on healthcare. By suggesting illustrative business cases, we aim to offer actionable insights, beneficial to both scholars and practitioners. Our research question is thus formulated as: How can businesses leverage CLT to influence consumer preference in self-control dilemmas?

## 2. Review of the literature

The construal level theory (CLT) (Trope & Liberman, 2003) is a psychological framework that explains how individuals form mental representations of objects or events depending on the psychological distance they attach to them. In other words, CLT argue that psychological distance systematically influences the way people mentally represent the world around them (Soderberg et al., 2015). Psychological distance can manifest in four ways: temporal distance, for events far in the future or in the past; spatial distance, for events taking place physically far away; social distance, when events are experienced by others; and hypothetical distance, dealing with events whom likeliness to happen is uncertain or low. The central assumption of CLT is that individuals represent events perceived as psychologically distant abstractly (high-level construals), while psychologically close events are represented concretely (low-level construals). This distinction bears important implications: while high-level construals are schematic and decontextualized, focusing on the core, essential characteristics of an event, low-level construals tend to represent events in an unstructured way, focusing on context-specific attributes, details, and incidental or non-essential features (Trope et al., 2008). Researchers generally highlight the dichotomy between low- and high-level construals, but these can be also understood as a continuum (Saeed et al., 2024). In the marketing literature, CLT has found solid grounding to confirm its practical applicability. A systematic literature review conducted by Saeed et al. (2024) mapped insights from advertising research, highlighting how CLT was investigated from multiple perspectives. The review focused on (1) the underpinning mechanisms determining ads efficacy (categorization and matching effects); (2) CLT relationship with ads appeal (such as hedonic vs utilitarian), ads framing (gain-framed vs lossframed), and imagery ad elements (e.g. photo vs illustrations); (3) CLT connection to audience attributes. In a later review, Saeed et al. (2025) categorized construal-level manipulations in advertising research by dimensions of (1) psychological distance; (2) psychological manipulations; and (3) marketing-related factors of focus. More recently, other studies have expanded the employment of the CLT framework in marketing research, exploring the role of psychological distance on consumer brand attitudes towards gamified marketing practices (Li et al., 2025), and to investigate the mediating role of consumers' perceived information credibility in shaping purchase intention when exposed to green marketing initiatives (Zhang et al., 2025). Similarly, Yun et al. (2025) focused on the influence of social norms and temporal framing, matched at similar construal levels, on consumers' engagement and purchase in CRM campaigns. Carrera et al. (2020) examined how abstract construal levels influence one's willingness to engage in desirable yet demanding actions,

showing that, when individuals adopt an abstract (high-construals) mindset, they tend to exhibit more motivation and willingness to perform challenging behaviours. Earlier works by Carrera et al. (2018) proved that abstract, outcome-focused messages can promote healthy behaviours more effectively, limiting perception of immediate execution challenges. Recently, Yuan et al. (2025) have shown how individuals with higher construal level invest more time in important, rather than urgent, tasks, while Zhang et al (2022) argued that aligning abstract construal level with intrinsic goals can result in increased commitment. In healthcare, Hurtado-de-Mendoza et al. (2019) have shown that the combination of positive emotions with abstractly framed messages can enhance adherence to demanding therapies, by emphasizing long-term benefits over immediate discomfort.

## 3. Business cases and managerial implications

In terms of practical applications, considering the tenets of CLT when communicating with consumers can empower businesses to shape their preferences more effectively – especially in healthcare and pharma, where patients are sometimes prone to put an excessive focus on immediate inconveniences, side effects, and short-term preferences. The healthcare sector could leverage CLT strategically, incorporating abstract construal in health campaigns and choosing between affective or cognitive messaging based on target behaviours (Carrera et al., 2014). As health-risk behaviours are better predicted by affective attitudes under abstract construal conditions (Carrera et al., 2020), combining positive emotions (calm, hopeful) with abstractly framed messages can be effective in enhancing adherence to new or difficult therapies (Hurtado-de-Mendoza et al., 2019). Likewise, Pharma companies striving to increase new drugs' market penetration can resort to CLT to guide consumers through self-control dilemmas. In a preliminary qualitative study conducted in May-June 2025 with senior pharma managers, several pointed out patients' and physicians' difficulties in abandoning longstanding habits, despite clinical advantages. One manager noted, "some patients rely on their treatments as life-defining habits and are hesitant to abandon their routine, even when presented with solutions that would improve their quality of life". Another emphasized the short-term gratifications patients can extract from suboptimal treatments: "they get an immediate sense of fulfilment that is difficult to problematize, even though it ends up limiting their freedom and daily routines; in certain ways, it becomes a fully-fledged addiction". CLT-informed interventions can frame behaviour in ways that enhance desirability and emotional commitment, informing how health promotion campaigns are designed. These lessons learned are not limited to healthcare and pharma sectors. In the fashion industry, Lee et al. (2024) have employed CLT to investigate corporate communication on adherence to sustainability practices, analysing the construal level of both managers and stakeholders and delineating three main communication strategies. CLT has also been employed in the hospitality sector, investigating how psychological distance can increase consumers' willingness to pay upselling services (Guillet and Mohammed; 2024), and testing the influence of temporal distance on book now, pay later options for travellers (Jang and Cao; 2025).

## 4. Conclusions

Self-control dilemmas are ever-present features of our daily life and analysing them using the right theoretical lens can be fundamental. By offering an updated snapshot of the academic discourse regarding CLT and self-control dilemmas, and presenting some business case applications to reflect on, this short paper aims at providing a starting point for further research through CLT, to stimulate a proficient scholarly discussion that could illuminate more applications where construal level and psychological distance might improve corporate communication and consumers' decision-making processes.

## References


Carrera, P., Fernández, I., Muñoz, D., & Caballero, A. (2020). Using Abstractness To Confront Challenges: How The Abstract Construal Level Increases People's Willingness To Perform Desirable But Demanding Actions. Journal Of Experimental Psychology: Applied, 26(2), 339–349. Https://Doi.Org/10.1037/Xap0000244

Carrera, P., Muñoz, D., Fernández, I., & Caballero, A. (2018). Abstractness And Messages Describing Consequences Promote Healthier Behavioral Intentions. The Journal Of Psychology, 152(7), 515–527. Https://Doi.Org/10.1080/00223980.2018.1486801

Carrera, P., Caballero, A., Muñoz, D., González-Iraizoz, M., & Fernández, I. (2014). Construal Level As A Moderator Of The Role Of Affective And Cognitive Attitudes In The Prediction Of Health-Risk Behavioural Intentions. British Journal Of Social Psychology, 53(4), 773–791. Https://Doi.Org/10.1111/Bjso.12058

Fishbach, A., & Zhang, Y. (2008). Together Or Apart: When Goals And Temptations Complement Versus Compete. Journal Of Personality And Social Psychology, 94(4), 547–559.

Guillet, B. D., & Mohammed, I. (2024). Understanding Consumers' Willingness To Pay For Online Upselling Of Hotel Rooms Through The Lens Of Psychological Distance. Tourism Management, 103, 104887. Https://Doi.Org/10.1016/J.Tourman.2024.104887

Hamilton, R., Ferraro, R., Haws, K. L., & Mukhopadhyay, A. (2020). Traveling With Companions: The Social Customer Journey. Journal Of Marketing, 85(1), 68–92. Https://Doi.Org/10.1177/0022242920908227 (Original Work Published 2021).

Hurtado-De-Mendoza, A., Carrera, P., Parrott, W. G., Gómez-Trillos, S., Perera, R. A., & Sheppard, V. B. (2019). Applying The Theory Of Planned Behavior To Examine Adjuvant Endocrine Therapy Adherence Intentions. Psycho-Oncology, 28, 187–194. Https://Doi.Org/10.1002/Pon.4931

Jang, Y., & Cao, Y. (2025). How To Effectively Present "Book Now, Pay Later": The Effects Of Appeal Type, Temporal Distance, And Traveler Type On Attitudes And Purchase Intentions. Journal Of Revenue And Pricing Management, 24, 101–110. Https://Doi.Org/10.1057/S41272-024-00485-7

Lee, Z., Gordon-Wilson, S., Davies, I., & Pring, C. (2024). Communicating About Sustainability In Fashion: A Construal Level Theory Approach. European Journal Of Marketing, 58(1), 313–341. Https://Doi.Org/10.1108/Ejm-09-2021-0701

Li, X., Xie, Y., Dong, G., Xiao, Q., & Xue, W. (2025). The Role Of User Participation And Psychological Distance In Consumer Brand Attitudes In Gamified Marketing. Scientific Reports, 15, 582. Https://Doi.Org/10.1038/S41598-024-84268-5

Mazzu, M. F., & Costabile, M. (2023). Dyadic Journeys: Una Prospettiva Combinatoria Sull'attivazione Simultanea Di Consumatori E Altri Attori Rilevanti Nel Processo D'acquisto. Https://Hdl.Handle.Net/11385/232678

Noh, H.-H., Rim, H. B., & Lee, B.-K. (2025). Risk Preferences In Decision-Making: A Construal Level Perspective. Acta Psychologica, 252, 104675. Https://Doi.Org/10.1016/J.Actpsy.2024.104675

Saeed, M. R., Khan, H., Khan, H., & Lee, R. (2024). Construal Level Theory In Advertising Research: A Systematic Review And Directions For Future Research. Journal Of Advertising, 53(1), 123–145. Https://Doi.Org/10.1080/00913367.2023.2262139.

Saeed, M. R., Khan, H., Khan, H., & Lee, R. (2025). A Systematic Review Of Applications, Manipulations And Manipulation Checks Of Construal Level Theory In Advertising. Communication Theory, 35(2), 63–95. Https://Doi.Org/10.1093/Ct/Qtae026.

Soderberg, C. K., Callahan, S. P., Kochersberger, A. O., Amit, E., & Ledgerwood, A. (2015). The Effects Of Psychological Distance On Abstraction: Two Meta-Analyses. Psychological Bulletin, 141(3), 525–548. Https://Doi.Org/10.1037/Bul0000005

Trope, Y., & Liberman, N. (2003). Temporal Construal. Psychological Review, 110(3), 403–421. Https://Doi.Org/10.1037/0033-295x.110.3.403

Trope, Y., Liberman, N., & Wakslak, C. (2008). Construal Levels And Psychological Distance: Effects On Representation, Prediction, Evaluation, And Behavior. Journal Of Consumer Psychology, 17(2), 83–95. Https://Doi.Org/10.1016/S1057-7408(07)70013-X

Yuan, Y., & Sun, X. (2025). Urgent Tasks Are Concrete, Important Tasks Are Abstract: A Construal Level Theory Perspective. Personality And Individual Differences, 241, 113191. Https://Doi.Org/10.1016/J.Paid.2025.113191

Yun, H. (2025). Exploring Construal Level Matching Effects: Focusing On Descriptive Norms And Temporal Framing In Environmental Cause-Related Communication Contexts. Corporate Communications: An International Journal, 30(3), 432–451. Https://Doi.Org/10.1108/Ccij-04-2024-0062

Zhang, W., & Zhang, H. (2022). High Construal Level Enhances Perceived Selfcontrol Capacity In Intrinsic But Not Extrinsic Goals. Personality And Individual Differences, 197, Article 111761. Https://Doi.Org/10.1016/J.Paid.2022.111761

Zhang, Y., Chen, H., Li, Y., & Zhao, X. (2025). Research On The Impact Of Matched Effects Between Green Advertising Appeals And Product Type On Consumer Purchase Intention. Journal Of Cleaner Production, 453, 141608. Https://Doi.Org/10.1016/J.Jclepro.2024.141608

# Walking the Talk on Sustainability: Consumer Perceptions on Retail Brand Equity Drivers

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## Abstract

This paper investigates how traditional and sustainability drivers influence customerbased retail brand equity (RBE). The work integrates brand awareness (BA) and perceived quality (PQ) with a second-order construct, sustainable brand associations (SBA), which captures consumers' environmental (ES) and social (SS) perceptions of retailers. Data were collected via an online questionnaire administered to 599 Italian grocery shoppers recruited from social networks. Multi-item Likert scale was used, and the proposed model was tested using structural equation modeling (SEM). The analysis confirms that ES and SS jointly build SBA, which, in turn, enhances RBE. BA is the strongest direct antecedent of RBE, while PQ has slightly meaningful effect in this highly commoditized category. Overall, the findings underscore the importance of both traditional brand salience and credible sustainability positioning for strengthening retailer's brand equity. This study contributes to Consumer-Based Brand Equity (CBBE) theory by demonstrating the added value of sustainability cues and provides retailers with practical advice on combining awareness campaigns with visible social and environmental initiatives.

*Keywords: consumer-based brand equity, sustainable brand associations, brand awareness, perceived quality, grocery retail.*

## 1. Introduction

Over the past few decades, the academic literature has highlighted significant transformations in the competitive retail landscape, with the retailer's brand assuming a pivotal role in the creation of value. Indeed, there has been a noteworthy transition in the role of retailers: from mere distributors of products to service-based and experiential brands, capable of offering a distinctive identity and promoting direct relationships with customers. In this context, the concept of Retail Brand Equity (RBE) has gained increasing academic and managerial attention, becoming a core strategic asset and a lever to differentiate in saturated and highly competitive markets. In this sense, RBE is considered as the value perceived by the consumer towards the retailer's brand, because of a set of functional and symbolic associations (Ailawadi & Keller, 2004) In the era of sustainability, consumers increasingly demand that retailers adopt ethical, transparent, and environmentally responsible practices (Willems, 2022). However, current RBE literature has only recently started to acknowledge the relevance of sustainability-related associations in shaping brand perceptions. In particular, the integration of sustainability into consumer-based brand equity models remains underexplored, especially in grocery retailing, where brand trust and social alignment strongly influence routine purchase behaviour (Gutiérrez Rodríguez et al., 2017). To fill this gap, the objective of this study is to explore the antecedents of RBE, employing a quantitative

approach through structural equation modelling (SEM), combining traditional CBBE antecedents with perceived sustainability dimensions.

The theoretical contribution of this study lies in extending the classic CBBE framework by incorporating value-based sustainability perceptions into the measurement of RBE, and in validating a multidimensional construct of sustainable brand association tailored to the grocery context.

## 2. Theoretical Background and Hypotheses Development

The paper is framed in the customer-based brand equity (CBBE) perspective.

The CBBE approach has been comprehensively theorised thanks to the seminal contributions of Aaker (1991) and Keller (1993), who propose distinct yet complementary models. Aaker defines CBBE as a set of intangible assets, namely awareness, associations, perceived quality and loyalty, which hold the potential to enhance the brand value in the consumers' eyes. Aaker's model has a parallel structure, where each dimension contributes independently to the overall value. On the other hand, Keller proposes a sequential structure, in which brand awareness fuels associations, which in turn build favourable attitudes and ultimately loyalty. In recent years, an increasing amount of attention has been directed towards the concept of RBE, driven by a growing recognition of the strategic role that retailers and their brands play in creating value for consumers, as well as in their ability to develop longterm emotional relationships with consumers. According to Ailawadi and Keller (2004), successful retail branding acts as a cognitive shortcut that recalls prior positive shopping experiences. RBE thus contributes to minimizing the effects of competitive pressures, especially in highly commoditized markets such as the grocery sector, where private label brands have evolved from generics to highly sophisticated and valuedriven brands, while retailers have increasingly positioned themselves as brands in their own right (Kumar & Steenkamp, 2007; Jara & Cliquet, 2012). Although traditional CBBE models have been crucial for the theoretical establishment of the concept, several authors have highlighted the inadequacy of these approaches in fully addressing the distinctive dynamics of the retail context (Londoño et al., 2016; Rudkowski, 2024). This is especially true in the grocery sectors, characterized by high frequency and routine-driven nature of purchases (Casanoves-Boix et al., 2025). Furthermore, as sustainability becomes increasingly central to consumer decision-making, perceived brand sustainability emerges as a key dimension to be integrated by companies (Salina, 2025). As such, adapting the CBBE framework to the retail context requires a tailored set of antecedents able to capture both functional and value-based dimensions of RBE. Accordingly, this study proposes a model of RBE based on three key antecedents: Brand Awareness (BA), Perceived Quality (PQ), and Sustainable Brand Association (SBA). BA and PQ represent two of the most widely recognized components in classic CBBE models. In contrast, SBA is modeled as a second-order latent construct reflecting consumers' perceptions of the retailer's ethical, social, and environmental integrity. The growing environmental and social awareness of consumers is leading RBE to be progressively influenced not only by functional benefits, but also by symbolic and moral associations (Willems, 2022). In this study, SBA is tailored to the grocery context, where sustainability practices could reinforce the brand's identity through brand associations and in so doing, enhance RBE. In this work, SBA is specifically composed of two first order dimensions: Social Sustainability (SS) and Environmental Sustainability (ES). While the concept of sustainability is traditionally conceptualized across three pillars - environmental, social, and economic (Elkington, 1994) - the present study focuses on the environmental and social dimensions in modelling sustainable brand associations. This choice stems from the recognition that economic sustainability typically refers to internal business practices, such

as long-term profitability, financial stability, and operational resilience, which are generally not visible or directly perceived by consumers (Kencebay & Ertugan, 2025).

Therefore, we hypothesize the following:

H1: Social Sustainability (SS) positively influences SBA;

H2: Environmental Sustainability (ES) positively influences SBA;

H3: Sustainable Brand Association (SBA) positively influences RBE; H4: Brand Awareness (BA) positively influences RBE;

H5: Perceived Quality (PQ) positively influences RBE.

Additionally, the model includes three control variables, namely age, gender, and household size, to account for potential demographic influences on consumer perceptions of RBE.

## 3. Methodology

A structured questionnaire, related to grocery shopping, was administered in February and March 2025 to 599 grocery shoppers through social networks. Each latent construct was measured using multi-item, 5-point Likert scale drawn from prior research. BA, PQ, and RBE rely on canonical brand-equity scales (Aaker, 1991; Keller, 1993). A structural equation model (SEM) was estimated using maximum likelihood with robust standard errors. Item reliabilities were high (.698–.906; $p < .001$). Internal consistency satisfied conventional benchmarks: Cronbach's $\alpha$ ranged from .727 to .923, and McDonald's $\omega/\varrho$ ranged from .846 to .924. These values exceed the .70 guideline for adequate reliability (Hair et al., 2022). Convergent validity was supported (AVE = .572–.742 > .50) (Fornell & Larcker, 1981). Although the squared correlations between constructs surpassed the AVE for several perceived dimensions, the subsequent HTMT ratios (all <.85) alleviated major concerns about discriminant validity. The overall model fit was acceptable, with a SRMR of .058, which is well below the .08 threshold, and indicates a good fit (Hu & Bentler, 1999). These fit indexes confirmed that the measurement model was sound and suitable for testing the hypotheses.

## 4. Results

Figure 1 shows the structural model. ES exerted a strong positive influence on SBA ($\beta = .471$, $z = 5.01$, $p < .001$), while SS contributed more modestly ($\beta = .198$, $z = 2.00$, $p = .046$). These results fully support H1 and H2. In turn, SBA enhanced retail BE ($\beta = .174$, $z = 2.98$, $p = .003$), supporting H3.

Among the classic antecedents, BA emerged as the most significant predictor of RBE ($\beta = .588$, $z = 10.88$, $p < .001$), confirming H4. However, PQ exhibited a slightly statistically significant effect ($\beta = .103$, $z = 1.89$, $p = .059$), leaving H5 supported at the 10% level. Demographic controls (gender, age, and household size) were not significant, except for age with a slightly positive effect on RBE.

The coefficient of determination for RBE was .999, indicating that the combined set of antecedents explains nearly all the variance, primarily due to a significant contribution from BA. The low SRMR, coupled with strong item reliabilities, provides confidence in the robustness of these relations.

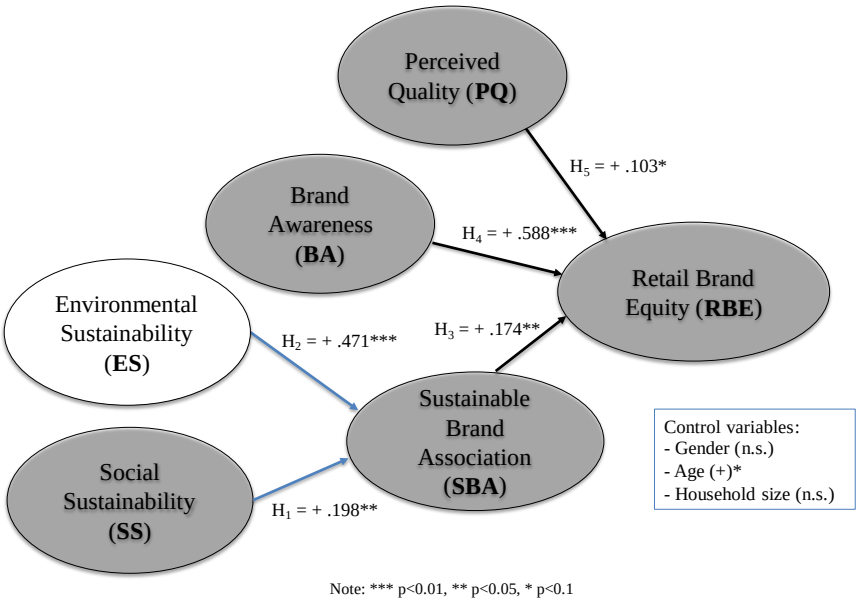



**Figure 1:** Structural model results and paths among latent constructs

## 5. Discussion

The study enriches customer-based brand equity research by empirically integrating sustainable associations into the context of grocery RBE. In line with foundational theories (Aaker, 1991; Keller, 1993), brand awareness is the primary driver of retail brand equity, highlighting the importance of brand recall in frequent purchasing environments. However, the results show that environmental and, to a lesser extent, social sustainability signals indirectly strengthen RBE via SBA. This finding aligns with recent claims that ethical and ecological credentials have become strategic differentiators for retailers (Willems, 2022). The greater significance of ES indicates that consumers view concrete environmental initiatives, such as waste reduction and eco-friendly packaging, as more reliable indicators than general social initiatives. This reflect marketplace trends where campaigns focusing on the environment tend to have a more immediate impact than those focusing on social issues.

On the other hand, the only slightly significant path from PQ to RBE suggests that perceived quality may have lost importance in a sector where basic product standards are widely accepted (Kumar & Steenkamp, 2007). When quality becomes a basic expectation, consumers seem to use much more awareness and sustainability heuristics to evaluate retailers.

From a managerial standpoint, investing in credible and well-communicated environmental programs can increase SBA and, ultimately, brand equity.

Finally, this study has some limitations. The model was tested only in grocery retailing, therefore replications using probability sampling, richer multi-item scales, and longitudinal or behavioral data across diverse retail sectors are needed to confirm the robustness and generalizability of our results.

## References

Aaker D. A. (1991). Managing Brand Equity. New York: The Free Press.

Ailawadi, K. L & Keller, K. L. (2004). Understanding retail branding: conceptual insights and research priorities. Journal of Retailing, 80(4), 331-342.

Casanoves-Boix, J., Cruz-García, A. & García-Lafuente, S. (2025). Brand equity applied to the FMCG industry before and during the covid-19 pandemic: A case study of private label products in Ireland. European Public & Social Innovation Review, 10, 1-20.

Elkington, J. (1994). Towards the Sustainable Corporation: Win-Win-Win Business Strategies for Sustainable Development. California Management Review, 36, 90-100.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. Journal of Marketing Research, 18(1), 39-50.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2022). Multivariate data analysis (9th ed.). Cengage.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. Structural Equation Modeling: A Multidisciplinary Journal, 6(1), 1-55.

Jara, M. & Cliquet, G. (2012). Retail brand equity: Conceptualization and measurement. Journal of Retailing and Consumer Services, 19, 140-149

Keller, K. L. (1993). Conceptualizing, Measuring, and Managing Customer-Based Brand Equity. Journal of Marketing, 57(1), 1-22.

Kencebay, B. & Ertugan, A. (2025). Understanding the Mediating Effect of Brand Equity on Sustainability and Omnichannel Operation and Phygital Experience. Sustainability, 17(1878), 1-27.

Kumar, N., & Steenkamp, J.-B.E.M. (2007). Private Label Strategy. Harvard Business School Press, Boston, United States.

Londono, J.C., Elms, J. & Davies, K. (2016). Conceptualising and measuring consumer-based brand–retailer–channel equity. Journal of Retailing and Consumer Services, 29, 70-81.

Rudkowski, J. (2024). Measuring employee-consumer integrated retailer brand equity. Journal of Retailing and Consumer Services, 76, 1-20.

Salinas, G. & Abril, C. (2025), "Exploring the relationship between sustainability perceptions and brand value: how and why does perceived sustainability affect brand value?", Spanish Journal of Marketing - ESIC, 1-26.

Willems, K. (2022). Brand personality appeal in retailing: Comparing fashion- and grocery retailing. Journal of Retailing and Consumer Services, 64, 1-10.

# Virtue or Virality? A Conceptual Exploration of Emerging Brand Rot vs. Conscientious Brand

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## Abstract

This paper aims to explore a new possible emerging orientation in branding communication—Brand rot—as a counterpoint to the growing trend of conscientious branding, which focuses on ethical responsibility and collective well-being. In contrast, Brand rot appears to reflect a strategic disengagement from real-world issues, favoring content that is absurd, surreal, and disconnected from meaning or purpose. Building on an initial exploration of Brain rot memes—viral, nonsensical digital artifacts—that companies have begun to integrate into their online brand communication, we propose a preliminary conceptual comparison between conscientious brands and those that may be engaging in what we refer as Brand rot dynamics, highlighting potential points of divergence and intersection. Through this short position paper, we intend to offer initial insights for further investigation and theorization. Given the novelty of the phenomenon and the current absence of academic literature on the topic, we suggest that Brand rot may represent a fertile domain for future research—particularly in relation with evolving branding practices in the attention economy. It may also reflect a deeper value fracture within younger generations: a divide between those who engage with socially conscious causes and those who instead embrace the absurd, the ironic, and the nonsensical, marked by disillusionment and detachment from traditional meaning-making structures.

*Keywords: Conscientious Brand, Brain Rot, Purpose-Oriented Branding, Brand-Rot, Brand Communication*

## 1. Introduction

In recent years, branding has shifted from a focus on the brand and company itself to greater attention to consumers' social contexts and concerns. This shift has been driven by rising expectations for brands to actively engage with socially relevant causes (Kjeldsen & Schmeltz, 2024). As noted in a report by Accenture (2020), especially among Generations Y and Z, consumers increasingly assess both current and potential brand relationships based on the degree of purpose-orientation. This orientation rather than a mere communicative stance (Walter, Föhl, Sander, & Nies, 2024) reflects a company's authentic commitment to promoting positive social change (Blocker, Cannon & Zhang, 2024), and encompasses various dimensions including corporate social responsibility, environmental, social and corporate governance, and business ethics. This commitment— increasingly embedded within corporate strategy—finds expression in the form of conscientious brands. These brands embody a sustained and deeply rooted moral engagement with one or more socially relevant causes, that transcends organizational boundaries and is outwardly projected

through a collaborative, co-creative approach involving all stakeholders (Abratt, Quaye & Kleyn, 2025). However, while branding increasingly appears to be moving toward purpose-driven strategies and moral engagement with societal causes, recent trends suggest the emergence of an opposite logic.

In potential contrast to conscientious brands, more recently certain brands' digital communication practices are increasingly embracing absurdity, detachment, and content devoid of meaning. This phenomenon—still unexplored in marketing and branding literature—can be observed in the growing use of *Brain rot memes* within several brands' digital communication strategies. Although not new, the use of memes in branded content is widely seen as an effective way to leverage internet culture, enabling brands to engage audiences through humorous and entertaining formats (Razzaq, Shao & Quach, 2024). However, while traditional meme virality relies on shared meanings and cultural codes (Razzaq et al., 2024), *Brain rot memes* are instead marked by a radical absence of meaning. These memes—digital artifacts generated using AI—typically combine randomly fused elements such as objects and anthropomorphized animals, paired with a nonsensical narrative voiced by an AI-generated male speaker. The term *Brain rot* derives from a popular expression describing the perceived decline of a person's mental or intellectual state, especially due to excessive consumption of trivial or unchallenging online content (Oxford University Press, 2024). But while the term originally refers to cognitive and attentional decline, particularly among Gen Z and Alpha (Yousef, Alshamy, Tlili & Metwally, 2025), its deliberate adoption by brands through meaningless and ephemeral content raises questions such as: could the brand's use of *Brain rot memes*—completely devoid of logical coherence or value expression—signify a form of communicative degradation that undermines both the functional and hedonic dimensions of the brand itself? This orientation—which we refer to using the novel term as "*Brand rot*"—could challenge the foundational assumptions of conscientious brands and invites reflection on a potential shift in branding logic.

## *2. Brand rot* vs. Conscientious brand

Given the lack of academic literature, our initial exploration of the *Brand rot* phenomenon—compared to conscientious brands—focuses on communicative differences, as these are currently the only observable indicators of *Brand rot* behavior. For this comparison, we draw on the communication requirements for conscientious brands outlined by Bertolini et al. (2023). The primary distinction lies in the function of communication: conscientious branding aims to clearly and truthfully convey the brand's purpose to inspire behavioral change, whereas *Brain rot memes* primarily seek relevance, using entertainment as a tool to maximize engagement and awareness through virality, even when employing content devoid of meaning (WDHN, 2025). With regard to "to whom" the brand communicates, conscientious brands typically address a broad audience—not limited to consumers but also including other businesses and organizations—since the social causes they promote tend to be of shared interest to multiple stakeholders (Iglesias et al., 2023). In contrast, *Brand rot* communication targets a narrower audience—primarily Gen Z and Alpha—who favor spontaneous, surreal, and instantly consumable content (WDHN, 2025) and show a marked preference for the nonsense-driven humor typical of *Brain rot memes* (Corriere, 2025).

Furthermore, when it comes to communication principles, conscientious brands are required to uphold transparency, clarity, consistency, and authenticity—not only to communicate effectively and influence stakeholders toward positive behavioral change, but also to avoid reputational risks associated with misleading or inconsistent messaging. An additional principle shared by both conscientious and *Brand rot* communication—though pursued with different aims—is openness. For conscientious brands, this entails a willingness to engage stakeholders in dialogue to address socially relevant issues (Bertolini et al., 2023). In contrast,

*Brand rot* communication embraces a form of openness (Table 1) that enables both users and brands to freely appropriate or generate characters and formats—not to encourage social impact or meaningful dialogue, but purely to fuel an ephemeral virality.

| **Brand** | ***Brain rot* meme** | **Typology** |
|---|---|---|
| KFC<br><br>(*Twisterino maranzino)* |  | *Owned*<br><br>(*Brain rot meme* created by the brand) |
| Carrefour Belgium<br><br>(*Ballerina cappuccina*) |  | *Owned (adapted from users)*<br><br>(*Brain rot meme* created from pre-existing online characters and adapted for branded content) |
| Nike<br><br>(*Tralalero Tralalà)* |  | *Earned*<br><br>(*Brain rot meme* created by users incorporating brand elements without the brand's consent or participation) |

**Table 1:** Examples of brand use of *Brain rot memes* as evidence of communicative openness

Taken together (Table 2), these distinctions highlight the divergent communicative logics underpinning conscientious and *Brand rot* brand. While the former is guided by purpose, ethical coherence, and stakeholder engagement, the latter prioritizes cultural immediacy, aesthetic detachment, and viral relevance.

| **Dimension** | **Conscientious Brand** | ***Brand rot* (emerging)** |
|---|---|---|
| Communication functions | Inspire positive change, ethics | Virality, attention, ephemerality, attention |
| Main communication targets | Multiple stakeholders | Generation Z and Alpha |
| Principles of communication | Transparency, clarity, consistency, authenticity, openness | Meme-driven, openness, nonsense (to be explored) |

**Table 2:** main differences between conscientious and *Brand rot* communication.

These first insights offer a conceptual basis for further investigation into the emerging phenomenon of *Brand rot* and its implications for brand strategy and identity in digital culture.

## 3. Future research directions

In outlining future research on the concept of *Brand rot*, there is a clear need for foundational work to establish a coherent conceptual framework and a shared definition of the phenomenon—potentially through expert-driven approaches such as the Delphi method. Moreover, while *Brand rot* currently manifests primarily through *Brain rot memes* in brand communication, it may evolve into other forms. Future studies should therefore explore its underlying drivers, potential advantages, and long-term implications for brand identity, particularly in relation to communication styles that are deliberately empty or absurd. Regarding the drivers, one possible research line could explore younger consumers' tendency to seek escapism as a response to the anxiety induced by today's global scenario marked by climate crises, economic instability, social and geopolitical tensions (TrendHunter, 2022; Orazi, Mah, Derkensen & Murray, 2023). In this context, *Brand rot* might emerge not merely as a stylistic choice but as a deeper cultural reaction to the saturation of moralized brand messaging, reflecting younger generations' growing fatigue with purpose-driven branding in an era of uncertainty and disillusionment.

However, the sharp opposition between *Brand rot* and conscientious brands outlined in this work may risk oversimplifying the phenomenon and overlooking its underlying complexity. First, we cannot assume that all *Brand rot* expressions are entirely detached from socially relevant issues. Future research could explore whether some cases of *Brand rot* represent instances of purpose-hushing, where brands opt to engage in silent forms of action. This approach might allow for a more detached, absurdist communication style without necessarily excluding an active commitment to collective well-being. Additionally, rather than indicating complete disengagement from reality, *Brand rot* communication may sometimes reflect a deliberate stance on social issues or a strategy to capture attention through shock, similar to the controversial marketing logic. Indeed, if sexual or violent imagery has lost its shock value (Urwin & Venter, 2014), *Brain rot memes* may represent new forms of transgression and provocation. Examples such as *Bombardiro Crocodilo*—a crocodile-bomber with an AI-generated voice claiming responsibility for the killing of children in Gaza—and the profane song featuring *Tralalero Tralalà* a Nike-wearing shark (Corriere, 2025) illustrate politically charged content that push the boundaries of meme culture and could emerge as a new frontier of controversial marketing. As such, we suggest that future research could further investigate these expressions as manifestations of the evolving logic of digital provocation within *Brand rot* communication. Finally, a further line of research could focus specifically on earned *Brain rot memes* involving brands that resulting from non-collaborative co-creation processes, could be interpreted as forms of brand hijacking (Siano, Confetto, Vollero & Covucci, 2022). Future research could investigate the motivations behind users' choices to embed specific brands in *Brain rot memes*—exploring whether these inclusions are entirely random or reflect more intentional acts of commentary, satire, or cultural positioning. Altogether, these preliminary directions highlight the need for a deeper exploration of *Brand rot*, its communicative logic, cultural meaning, and strategic implications.

## References

Abratt, R., Quaye, E. S., & Kleyn, N. (2025). Conscientious corporate brands: the roles of organisational purpose, organisational culture, brand authenticity and corporate social responsibility. *Journal of Brand Management*, 1-20.

Bertolini, A., Conte, F., Siano, A., & Marongiu, F. (2023). Digital Communication of Conscientious Brands: Case Studies. *Sustainability*, *15*(21), 15378.

Blocker, C. P., Cannon, J. P., & Zhang, J. Z. (2024). Purpose orientation: An emerging theory transforming business for a better world. Journal of the Academy of Marketing Science, 1-27.

Edinger-Schons, L. M., Lengler-Graiff, L., Scheidler, S., Mende, G., & Wieseke, J. (2020). Listen to the voice of the customer—First steps towards stakeholder democracy. *Business Ethics: A European Review*, *29*(3), 510-527.

Iglesias, O., & Ind, N. (2020). Towards a theory of conscientious corporate brand co-creation: the next key challenge in brand management. *Journal of Brand Management*, *27*(6), 710-720.

Iglesias, O., Mingione, M., Ind, N., & Markovic, S. (2023). How to build a conscientious corporate brand together with business partners: A case study of Unilever. *Industrial Marketing Management*, *109*, 1-13.

Kjeldsen, A. K., & Schmeltz, L. (2024). The challenges of balancing ethics and competence for purpose-driven brands: An exploratory case study on social impact company Too Good To Go. *Journal of Brand Management*, *31*(3), 310-330.

Orazi, D. C., Mah, K. Y., Derksen, T., & Murray, K. B. (2023). Consumer escapism: Scale development, validation, and physiological associations. *Journal of Business Research*, *160*, 113805.

Razzaq, A., Shao, W., & Quach, S. (2024). Meme marketing effectiveness: A moderated-mediation model. *Journal of Retailing and Consumer Services, 78,* 103702.

Siano, A., Confetto, M. G., Vollero, A., & Covucci, C. (2022). Redefining brand hijacking from a non collaborative brand co-creation perspective. *Journal of Product & Brand Management*, *31*(1), 110-126.

Urwin, B., & Venter, M. (2014). Shock advertising: Not so shocking anymore. An investigation among Generation Y. *Mediterranean Journal of Social Sciences*, *5*(21), 203-214.

Walter, N., Föhl, U., Sander, F., & Nies, A. (2024). Act as you preach! Authentic brand purpose versus "woke washing's" impact on brand credibility: The moderating role of cause involvement and consumer skepticism. *Journal of Business Research*, *184*, 114868.

Williams, P., Escalas, J. E., & Morningstar, A. (2022). Conceptualizing brand purpose and considering its implications for consumer eudaimonic well-being. *Journal of consumer psychology*, *32*(4), 699-723.

Yousef, A. M. F., Alshamy, A., Tlili, A., & Metwally, A. H. S. (2025). Demystifying the New Dilemma of Brain Rot in the Digital Era: A Review. *Brain Sciences*, *15*(3), 283.

## Websites

https://humancg.com/brands-exploit-italian-brainrot/

https://www.accenture.com/content/dam/accenture/final/a-com-migration/pdf/pdf-117/accenture-generation-p-urpose-pov.pdf

https://corp.oup.com/news/brain-rot-named-oxford-word-of-the-year-2024/

https://www.wdhn.com/business/press-releases/ein-presswire/803101615/why-brands-are-embracing-italian-brainrot-to-go-viral-on-tiktok-and-win-over-gen-z/

https://www.corriere.it/tecnologia/25_maggio_14/cos-e-l-italian-brain-rot-il-trend-di-meme-che-sta-conquistando-tutto-il-mondo-f6a6ce57-0f76-4f56-82b3-c3dc31e7exlk.shtml

https://www.trendhunter.com/protrends/escapist-marketing?utm

# Integrating Marketing and Linguistic Perspectives in Sustainable Tourism: Greenspeak in Copenhagen's Place Branding

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## Abstract

Tourism destinations increasingly turn to place branding as a strategic response to sustainability challenges. Building on this trend, the present study investigates how Copenhagen's brand is discursively constructed in the CopenPay campaign, a sustainability initiative launched by Visit Copenhagen to incentivize eco-friendly tourist behaviors through rewards. By analyzing two promotional videos released in 2024 and 2025 as part of the campaign, the study explores how sustainability is framed through progressive values, civic engagement, and affective appeal. The analysis is grounded in two theoretical frameworks: the Nordic wave of place branding, which emphasizes social responsibility, participatory governance, and cultural pluralism; and ecolinguistics, which explores how language shapes ecological values and imaginaries. Methodologically, the study adopts Positive Discourse Analysis to examine how empowering narratives are constructed through linguistic choices and rhetorical strategies. Findings reveal that the campaign mobilizes greenspeak—a form of environmental discourse that blends ethical messaging with promotional intent. Sustainability is framed as a pleasurable and emotionally rewarding experience, which both empowers tourists as ethical agents and reinforces Copenhagen's brand as an environmentally responsible destination. However, the analysis also identifies discursive silences, which manifest in the neglect of structural critiques related to tourism's environmental impact and social sustainability issues. This paper contributes to interdisciplinary debates on sustainability communication and place branding by demonstrating how discourse is both a branding tool and an ideological construct. In doing so, the study offers practical insights for tourism marketers and encourages more transparent and critically reflective sustainability narratives in urban place branding.

*Keywords: Sustainability, Marketing Communication, Nordic Place Branding, Ecolinguistics, Positive Discourse Analysis*

## 1. Introduction

As tourism destinations increasingly face the challenges of overtourism, climate change, and shifting visitor expectations, place branding has emerged as a strategic tool for aligning urban development with global environmental goals. For instance, the city of Miami Beach in the United States has recently implemented a rebranding strategy aimed at mitigating the negative

impacts of spring break tourism and promoting sustainable-responsible tourist behavior that prioritizes both visitor experience and resident well-being (Spezzano & Lusby, 2024a, 2024b).

Amidst critical contestations of tourism, the Nordic countries have positioned themselves at the forefront of progressive place branding by embedding values such as social responsibility, environmental stewardship, and participatory governance into their tourism narratives (Cassinger, Gyimóthy, & Lucarelli, 2021). In particular, Copenhagen has gained international recognition for its innovative approaches to sustainable urban tourism. A notable example is *CopenPay*, a tourism campaign launched by the city's official destination marketing organization—Visit Copenhagen—to incentivize sustainable tourist behavior.

Launched in 2024 and renewed the following year, CopenPay is a pioneering initiative that rewards visitors for engaging in eco-friendly actions—such as biking, picking up litter, or arriving by train. This initiative aims to promote sustainable tourism behavior and reinforce Copenhagen's broader green transition. Two promotional videos, released across digital platforms as part of the 2024 and 2025 editions, lie at the heart of the campaign's communication strategy. They encapsulate the ethos of CopenPay through a persuasive narration that frames sustainability as an enjoyable, socially rewarding part of the tourist experience.

This research explores how Copenhagen's brand is discursively constructed in both promotional videos through positive, future-oriented narratives that emphasize agency, inclusivity, and ethical consumption. Theoretically, the study draws on two key frameworks: the Nordic wave of place branding (Cassinger, Lucarelli, & Gyimóthy, 2021) and ecolinguistics (Stibbe, 2021). Methodologically, it adopts Positive Discourse Analysis (Bartlett, 2012; Martin, 2004) as the analytical lens to examine how sustainability discourse in place branding is articulated and communicated within the digital landscape. The study contributes to ongoing debates on sustainability and branding at the intersection of marketing communication, applied linguistics, and tourism research (Cassinger et al., 2019; Lusby, 2021; Ponton, 2022; Sharma et al., 2020; Stibbe, 2017).

## 2. Sustainable Tourism and the Nordic Wave of Place Branding

Contemporary urban tourism is both competitive and contested due to the backlash of overtourism and tourism-led gentrification (Cocola-Gant, 2018; Milano et al., 2019; Sigler & Wachsmuth, 2020). In this context, European destinations increasingly turn to sustainable initiatives to better align tourism with urban policy goals in their aspiration to enhance both visitor appeal and resident satisfaction (Kavaratzis & Kalandides, 2015). Sustainability has thus become a strategic brand differentiator on the tourism market, with the Nordic countries being illustrative examples of a shifting place branding practice. Rather than focusing solely on iconic landmarks or cultural heritage, cities like Copenhagen and Stockholm seek to position themselves through environmental responsibility, inclusive public spaces, and longterm livability.

Recent research contributions (Cassinger et al., 2019; Cassinger, Gyimóthy, & Lucarelli, 2021) have highlighted the specific character of the Nordic wave of place branding, which combines critical and geopolitically reflective scholarship with societal engagement. In contrast to corporatist and market-driven theorizations of brand management, the Nordic approach to place branding is embedded in the unique sociocultural context of the Nordic region (*Nordic exceptionalism*), which is framed by participatory governance, social cohesion, and trust, as well as local stakeholder involvement (Cassinger & Eksell, 2017).

The key tenets of the Nordic wave can be summarized in three distinct features: collaboration, social responsibility, and cultural pluralism. First, the metaphor of the wave

emphasizes a transdisciplinary and collaborative approach where citizens, local communities, public institutions, and academics are active co-creators of place brands (Kavaratzis et al., 2017; Lucarelli & Brorström, 2013). Second, Nordic branding is driven by ethical imperatives rather than image-building, and is engaged in promoting the values of sustainability, gender equality, climate consciousness, and social justice. Place branding is thus conceived as a platform for market responsibilization, not merely attracting tourists or investment (Cassel, 2019; Ren et al., 2019). Third, Nordic scholars reject the idea of a singular, essentialist brand identity (Ren & Blichfeldt, 2011), and instead promote narrative multiplicity and an ongoing process of meaning-making (Gyimóthy 2017; Ooi 2004), grounded in local stories, cultural symbols, and diverse expressions of place.

These tenets collectively form a progressive framework for place branding that is capable of navigating the tensions between local identity formation and the commodification of both Nordicity and welfare values for international markets. Sustainability is inherent to the core brand ethos of Nordic place brands, but it has also become a practical asset in tourism development. Innovative business models are aligned with the sharing economy and circular principles, which have contributed to new carbon-neutral and climate-adaptive experiences for visitors. As such, consumers are increasingly assigned co-responsibility in the green transition.

In particular, Nordic practitioners are keen on experimenting with placesensitive interventions. These may entail responsibilizing campaigns, such as CopenPay (Bosangit et al., 2025), or design interventions called provotyping (Waade et al., 2019), which further enhance dialogue between planners, residents, and tourists.

## 3. Ecolinguistics and Greenspeak

While the Nordic wave of place branding emphasizes collaborative and ethical storytelling, ecolinguistics provides the theoretical framework for analyzing the narratives that underpin such branding practices. Ecolinguistics emerges from the broader ecological turn in the humanities and social sciences, which reorients disciplines toward environmental concerns and highlights the role of language in shaping ecological futures (Stibbe, 2021). This shift reflects growing recognition that human narratives, values, and communicative practices significantly shape how societies engage with environmental challenges. At the core of ecolinguistics lies the concept of *ecosophy*, a normative philosophy of ecological harmony introduced by Næss (1995). Ecosophy provides an ethical basis for evaluating communication not merely on its rhetorical efficacy but on its contribution to sustaining life.

One of the central aims of ecolinguistics is to identify and interrogate the "stories we live by" (Stibbe, 2021, p. 1)—those underlying narratives and cognitive structures that guide how societies perceive and act upon their relationship with the natural world. In sustainability discourse, these stories often appear in the form of implicit assumptions about progress, consumption, and economic growth—narratives that may run counter to ecological goals. Ecolinguistics seeks to expose such narratives while advocating for alternatives that promote interdependence, sufficiency, and longterm ecological care.

Building on this theoretical grounding, the ecolinguistic perspective becomes particularly salient in Nordic place branding, where environmental narratives play a central role in shaping perceptions and behaviors. Ecolinguistics prompts a reconsideration of how language can either sustain exploitative ideologies or foster more sustainable and inclusive practices. This means assessing whether place-based narratives reinforce extractive economic paradigms or promote civic engagement, environmental awareness, and cultural resilience.

The present study conceptualizes sustainability discourse in Nordic place branding in terms of *greenspeak*—a word coined by Harré et al. (1999) to describe the language and rhetorical patterns used in environmental communication. Greenspeak refers to discursive practices that range from sincere expressions of ecological concern to more strategic or promotional uses of environmental language. In the Nordic place branding context, this discourse becomes highly relevant, revealing tensions between genuine sustainability commitments and strategic uses of green language to shape brand perception. Analyzing greenspeak through the lens of ecolinguistics allows for a deeper understanding of how sustainability is constructed, performed, and sometimes commodified in place branding.

## 4. Methodology

This study adopts a qualitative approach drawing on Positive Discourse Analysis (Bartlett, 2012; Martin, 2004), a strand of discourse studies that explores how language constructs empowering narratives, promotes social change, and fosters solidarity. This approach is particularly suited to analyzing public campaigns that aim to inspire and engage audiences, with a focus on how discourse enacts positive social and environmental values.

The data consist of the transcriptions of the two promotional videos published across digital platforms by Visit Copenhagen in 2024 (Appendix A) and 2025 (Appendix B) as part of the CopenPay initiative. Both videos were transcribed in full and subjected to a close discourse analysis that focused on lexico-semantic choices, rhetorical strategies, and broader discursive patterns.

The analysis followed three stages. First, recurring themes and ecological values were identified, including civic responsibility, ethical consumption, emotional engagement, and collective action. Second, the linguistic features and rhetorical devices used to construct these themes were examined. Particular attention was paid to verbs of agency (e.g., *help*, *earn*, *take part*), inclusive pronouns (e.g., *we*, *everyone*), affective expressions (e.g., *feel good*, *make a difference*), and reward-oriented language structures. Third, the two videos were compared diachronically to trace discursive shifts between the 2024 pilot and the 2025 version, enabling the identification of evolving narratives.

Additionally, the analysis explored how tourists were discursively positioned as ethical actors and how emotional appeals were embedded to reinforce desired behaviors. Intertextual references to Nordic cultural values and implicit ideological silences were also examined, in line with the ecolinguistic goal of uncovering both what is said and what is left unsaid.

Through this methodological approach, the study shows how greenspeak operates in Copenhagen's sustainability narrative and how language in place branding both reflects and shapes ecological imaginaries.

## 5. Findings and Discussion

The analysis of the two CopenPay promotional videos reveals how Copenhagen's brand discursively constructs sustainability through a form of greenspeak that blends civic encouragement, ecological responsibility, and strategic optimism. The campaign mobilizes language not only to promote environmentally responsible behaviors but also to shape an affective and inclusive sustainability narrative aligned with Nordic place branding values.

### 5.1 Framing Sustainability as Empowering and Enjoyable

A central theme in both videos is the framing of sustainability as a pleasurable, low-barrier, and socially rewarding experience. Lexical choices such as *enjoy*, *earn*, *reward*, and *explore* reposition eco-friendly behaviors not as obligations but as desirable and even entertaining

actions. This framing constitutes a positive "story to live by" (Stibbe, 2021, p. 1), which replaces narratives of guilt or sacrifice with narratives of agency, empowerment, and mutual benefit. Building on this strategic positivity, the 2025 video further develops the idea of active participation as gratifying civic action. Tourists are encouraged to "help keep the water in the canals clean in exchange for a free boat tour," "help remove invasive plants," and "take part in a plogging tour where people collect litter together and get a free coffee and a Danish."

Such utterances combine environmental action with gamified gratification, expressing a civic ethos while also appealing to self-interest. From a greenspeak perspective, this duality reflects both an authentic ecological orientation and a marketing logic designed to enhance the city's competitive appeal. It also aligns with the Nordic wave's emphasis on responsibilization as a shared and ethical endeavor, while echoing the dynamics of *consumer responsibilization* (Giesler & Veresiu, 2014), whereby individuals are discursively positioned as responsible agents expected to advance environmental and social goals through their consumption choices.

### 5.2 Pronouns and Discourses of Inclusion

Extending the logic of shared responsibility, the videos consistently use inclusive pronouns such as *we*, *you*, and *everyone*, constructing sustainability as a shared social project. This rhetoric aligns with ecolinguistics' emphasis on interdependence and with the Nordic branding's core value of participatory governance. For example, the 2025 video includes statements such as "you can even get rewarded for how you get to Copenhagen," and "the hope is to inspire to a more conscious mindset."

This inclusive stance serves a dual function. It positions Copenhagen as a socially cohesive destination and constructs tourists as active moral agents rather than passive consumers. Through this discursive move, the brand performs what Positive Discourse Analysis defines as *solidarity-building discourse* (Bartlett, 2012), reinforcing the social legitimacy of green behaviors while strengthening the emotional connection between visitor and place.

### 5.3 Emotional Appeal and Affective Stance

Beyond inclusivity, greenspeak evokes a diverse emotional landscape tied to agency, responsibility, and collective engagement. Rather than relying on overtly affective expressions, the CopenPay campaign promotes emotional gratification through affirming language and the association of climate-friendly actions with tangible rewards. These include feelings of joy and light-heartedness—fostered through the gamified nature of earning treats like boat tours, coffee, or gourmet meals—as well as pride in participating in meaningful environmental practices. Group activities such as plogging or removing invasive plants evoke a sense of belonging and togetherness, while the generosity of the rewards may trigger gratitude.

At a deeper level, tourists are invited to feel empowered and morally fulfilled by engaging in sustainable behavior, reinforcing their role as ethical actors in the green transition. This affective appeal plays a central role in greenspeak, serving to normalize environmental responsibility through a language of positivity. Rather than employing alarmist or guilt-driven rhetoric, the videos promote a tone of affective governance (Bajde & Rojas-Gaviria, 2021), aligning with the optimistic and future-oriented narratives emphasized in ecolinguistics. This strategic emotional framing positions the city as not only environmentally advanced but also emotionally rewarding to visit and support.

### 5.4 Intertextuality and Cultural Referencing

In parallel with its emotional resonance, the campaign draws on broader Nordic cultural codes—particularly those associated with environmental citizenship, cycling culture, and

civic pride. These references are exemplified by the statement "the people in Copenhagen bike, swim in the canals, and drink tap water instead of bottled water," which frames sustainability as a normalized, everyday behavior. At the same time, this normalization is localized: it constructs sustainable practices as an inherent feature of Copenhageners' lifestyle, thereby positioning locals as moral exemplars and cultural insiders.

This dual framing performs several discursive functions. For domestic audiences, it reinforces civic identity and environmental self-image; for international audiences, it presents a behavioral model to aspire to—implicitly inviting tourists to adopt local norms. From a greenspeak perspective, this rhetorical move legitimizes the campaign's sustainability claims by anchoring them in culturally specific narratives of Nordic exceptionalism. It also reflects the ideological layering of environmental discourse in tourism branding, where sustainability is not only a policy goal but also a marker of cultural identity and moral leadership.

### 5.5 Subject Positioning: The Ethical Tourist

Echoing the theme of cultural modeling, the videos construct the tourist as an empowered, ethical subject—someone capable of making a difference through everyday actions. This is visible in imperative and modal verb structures such as "arriving by bike can earn you a trip," "help keep the water in the canals clean," and "bike to a museum." Here, agency is foregrounded not as a burden but as an accessible, morally appropriate, and even pleasurable opportunity.

Such subject construction is significant from both ecolinguistic and branding perspectives. It redefines the tourist role from passive consumer to co-creator of sustainability. This reframing aligns with the Nordic ideal of co-responsibility while also fulfilling a branding function: casting the city as a platform for meaningful participation and ethical consumption.

### 5.6 Strategic Silences and Ideological Selectivity

Despite this progressive narrative, the campaign also exhibits discursive omissions that reflect the ideological boundaries of greenspeak. Notably absent are references to structural barriers, systemic emissions, or the broader contradictions of promoting air travel to a "green" city. Moreover, the campaign's discourse overlooks critical aspects of social sustainability, including gentrification and the commodification of everyday urban life. By foregrounding individual actions and personal choices, greenspeak sidesteps more complex critiques of tourism's environmental and socio-spatial impacts.

Such silences are not accidental; they reveal the selective logic of sustainability discourse in commercial contexts. As ecolinguistics warns, even wellintentioned narratives can reproduce dominant ideologies by omitting uncomfortable truths (Stibbe, 2021). In this case, the narrative centers on voluntarism and optimism while marginalizing discussions of environmental limits, social equity, or policy enforcement—thereby promoting a vision of sustainability that is easy to sell and safe to implement, but ultimately limited in scope.

## 6. Conclusion

This study has investigated how Copenhagen's brand is discursively framed in the CopenPay campaign by drawing on the Nordic wave of place branding and ecolinguistics from a theoretical perspective, and Positive Discourse Analysis as its methodological approach. Through an in-depth analysis of the 2024 and 2025 promotional videos at the heart of the campaign, the research has shown how greenspeak operates as both a communicative strategy and an ideological construct in sustainable place branding.

The findings demonstrate that CopenPay mobilizes a discursive repertoire aligned with core values of the Nordic wave—such as social responsibility, civic participation, and inclusive governance—while promoting a commodified form of sustainability that is emotionally engaging, socially rewarding, and commercially appealing. The campaign reframes sustainable behavior as accessible and enjoyable, intertwining civic action with personal gratification and thereby constructing a positive, future-oriented narrative that enhances both ecological awareness and destination appeal. Through affective language, inclusive pronouns, and the ethical positioning of tourists, the campaign cultivates a sense of belonging and shared purpose that aligns individual agency with collective environmental goals.

At the same time, the analysis highlights critical absences that reveal the ideological selectivity of greenspeak. By centering voluntarism, emotional resonance, and everyday practices, the campaign sidelines deeper structural concerns—such as the environmental contradictions of air travel, the socio-spatial consequences of urban tourism, and the commodification of everyday civic life. These silences do not merely reflect strategic omissions but actively shape how sustainability is imagined and communicated. As such, the CopenPay campaign illustrates both the rhetorical power and the political limitations of sustainability narratives in commercial place branding.

From an academic standpoint, the study contributes to the interdisciplinary dialogue on sustainability and branding at the intersection of marketing communication, applied linguistics, and tourism research. It demonstrates the analytical value of Positive Discourse Analysis for examining how sustainability is linguistically constructed, ideologically shaped, and emotionally charged in tourism communication. Moreover, by integrating an ecolinguistic perspective, the study advances the conceptualization of greenspeak as a discursive tool that frames ethical action within consumer-oriented campaigns, particularly in the context of Nordic place branding.

From a managerial perspective, the findings offer valuable insights for destination marketers, tourism planners, and communication strategists. The study suggests that positioning sustainability as a pleasurable, inclusive, and culturally meaningful experience can foster stronger engagement and reinforce brand credibility. At the same time, it cautions against the risks of overly optimistic or strategically sanitized narratives. For sustainability messaging to be credible and effective, it must acknowledge ecological limits and foster more transparent, participatory, and structurally aware communication strategies. Brands are thus encouraged to move beyond aspirational storytelling and adopt discourse practices that align with long-term environmental goals and inclusive stakeholder collaboration.

Future research could extend this work by exploring greenspeak across different geographical and cultural contexts, including cities outside the Nordic region with varying branding logics and environmental policies. Longitudinal analyses could examine how sustainability narratives shift in response to social or political developments, while audience reception studies could illuminate how these narratives are interpreted, endorsed, or resisted by diverse stakeholder groups. Finally, multimodal approaches could further enrich the analysis by investigating the interplay of verbal, visual, and auditory modes in campaign messaging.

In sum, this study affirms the centrality of discourse in the construction of sustainable tourism imaginaries. Language plays a critical role in shaping perceptions, mobilizing action, and defining the ethical contours of green transitions. As such, discourse analysis remains essential to understanding—and improving—the ways in which sustainability is communicated in place branding.

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## References

Bajda, D., & Rojas-Gaviria, P. (2021). Creating responsible subjects: The role of mediated affective encounters. *Journal of Consumer Research*, *48*(3), 492–512. https://doi.org/10.1093/jcr/ucab019

Bartlett, T. (2012). *Hybrid voices and collaborative change: Contextualising positive discourse analysis*. Routledge.

Bosangit, C., Malone, S., & Peattie, K. (2025). Tourism: A paradoxical challenge for marketing and sustainability. In K. Peattie, R. De Angelis, N. Koenig-Lewis, & C. Strong (Eds.), *The Routledge Companion to Marketing and Sustainability* (pp. 302–316). Routledge.

Cassel, S. H. (2019). Branding Sámi tourism: Practices of indigenous participation and place-making. In C. Cassinger, A. Lucarelli, & S. Gyimóthy (Eds.), *The Nordic wave in place branding: Poetics, Practices, Politics* (pp. 139–152). Edward Elgar Publishing.

Cassinger, C., & Eksell, J. (2017). The magic of place branding: Regional brand identity in transition. *Journal of Place Management and Development, 10*(3), 202–212. https://doi.org/10.1108/JPMD-03-2017-0028

Cassinger, C. Gyimóthy, S. & Lucarelli, A. (2021). 20 years of Nordic place branding research: A review and future research agenda. *Scandinavian Journal of Hospitality and Tourism*, *21*(19), 70–77. https://doi.org/10.1080/15022250.2020.1830434

Cassinger, C., Lucarelli, A., & Gyimóthy, S. (Eds.). (2019). *The Nordic wave in place branding: Poetics, practices, politics*. Edward Elgar Publishing.

Cassinger, C., Lucarelli, A., & Gyimóthy, S. (2021). The Nordic wave in place branding: Global implications and relevance. In D. Medway, G. Warnaby, & J. Byrom (Eds.), A research agenda for place branding (pp. 117–130). Edward Elgar Publishing.

Cocola-Gant, A. (2018). Tourism gentrification. In L. Lees & M. Phillips (Eds.), *Handbook of gentrification studies* (pp. 281–293). Edward Elgar Publishing.

Giesler, M., & Veresiu, E. (2014). Creating the responsible consumer: Moralistic governance regimes and consumer subjectivity. *Journal of Consumer Research*, *41*(3), 840–857. https://doi.org/10.1086/677842

Gyimóthy, S. (2017). The reinvention of terroir in Danish food place promotion. *European Planning Studies, 25*(7), 1200–1216. https://doi.org/10.1080/09654313.2017.1296114

Harré, R., Brockmeier, J., & Mühlhäusler, P. (1999). *Greenspeak: A study of environmental discourse*. SAGE.

Kavaratzis, M., Giovanardi, M., & Lichrou, M. (Eds.). (2017). *Inclusive place branding: Critical perspectives on theory and practice*. Routledge.

Kavaratzis, M., & Kalandides, A. (2015). Rethinking the place brand: The interactive formation of place brands and the role of participatory place branding. *Environment and Planning A: Economy and Space, 47*(6), 1368–1382. https://doi.org/10.1177/0308518X15594918

Lucarelli, A., & Brorström, S. (2013). Problematising place branding research: A meta-theoretical analysis of the literature. *The Marketing Review, 13*(1), 65–81. https://doi.org/10.1362/146934713X13590250137826

Lusby, C. (Ed.). (2021). *Destination unknown: Sustainable travel and ethical tourism*. Common Ground Research Networks.

Martin, J. (2004). Positive discourse analysis: Solidarity and change. *Revista Canaria de Estudios Ingleses*, 49, 179–202.

Milano, C., Cheer, J. M., & Novelli, M. (Eds.). (2019). *Overtourism: Excesses, discontents and measures in travel and tourism*. CABI.

Næss, A. (1995). The shallow and the long range, deep ecology movement. In A. Drengson & Y. Inoue (Eds.), *The deep ecology movement: An introductory anthology* (pp. 3–10). North Atlantic Books.

Ooi, C. S. (2004). Poetics and politics of destination branding: Denmark. *Scandinavian Journal of Hospitality and Tourism, 4*(2), 107–128. https://doi.org/10.1080/15022250410003898

Ponton, D. M. (2022). Ecolinguistics and positive discourse analysis: Convergent pathways. MediAzioni, 34(1), A36–A54. https://doi.org/10.6092/issn.1974-4382/15506

Ren, C., & Blichfeldt, B. S. (2011). One clear image? Challenging simplicity in place branding. *Scandinavian Journal of Hospitality and Tourism, 11*(4), 416–434. https://doi.org/10.1080/15022250.2011.598753

Ren, C., Gad, U. P., & Bjørst, L. R. (2019). Branding on the Nordic margins: Greenland brand configurations. In C. Cassinger, A. Lucarelli, & S. Gyimóthy (Eds.), *The Nordic wave in place branding* (pp. 160–174). Edward Elgar Publishing.

Robbins, P. (2012). *Political ecology: A critical introduction*. John Wiley & Sons.

Sharma, A., Pulido-Fernández, J. I., & Hassan, A. (Eds.). (2020). *Sustainable Destination Branding and Marketing*. CABI

Sigler, T., & Wachsmuth, D. (2020). New directions in transnational gentrification: Tourism-led, state-led and lifestyle-led urban transformations. *Urban Studies*, *57*(15), 3190–3201. https://doi.org/10.1177/0042098020944041

Spezzano, W., & Lusby, C. (2024a). Mitigating overtourism in Miami Beach through sustainable destination branding: A tourism discourse analysis of the antispring break marketing campaign. *Proceedings of the 21st SIM Conference: Brand a Purpose in a Changing Era.*

Spezzano, W., & Lusby, C. (2024b). Rebranding unsustainable destinations: The case study of Miami Beach breaking up with spring break. *Tourism Cases*, tourism202400088. https://doi.org/10.1079/tourism.2024.0088

Stibbe, A. (2017). Positive discourse analysis: Rethinking human ecological relationships. In A. F. Fill & H. Penz (Eds.), *The Routledge handbook of ecolinguistics* (pp. 165–178). Routledge.

Stibbe, A. (2021). *Ecolinguistics: Language, ecology and the stories we live by* (2nd ed.). Routledge.

Waade, A. M., Pasgaard, J. C., Meldgaard, M., & Nielsen, T. (2019). Nordic landscapes in collaborative place-making interventions. In C. Cassinger, A. Lucarelli, & S. Gyimóthy (Eds.), *The Nordic wave in place branding* (pp. 91–108). Edward Elgar Publishing.

## Appendices

*Appendix A: Transcription of the 2024 Promotional Video*

Copenhagen aspires to be more than just the capital of Denmark. It aims to become the capital of sustainable tourism. Most of the city's electricity comes from renewable energy sources, and the people in Copenhagen bike, swim in the canals, and drink tap water instead of bottled water. Now, Copenhagen attractions promote green actions by introducing CopenPay. The model is simple: Copenhagen attractions reward climatefriendly actions. For instance, arriving by bike can earn you a trip down Copenhagen's famous ski slope; cycling to the National Museum earns your family a treat. Work on an urban farm and get a free vegetarian lunch—or, if you help keep the water in the canals clean, you can get the kayak tour for free. Copenhagen is introducing CopenPay as a pilot project where a wide range of attractions reward tourists with CopenPay. The hope is not only for people to increase green actions in Copenhagen, but to inspire more green actions worldwide.

*Appendix B: Transcription of the 2025 Promotional Video*

How can tourism be turned from a burden into a positive force for change? In 2024, this question led Copenhagen to turn conscious actions into a currency by launching CopenPay. The initiative became such a success that it's now back, three times as big— and this year, you can even get rewarded for how you get to Copenhagen. There are many ways to earn and use CopenPay. For instance: help keep the water in the canals clean in exchange for a free boat tour; help remove invasive plants for a free vegetarian meal; take part in a plogging tour where people collect litter together and get a free coffee and a Danish; bike to a museum instead of going by car and get an entry discount or a free cup of coffee. More than anything, CopenPay rewards fewer flights and longer stays. So, if you arrive to Copenhagen by train or stay for a minimum of four days, you can get free bike rental, a free bag of surplus food, a yoga class, free guided tours, or even a dinner made with surplus ingredients by gourmet chefs. The hope is to inspire to a more conscious mindset and make tourism a positive force for change—in Copenhagen and around the world.

# The communication strategies of agri-food companies in the North-West Italy in the light of sustainability and digitalization

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## Abstract

Despite the growing importance of sustainability in many sectors, including the agri-food sector, and the increasing attention of consumers to sustainability values, there is still a gap in the literature with reference to communication strategies to support sustainability in the agri-food sector (also through digitalization) and to the involvement of consumers by companies in their co-creation. For this reason, this paper aims to investigate which communication strategies are adopted by agri-food companies in North-West Italy in a digitalization and sustainability perspective, and how these companies involve consumers in the co-creation of communication strategies. For this purpose, a study will be conducted using semi-structured interviews with entrepreneurs/CEOs and/or company profiles operating in the commercial/communication/marketing or innovation or sustainability areas (or similar profiles) of companies in the agri-food sector of North-West Italy. The expected results consist of an increasing use of new technologies and different channels in the communication strategies of these companies and we hope to discover some examples of consumer engagement in sustainability communication strategies. These expected results will provide useful insights to support companies wishing to undertake a communication strategy in the light of sustainability and digitalization.

*Keywords: Communication Strategies; Digitalization; Sustainability; Agri-food sector; North-West Italy.*

## 1. Introduction

Sustainability communication in the field of marketing has been the subject of attention in academic literature (Dazzi Braga et al., 2024). Sustainable marketing involves economic, social, and environmental factors, as it offers a holistic and integrated approach to the development of marketing strategies (Bridges and Wilhelm, 2008). However, only a few studies on communication strategies in the agri-food sector have focused on the role played by digitalization (Favaretto and Villa, 2024) or on the promotion of sustainable food consumption through marketing communication (Vide et al., 2021). Thus, this exploratory paper firstly aims to fill these gaps in the literature, investigating how sustainability values are conveyed in the digital communication strategies of agri-food companies. Consumers play a very important role in these practices, demanding greater transparency and accountability and pushing for better communication of sustainability efforts (Bunchabusabong et al., 2024); increasingly, marketing strategies are developing brand activism advertising campaigns

that highlight key social and environmental causes that matter to consumers (Dahlen and Rosengren, 2016). In food industry the role of co-creation has been studied in new food product strategies (Durco et al., 2025) and in new food product development (Ribeiro et al., 2025), but it is underdeveloped in terms of communication strategies. Thus, the second aim of the paper is to understand how companies in the agri-food sector involve consumers in co-creating communication strategies in the light of sustainability. These objectives will be achieved through a study conducted on companies in the agri-food sector of North-West Italy (a very important area for this sector) using semi-structured interviews. Finally, the expected results and managerial implications will be presented.

## 2. Theoretical Background

### 2.1 The role of sustainability and digitalization in communication strategies

Given the growing concern for health at a global level, an opportunity for companies to differentiate their products lies in promoting healthy products (Cuesta-Valiño et al., 2020). Furthermore, persuasive communication is an effective factor in convincing consumers to opt for sustainable consumption (Tseng et al., 2020). Sustainability can be communicated by companies in different ways, e.g. through social media (Herrada-Lores et al., 2025), storytelling (Vitting-Seerup and Matthiessen, 2025), etc. The agri-food sector is closely linked to ESG (Environmental, Social, and Governance) factors (Gallo et al., 2023) and technological innovation is also playing an increasingly important role in supporting sustainability in this sector (Setiadi, 2024). Considering the opportunities in terms of digitization and sustainability that have not yet been fully explored in the communication strategies of agri-food companies, the first research question (RQ1) is: What are the communication strategies adopted by agri-food companies in North-West Italy in the light of digitalization and sustainability?

### 2.2 The role played by customers in communication strategies aimed at sustainability

Effective web communication can have an important role on sustainability in terms of consumer awareness/perception (Dach and Allmendinger, 2014). The integration of stakeholders to achieve, among other things, sustainability goals become fundamental (Rathobei et al., 2024), as does the role of consumers in the co-creation process. Some authors have studied open innovation based on sustainability principles in the agri-food sector, analyzing the interaction between different actors and conceptualizing their role in promoting sustainability (Krasnokutska et al., 2024). Despite phenomenon of co-creation has been the subject of interest with regard to the advantages, challenges and prospects relating to its use in the development of new food products (Durco et al., 2025) or with regard to its application in the development of new food products (Ribeiro et al., 2025), the literature on the role of co-creation in communication strategies in the agri-food sector is underdeveloped. Therefore, the second research question (RQ2) is: How do agri-food companies engage consumers in co-creating communication strategies for sustainability?

## 3. Methodology

To achieve the objectives of this paper a qualitative approach will be adopted. The intention is to conduct a study by conducting online semi-structured interviews (some of which have already been carried out) - because they allow for in-depth information to be obtained from respondents (Ruslin et al., 2022) - with entrepreneurs/CEOs and/or company profiles operating in the commercial/communication/marketing or innovation or sustainability areas (or similar profiles) of companies in the agri-food sector (an important sector for Italian economy) of North-West Italy. The interview data will be treated anonymously. The interviews will be discontinued when saturation is reached, e.g. when no new

themes/information emerge from the data (McLeod, 2024). North-West Italy has been chosen because some of its regions boast impressive records, e.g. the leading Italian region in terms of agri-food turnover and agri-food exports (Lombardy) (The European House - Ambrosetti, 2025), the leading Italian region in terms of number of DOCG wines (Piedmont) (Enosearcher website), etc. To formulate our findings, deductive thematic analysis on the transcriptions of interviews (Lawless and Chen, 2019) will be carried out. Inductive coding will be used, with codes developed from the data using terms/phrases expressed by the interviewees (Linneberg and Korsgaard, 2019). To enhance rigor, the thematic coding will be complemented by triangulation (Carter et al., 2014), comparing interview data with secondary sources.

## 4. Expected results

We expect respondents to provide answers that offer important insights to support communication strategies related to sustainability values: first, we expect to understand whether and how companies in North-West Italy include sustainability values in their communication strategies (also through digitalization); with regard to RQ1, we expect to see growing attention to sustainability issues from companies, with initiatives and activities structured to varying degrees depending on the size of the companies and the use of a variety of channels in communicating with consumers. Secondly, we hope to identify interesting examples of co-creation by consumers in companies' communication strategies in the light of sustainability. We expect growing awareness among consumers and businesses of the importance of co-creating communication strategies in light of sustainability and digitalization.

## 5. Conclusions

This paper aims to explore the communication strategies adopted by agri-food companies in North-Western Italy to promote sustainability values and how these companies involve consumers in co-creating communication strategies in the light of sustainability. The expected results will contribute to the debate in literature on the above-mentioned topics and will offer interesting insights for companies wishing to undertake/continue a path of communication of sustainability values. The main limits of this article are: the sample focused on North-West Italy, which could be further expanded; it has been chosen to conduct a single study, but in future research, a second study facing the topics of this paper on the consumers' side could be added.

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## References


Carter, N., Bryant-Lukosius, D., DiCenso, A., Blythe, J., Neville, A. J. (2014). The use of triangulation in qualitative research. *Oncology Nursing Forum*, 41(5), 545-547 https://doi.org/10.1188/14.ONF.545-547.

Bridges, C. M., & Wilhelm, W. B. (2008). Going Beyond Green: The "Why and How" of integrating sustainability into the marketing curriculum. *Journal of Marketing Education*, 30(1), 33-46. https://doi.org/10.1177/0273475307312196 (Original work published 2008).

Bunchabusabong, K., Tiwasuppachai, J., & Kunathikornkit, S. (2024). Comparative analysis of sustainability communication strategies of Thai and global brand restaurants on social media and websites. *European Journal of Studies in Management and Busines*s, 32, 28-59. https://doi.org/10.32038/mbrq.2024.32.02.

Cuesta-Valiño, P., Rodríguez, P. G., & Núñez-Barriopedro, E. (2020). Perception of advertisements for healthy food on social media: effect of attitude on consumers' response. *International Journal of Environmental Research and Public Health*. 17(18), 1-19. doi: 10.3390/ijerph17186463.

Dach, L., & Allmendinger, K. (2014). Sustainability in corporate communications and its influence on consumer awareness and perceptions: a study of H&M and Primark. *Procedia - Social and Behavioral Sciences*. 130, 409-418. https://doi.org/10.1016/j.sbspro.2014.04.048.

Dahlen, M., & Rosengren, S. (2016). If Advertising Won't Die, What Will It Be? Toward a Working Definition of Advertising. *Journal of Advertising*, 45(3),334–345. https://doi.org/10.1080/00913367.2016.1172387.

Dazzi Braga, L., Grage Tardin, M., Gattermann Perin, M., & Boaventura, P. (2024). Sustainability communication in marketing: a literature review. *RAUSP Management Journal*. 59(3), 293–311. https://doi.org/10.1108/RAUSP-10-2023-0205.

Durço, B. B., Pimentel, T. C., Gámbaro, A., Farias, C. O., Duarte, M. C. K., Esmerino, E. A., Cruz, A. G., & Tavares Filho, E. R. (2025). Redefining innovation: the role of co-creation in collaborative new food product strategies. *Current Opinion in Food Science*, 63, 101298, 1-11 https://doi.org/10.1016/j.cofs.2025.101298.

Ribeiro, A. C. P., Esmerino, E. A., Tavares Filho, E. R., Cruz, A. G., & Pimentel, T. C. (2025). Unraveling the potential of co-creation on the new food product development: A comprehensive review on why and how listening to consumer voices. *Trends in Food Science & Technology*. 159, 104978, 1-12. https://doi.org/10.1016/j.tifs.2025.104978.

Favaretto, M. P., & Villa, M. (2024). *Food & Wine Marketing 4.0 Reloaded. Mettiamo a tavola il futuro. Insieme.* Dario Flaccovio Editore.

Gallo, A., Operato, L., Masoero, G., Panzeri, A., & Rondoni, N. (2023). The Integrated ESG Approach to Assess Sustainability: An Application in the Food and Beverage Sector. In: F. G. Galizia, & M. Bortolini (Eds), *Production Processes and Product Evolution in the Age of Disruption. CARV 2023. Lecture Notes in Mechanical Engineering*. Springer. https://doi.org/10.1007/978-3-031-34821-1_46.

Herrada-Lores, S., Palazón, M., Iniesta-Bonillo, M. Á., & Estrella-Ramón, A. (2025). The communication of sustainability on social media: the role of dialogical communication. *Journal of Research in Interactive Marketing*. 19(2), 307-332. https://doi.org/10.1108/JRIM-10-2023-0372. https://www.enosearcher.it/contents/article/367/vini-denominazioni-piemonte/.

Krasnokutska, N., Merino, A., Escudero Guirado, C., & Díaz-Carmona, E. M. (2024). Open innovation for sustainability in the agri-food sector: why, who and how? European Journal of Innovation Management- Ahead-of-print. https://doi.org/10.1108/EJIM-09-2023-0766.

Lawless, B. & Chen, Y. W. (2019). Developing a method of critical thematic analysis for qualitative communication inquiry. *Howard Journal of Communications*. 30(1), 92-106. https://doi.org/10.1080/10646175.2018.1439423.

Linneberg, M. S., & Korsgaard, S. (2019). Coding qualitative data: a synthesis guiding the novice. *Qualitative Research Journal,* 19(3), 259–270. https://doi.org/10.1108/QRJ-12-2018-0012.

McLeod, S. (2024). Theoretical saturation in grounded theory. *SimplyPsychology,* 1-9. http://dx.doi.org/10.13140/RG.2.2.34590.55366.

Rathobei, K. E., Ranängen, H., Lindman, A. (2024). Stakeholder integration in sustainable business models to enhance value delivery for a broader range of stakeholders. *Business Strategy and the Environment*. 33(4), 3687-3706, https://doi.org/10.1002/bse.3651.

Ruslin, R., Mashuri, S., Rasak, M. S. A., Alhabsyi, F., & Syam, H. (2022). Semi-structured Interview: A Methodological Reflection on the Development of a Qualitative Research Instrument in Educational Studies. *IOSR Journal of Research & Method in Education (IOSR-JRME)*, 12(1), 22-29. DOI: 10.9790/7388-1201052229.

Setiadi, M. T. (2024). The impact of technological innovation on sustainability and competitiveness in the food and beverage industry sector. *International Journal of Management Science and Information Technology*, 4(2), 438–449. https://doi.org/10.35870/ijmsit.v4i2.3208.

The European House - Ambrosetti (2025). *La Roadmap per il futuro del Food&Beverage: quali evoluzioni e quali sfide per i prossimi anni. Rapporto 2025*. TEHA Group S.p.A. https://www.ambrosetti.eu/le-nostre-community/forum-food/.

Tseng, M. L., Sujanto, R. Y., Iranmanesh, M., Tan, K., Chiu, A. S. (2020). Sustainable packaged food and beverage consumption transition in Indonesia: Persuasive communication to affect consumer behavior. *Resources, Conservation and Recycling*. 161, https://doi.org/10.1016/j.resconrec.2020.104933.

Vide, R. K., Juhart, S., & Hunjet, A. (2021). Sustainable food consumption promotion through online marketing communication: the case of Slovenian and Croatian grocery stores. *Archives of Business Research*. 9(10), 102-123. https://doi.org/10.14738/abr.910.10978.

Vitting-Seerup, S., & Matthiessen, L. E. (2025). Storytelling science for sustainability – using storytelling to communicate the science of sustainable food systems. *Environmental Communication*. 1–17. https://doi.org/10.1080/17524032.2025.2493331.

# Track 4
# Business-to-Business Marketing

Coordinators: Antonella La Rocca & Andrea Perna

Le profonde trasformazioni tecnologiche ed economiche in corso continuano ad influenzare profondamente i mercati B2B con conseguenti mutamenti nelle strategie delle imprese che vi operano. Al Business Marketing si presentano sfide importanti sia dal punto di vista delle pratiche manageriali che dal punto di vista dello sviluppo della disciplina in una prospettiva di crescente integrazione e di un approccio multidisciplinare.Le ricerche presentate nella sezione B2B Marketing & Supply Chain Management durante gli ultimi convegni evidenziano, in linea con quanto emerge dalla letteratura internazionale, la stretta integrazione tra temi di business marketing e hot topics nei campi dell'innovazione, del trasferimento della conoscenza e della creazione di valore, dell'internazionalizzazione.

Tra gli argomenti di frontiera si segnalano l'impatto delle nuove tecnologie - Industry 4.0, Data analytics, Social Media - e della sostenibilità nell'organizzazione del marketing delle imprese B2B, nelle relazioni diadiche tra imprese e più in generale nella Global Value Chain (GVC). Relazioni tra Marketing e altre funzioni aziendali, processi di servitization in ambito industry 4.0, customer journey & relationship value e ruolo dei Social Media, customer-driven Supply Chain, processi di offshoring e reshoring, sostenibilità e riorganizzazione della catena globale del valore, sono solo alcune delle tematiche a cui il B2B Marketing può efficacemente contribuire.

L'obiettivo della sezione Business Marketing & Supply Chain Management è quello di promuovere il confronto tra studiosi e manager sui nuovi approcci manageriali che potrebbero essere adottati per gestire in modo efficace le relazioni industriali, alla luce dei cambiamenti che abbiamo sopra delineato e con riferimento sistemi di offerta service-oriented.

Technological and economic shifts are profoundly transforming B2B markets, reshaping firms' strategies and pushing business marketing toward greater integration and multidisciplinarity. Recent research highlights strong connections between B2B marketing and themes such as innovation, knowledge transfer, value creation, and internationalization.

Key emerging issues include the effects of Industry 4.0 technologies, data analytics, social media, and sustainability on B2B marketing, interfirm relationships, and the Global Value Chain. Topics such as servitization, customer-driven supply chains, offshoring and reshoring, and sustainability-driven value chain redesign are particularly relevant.

The section's goal is to promote dialogue between scholars and managers on new approaches for effectively managing industrial relationships and service-oriented offerings in this evolving landscape.

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# Big Bank Theory: Monetary Resources as Lubricant for Network Innovation

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## Abstract

This study shows how Monetary Resource Brokerage (MRB) by a territorial bank can turn a small, student-oriented experiment into a self-financing, multi-actor innovation platform. We track the SITUM (Scuola di Innovazione Tecnologica Umanistica e Manageriale) network in Central Italy from 2020 to 2025 through 54 interviews, 161 surveys, financial dashboards, project artefacts and policy records. Events were coded using an Industrial Marketing & Purchasing (IMP) lens.
**Key findings: Innovation output.** SITUM delivered seven master-level courses, 88 project works and nine prototypes; two flagships—*Colli 4.0* (IoT shock-sensor logistics) and *Human-Factors XR*—passed pilot tests, reducing shipment damage by 25 % and opening an AI-ergonomics research line. **Human capital and branding impact.** Graduate retention in the Marche–Umbria–Abruzzo region rose to 73 % (baseline 54 %); company lecturers grew 21 → 46 (+ 119 %), and the network's 99 SMEs gained 42,000 social-media impressions, enhancing the visibility of "invisible" B2B champions. **Financial leverage.** Three €35 000 scholarship tranches supplied by ALPHA Bank (disguised name) unlocked €138 000 in company participation fees and a €50 000 public grant, so that 60 % of the 2024 budget is covered by non-bank funding. Overall, MRB follows a **Trigger → Align → Layer → Anchor** pattern: scholarships legitimise collaboration, firm fees align incentives, flagship projects layer specialised activities, and a regional tax credit anchors the network within an ESG-linked policy setting. The process compresses digital adoption time from 14 to 10 months (−30 %) and demonstrates that money, when brokered strategically, acts as a multiplying super-resource rather than a neutral lubricant, extending IMP theory on resource interaction.

*Keywords: Business Network Innovation; Monetary Resource Brokerage; Industrial Network Approach; Bank-SMEs-Academia collaboration.*

## 1. Introduction

Innovation rarely unfolds in isolation. Echoing the IMP dictum that "no business is an island" (Håkansson & Snehota, 1995), the renewal of any territory hinges on the density and quality of inter-organisational relationships. The Marche, Umbria, and Abruzzo "macro-region" faces structural challenges, including youth outmigration, population ageing (ISTAT, 2024), and the twin transitions to digitalisation and sustainability (Rust, 2021). Local SMEs, operating primarily in B2B markets, often lack the managerial depth and financial slack to turn new technologies into market value. Furthermore, their low consumer market visibility contributes to graduate migration toward universities aligned with global brands, reinforcing the talent drain (Beverland et al., 2020).

Universities often struggle to match their research outputs to the incremental, low-budget innovation needs of local SMEs (Muscio & Pozzali, 2013). National and EU support schemes rarely align with the timing, scale, and relational requirements of small firms in semi-peripheral regions (Uyarra & Flanagan, 2010). In such contexts, territorial banks can act as relational intermediaries, coupling patient capital with trust-based brokerage among network actors (Ferri, Fraquelli & Marinoni, 2014).

Unlike national development agencies, local cooperative banks possess embedded knowledge of the industrial firms, informal trust channels, and reputational capital accumulated through long-standing client relationships (Alessandrini et al., 2009; Agostino et al., 2024). These features make them uniquely positioned to act as relational brokers in innovation networks (La Rocca & Snehota, 2014; Håkansson & Olsen, 2015).

This paper examines the role of ALPHA Bank—Italy's third-largest cooperative bank—in fostering SITUM, an innovation network launched by three universities. We explore how targeted capital infusions—such as scholarships, firm contributions, and policy-linked grants—help structure and stabilise collaborative configurations over time.

## 2. Literature Background

In the IMP tradition, money has long been treated as a neutral facilitator of exchange (Håkansson, 1982). However, capital can actively reshape actor bonds, resource ties, and activity links (Perna et al., 2015; Håkansson & Olsen, 2015). Håkansson and Waluszewski's (2007) DPU framework—extended to include Policy (Waluszewski et al., 2024; Cinti & Lillini, 2024)—captures the multi-setting dynamics of innovation.
We define Monetary Resource Brokerage (MRB) as the purposive mobilisation of capital to interface capabilities across Developing, Producing, Using, and Policy settings. It unfolds through: (i) Triggering, which legitimises collaboration (La Rocca & Snehota, 2014); (ii) Aligning, which coordinates expectations via shared KPIs (Andersen & Medlin, 2016); and (iii) Institutionalising, which embeds networks in policy contexts (Cinti & Lillini, 2024). Managerial capabilities complement technical assets in enabling successful commercialisation (Sorescu & Spanjol, 2008). Yet low brand visibility in B2B hinders talent attraction (Capello & Lenzi, 2019; Napolitano & De Nisco, 2017). Financial intermediaries can mitigate these constraints, but their role remains under-theorised.

RQ1. *How does MRB performed by a territorial bank reconfigure an innovation network?*

RQ2. *In what ways does MRB mitigate B2B visibility gaps and talent out-migration by connecting regional SMEs to university-led marketing and technological capabilities?*

## 3. Methodology

This study employs a longitudinal single-case design (Yin, 2018), which is well-suited for capturing processual change in industrial networks (Halinen & Törnroos, 2005). The case study—SITUM, an innovation network nurtured by ALPHA Bank—was selected for its revelatory potential as one of the few instances where a financial actor purposively mobilises capital to reshape network configurations (cf. Perna et al., 2015).

Data were collected from 2020 to 2025 using semi-structured interviews, surveys, internal documents, project artefacts, and public sources. This multi-source strategy enabled event triangulation, ensuring both construct validity and temporal depth (Dubois & Gadde, 2002).

Coding followed Thompson's (2022) process theorising template. Five episodes (E0–E4) were reconstructed as a network picture (Gadde & Dubois, 2010), centred on monetary events and decomposed into critical incidents. Each event was analysed in terms of changes in actor bonds, resource ties and activity links (ARA model) (Håkansson & Snehota, 1995). Axial coding identified cross-episode patterns such as activity layering and actor alignment.

Reliability was ensured through shared coding protocols and inter-coder agreement. Interim findings were validated with key informants. Generalisability is pursued through thick description and theoretical anchoring in NIA frameworks (Cinti & Lillini, 2024).

## 4. Preliminary Findings

SITUM was initiated in 2020 by three Central-Italian universities to counter regional talent outmigration and weak SME-university ties. The programme evolved through four main episodes. In 2021, a € 35 000 scholarship tranche from ALPHA Bank triggered an "Education" phase, during which postgraduate courses and student projects were developed through continuous interaction among students, firm managers and academic researchers. In 2022 and 2023, firm participation fees and a second tranche enabled the creation of a Digital Lab, with SMEs co-developing digital tools. By 2024, SITUM was embedded in master's programmes and supported two flagship projects: an IoT-based logistics prototype and an XR co-design process for ergonomic workspaces. By 2024, the programme will be extended to a Summer School and AI-based research contracts.

| Episode/phase | Monetary leverage | Actors engaged (Δ) | Main outputs | Main effects on the network |
|---|---|---|---|---|
| E1 – Education launch(2021) | € 35 k ALPHA Bank scholarships | 40 students • 30 SMEs • | 2 post-graduate courses; 12 student projects | First stable collaboration arena; aligning language among universities and firms |

| | | | | |
|---|---|---|---|---|
| | | 21 manager-lecturers | | |
| E2 – Digital Lab<br><br>(2022) | € 35 k 2ª tranche + € 500 firm fee | 56 SMEs (+26) • 34 mgr-lecturers (+13) | Digital-practice workshops; starter prototypes | Firms and faculty co-define shared KPIs; trust increases, enabling faster decision cycles |
| E3 – Flagship projects<br><br>(2023-24) | € 1 000 firm fee + € 50 k public grant | 99 SMEs (+69) • 46 mgr-lecturers (+25) | Colli 4.0 IoT label; XR training prototype | 25 % logistics loss reduction; time-to-market compressed from 14 to 10 months |
| E4 – Policy & spill-overs<br><br>(2024-25, ongoing) | 10 % regional payroll tax credit | actors anchored and raised | Two-day Summer School; XR-UNIV AI ergonomics project | Graduate retention rises to 73 % (regional base 54 %); SITUM branded as regional innovation platform |

**Table 1:** Summary of the preliminary findings. Source: our elaboration, 2025

The analysis identifies MRB as a focal resource interface that connects the Developing, Producing, Using, and Policy settings. Monetary injections did not merely enable projects but activated actor bonds and accelerated innovation. ALPHA bank's funding mobilised university labs, SME pilots, and marketing platforms, creating integrated value chains. The introduction of participation fees reinforced engagement, establishing durable ties among actors. MRB shortened innovation cycles, reducing the time-to-adoption of digital tools from 14 to 10 months. It also enhanced SME visibility in a B2B context: SITUM's graduates showed a 73 % in-region employment rate, compared to a 54 % average (ANPAL, 2023). Press and social media engagement further amplified the territorial impact. Eventually, public policy converged: a regional tax credit and ESG-aligned MoUs institutionalised the network. In summary, the case highlights how MRB follows a Trigger → Align → Layer → Anchor Lubricant. It begins with scholarships, aligns firms through shared KPIs and co-financing, expands into complex projects, and culminates in policy integration. ALPHA Bank acted not as a passive funder but as a financial orchestrator, actively shaping actor configurations and capabilities across the innovation network.

## References

Agostino, M., Errico, L., Rondinella, S., & Trivieri, F. (2024). Leverage and SMEs financial stability: the role of banking competition. *Journal of Economics and Finance*, *48*(2), 345-376.

Alessandrini, P., Presbitero, A. F., & Zazzaro, A. (2009). Geographical organization of banking systems and innovation diffusion. In *The Changing Geography of Banking and Finance: The Main Issues* (pp. 75-108). Boston, MA: Springer US.

Andersen, P. H., & Medlin, C. J. (2016). Transient and continuous: Dynamics of network interaction. *Industrial Marketing Management, 60*, 97-107.

ANPAL-Agenzia Nazionale Politiche Attive del Lavoro (2023) n. 150, Roma

Capello, R., & Lenzi, C. (2019). Brain drain and brain circulation: Where do European graduates move? *Journal of Regional Science, 59*(4), 701-731.

Cinti A., Fraboni P.F.L., Temperini V., (2024b), Artisanal Intelligence and the Importance of Creating Use: An Empirical Case Study of an Italian Luxury Fashion New Venture, *International Journal of Management Cases, 90 Volume 26 (3) pp. 90-101*

Cinti, A., Lillini, N. (2024). Innovation Policy Copes to Corporate Sustainability Due Diligence Directive: An Interaction Approach. In Petrov P. & V. Mitev (Eds.), *The Role of Energy Cooperatives in the Decarbonization Process, International Scientific Forum (pp. 5-28).* UNWE ACADEMIC PUBLISHING HOUSE, ISBN 978-619-232-883-2

Ferri, G., Fraquelli, G., & Marinoni, M. (2014). Local banks and territorial development: Evidence from Italy. *Annals of Public and Cooperative Economics, 85*(4), 567-584.

Gadde, L.-E., & Dubois, A. (2010). Partnering in the construction industry: A supply network approach. *Journal of Purchasing and Supply Management, 16*(4), 254-263.

Håkansson, H. (Ed.). (1982). *International marketing and purchasing of industrial goods: An interaction approach*. Wiley.

Håkansson, H., & Olsen, P. I. (2015). The roles of money and business deals in network structures. *Industrial Marketing Management, 45*, 207-217.

Håkansson, H., & Snehota, I. (1995). *Developing relationships in business networks*. Routledge.

Håkansson, H., & Snehota, I. (Eds.). (2017). *No business is an island: Making sense of the interactive business world*. Emerald Publishing Limited.

Håkansson, H., & Waluszewski, A. (2007). *Knowledge and innovation in business and industry: The importance of using others*. Routledge.

ISTAT. (2024). *Rapporto annuale sulla popolazione italiana*. Rome: Istituto Nazionale di Statistica.

La Rocca, A., & Snehota, I. (2014). Relating in business networks: Innovation in practice. *Industrial Marketing Management, 43*(3), 441-447.

Muscio, A., & Pozzali, A. (2013). The effects of cognitive distance in university–industry collaborations: Some evidence from Italian universities. *Journal of Technology Transfer, 38*(4), 486-508.

Napolitano, M. R., & De Nisco, A. (2017). Cultural heritage: The missing link in place-marketing literature. *Journal of Place Management and Development, 10*(3), 254-269.

Perna, A., Baraldi, E., & Waluszewski, A. (2015). Combining monetary and non-monetary resources: The Solibro solar-cell case. *Journal of Business & Industrial Marketing, 30*(1), 15-25.

Rust, R. T. (2021). The transformation of marketing in the digital era. *Journal of Marketing Research, 58*(3), 473-485.

Sorescu, A., & Spanjol, J. (2008). Innovation's effect on firm value and risk: Insights from consumer packaged goods. *Journal of Marketing, 72*(2), 114-132.

Thompson, C. J. (2022). Process theorizing in marketing: A methodological primer. *Journal of Marketing Theory and Practice, 30*(4), 421-438.

Uyarra, E., & Flanagan, K. (2010). Understanding the innovation impacts of public procurement. *European Planning Studies, 18*(1), 123-143.

Waluszewski, A., Cinti, A., & Perna, A. (2024). Major or minor? The EU food animal antibiotic policy and the varied use. *Journal of Business & Industrial Marketing*, *39*(13), 145-159.

Yin, R. K. (2018). *Case study research and applications* (6th ed.). Sage.

# AI-Enabled Innovations for Waste Reduction in Agri-Food Supply Chains: A Bibliometric Analysis of Keyword Co-Occurrence

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## Abstract

The reduction of food waste has become a central concern in agri-food supply chains, driving increasing interest in technological innovation as a potential solution. This study presents a bibliometric and network analysis of 278 academic publications published between 2020 and 2024 to map the evolution, key themes, and knowledge structure of this growing research field, after the launch of the European Farm to Fork Strategy for sustainable development and technological advancements. Adopting a keyword co-occurrence and density visualization analysis, this study identifies 3 core research clusters along with their interconnections. This structured mapping reveals both consolidated areas and underexplored directions, offering a foundation for future research on the role of digital technologies in minimizing waste and enhancing sustainability across agri-food systems.

*Keywords: sustainable innovation, b2b, agrifood*

## 1. Introduction

Food waste represents a major issue for sustainable development. In 2022, the total food waste in Europe exceeded 59 million tonnes of fresh mass (European Commission, 2024). Although such estimates are particularly inflated by households' consumption choices, rather than the different stages of the food supply chain, the food sector faces increasing pressure to reduce its environmental footprint, especially because of emerging regulations such as the Farm to Fork Strategy of the European Union (European Commission, 2020).

Among the most promising options, solutions enabled by artificial intelligence (AI), Internet of Things (IoT), predictive analytics, and blockchain are being explored for their capacity to monitor inventory levels, forecast demand, optimize processing, and extend shelf life, thus directly contributing to food waste avoidance and mitigation (Cane & Parra, 2020).

However, the literature appears to lack a comprehensive overview of the available tools (such as artificial intelligence, machine learning, predictive analytics, and IoT) that can be used throughout the agri-food supply chain and their effectiveness. Aiming to cover this gap, this research presents a bibliometric analysis of literature about technological innovation within the agrifood supply chain aimed at identifying the key content of scientific research in this field after the launch of the Farm to Fork Strategy in 2020. In particular, we analyzed 202,

papers published between 2020 and 2024, retrived from two well-known academic databases (namely Web of Science and Scopus). The analysis is based on a keyword co-occurrence map and a density map generated through VOSViewer (van Eck & Waltman, 2014), to better understand the field of sustainable innovation for food waste prevention within the agrifood sector.

## 2. Research methodology

In order to identify relevant publication in the field, the present research draws on the Scientific Procedures and Rationales for Systematic Literature Review protocol (SPAR-4-SLR, Paul et al., 2021), which is synthetized below:

(1) Acquisition: To identify relevant publications we looked for articles published in peer-reviewed journals in the last 5 years, relying on two widely used databases (i.e.,Web of Science and Scopus). The selection of search terms was informed by previous literature on the topic and included keywords related to sustainable innovation, artificial intelligence, food industry and food waste (e.g., Trevisan & Formentini, 2023). As a first result, a total of 181 studies were retrieved from Web of Science and a total of 25 studies were retrieved from Scopus[10].

(2) Arranging and Assessing: Data were unified in Excel, cleaned from duplicates (N=4) and exported as CSV files for bibliometric analysis in VOSviewer (version 1.6.20; van Eck and Waltman, 2014). This paper aims to provide a domaincentric review, so we focused on cluster analysis based on keyword co-occurrence which uses text mining to visualize on a map the number of papers with keywords that occur together (van Eck and Waltman, 2014).

## 3. Results

### 3.1 Keywords co-occurrence

The keyword co-occurrence analysis reveals the structural backbone of the literature on AI-enabled food waste reduction. As expected, the most frequently cooccurring keyword is "food" (Total Weight: 831; Links: 75), followed by "production" (596), "practice" (583), "use" (559), and "application" (545), all of which rank among the top in both total weight and number of linkages.

Furthermore, VOSviewer allows to visualize recurring keywords in a structured map adopting a distance-based approach (*figure 1, left*). More specifically, the software grouped N=96 items into three clusters of significant size, which represent the three main fields addressed by technological innovation in the agrifood b2b literature (van Eck and Waltman, 2014). The software provided information about terms occurrence (i.e., the number of documents in which a term occurs at least once) and a relevance score (i.e., how topic-specific a term is).

Hereafter we will briefly synthetize the key contents of each cluster.

10 Scopus Query Link: Query results Scopus; Web of science Query link: Query results WoS

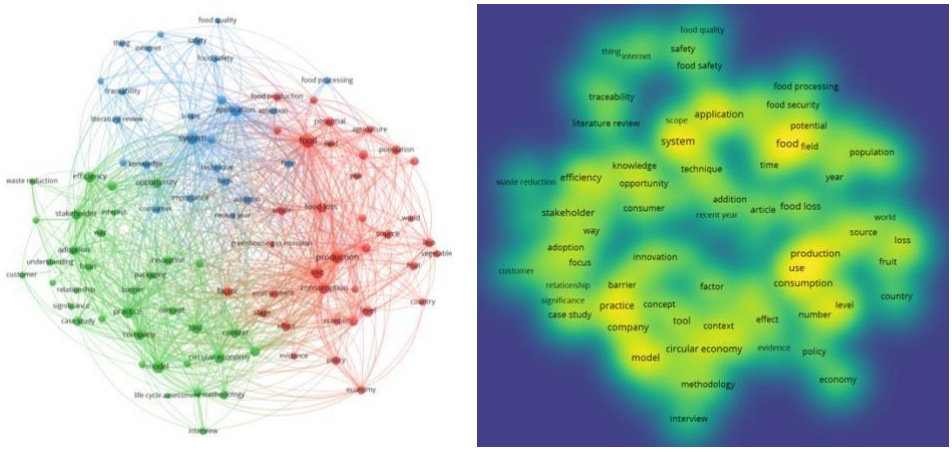



**Figure 1:** VOSviewer Network (left) and Density Visualization (right)

***Cluster 1 - Systemic perspectives on sustainable food systems.*** The red cluster (N=36 items, 37.5% of words in the map) brings together keywords like "food loss", "production", "economy", "population" "agriculture", "policy", and "environment". This research stream takes a macro-level view of food waste, highlighting the systemic drivers, demographic trends, and policy frameworks associated with overproduction and loss across food systems. The inclusion of terms such as "potential," "source," and "impact" suggests a strong focus on quantification and large-scale modeling, often through national or global assessments. This cluster also addresses food security, environmental emissions, and the economic implications of waste, framing food loss not only as an operational inefficiency but as a multidimensional societal challenge. This cluster is in line with recent studies focusing on the enabling conditions and constraints that affect the integration of sustainability practices at firm and system level (e.g., Miranda et al., 2021).

***Cluster 2 – Organizational perspectives and environmental impact.*** *The green cluster (N=55, 14% of all terms) is defined by keywords such as "company", "practice", "stakeholder", "adoption", "model", "tool", "barrier", and "innovation." This cluster reflects a managerial and organizational perspective, focusing on how companies adopt and integrate technological solutions for food waste reduction. Common themes include the drivers and inhibitors of adoption, stakeholder engagement, and the role of business models in supporting sustainability. This cluster largely corresponds to performance assessment studies, including LCAbased approaches and evaluations of technological solutions at post-harvest and transformation stages (e.g., Aldama et al., 2023;* Ahamed et al., 2016), as well as cases or interviews with experts to evaluate practices in real world settings.

***Cluster 3 – AI applications and outcomes in agri-food systems.*** *The blue cluster (N=25 items, 26% of keywords displayed in the map) is centered around keywords such as "system", "application", "traceability", "food safety", "blockchain", and "internet." This thematic group represents the technological and digital infrastructure underlying food waste reduction strategies. Research in this cluster tends to focus on data-driven systems, AI applications, and IoT-enabled traceability tools that enhance the monitoring, transparency, and safety of agri-food chains. Several studies explore the use of blockchain to support secure and decentralized data sharing (e.g., Yele et al., 2025), while others highlight the relevance of smart systems or machine learning in managing food processing and supply chain synchronization (e.g. Garre et al., 2020). The prominence of terms like "food safety" and "literature review" also suggests that this cluster includes foundational and conceptual work mapping the technological potential of AI in food systems.*

Finally, the software allows to identify several bridge terms (i.e. keywords with high strength across clusters): for example, the term "System" (Total Weight = 702; Links = 92) acts as a

central hub connecting the blue cluster's focus on traceability systems with the red cluster's concerns about production ecosystems and the green cluster's managerial adoption frameworks. Similarly, terms like "Application" (545; 94) and "Tool" (386; 92) link technological concepts (AI, IoT in blue cluster) to practical implementation and model evaluation in the green cluster, bridging theory and practice. Finally, "Innovation" (327; 92) and "Adoption" (375; 92) serve as connectors between green cluster discussions on organizational barriers and the blue cluster's technological readiness, indicating the importance of change processes.

### 3.2 Density visualization

Compared to the network visualization, which organizes co-occurring terms into thematic clusters based on proximity and interlinkages, the density visualization adds a complementary layer of insight by highlighting where research attention is most concentrated within the field. In this representation, the color gradient—from green to yellow —reflects both the frequency and centrality of terms across the corpus.

The density map confirms the prominence of the previously mentioned keywords, with "food," "production," "system," "practice," and "application" forming dense, high-visibility zones. These areas represent cognitive centers of the field. Keywords like "blockchain," "artificial intelligence," and "life cycle assessment" are less frequent and appear in peripheral zones, suggesting emerging or niche subfields. The map also reveals the interdependence between technological solutions and their organizational embedding, as seen in the spatial overlap between "application", "tool", and "company".

## 4. Conclusion

The study makes three key contributions: it offers a visual mapping of a highly interdisciplinary, dynamic and fragmented field, as well as its evolution in the last 5 years; it identifies critical blind spots and conceptual overlaps that hinder progress in the field; and it establishes a roadmap for future scholarly inquiry, aimed at enhancing the scalability, impact, and inclusivity of food waste prevention strategies driven by technological innovation. The bibliometric analysis identifies three main research clusters in the field of food waste prevention: (1) systemic perspectives on sustainable food industry; (2) organizational perspectives and environmental impact assessment; and (3) AI applications and outcomes in agri-food systems. While digital innovation is gaining momentum, the literature still lacks integrative frameworks that connect technological applications with measurable reductions in food waste. Empirical evidence on the adoption and scalability of these technologies, especially by SMEs or startups, remains limited.

To address these gaps, future research must develop interdisciplinary, context-sensitive frameworks that blend technological, organizational, and behavioral insights. Longitudinal and experimental studies are needed to evaluate the real-world impact of innovations and identify the conditions that support successful implementation. Researchers should also investigate how digital solutions can be effectively adapted to diverse local environments, particularly in underserved regions. Finally, standardized metrics for assessing food waste reduction outcomes are essential to enable meaningful comparisons and guide evidence-based policy and practice.

## Selected References


Aldama, D. D., Grassauer, F., Zhu, Y., Ardestani-Jaafari, A., & Pelletier, N. (2023). Allocation methods in life cycle assessments (LCAs) of agri-food co-products and food waste valorization systems: Systematic review and recommendations.

Journal of Cleaner Production, 421, 138488.

Ahamed, A., Yin, K., Ng, B. J. H., Ren, F., Chang, V. C., & Wang, J. Y. (2016). Life cycle assessment of the present and proposed food waste management technologies from environmental and economic impact perspectives. Journal of Cleaner Production, 131, 607-614.

Aramyan, L., Grainger, M., Logatcheva, K., Piras, S., Setti, M., Stewart, G., & Vittuari, M. (2021). Food waste reduction in supply chains through innovations: a review. *Measuring Business Excellence*, *25*(4), 475-492.

Cane, M., & Parra, C. (2020). Digital platforms: mapping the territory of new technologies to fight food waste. British Food Journal, 122(5), 1647-1669.

Carmela Annosi, M., Brunetta, F., Capo, F., & Heideveld, L. (2020). Digitalization in the agri-food industry: the relationship between technology and sustainable development. Management decision, 58(8), 1737-1757.

Bosona, T., & Gebresenbet, G. (2023). The role of blockchain technology in promoting traceability systems in agri-food production and supply chains. Sensors, 23(11), 5342.

European Commission. (2020). A Farm to Fork Strategy for a fair, healthy and environmentally-friendly food system. Available at https://food.ec.europa.eu/system/files/2020- 05/f2f action-plan 2020 strategyinfo en.pdf

European Commission (2024) Food waste and food waste prevention – estimates available at https://ec.europa.eu/eurostat/statistics-

explained/index.php?title=Food waste and food waste prevention - estimates Garre, A., Ruiz, M. C., & Hontoria, E. (2020). Application of Machine Learning to support production planning of a food industry in the context of waste generation under uncertainty. Operations Research Perspectives, 7, 100147.

Junejo, S., Khan, J., Muhammad, M., & Hirawan, F. B. (2025). The Impact of Technological Innovations and Food Waste Management on Carbon Emissions: A Time Series Analysis of Indonesia. Pollution, 11(1), 95-116.

Mahroof, K., Omar, A., & Kucukaltan, B. (2022). Sustainable food supply chains: overcoming key challenges through digital technologies. International Journal of Productivity and Performance Management, 71(3), 981-1003.

Miranda, B. V., Monteiro, G. F. A., & Rodrigues, V. P. (2021). Circular agrifood systems: A governance perspective for the analysis of sustainable agri-food value chains. Technological Forecasting and Social Change, 170, 120878.

Tubiello, F. N., Karl, K., Flammini, A., Gütschow, J., Obli-Laryea, G., Conchedda, G., ... & Torero, M. (2022). Pre-and post-production processes increasingly dominate greenhouse gas emissions from agri-food systems. Earth System Science Data, 14(4), 1795-1809.

Vahdanjoo, M., Sørensen, C. G., & Nørremark, M. (2025). Digital transformation of the agri-food system. Current Opinion in Food Science, 101287.

Yele, S., Litoriya, R., Nair, P. S., & Bandhu, K. C. (2025). Empowering the restaurant industry: hyper ledger framework for safer and more transparent food supply chains. International Journal of System Assurance Engineering and Management, 16(1), 310-329.

# AI-Driven Business Model Innovation: A Paradigm Shift in Value Creation

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## Abstract

This study investigates how AI drives business model innovation (BMI) in the B2B sector, with particular attention to power dynamics and value distribution mechanisms. Drawing on dynamic capabilities theory, we analyze 50 leading companies to examine how AI-driven BMI transforms organizational value creation, delivery, and capture processes. Through qualitative analysis, we identify three distinct business models: Usage-Based Credit (UBC), Tiered Quota-Based (TQB), and Pay-As-You-Go (PAYG) models. While these models enhance operational efficiency and enable new value propositions, they also create risks of technological lock-in, power concentration, and value extraction that disproportionately benefit dominant platform providers. The research reveals critical gaps in existing literature regarding the "dark sides" of AI-driven innovation, including potential exclusion of smaller organizations and strategic autonomy compromise. Findings contribute to understanding how computational systems influence competitive ecosystems and highlight the need for governance mechanisms to ensure equitable distribution of innovation benefits across stakeholders.

*Keywords: Artificial Intelligence, Business Model Innovation, Digital Transformation, Value Creation, AI-driven Innovation, B2B*

## 1. Introduction

The global economy is undergoing a profound transformation, driven by cutting-edge technologies such as artificial intelligence (AI), the Internet of Things (IoT), blockchain, and cloud computing (Kraus et al., 2022). Among these, AI has emerged as a central force in redefining business operations across all sectors (Enholm et al., 2022). One of the most significant impacts of AI is its ability to drive business model innovation (BMI), which involves redesigning or creating new mechanisms to capture, deliver, and create value in ways that were previously inconceivable (Sjödin et al., 2021).

The business model encompasses the logic of how an organization creates, delivers, and captures value, emphasizing both the practical operations and customer relationships needed to sustain profitability (Shafer et al.2005). Historically, business models have evolved incrementally as companies responded to market pressures, technological disruptions, or changes in customer needs (Tongur & Engwall, 2014). However, with the advent of AI, the nature of innovation in business models have accelerated: this transformation raises critical issues that are often overlooked in the existing literature. While AI offers opportunities to

expand value propositions and enhance efficiency, it also brings about organizational, business, and ethical challenges that require in-depth critical analysis.

The increasing concentration of power in the hands of a few dominant platforms raises concerns about the distribution of value and the extraction of wealth from ecosystem participants (Bourai et al., 2023). This phenomenon intersects with contemporary debates on the platform economy, where AI platform owners can exert disproportionate control over the mechanisms of value creation and capture, raising questions about the long-term sustainability of these models (Crawford, 2021).

Leading companies like Amazon, Netflix, and OpenAI have redefined traditional industry standards through AI-driven innovations. As companies integrate AI into their business models, they not only enhance internal processes but also reshape industrial ecosystems, connecting supply chains, customers, and external partners in ways that foster open innovation and collaboration. The decentralization and the blurring of organizational boundaries also pose risks of technological dependence, data vulnerability, and potential power imbalances that can compromise the strategic autonomy of participating organizations (Holmström, 2022).

## 2. Theoretical Background

The theory of dynamic capabilities (Teece et al., 1997) provides a foundation for understanding how firms adapt, renew, and reconfigure resources in response to rapidly evolving environments. It is particularly relevant for analyzing how advanced computational systems drive BMI because dynamic capabilities emphasize a firm's ability to sense opportunities, seize them by effectively reallocating resources, and transform organizational structures to maintain competitiveness during market disruptions (Shrestha et al., 2019).

While the theory of dynamic capabilities captures the conceptual alignment between advanced computational systems and organizational flexibility, it has critical limitations when applied to contemporary contexts dominated by digital platforms (Ellström et al., 2022). Traditional literature does not adequately address how the power asymmetry between providers of advanced computational technologies and their users can compromise organizations' strategic autonomy, paradoxically creating technological dependencies that limit the very dynamic capabilities they are supposed to promote (Linde et al., 2021). As these computational systems increasingly transform how companies create, deliver, and capture value, they align closely with these dynamic processes, enabling firms to co-evolve with changing technological and customer demands. This co-evolution, however, is not neutral: it often favors actors with greater computational resources and data access, creating "winner-take-all" dynamics that can exclude smaller or less technologically advanced organizations from benefiting equally from innovation driven by these systems (Bourai et al., 2023).

These advancements improve operational efficiency and create entirely new opportunities for value generation (Kohtamäki et al., 2019). These capabilities are manifested in digital servitization, which describes the organizational transformation of processes, capabilities, offerings, and business models to integrate and maximize digital technologies (Sjödin et al., 2021). However, digital servitization also carries risks of commoditizing traditional services and potentially disintermediating established players, raising questions about the social and economic sustainability of such transformations.

A critical, often-overlooked aspect is the phenomenon of value extraction within platforms that leverage advanced computation. Platform owners can capture disproportionate value compared to the actors who contribute to its creation through opaque pricing mechanisms, technological lock-ins, and algorithmic control (Srnicek, 2017). This raises fundamental

questions about the equitable distribution of benefits from innovation driven by these systems and the concentration of economic power in the hands of a few dominant players. By enabling data-driven services like predictive maintenance and operational optimization, advanced computational systems allow manufacturers to shift from product-centric offerings to platform- or service-based business models (Kohtamäki et al., 2019). It is crucial to recognize that the providers of these computational services do not operate in a neutral vacuum: they significantly influence strategic decisions regarding innovation trajectories, potentially creating technological dependencies and power asymmetries that can limit the strategic autonomy of client organizations (Weiblen & Chesbrough, 2015). Consequently, these providers facilitate companies' transition from traditional business models, but this transition must be analyzed by considering both the benefits and the potential risks of power concentration and value extraction. Despite preliminary insights into these benefits, the literature reveals key gaps in the understanding on how these systems influence the power and control mechanisms through which firms truly seize and transform opportunities.

## 3.Methodology

The research process was conducted in three distinct phases. The first phase involved identifying 50 leading companies based on advanced computational systems operating in the B2B sector, selected based on their projected 2024 revenues and received funding. The selection process was based on data from various sources, including company reports, industry publications, and reliable market intelligence platforms (e.g., Crunchbase). The selection also considered criteria of geographical and sectoral diversity to avoid bias toward specific market or regulatory configurations that might limit the generalizability of the results (Yadav, 2022).

The data collection and analysis phase focused on gathering detailed information on each firm's approach to using AI systems in its operations, analyzing the broader implications of these approaches for the competitive ecosystem. The analysis explored how the services are designed, distributed, and integrated into customer operations, including an assessment of the potential effects of technological lock-in, supplier dependency, and impacts on the distribution of value within the ecosystem, and the potential negative consequences such as the commoditization of traditional services, the exclusion of less technologically advanced actors, and the risks of market concentration.

Finally, the study considered strategic dimensions such as scalability, adaptability, and ecosystem partnerships, critically analyzing how these factors can both facilitate the competitive positioning and market differentiation of the firms and contribute to the creation of entry barriers that could limit future competition. Each firm's data was independently evaluated by two researchers (Skjott Linneberg & Korsgaard, 2019), with particular attention to identifying both the patterns of value creation and the potential mechanisms of value extraction that characterize the platform economy driven by advanced computational systems.

## 5. Results

The activity led to the identification of three distinct business models that exhibit differentiated approaches to creating, delivering, and capturing value. These models reflect variable strategies for leveraging advanced computational capabilities in the B2B sector, and critical implications for the distribution of power, equity of access, and the competitive sustainability of the ecosystem (see Table 1).

*Usage-Based Credit (UBC) Model*

One of the most prevalent business models involves usage-based credit frameworks. These models offer customers the flexibility to purchase modular credits that act as usage tokens for advanced computational services, allowing access to specific features or incremental usage without the commitment of a full subscription. While this approach facilitates initial adoption, it also creates mechanisms of progressive dependency where users gradually become tied to the platform, making it costly to switch to alternative providers. The credits are structured in tiers, with low-cost entry points that enable easy adoption, which is particularly beneficial for smaller businesses that may not be aware of the long-term implications of such technological dependency. As usage increases, customers transition to higher consumption tiers, providing these computational service providers with scalable monetization opportunities that often result in a disproportionate increase in costs for the most intensive users.

Companies using credit-based models face not only risks of resource inefficiency in cases of niche overuse where unsupervised access strains system performance, but also ethical issues related to the transparency of real costs and the potential manipulation of user behavior through credit gamification mechanisms. Firms responding to these challenges have adopted moderation mechanisms, including usage limits, oversight tools, and customer education systems. However, these mechanisms can also be used to exert discretionary control over access to advanced computational resources.

*Tiered Quota-Based (TQB) Model*

A second approach involves implementing tiered, quota-based systems, especially among scale-ups and established companies that offer enterprise-level solutions using advanced computational systems. While these models provide predictability for large organizations, they can also create artificial barriers to access and favor market concentration toward a few dominant providers.

These models segment customer access based on predefined usage quotas, allowing companies to tailor value delivery to larger organizations with predictable workflow requirements. However, this segmentation can also serve as a price discrimination mechanism that maximizes value extraction from enterprise clients while potentially excluding organizations with limited resources from accessing advanced features. These tiers bundle services designed for specific workflows (e.g., data training, cloud-based deployment, or analytics monitoring). They are often aligned with annual budgets for more reliable cost control but can also mask the actual opportunity cost of alternative or in-house solutions.

*Pay-as-you-go (PAYG) Model*

The Pay-As-You-Go model is a flexible framework that links costs directly to the actual use of resources, eliminating the need for fixed commitments. While this adaptability makes it particularly valuable for organizations with variable or unpredictable consumption patterns, such as startups and SMEs, it also raises critical questions about long-term economic sustainability for both providers and users. This model allows costs to be dynamically aligned with real-time usage but can also create financial uncertainty and difficulty in long-term strategic planning. While its strengths include transparency, cost efficiency, and alignment with user behavior, challenges like revenue unpredictability, administrative complexity, and risks of over-fragmentation can hinder scalability. Furthermore, this model can incentivize a suboptimal use of computational resources, where short-term convenience outweighs long-term sustainable value creation.

| Characteristic / Model | 1. Usage-Based Credit Model | 2. Tiered Quota-Based Model | 3. Pay-As-You-Go Model |
|---|---|---|---|
| **Primary Objective** | Maximize adoption and foster ecosystem growth | Serve large enterprise clients with high predictability and scalability needs | Offer ultimate flexibility to users based on actual consumption, aligning costs precisely with usage |
| **AI Innovation Mechanisms** | **Scalability**: Facilitate wide adoption with low initial costs | **Modularity**: Provide tailored service bundles to match enterprise workflows | **Consumption Optimization**: Dynamically align resource allocation to actual usage patterns and fluctuations |
| **Customer Engagement Strategies** | **Usage-Based Incentives**: Introduce credits to ease entry and encourage experimentation | **User Feedback Loops**: Adapt tiered offerings based on user feedback and stable demand patterns | **Pricing Flexibility**: Allow payments based only on resource consumption without upfront or fixed commitments |
| **Value Capture Approaches** | **Maximizing ROI**: Incentivize rapid onboarding while creating future upselling opportunities | **Dynamic Tiers**: Scale revenues based on service volume and enterprise requirements | **Direct Revenue Alignment**: Achieve revenue precision by capturing payment directly correlated with actual usage |
| **Target User Base** | SMEs, and developers with experimental or variable usage | Large enterprises with predictable and high-volume operational demands | Users in industries with uncertain or irregular consumption patterns |
| **Key Advantages** | Provides flexibility to users with limited budgets, fosters exploration | Ensures cost predictability, retains large-scale enterprise users | Offers ultimate alignment with user behavior, eliminates unnecessary cost burdens, supports niche and irregular user cases |
| **Challenges/Disadvantages** | Risk of commoditization, overuse of free/low tiers, stagnation at lower levels | Rigidity for SMBs and users with sporadic or inconsistent needs | Difficulty achieving predictable revenue streams, administrative complexity of tracking small-scale, granular payments |
| **Differentiating Variables** | Token/credit models, flexible multi-tier usability | Fixed quotas, workflow bundles, guaranteed service levels | Real-time usage metering, variable payments without fixed contractual obligations |
| **Critical Implications** | Risk of progressive dependency and technological lock-in | Potential exclusion of organizations with limited resources and market concentration | Financial uncertainty and potential suboptimal use of computational resources |

**Table 1:** AI-Driven Business Model Innovations

## 6. Conclusions

This study explored how innovation in business models driven by advanced computational systems manifests through different business models. It revealed the dynamic capabilities

that enable companies to sense, seize, and transform opportunities in rapidly evolving markets, and the critical implications for the distribution of power, equity of access, and the sustainability of the competitive ecosystem.

This research advances the understanding of dynamic capabilities by demonstrating how these computational systems enhance firms' abilities to perceive market changes, seize emerging opportunities, and transform operational structures. While existing literature predominantly emphasizes the benefits of innovation driven by these systems, this research sheds light on the "dark sides" of such transformations, including the risks of technological lock-in, the concentration of power in the hands of a few dominant players, and the potential negative externalities for the most vulnerable stakeholders in the ecosystem.

From a managerial perspective, the research underscores the importance of matching business models to organizational goals and user needs. It also highlights the need for policies and governance mechanisms that prevent the abuse of dominant positions and ensure a more equitable distribution of the benefits of innovation driven by these systems. Modular credit systems present opportunities for smaller organizations to access advanced computational capabilities without high initial investments. However, they also require safeguards to prevent predatory pricing mechanisms and technological dependency.

Finally, this research opens opportunities for further critical exploration. Future studies should expand the analysis of how these business models evolve across different sectors and stages of company development, including longitudinal assessments of redistributive effects and social justice implications. Comparative analyses of companies in different industrial and regulatory environments could also deepen insights into the scalability and adaptability of these innovations, contributing to the development of more effective regulatory frameworks for governing the platform economy that uses advanced computational systems.

## References


Bourai, S., Yadav, N., & Arora, R. (2023). Winner-Take-All Strategy in Digital Platform Market: A Theoretical Exposition. In *Handbook of Evidence Based Management Practices in Business* (pp. 573-584). Routledge.

Crawford, K. (2021). *The atlas of AI: Power, politics, and the planetary costs of artificial intelligence*. Yale University Press.

Ellström, D., Holtström, J., Berg, E., & Josefsson, C. (2022). Dynamic capabilities for digital transformation. *Journal of Strategy and Management*, *15*(2), 272-286.

Enholm, I. M., Papagiannidis, E., Mikalef, P., & Krogstie, J. (2022). Artificial intelligence and business value: A literature review. *Information Systems Frontiers*, *24*(5), 1709-1734.

Holmström, J. (2022). From AI to digital transformation: The AI readiness framework. *Business Horizons*, *65*(3), 329-339.

Kohtamäki, M., Parida, V., Oghazi, P., Gebauer, H., & Baines, T. (2019). Digital servitization business models in ecosystems: A theory of the firm. *Journal of business research*, *104*, 380-392.

Kraus, S., Durst, S., Ferreira, J. J., Veiga, P., Kailer, N., & Weinmann, A. (2022). Digital transformation in business and management research: An overview of the current status quo. *International journal of information management*, *63*, 102466.

Linde, L., Sjödin, D., Parida, V., & Wincent, J. (2021). Dynamic capabilities for ecosystem orchestration A capability-based framework for smart city innovation initiatives. *Technological Forecasting and Social Change*, *166*, 120614.

Shafer, S. M., Smith, H. J., & Linder, J. C. (2005). The power of business models. *Business horizons*, *48*(3), 199-207.

Shrestha, Y. R., Ben-Menahem, S. M., & Von Krogh, G. (2019). Organizational decision-making structures in the age of artificial intelligence. *California management review*, *61*(4), 66-83.

Sjödin, D., Parida, V., Palmié, M., & Wincent, J. (2021). How AI capabilities enable business model innovation: Scaling AI through co-evolutionary processes and feedback loops. *Journal of Business Research*, *134*, 574-587.

Skjott Linneberg, M., & Korsgaard, S. (2019). Coding qualitative data: A synthesis guiding the novice. *Qualitative research journal*, *19*(3), 259-270.

Srnicek, N. (2017). *Platform capitalism*. John Wiley & Sons.

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic management journal*, *18*(7), 509-533.

Tongur, S., & Engwall, M. (2014). The business model dilemma of technology shifts. *Technovation*, *34*(9), 525-535

Weiblen, T., & Chesbrough, H. W. (2015). Engaging with startups to enhance corporate innovation. *California management review*, *57*(2), 66-90.

# Turning Cellulose into Circularity: Sustainable Approaches in the B2B Paper Industry

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## Abstract

As sustainability becomes increasingly central to both academic research and industrial strategy, B2B firms are under pressure to reshape their innovation processes to align with circular economy principles. This paper explores how companies in the paper industry develop and deploy sustainability-oriented innovations, with a specific focus on the interplay between endogenous and exogenous sources of innovation. Endogenous innovations stem from internal capabilities such as R&D and strategic vision, while exogenous innovations emerge through interactions with external actors across the business ecosystem.

Grounded in the Industrial Marketing and Purchasing (IMP) perspective, the study adopts a comparative case analysis of two paper companies operating in different geographical and organizational contexts. Data were collected through interviews and company documents between 2023 and 2024. The analysis highlights how circularity is not achieved in isolation but through evolving interdependencies among firms, requiring coordination, mutual adaptation, and co-development.

The findings reveal that advancing circularity demands both internal innovation dynamics and active engagement in collaborative networks. Sustainability is thus framed not as a fixed blueprint, but as a process shaped by the firm's capacity to mobilize resources and align with broader systemic efforts. This research contributes to understanding circular innovation as a relational and context-sensitive phenomenon in B2B settings.

*Keywords: circular economy, sustainability, business networks, endogenous innovation*

## 1. Introduction

Nowadays, sustainability is a cornerstone of academic and applied discourse on recent socio-economic and environmental transformations posing challenges for business-to-business (B2B) enterprises. In this scenario, sustainable development paradigms provide conceptual and operational frameworks for rethinking production systems, including established ones (Elkington, 2018; Ferro et al., 2019).

In the academic literature, there are multiple approaches to pursuing sustainability, each reflecting different priorities (Esteban-Amaro et al., 2024). Specifically, in the Industrial Marketing and Purchasing (IMP) thinking, some studies focus on specific capabilities, such as network vision, orchestration and the ability to perceive other actors as partners, to create new business relationships which give meaning to sustainability contexts (Ryan et al., 2012). In this research stream, Dessaigne (2024) analysed the interaction processes between companies highlighting the centrality of sharing meaning in the process of (sustainable) network change, also by adopting innovative solutions to minimise environmental impact. Moreover, there are perspectives that consider sustainability in a systemic dimension, requiring coordination between different actors to develop circular economy models and shared value paths.

Furthermore, IMP scholars emphasize the embeddedness of business practices within complex interaction patterns, where sustainability—and more recently circularity—is not pursued in isolation, but through evolving interdependencies among actors. Circular economy initiatives are thus interpreted not merely as operational innovations, but as relational and systemic transformations, requiring coordinated efforts across networks to reconfigure resource flows, product life cycles, and value creation logics. This perspective resonates with the IMP view of business networks as arenas of joint sense-making, adaptation, and co-development, where circularity emerges through mutual adjustments, negotiated commitments, and the alignment of heterogeneous interests (Håkansson & Waluszewski, 2007). Consequently, the transition towards circular business models depends on the capacity of actors to mobilize and reconfigure network resources, develop shared visions, and sustain long-term interaction processes that challenge traditional linear models of production and consumption.

The B2B paper industry emerges as an emblematic sector for analysing sustainability due to its intrinsic connection with the management of renewable resources and circular processes. Paper production, based on the use of natural raw materials such as wood from which to obtain cellulose, is already a virtuous reference model in terms of the circular economy. Despite these common characteristics, the ways in which sustainability is implemented vary significantly between companies in the sector. These differences result from a variety of factors, including internal innovative capacity, organisational characteristics and market conditions. Some companies enhance energy efficiency and the use of renewable energy, while others focus on reducing waste and developing recycling. These distinct approaches reflect the specificities of the internal and external contexts in which companies operate, shaping a variety of strategies for sustainable value creation.

From this perspective, sustainability is not a uniform concept, but a dynamic and contextualized approach (Marinina et al., 2022; Triguero et al., 2022; Wade et al., 2022). Each company, acting within a shared framework of principles, adapts sustainability strategies to its own operational needs and external stimuli. This process of strategic "customization" is particularly evident in the paper industry, where network dynamics and the capacity for collaborative learning play a crucial role in the development of innovative practices.

Indeed, this study questions how companies in the paper sector adopt and deploy sustainability and circularity strategies. In particular, the investigation aims to understand

whether these innovations are predominantly the result of endogenous processes, i.e. linked to internal research and development capacity, or whether they arise from exogenous interactions with other actors in the production system, such as suppliers, customers or public and private institutions.

A key element of the analysis concerns the distinction between endogenous and exogenous innovations. Endogenous innovations, often the result of investments in research and development and internal strategic decisions, represent the company's ability to adapt autonomously to environmental and market challenges. Conversely, exogenous innovations emerge through processes of co-creation and exchange with external partners such as industry consortia, research institutions and non-governmental organisations. This dialectic is central to understanding how companies build sustainable and collaborative pathways.

## 2. Methodology

To achieve this research aim, this study adopts a comparative approach which allows for the analysis of two business cases from heterogeneous geographical and organisational contexts. The aim is to identify similarities and differences in sustainability practices, providing a critical understanding of the dynamics underpinning innovation in this area. From November 2023 to September 2024, we collected 6 semi-structured interviews with professionals operating in the two case companies, such as marketing directors, communication managers and marketing specialists. In addition, company documents such as presentations, sustainability reports, press releases and sustainability initiative reports were analyzed by the researchers. This analysis allows to highlight the enabling factors and barriers that condition the adoption of circular business models in the paper industry.

## 3. Results and conclusions

Preliminary results of this study highlight that the case companies focus on continuous improvement and the involvement of the entire production ecosystem, including brands, printers, converters, designers, and suppliers, to promote a responsible and sustainable approach. For example, a case company has developed the "Group Sustainability Decalogue", which establishes rules based on risk assessment, emphasizing attention to detail in production while promoting safety and openness to change among employees. Both the analyzed companies are also working on plastic-to-paper solutions to replace plastic with highly performant paper in terms of strength, water resistance, and hygiene. These solutions are applicable across various sectors such as food & beverage, cosmetics, hospitality, and logistics.

Furthermore, the companies promote sustainable relationships through a distributed governance model that actively involves all business functions to ensure clarity, transparency, accountability, and competence in daily operations. They are committed to fostering interactions and building trust with all actors, including employees, shareholders, customers, suppliers, and local communities. In this regard, a case company has been awarded a platinum medal by EcoVadis, an international sustainability rating agency, recognizing excellence in environmental, social, and ethical practices. These efforts reflect the company's commitment to building and maintaining sustainable relationships with all stakeholders, contributing to a responsible and sustainable approach.

## References


Dessaigne, E. (2024). Agency in business networks: combining IMP research with a relational sociological perspective to challenge views on sustainability and ethics. Journal of Business & Industrial Marketing, 39(7), 1-15.

Elkington, J. (2018). 25 years ago I coined the phrase "triple bottom line." Here's why it's time to rethink it. Harvard business review, 25, 2-5.

Esteban-Amaro, R., Estelles-Miguel, S., Lengua, I., Yannou, B., & Bouillass, G. (2024). Assessing circularity and sustainability of a value chain: A systematic literature review. Business Strategy and the Environment. doi:10.1002/bse.4009

Ferro, C., Padin, C., Høgevold, N., Svensson, G., & Varela, J. C. S. (2019). Validating and expanding a framework of a triple bottom line dominant logic for business sustainability through time and across contexts. Journal of Business & Industrial Marketing, 34(1), 95-116.

Ilić, M. P., Ranković, M., Dobrilović, M., Bucea-Manea-Ţoniş, R., Mihoreanu, L., Gheţa, M. I., & Simion, V. E. (2022). Challenging Novelties within the Circular Economy Concept under the Digital Transformation of Society. Sustainability (Switzerland), 14(2). doi:10.3390/su14020702

Marinina, O., Kirsanova, N., & Nevskaya, M. (2022). Circular Economy Models in Industry: Developing a Conceptual Framework. Energies, 15(24). doi:10.3390/en15249376

Pedersen, S., Clausen, C., & Jørgensen, M. S. (2023). Navigating value networks to co-create sustainable business models: An actionable staging approach. Business Strategy and the Environment, 32(1), 240-258. doi:10.1002/bse.3127

Ryan, A., Tähtinen, J., Vanharanta, M., & Mainela, T. (2012). Putting critical realism to work in the study of business relationship processes. Industrial Marketing Management, 41(2), 300-311

Superti, V., Merino-Saum, A., Baur, I., & Binder, C. R. (2021). Unraveling how the concept of circularity relates to sustainability: An indicator-based meta-analysis applied at the urban scale. Journal of Cleaner Production, 315. doi:10.1016/j.jclepro.2021.128070

Triguero, Á., Cuerva, M. C., & Sáez-Martínez, F. J. (2022). Closing the loop through eco-innovation by European firms: Circular economy for sustainable development. Business Strategy and the Environment.

Wade, B., Meath, C., & Griffiths, A. (2022). Capabilities for circularity: Overcoming challenges to turn waste into a resource. Business Strategy and the Environment.

Walker, A. M., Vermeulen, W. J. V., Simboli, A., & Raggi, A. (2021). Sustainability assessment in circular inter-firm networks: An integrated framework of industrial ecology and circular supply chain management approaches. Journal of Cleaner Production, 286. doi:10.1016/j.jclepro.2020.125457

# Does GenAI have a role in the buyer-seller relationship initiation process? A conceptual perspective

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## Abstract

This conceptual paper explores the role of Generative AI (GenAI) in reshaping the buyer–seller relationship initiation (BSRI) process by conceptually discussing its role toward both actors across BSRI phases. Adopting the IMP interaction perspective and a model conceptual paper approach, the study maps GenAI's dual role in automating and augmenting interaction, communication, and coordination tasks between buyer and seller during the relationship initiation process. The paper presents a novel perspective on both BSRI and GenAI management literature, contributing to the clarification of GenAI's emerging role as both a tool and an active actor in shaping how business relationships are initiated and developed in B2B contexts.

*Keywords: GenAI, buyer-seller initiation, business relationship, business interactions.*

## 1. Introduction

The rise of generative artificial intelligence (GenAI) is reshaping how firms interact, communicate, and create value in B2B settings (Chen et al., 2021). While existing research has examined AI's role in the customer journey (Rusthollkarhu et al., 2022), procurement (Herold et al., 2025), and sales (Paschen et al., 2020) - emphasising benefits in lead generation, personalisation, and automation - less attention has been given to how GenAI affects the initiation of buyer-seller relationships (BSRI) in the B2B context, a critical and fragile stage (Chang, 2022; Edvardsson et al., 2008). This represents a pivotal research gap, especially as firms face increasing pressure to establish new relationships in digital-first environments. Buyers are now keener to research independently, avoiding human interaction, while sellers seek efficient, cost-effective methods to engage with new buyers (Chang, 2022). Prior studies have explored AI's impact from both the buyer and seller perspectives, focusing on a transactional approach, while overlooking the early-stage dynamics of the business relationship (Chang, 2022; Herold et al., 2025). This study addresses the gap by answering the following research question: *how does GenAI influence the BSRI process?* The study unfolds according to the Industrial Marketing and Purchasing (IMP) Group theoretical lens (Håkansson & Snehota, 1995), which views interaction as a co-evolving process within business networks. The paper develops a conceptual framework to explain how GenAI reshapes interaction, communication, and coordination between actors, highlighting its relational impact and how it might transform the way B2B relationships begin and evolve.

## 2. Literature background

*Buyer-seller relationship initiation (BSRI): an overview*

According to Håkansson and Snehota (1995, p. 25), a business relationship is a "mutually oriented interaction between two reciprocally committed parties," developing through various episodes and interaction processes. The BSRI marks the beginning of this development (Wadell & Bengtson, 2024). Although scholars have tried to define BSRI, its boundaries remain unclear, as the process is difficult to capture (Perna et al., 2015; Valtakoski, 2015). Still, it is commonly understood to begin when unknown actors coexist in space and time, proceed through mutual recognition, and ideally end with a business agreement (Mandják et al., 2015). This study adopts Dwyer et al.'s (1987) two-phase model of BSRI: awareness and exploration. In the awareness phase, parties engage in unilateral positioning without direct interaction. The exploration phase begins with initial contact and serves as a trial period for evaluating mutual compatibility, value, and obligations (Dwyer et al., 1987). This phase entails five sub-phases: attraction, communication and bargaining, power and justice, norm development, and expectation development. Although this phase allows actors to align and define relationship boundaries, it remains unstable (Edvardsson et al., 2008). Thus, early communication and trust-building are critical for relationship formation (Mandják et al., 2015; Valtakoski, 2015).

*Preliminary evidence of GenAI for buyers and sellers*

Artificial intelligence (AI) refers to systems that interpret, learn and use data to perform tasks through flexible adaptation (Chang, 2022). GenAI can produce new content that is human-likely, becoming mainstream in business due to the spread of accessible and intuitive tools (e.g. ChatGPT). It automates tasks and supports decision-making by complementing human reasoning (Paschen et al., 2020). In B2B settings, GenAI is addressed to reshape the procurement and sales processes. Buyers use GenAI to access and analyse product and market information, enabling independent decision-making without human sales intervention (Chang, 2022). Sellers employ GenAI to identify, qualify, and engage leads through automated outreach and personalised messaging (Paschen et al., 2020). AI supports negotiation and communication, shaping outcomes (Herold et al., 2025; Rusthollkarhu et al., 2022). However, challenges include reduced human involvement, emotional disconnect, and the need for digital skills. While GenAI offers strong potential in BSRI, its integration must preserve relational depth and trust (Keegan et al., 2023).

## 3. Methodology

Following Jaakkola (2020) and MacInnis (2011), this study adopts a conceptual approach to explore the role of GenAI in the BSRI process. While prior research has examined GenAI in procurement, sales, and the B2B customer journey, this study argues for revisiting these insights through the IMP interaction perspective, which focuses on reciprocal interactions in business networks. The study follows a "delineating" conceptual goal (MacInnis, 2011), aiming to map and explain GenAI's influence on BSRI using deductive reasoning. Consistent with Jaakkola's (2020) model paper approach, it defines the focal phenomenon, reviews relevant B2B AI literature, and integrates practical insights from industry reports. The IMP framework (Håkansson & Snehota, 1995) is used as the "method theory" to organise findings within Dwyer et al.'s (1987) BSRI framework. The study develops a theoretical framework that requires empirical testing (Figure 1), offering a structured model of GenAI's relational impact.

## 4. Preliminary findings

Figure 1 below provides preliminary insights by conceptually framing the use of GenAI by buyers and sellers within the BSRI process. The figure also entails which of the described tasks are automated and which are augmented, according to the GenAI paradigm.

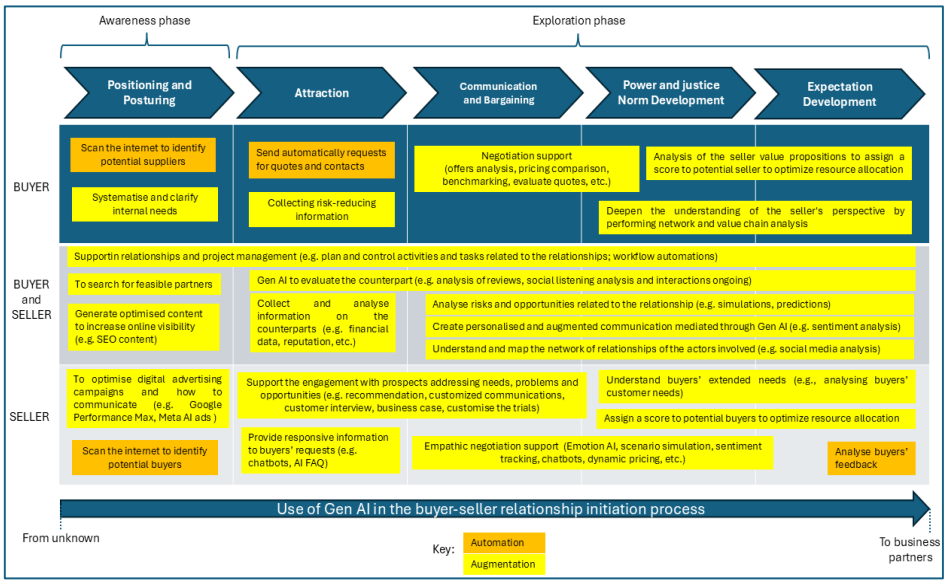



**Figure 1:** BSRI process and GenAI impact according to phases and actors (our elaboration)

## 5. Preliminary theoretical implications and conclusions

The study suggests that GenAI is increasingly adopted to enhance BSRI processes from both buyers and sellers (Rusthollkarhu et al., 2022). The study also suggests that GenAI unfolds through all the phases of the BSRI process (Chang, 2022). The study highlights that GenAI contribute to both automation and augmentation of the tasks within the BSRI process for both buyers and sellers (Chang, 2022). Therefore, the study posits that GenAI is emerging as software capable of improving the ability of buyers and sellers to initiate new business relationships (Herold et al., 2025), emphasising how it is becoming a new "player" in the dyad (Keegan et al., 2023). GenAI's capabilities improve mutual recognition, interaction, and adaptation between buyers and sellers during the BSRI process, potentially leading to a more fluid, effective, and efficient BSRI process (Chang, 2022; Herold et al., 2025; Paschen et al., 2020)

However, the effects of GenAI on BSRI also have dark sides. In particular, the study highlights how both buyers and sellers are at risk of alienation, a lack of critical analysis, developing weaker business relationships, and delegating decisions to machines, thereby being subjected to black-boxed decision-making processes when creating new business relationships (Keegan et al., 2023).

## 6. Implications for managers

Since GenAI act as a new tool for BSRI, managers are called to acknowledge where the potential lies for better contributions in initiating new business relationships. While the role of GenAI unfolds in several aspects of the process (e.g. data collection, analysis, content and document creation, suggestions, evaluations and comparisons), it is clearly influencing how

buyers and sellers perceive each other. Therefore, above the opportunities related to GenAI, which can be addressed to an effective and efficient BSRI process, managers should be aware of the potential risks associated with its misuse.

## 7. Conclusion

The present study is one of the first to attempt to conceptualise the role of GenAI in the BSRI process. This early study suggests that GenAI unfolds widely within the process and is potentially adopted by both buyers and sellers. The study presents a conceptual framework to clearly identify how GenAI unfolds and what roles it plays within the BSRI process according to each phase and each actor (e.g., buyers and sellers). In addition to the benefits and aforementioned mechanisms, the study also briefly outlines potential drawbacks associated with the use of GenAI for BSRI.

The study is not without limitations, as it is still ongoing and underdeveloped, and attempts to provide preliminary results on a complex and multifaceted phenomenon that still requires further investigation. However, the study took the opportunity to suggest further studies to advance the research on GenAI and BSRI. In particular, empirical studies (e.g. case studies, Delphi) are suggested to deepen the understanding of how buyers and sellers use GenAI in a real-world setting for initiating new business relationships. A further dynamic that needs to be understood is how firms might develop capabilities and competencies to exploit GenAI safely and how GenAI is useful in coping with the existing context-related factors that usually affect the BSRI process.

## References


Chang, W. (2022). The effectiveness of AI salesperson vs. human salesperson across the buyer-seller relationship stages. Journal of Business Research, 148, 241-251.

Chen, L., Jiang, M., Jia, F., & Liu, G. (2021). Artificial intelligence adoption in business-to-business marketing: toward a conceptual framework. Journal of Business & Industrial Marketing, 37(5), 1025-1044.

Dwyer, F. R., Schurr, P. H., & Oh, S. (1987). Developing buyer-seller relationships. *Journal of marketing*, *51*(2), 11-27.

Edvardsson, B., Holmlund, M., & Strandvik, T. (2008). Initiation of business relationships in service-dominant settings. *Industrial Marketing Management*, *37*(3), 339-350.

Håkansson, H., & Snehota, I. (1995). Developing relationships in business networks. London: routledge.

Herold, S., Heller, J., Rozemeijer, F., & Mahr, D. (2025). Brave new procurement deals: An experimental study of how generative artificial intelligence reshapes buyer–supplier negotiations. Journal of Purchasing and Supply Management, 101012.

Jaakkola, E. (2020). Designing conceptual articles: four approaches. AMS review, 10(1), 18-26.

Keegan, B. J., Iredale, S., & Naudé, P. (2023). Examining the dark force consequences of AI as a new actor in B2B relationships. Industrial Marketing Management, 115, 228-239.

MacInnis, D. J. (2011). A framework for conceptual contributions in marketing. Journal of marketing, 75(4), 136-154.

Mandják, T., Szalkai, Z., Neumann-Bódi, E., Magyar, M., & Simon, J. (2015). Emerging relationships: how are they born? *Industrial Marketing Management*, *49*, 32-41.

Paschen, J., Wilson, M., & Ferreira, J. J. (2020). Collaborative intelligence: How human and artificial intelligence create value along the B2B sales funnel. Business Horizons, 63(3), 403-414.

Perna, A., Runfola, A., Guercini, S., & Gregori, G. L. (2015). Relationship beginning and serendipity: insights from an Italian case study. *IMP Journal*, *9*(3), 233-249.

Rustholllkarhu, S., Toukola, S., Aarikka-Stenroos, L., & Mahlamäki, T. (2022). Managing B2B customer journeys in digital era: Four management activities with artificial intelligence-empowered tools. Industrial Marketing Management, 104, 241-257.

Valtakoski, A. (2015). Initiation of buyer–seller relationships: The impact of intangibility, trust and mitigation strategies. *Industrial Marketing Management*, *44*, 107-118.

Wadell, O., & Bengtson, A. (2024). On the starting situation for business relationship initiation in turbulent business networks. Journal of Business & Industrial Marketing, 39(13), 1-14.

# Human–AI Relational Capabilities in Business-to-Business Marketing: A Review and Research Agenda

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## Abstract

Artificial intelligence (AI) continues to transform industrial exchange, yet the skills required to orchestrate machine–human partnership in business-to-business (B2B) relationship marketing remain poorly specified. To close this gap, we conduct a systematic literature review of 419 peer-reviewed articles published between 1995 and 2024. After PRISMA screening, we apply a hybrid text-analytics pipeline like Guided Latent Dirichlet Allocation, lexicon matching and dependency parsing to surface thematic structures and extract competence terms from full texts.

Six research clusters dominate the corpus: (1) AI strategy and business analytics, (2) machine-learning modelling, (3) AI-enabled education and skills development, (4) AI-mediated customer engagement, (5) sentiment and user experience, and (6) adoption of AI analytics and firm performance. Only Cluster 6 treats B2B relationship management systematically, revealing a persistent focus on data infrastructures and decision analytics rather than on boundary-spanning work itself. Skill extraction confirms the bias: technical capabilities (e.g., classification, regression) outweigh marketing-specific (e.g., CRM analytics) and soft skills (e.g., critical thinking) by an order of magnitude.

We synthesise these findings into an integrative capability framework that couples data-engineering competences with interactional, sense-making and ethical competences – elements largely absent from extant studies. The article closes with a research agenda that redirects B2B scholarship from algorithmic optimisation to relational orchestration in AI-augmented networks, and offers managers a checklist for recruiting, up-skilling and governing human–AI frontline coalitions.

*Keywords: artificial intelligence; relational capability; competencies; systematic review; B2B marketing; AI-CRM*

## 1. Introduction

Industrial marketers operate in value chains increasingly punctuated by cognitive automation. Conversational agents negotiate order specifications, predictive engines trigger replenishment, and AI-embedded customer-relationship-management suites curate partner interactions at scale. Yet less than one per cent of firms report having exhausted AI

deployment potential, suggesting that human competences constitute the binding constraint, not the hardware.

While early commentaries portrayed AI as a back-office optimisation tool, newer studies implicate it in core relational processes: opportunity recognition, trust calibration and value co-creation (Saura et al., 2021; Gaczek et al., 2023). Still, the scholarly conversation is fragmented. Technical papers refine algorithms; sociotechnical papers debate job displacement; marketing work investigates consumer chatbots more than inter-firm interfaces. As a result, B2B marketing lacks a consolidated view of what people must know, feel and do to partner productively with AI. This paper responds to this gap. Anchored in competence-based theory, we ask:

RQ1: How has academic research conceptualised AI-enabled work in marketing? RQ2: Which competences are ascribed to marketers, specifically in B2B relationship contexts?

RQ3: Where do conceptual and empirical gaps remain?

By integrating topic modelling with context-sensitive skill extraction, we map the intellectual terrain and derive an actionable capability set for academics and practitioners.

## 2. Theoretical background

Business-to-business (B2B) marketing scholars have long framed competitive advantage in terms of organizational competences, bundles of knowledge, skills and routines that enable firms to create and appropriate value (Prahalad, 1993). Recent work extends this lens to dynamic capabilities, i.e., the capacity to sense, seize and reconfigure resources under turbulence (Teece, 2007). Yet the arrival of artificial intelligence (AI) complicates both ideas, because machine agents now participate directly in sensing (e.g., anomaly detection), seizing (e.g., dynamic pricing) and even reconfiguring (e.g., autonomous supply-chain optimisation). Understanding how human actors develop relational capabilities that integrate AI agents into inter-firm exchange therefore demands a more granular theoretical scaffolding.

### 2.1 From technical resources to relational capabilities

In the competence-based tradition, technologies are usually treated as operand resources, i.e. tools that humans deploy (Huang & Rust, 2021). However, service-dominant logic asserts that when technologies possess agency (predict, adapt, converse) they become operant resources capable of co-acting with humans in value creation. In B2B networks, where transactions are high stakes, information is often private, and coordination routines are negotiated rather than scripted, AI systems alter both task and relational architectures. They offload prediction but also raise novel demands for interpretation, justification and trust calibration.

Research on AI acceptance provides the first layer of insight. Studies show that explainability, transparency and error controllability drive adoption of AI-CRM analytics among industrial sellers (Gaczek et al., 2023), echoing Technology Acceptance Model antecedents but adding relational risk as a salient construct. Yet acceptance studies seldom address how marketers mobilise AI insights within boundary-spanning dialogues that involve political manoeuvring, sensemaking and joint problem solving.

IMP research characterises exchange relationships as socio-technical networks governed by interaction episodes and adaptations. Boundary spanners translate organisational logics, build trust and manage power asymmetries. When AI enters the scene, translation becomes two-fold: actors must interpret algorithmic outputs and repackage them for partners whose

own data and models remain opaque. Literature on managerial sense-making (Maitlis & Sonenshein, 2010) suggests that credible narratives reduce ambiguity and enable collective action. We therefore posit that interpretive competence (the ability to embed AI signals in persuasive, partner-oriented stories) is a missing but critical micro-foundation of dynamic capability in AI-rich B2B markets.

Sociomateriality argues that social practices and material artefacts are entangled. AI systems not only assist tasks; they shape who speaks, when, and on what evidentiary basis. Early ethnographies of AI-integrated sales teams reveal role renegotiation: account managers cede routine forecasting to machines but invest more effort in stewardship and escalation tasks (Koponen et al., 2025). This redistribution of labour foregrounds ethical and political competences (e.g., recognising bias, defending human discretion, and orchestrating escalation when models mis-perform). Yet only 4 % of competence mentions in our corpus concern such "soft" skills indicating a theoretical blind spot.

Synthesising the above streams, we conceptualise human-AI relational capability as a triad:

- Data-engineering capability: proficiency in collecting, cleaning and modelling data, long emphasised in digital-marketing research.
- Interpretive capability: cognitive and rhetorical skills that transform algorithmic output into actionable, partner-specific narratives.
- Relational-orchestration capability: communicative, ethical and political skills that embed AI recommendations into joint routines, manage divergence, and renegotiate expectations when algorithms err.

Dynamic-capability theory locates these competences within higher-order processes of sensing (data mining and environmental scanning), seizing (resource allocation and proposal framing) and reconfiguring (governance redesign and capability retraining). Our review reveals that extant B2B scholarship richly treats the first layer but sparsely theorises layers two and three.

## 3. Data and method

Following PRISMA guidelines, we queried Scopus and Web of Science for English peer-reviewed articles that mention marketing × AI × human terms (e.g., marketer, manager, staff) between 1995 and 2024. After removing 651 duplicates and applying a machine-assisted screening validated by expert raters (inter-rater consistency 86– 100 %), 419 articles remained.

We formulated an analytical pipeline covering three meta steps

Step 1: Topic modelling. Guided LDA with six seed-anchored topics captured latent thematic structure; model fit peaked at k = 6.

Step 2: Skill extraction. We built a 210-term competence lexicon spanning technical, marketing, tool and soft skills. Using spaCy dependency parsing, we filtered out purely methodological mentions and retained context-valid skills.

Step 3: Synthesis. Topic proportions and skill frequencies were cross-tabulated to identify competence emphases per research cluster.

We also carried out reliability checks throughout the process by including independent evaluation of performed by human investigators. A grey-zone resample (probability 0.4–0.5) was re-coded by five experts (85 % agreement); a high-confidence subsample (< 0.25) yielded 93 % algorithm–human congruence.

## 4. Findings

### 4.1 Research landscape

Clusters 0–5 reproduce the six-topic solution. Two observations stand out. First, technical machine-learning work (Cluster 1) has ceded dominance to strategy-analytics (Cluster 0) and adoption-performance studies (Cluster 5) over the past decade. Second, only Cluster 5 embeds a distinct B2B lens, foregrounding AI-CRM roll-outs, data-quality governance and decision rights in supplier–buyer dyads.

### 4.2 Competence spotlight

Across the corpus we retrieved 1 145 unique skill mentions; 68 % fell into the technical bucket, 19 % tool-based, 9 % marketing-specific, and only 4 % soft skills. The top five competences were regression, classification, NLP, AWS and SEO. Relational capabilities such as negotiation, trust-building or ethical judgement registered fewer than ten mentions each.

Mapping skills onto topics reveals a capability mis-alignment: B2B-oriented Cluster 5 discusses decision analytics and data stewardship but rarely cites interpersonal competences. Conversely, customer-engagement clusters emphasise affective understanding yet are situated in B2C contexts.

## 5. Discussion

Our review paints an uneven capability landscape. Algorithmic muscle has out-run relational sinew. Nearly seven in ten competence mentions concern data wrangling, modelling or cloud tooling, whereas explicitly marketing and soft competences together account for less than one-quarter of the discourse. Even within the only research cluster that consistently adopts a B2B lens (Topic 5, Adoption of AI analytics & performance) scholars dwell on data infrastructures, explainability dashboards and decision rights, yet seldom theorise how boundary spanners translate algorithmic output into credible promises, renegotiate expectations with partners or heal relationship ruptures when AI misfires.

Building on competence-based theory, we contend that AI capability in industrial markets is best conceived as a triadic bundle:

- Data-engineering capability: the hard core of ingestion, modelling and deployment.
- Interpretive capability: managerial cognition that renders opaque predictions actionable.
- Relational orchestration capability: the communicative, ethical and political work required to embed AI recommendations in inter-firm routines.

While the first pillar dominates Clusters 0 and 1, our findings show the second and third pillars are conceptually thin, particularly in B2B scholarship that privileges efficiency metrics over social glue. Without interpretive and orchestration competences, firms risk becoming

digital alchemists—able to churn insights yet unable to transmute them into durable exchange value.

Extending Teece's sensing–seizing–reconfiguring sequence, we propose that AI-enabled B2B marketers must add two micro-foundations:

- Sense-making loops that align model salience with customer priorities. This entails narrative framing, counter-argument anticipation and collaborative scenario building and these skills are barely visible in the current corpus.
- Ethical guardrails that manage bias, privacy and autonomy concerns. Only scattered studies mention algorithmic fairness or relational ethics, despite mounting regulatory pressure and partner scrutiny.

Integrating these elements reframes AI not as a plug-and-play optimiser but as a negotiated actor in industrial networks.

Our synthesis invites business-marketing theory to move beyond the technology acceptance paradigm towards a capability-interaction perspective. Doing so positions AI as both resource and relationship participant, whose productive potential hinges on marketers' ability to craft credible narratives, negotiate algorithmic authority and steward ethical engagement. Only by cultivating this expanded competence set can B2B firms convert predictive horsepower into relational advantage. The gaps surfaced suggest fertile avenues for B2B marketing scholars:

- Competence-bundle experiments that manipulate combinations of technical, interpretive and orchestration skills to isolate their causal impact on trust and financial outcomes.
- Network-level analyses exploring whether AI adoption amplifies or dampens power asymmetries between large system integrators and smaller suppliers, and how orchestration competences mediate these effects.
- Longitudinal studies tracking competence evolution across AI maturity stages to test whether relational orchestration lags technical deployment by predictable intervals, echoing the topic-shift from modelling to strategy we observe in the literature timeline.

## 6. Conclusions and future research

AI's diffusion in industrial markets is no longer a technology question but a capability puzzle. By mapping 30 years of scholarship, we show that B2B research has privileged data-centric competences while neglecting interactional work at the human–AI–partner nexus. Future studies should: (1) ethnographically trace how marketers negotiate AI advice with key accounts; (2) test how competence bundles influence relational and financial outcomes; and (3) explore governance mechanisms that balance algorithmic authority with human agency. Addressing these questions will help B2B firms move from using AI to partnering with it and thus unlock relational advantage in intelligent value chains.

## References (selected)

Gaczek, P., Leszczyński, G., & Mouakher, A. (2023). Collaboration with Machines in B2B Marketing: Overcoming Managers' Aversion to AI-CRM with Explainability. *Industrial Marketing Management*, 115, 127–142.

Huang, M.-H., & Rust, R. T. (2021). A Strategic Framework for Artificial Intelligence in Marketing. *Journal of the Academy of Marketing Science*, 49, 30–50.

Koponen, J., Julkunen, S., Laajalahti, A., Turunen, M., & Spitzberg, B. (2025). Sales Managers' Perceptions of Interpersonal Communication Competence in Leading AI-Integrated Sales Teams. *Industrial Marketing Management*, 124, 57–72.

Maitlis, S. & Sonenshein, S. (2010), Sensemaking in Crisis and Change: Inspiration and Insights From Weick (1988). *Journal of Management Studies*, 47: 551-580.

Prahalad, C. K. (1993). The Role of Core Competencies in the Corporation. *Research-Technology Management*, 36(6), 40–47.

Saura, J. R., Ribeiro-Soriano, D., & Palacios-Marqués, D. (2021). Setting B2B Digital Marketing in Artificial-Intelligence-Based CRMs: A Review and Directions for Future Research. *Industrial Marketing Management*, 98, 161–178.

# Organizing the Marketing Function for Public–Private Interaction: The Case of Pharmaceutical Companies

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## Abstract

This contribution explores the role of Market Access (MA) and marketing functions within pharmaceutical companies, with particular reference to pricing—an element subject to strict regulatory oversight in the pharmaceutical sector. The study focuses on the negotiation process between pharmaceutical companies and the Italian Medicines Agency (AIFA), as well as the evolving role played by Regional Health Authorities in determining market access. Employing a qualitative methodology, the paper presents evidence drawn from in-depth interviews with pharmaceutical companies operating in the Italian market. The paper discusses intra-organizational issues and the interaction between pharmaceutical companies and other private and public actors for market access purpose.

*Keywords: market access, pharmaceutical marketing, pricing, regulation, public-private interaction*

## 1.Framing of the research

Pricing constitutes one of the most strategic levers of the marketing mix, as it is the primary element that generates revenue. Moreover, it is the most readily adjustable element in many sectors. However, in certain highly regulated industries, such as the pharmaceutical industry, price setting is not a matter of corporate discretion. For istance, in Italy, the Agenzia Italiana del Farmaco (AIFA) determines drug prices both at the time of market authorization and throughout the patent life of a product. Regulatory intervention is primarily aimed at patented, innovative drugs sold on prescription and often extends to off-patent prescription medications (Galliverti, Saraceni, & Lega, 2023). The rationale for pharmaceutical price regulation lies in a delicate balance among competing goals: public health protection, equitable access to medicines, cost containment, and industrial competitiveness. Governments often pursue multiple policy objectives through price control mechanisms, seeking to promote social welfare, economic efficiency, and universal access to care, regardless of income disparities. Pharmaceutical companies, on the other hand, must take economic sustainability into account and therefore effectively manage complex interactive processes with public (and other) stakeholders in order to reach a negotiated price that considers their need to generate profit (Runfola et al., 2021).

In Italy, where the public sector is the primary purchaser of medicines, price regulation frequently overlaps with reimbursement decisions, creating an intricate interplay between pricing policy and healthcare financing (Puig-Junoy, 2005).

Despite the sustained interest of marketing and management scholars in the pharmaceutical industry, the process through which new ethical drugs gain market access at a negotiated price —an issue of significant marketing relevance— remains largely overlooked and under-researched. The limited body of marketing and management literature on the topic has highlighted how pharmaceutical companies structure themselves and the actions they undertake to achieve market access (Schiavone and Simoni, 2019). Scholars have underscored the importance of viewing market access not merely as a negotiation phase between pharmaceutical companies and regulatory authorities, but as a broader process involving a network of interactions with multiple stakeholders (Guercini et al., 2020).

Building on this background, the paper aims to analyze two crucial aspects of market access for new drugs: the interactive processes between pharmaceutical companies and various public and private actors within the healthcare system aimed at price determination, and the underlying intra-organizational dynamics within pharmaceutical companies.

## 2. Research method

Given that the topic under study is current, rapidly evolving, and insufficiently studied, we adopted an exploratory research approach (Eisenhardt and Graebner, 2007). In particular, we employed a qualitative interpretivist methodology, relying primarily on interviews for data collection. The selection criteria for interview participants included: over a decade of experience in pharmaceutical or related sectors—such as consulting firms, governmental bodies, or public institutions; direct or indirect involvement in market access functions and activities; and senior-level roles in management or business consulting. Based on these criteria, a purposive sampling strategy was employed to identify suitable candidates, resulting in the selection of 9 key informants (interviews are still in progress). Due to the sensitivity of the topic, participant availability played a crucial role in the selection process. Each interview ranged in duration from 45 to 70 minutes. Interviewers took detailed notes throughout the sessions, all of which were audio-recorded and subsequently transcribed. Preliminary findings are now presented based on a content analysis.

## 3. Preliminary findings

Prices for reimbursable drugs are determined through a structured negotiation between AIFA and pharmaceutical companies. The process is managed by AIFA's Scientific and Economic Commission for Drugs (CSE), which has subsumed the roles of the former Technical Scientific Committee (CTS) and Pricing and Reimbursement Committee (CPR). CSE assesses the cost-effectiveness of new medicines and their therapeutic innovation. It considers whether the drug addresses unmet medical needs or outperforms existing alternatives, both in terms of efficacy and risk-benefit profile.

Negotiations generally unfold through a four-stage Corresponding author-based process: (i) submission of a comprehensive dossier by the pharmaceutical company to AIFA's Pricing and Reimbursement Unit; (ii) evaluation by CTS of the clinical value and incremental benefit of the drug over existing comparators; (iii) review by CPR and subsequent initiation of price negotiations; (iv) final appraisal and ratification by AIFA's Board of Directors.

Contracts typically last 24 months and renew automatically unless renegotiated at least 60 days before expiry. In case of market developments that significantly deviate from original assumptions, price renegotiation may occur—though only downward adjustments have historically been observed. With the corporatization of Italy's National Health Service (SSN) in the late 1990s, Regions and regional procurement agencies (e.g., ESTAR in Tuscany) have become key actors. Regions assess therapeutic innovation and regulate drug access within their specific Regional Health Systems (SSR). They often limit prescription eligibility to well-

defined patient cohorts and collaborate with purchasing centers to maximize economies of scale.

At the heart of these interactions lies the Market Access (MA) function—a relatively recent addition to pharmaceutical corporate structures in Italy, with no equivalent in other industries. MA serves as the organizational linchpin interfacing regulatory authorities, healthcare stakeholders, and internal departments (medical, marketing, sales).

Interviews conducted to date reveal a consistent organizational pattern across companies: MA typically reports directly to the General Manager, alongside Marketing, Medical Affairs, and Sales. In some companies, MA holds even greater hierarchical prominence, reporting directly to the CEO.

MA is tasked with six core responsibilities: market access strategy; health economic evaluations; pricing and reimbursement strategy; stakeholder engagement; regulatory landscape analysis; real-world evidence and outcome assessments

Pharmaceutical marketing, meanwhile, is distinct from its counterparts in other sectors due to its scientific complexity, regulatory constraints, and the indirect nature of demand. The connection between MA and marketing is strong and spans all key stages of the product lifecycle—from pre-negotiation strategy to post-launch brand development.

During pre-negotiation, marketing helps shape the Value Dossier with insights on market dynamics and therapeutic positioning. It also participates in meetings during clinical Phase II trials, gearing up for the pricing negotiation and commercialization phases. Once national and regional access is secured, marketing takes the lead in driving uptake, developing promotional materials in alignment with MA, and ensuring consistent corporate messaging.

All interviewed companies adopt a "pricing corridor" strategy—setting upper and lower reimbursement thresholds prior to negotiation with AIFA. Most prepare for a conservative outcome, assuming that price concessions will be substantial. Target prices are often aligned with the average of prior negotiations. Post-launch, both MA and marketing remain actively involved to monitor long-term drug safety, effectiveness, and market performance.

## 4. Conclusion

This paper, still a work in progress, aims to offer an initial exploration of the connection between intra-organizational and inter-organizational aspects. At the intra-organizational level, it highlights the relationship between two functions—marketing and market access—which, although seemingly interconnected within companies operating in regulated markets such as the pharmaceutical industry, often lack effective cross-functional coordination. This misalignment can potentially generate critical issues in the market access process of a new drug. Such challenges may also extend to the inter-organizational level, particularly in the interactive processes between pharmaceutical companies and public actors. This relationship should be interpreted beyond a purely transactional logic, embracing instead an interactive perspective that calls for a deeper investigation of public–private interaction within industrial marketing, specifically in relation to the pricing of new products

## References

Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. Academy of Management Journal, 50(1), 25-32.

Galliverti, G., Saraceni, N., & Lega, F. (2023). Market access: nuovi paradigmi manageriali e strumenti operativi per le imprese del Life Science (perché niente è più come prima). Milano: Milano University Press.

Guercini, S., Milanesi, M., & Runfola, A. (2020). Bridges to sustainable health systems: public-private interaction for market access. Journal of Business & Industrial Marketing, 35(12), 1929-1939.

Puig-Junoy, J. (2005). Price regulation systems in the pharmaceutical market. The Public Financing of Pharmaceuticals. An economic approach. Cornwall: Edward Elgar Publishing Limited, 35-58.

Runfola, A., Guercini, S., & Milanesi, M. (2021). Network interactions for pharmaceutical market access: findings from an explorative research. Journal of Business & Industrial Marketing, 36(13), 174-186.

Schiavone, F., & Simoni, M. (2019). Strategic marketing approaches for the diffusion of innovation in highly regulated industrial markets: the value of market access. Journal of Business & Industrial Marketing, 34(7), 1606-1618.

# Track 5
# Retailing, Sales & Trade Marketing

Coordinators: Silvio Cardinali Pizzi & Gabriele Pizzi

Il marketing distributivo e le relazioni verticali di filiera affrontano oggi le sfide di mercati sempre più competitivi e di traiettorie tecnologiche sempre meno prevedibili. Se a questo si affianca l'evoluzione dell'ambiente normativo e socio-demografico, si comprende la forte discontinuità in atto che richiede rinnovate pratiche manageriali e nuove prospettive di riflessione teorica.

Il focus della Sezione è, da un lato, l'impresa commerciale che crea valore gestendo le relazioni con il mercato finale e con i produttori industriali e, dall'altro, il go-to-market delle imprese industriali e le strategie di trade marketing. A tematiche più consolidate si affiancano quelle più di frontiera legate all'abbattimento dei confini tra dimensione fisica e digitale.

Aspetti di particolare interesse sono le relazioni industria-distribuzione, le strategie di trade/shopper marketing industriali, le dimensioni della competizione inter-intratype tra i retailers, il fenomeno della multi-omnicanalità, le logiche di supply chain management, i modelli di internazionalizzazione dei distributori, l'evoluzione dei comportamenti di acquisto, le dimensioni della store loyalty e le politiche di CRM, le strategie assortimentali, le politiche di retail branding e le forme di interbrand competition, le scelte di pricing distributivo, l'innovazione e la digitalizzazione degli store format, i driver di sviluppo dell'e-commerce. L'attività della Sezione è aperta agli accademici e ai practitioners interessati a proporre analisi rigorose ed innovative allo scopo di stimolare un ampio dibattito sui risvolti teorici e sulle implicazioni manageriali dei risultati di ricerca ottenuti.

Distributive marketing and vertical supply-chain relationships face increasing competitive pressure, rapid technological shifts, and changing regulatory and socio-demographic environments. This discontinuity demands renewed managerial practices and updated theoretical perspectives.

The Section focuses on retail firms that create value through relationships with both final markets and industrial producers, as well as on industrial firms' go-to-market strategies and trade marketing. Alongside established topics, it addresses frontier issues arising from the blurring of physical and digital channels.

Key areas include manufacturer–retailer relationships, trade and shopper marketing, inter- and intra-type retail competition, multi- and omnichannel models, supply-chain management, internationalization of retailers, evolving shopping behaviors, store loyalty and CRM, assortment and pricing strategies, retail branding, store-format innovation and digitalization, and e-commerce development. The Section welcomes rigorous and innovative contributions from academics and practitioners to stimulate debate on theoretical and managerial implications.

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# Retail Sensors: An Empirics First Approach

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## Abstract

This research adopts an Empirics First approach to examine whether integrating in-store sensor data with traditional scanner data improves demand forecasting in retail environments. Using motion-detection cameras and AI-based computer vision systems, we track customers' in-store movements and dwell times while preserving GDPR compliance. These behavioral data are aligned with planograms and POS records to model the probability that a customer purchases a given SKU, based on both their path and the shelf layout. Leveraging deep learning methods, we build a predictive model capable of estimating a conversion rate of the shelf similarly to the approach typically adopted in the field of digital advertising. This approach represents a novel contribution to retail analytics by combining behavioral signals with sales data to forecast demand more accurately. The proposed system enhances resource allocation, inventory management, and customer satisfaction—ultimately supporting both firm profitability and public accessibility to goods.

*Keywords: retail analytics, in-store sensors, shelf layout, machine learning, shopper behavior.*

## 1. Introduction

Modern retailers are facing a growing pressure to improve demand forecasting precision (Hoeltgebaum et al. 2021), particularly during periods of volatility when traditional sales models fail to respond quickly to shifting consumer behavior (Kamran-Disfani & Mantrala 2024). While scanner data and time-series methods have long served as the backbone of retail analytics, their retrospective nature and limited ability to capture in-store behavior hinder their effectiveness (Wolters & Huchzermeier 2021). In parallel, the growing availability of in-store technologies is generating multiple opportunities to observe and model customers' behaviors, and recent literature has underlined the potential of predictive analytics to profitably exploit the huge amount of customer data which can be collected in-store (Bradlow et al. 2017). Prior studies have modeled customers' in-store movements and purchase behaviors by relying on multiple data sources, such as RFID tags (Larson et al. 2005), 3D depth sensors (Knof et al. 2024), etc. Similarly, a potentially fruitful avenue is given by the combination of different sources of behavioral information such as POS and in-store sensors' data (Inman & Nikolova 2017) to support retailers' informed decisions to forecast store visits and sales. However, to the best of our knowledge, there are no studies modelling consumers' presence and movements inside a store in order to enable retailers to estimate a) the number of customers patronizing the store at each time frame of the day, b) the path followed by customers during their shopping experience, and c) the customer behavior in

front of the shelf in terms of which and how many products will be purchased. In this research, we take an Empirics First approach (Golder et al. 2023) to explore whether combining scanner data with in-store sensor tracking can significantly improve demand prediction, thus contributing to retailing research and practice.

## 2. Theoretical Background

Retail demand forecasting has traditionally been driven by scanner data and time-series models such as ARIMA, exponential smoothing, and seasonal decompositions (Tsay 2010). While robust under stable conditions, these models often fail in high-variability or data-sparse settings—especially for new SKUs or during demand shocks. Machine learning has shown promise in capturing complex, nonlinear relationships in transactional data (Fildes et al. 2008), but is rarely applied in-store.
The second stream focuses on shopper behavior. With these regards, prior literature has documented that both store layout and shelf layout qualify as relevant leverages for retailers to affect consumers' in-store behaviors (Garaus et al. 2015). A typical and basic measure of retail space productivity is sales per square meter (Page et al. 2019) which was found to effectively capture the extent to which product placement on shelves and organization of the shelves within the store contribute to generating sales (Bezawada et al. 2009). Traditional research and practice in retailing have widely relied on checkout data to identify the "hot" and "cold" store areas in terms of customer density (Pantano et al 2021). The underlying assumption is that the higher the number of products in customers' baskets – as revealed by checkout data – the higher the density of customers in the area of the store where the product is shelved. In the present study, we challenge this assumption as there might be a store area with a huge level of customer crowding, but with very low levels of demand for the products shelved in that area. Checkout data would erroneously lead to label that area as "cold", failing to capture the high levels of customers' passage. By analogy, this situation can be reconducted to a very common situation in digital advertising: the conversion rate of an ad hosted on a webpage is not given merely by the number of clicks on the ad, but by the ratio between the number of clicks and the number of impressions (Haans et al. 2013). In the context of retail stores, the conversion rate of a shelf might be expressed as the ratio between the number of times a product is put on the shelf and the number of people who stopped in front of the product. The contribution of AI and computer vision lies exactly here, since they provide the unprecedented opportunity to obtain very precise estimates about the number of customers exposed to each single portion of the shelf at any point in time (Guha et al 2021).
Early retail analytics relied on manual observation, but modern research has turned to computer vision, RFID, and sensor technologies to track in-store paths, dwell time, and shelf interaction (Hui et al. 2013). These behaviors signal consideration and interest, even when they do not lead to purchase—offering a more complete picture of demand. Yet, most studies fall short on the integration of these data into formal predictive systems. Nonetheless, an estimate of retailer shelves' conversion rate as well as detailed trajectory data would provide very relevant indications to support retail managers in the design of the store and shelf layout. An appropriate store layout does not fulfill only customers' utilitarian needs, such as assisting them to purchase more efficiently (Morales et al. 2005) or exploring the store more in depth (Mohan et al. 2012), but it extends also to the experiential side of shopping triggering positive emotions and satisfaction (Terblanche 2018). Accordingly, consumer demand in a retail setting can be forecasted starting from the observation of how consumers behave within a given store and shelf layout.

## 3. Methodology

We collected data for this study from October 2024 to March 2025 in two large-format supermarkets (each exceeding 1,000 square meters) located in Italy. Our proposed system

used motion-detection cameras installed across a store's ceiling together with mobile antennas to detect customer paths and dwell times, all while ensuring compliance with GDPR privacy standards. The cameras recorded anonymized data on the presence, walking paths, and stopping behavior of customers across different store zones and directly in front of shelves. Meanwhile, the antennas captured signals from mobile devices to validate footfall estimates and enrich trajectory tracking. This multi-sensor infrastructure produced spatiotemporal datasets indicating how many customers entered the store, how they navigated the aisles, where they paused, and for how long.

These behavioral data streams were then integrated with planogram layouts and point-of-sale (POS) transaction data, enabling us to link customer paths and dwell instances to specific shelf areas and SKUs.

The resulting dataset serves as the foundation for training deep learning models to forecast demand, leveraging both traditional sales inputs and rich in-store behavioral signals.

## 4. Future Analyses

With this integrated behavioral and transactional dataset, we plan to perform different types of analyses. First, beyond predicting individual SKU demand, these data allow for the direct computation of a shelf conversion rate. This metric can help retailers more precisely evaluate the effectiveness of shelf layouts and optimize planogram strategies.

Second, detailed trajectory data captured via mobile antennas allow to perform unsupervised machine learning clustering of customer paths within the store. Such an approach would identify distinct shopping patterns or missions (e.g., quick grab-and-go vs. exploratory shopping). By probabilistically linking these clusters to checkout baskets, we could assess how different in-store movement behaviors translate into purchasing outcomes, offering deeper insights into the interplay between navigation and conversion.

Finally, integrating data on shopping carts—when available through cart-mounted sensors—with point-of-sale receipts would enable us to study not only where and how long customers dwell, but also what items they actively carry before final purchase.

Altogether, these opportunities highlight how the fusion of in-store sensor data with traditional sales records can drive a new generation of analytics to support store design, category management, and personalized marketing interventions.

## References

Bezawada, R., Balachander, S., Kannan, P. K., & Shankar, V. (2009). Cross-category effects of aisle and display placements: a spatial modeling approach and insights. *Journal of Marketing*, *73*(3), 99-117.

Bradlow, E. T., Gangwar, M., Kopalle, P., & Voleti, S. (2017). The role of big data and predictive analytics in retailing. *Journal of Retailing*, *93*(1), 79-95.

Fildes, R., Goodwin, P., Lawrence, M., & Nikolopoulos, K. (2008). Effective forecasting and judgmental adjustments: An empirical evaluation and strategies for improvement in supply chain planning. International Journal of Forecasting, 24(1), 3–19. https://doi.org/10.1016/j.ijforecast.2007.08.013

Garaus, M., Wagner, U., & Kummer, C. (2015). Cognitive fit, retail shopper confusion, and shopping value: Empirical investigation. *Journal of Business Research*, *68*(5), 1003-1011.

Golder, P. N., Mitra, D., & Moorman, C. (2023). Empirics First: Research in the Real World. Journal of Marketing, 87(1), 1–23. https://doi.org/10.1177/00222429221144460

Guha, A., Grewal, D., Kopalle, P. K., Haenlein, M., Schneider, M. J., Jung, H., ... & Hawkins, G. (2021). How artificial intelligence will affect the future of retailing. *Journal of Retailing*, *97*(1), 28-41.

Larson, J. S., Bradlow, E. T., & Fader, P. S. (2005). An exploratory look at supermarket shopping paths. *International Journal of research in Marketing*, *22*(4), 395-414.

Haans, H., Raassens, N., & van Hout, R. (2013). Search engine advertisements: The impact of advertising statements on click-through and conversion rates. *Marketing Letters*, *24*, 151-163.

Hoeltgebaum, H., Borenstein, D., Fernandes, C., & Veiga, Á. (2021). A score-driven model of short-term demand forecasting for retail distribution centers. *Journal of Retailing*, *97*(4), 715-725.

Hui, S. K., Inman, J. J., Huang, Y., & Suher, J. (2013). The effect of in-store travel distance on unplanned spending: Applications to mobile promotion strategies. Journal of Marketing, 77(2), 1–16. https://doi.org/10.1509/jm.11.0436

Inman, J. J., & Nikolova, H. (2017). Shopper-facing retail technology: A retailer adoption decision framework incorporating shopper attitudes and privacy concerns. *Journal of Retailing*, *93*(1), 7-28.

Kamran-Disfani, O., & Mantrala, M. (2024). Can crowdsourcing improve prediction accuracy in fashion retail buying?. *Journal of Retailing*, *100*(3), 404-421.

Knof, M., Stock-Homburg, R., & Schurer, J. (2024). How in-store sensor technologies can help retailers to understand their customers: overview on two decades of research. *The International Review of Retail, Distribution and Consumer Research*, *34*(3), 381-398.

Mohan, G., Sivakumaran, B., & Sharma, P. (2012). Store environment's impact on variety seeking behavior. *Journal of Retailing and Consumer Services*, *19*(4), 419-428.

Morales, A., Kahn, B. E., McAlister, L., & Broniarczyk, S. M. (2005). Perceptions of assortment variety: The effects of congruency between consumers' internal and retailers' external organization. *Journal of Retailing*, *81*(2), 159-169.

Page, B., Trinh, G., & Bogomolova, S. (2019). Comparing two supermarket layouts: The effect of a middle aisle on basket size, spend, trip duration and endcap use. *Journal of Retailing and Consumer Services*, *47*, 49-56.

Pantano, E., Pizzi, G., Bilotta, E., & Pantano, P. (2021). Enhancing store layout decision with agent-based simulations of consumers' density. *Expert Systems with Applications*, *182*, 115231.

Terblanche, N. S. (2018). Revisiting the supermarket in-store customer shopping experience. *Journal of Retailing and Consumer Services*, *40*, 48-59.

Tsay, R. S. (2010). Analysis of Financial Time Series (3rd ed.). Wiley.

Wolters, J., & Huchzermeier, A. (2021). Joint in-season and out-of-season promotion demand forecasting in a retail environment. *Journal of Retailing*, *97*(4), 726-745.

# Non-Endemic but Effective? Managerial Logic Behind Non-Endemic Retail-Media Spend

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## Abstract

Retail-media networks (RMNs) are quickly expanding their inventory to include nonendemic advertisers—brands that lack a direct merchandising relationship with the host retailer. While industry spending on these out-of-category placements is increasing, there is limited academic understanding of the managerial motives and success metrics behind such investments. This study tries to fill this gap through an exploratory, qualitative approach based on semi-structured interviews with brand decision-makers. Guided by schema congruity and halo-effect theories, the study intends to contribute to extant literature by offering insights into the strategic reasons for allocating budget to non-endemic placements and the key performance indicators (KPIs) managers aim to influence.

### 1. Introduction

Retailers have always been advertisers, but recently, owing to their ability to collect valuable data about customers' characteristics and preferences when customers visit a retailer's store (both digital and physical), they are expanding their advertising efforts to deliver more personalized content and communication. In this scenario, retailers are evolving into retail media networks (RMNs) by monetizing their customer data and offering new advertising platforms. Retail media network refers to advertising on a retailer's owned and operated assets, third-party publishers' properties, and other media content powered by the retailer's first-party shopper data (eMarketer, 2023). Statista (2024) confirms the increasing importance of retail media networks in the advertising market: considering only digital retail media advertising, worldwide expenditure grew from 103,3 billion dollars in 2021 to over 150 billion in 2024. From a brand perspective, retail media provides new ways to connect and engage with customers in a contextually relevant environment using trusted customers' data. Within the personalization paradigm, brands strive to deliver "the right message to the right consumer at the right moment" (Aguirre et al., 2016). They have rapidly integrated retail media into their marketing mix strategy to accomplish this. Decades of research show that endemic advertising, messages placed in content environments thematically related to the product, facilitates processing, heightens visual attention, and boosts attitudinal as well as behavioral responses (Goodstein, 1993; Janssens et al., 2012; Peters & Leshner, 2013; Rieger et al., 2015; Segev et al., 2014). However, a rapid shift in brand communication strategy is taking place. Today, RMNs are moving beyond endemic logic. Major platforms (e.g., Walmart Connect, Amazon) have begun selling ADV inventory to non-endemic advertisers such as automotive, financial services, or travel brands with no direct merchandising

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relationship with the retailer (Donnelly, 2025; eMarketer, 2024). Also, brands have begun placing their ads in non-endemic category RMNs to leverage retailer data and achieve priority customers wherever they shop, banking on their attention gains and incremental reach. Despite its growing prevalence, non-endemic RMN advertising remains an under-examined topic in academic literature, especially regarding brand choices and customers' responses. On the one hand, few studies have investigated why brands deliberately opt for non-endemic placements at the point of sale, or which performance metrics they expect to influence (Huettermann et al., 2023); on the other hand, the results on the exposure to nonendemic ads on customers' responses are mixed, showing a negative effect on customers' cognitive effort and decision-making process (Kwon et al., 2019). To address this gap, the present study adopts an exploratory qualitative design, based on semi-structured executive interviews, to better understand the motives that drive brands toward non-endemic ADV inventory, the performance and benefits they obtained, and their customers' responses in a new ad context, that is, RMNs. Accordingly, our guiding research questions are:

RQ1: Why do brands invest in non-endemic advertising within retail-media networks? RQ2: Which performance outcomes do they seek to achieve?

RQ3: What are the main effects of non-endemic advertising within retail-media networks on customers' behavioral response?

The study provides valuable insights into theory and practice by shedding light on how brands approach non-endemic placements by analyzing customer attitudes and behavioral intention, as well as performance metrics results.

## 2. Theoretical background

### 2.1 Ad-context endemicity and congruence theory

As Germelmann et al. (2020) state, ad-context endemicity describes the connection between advertising and media concerning content themes. In literature, endemicity embraces relevancy and expectancy. The first concerns the similarities between ad and media content, while expectancy refers to the anticipated relationship between ad and media content based on previously formed schemas (Goodman, 1980; Heckler & Childers, 1992). Bartlett (1932) defined schema as the mental connections formed in the brain while making meaning. People rely on their cognitive schemas to process, retain, and interpret the numerous advertisements they are exposed to daily (Anderson, 1988). If newly encountered cues fit smoothly with existing mental frameworks, they are considered schema-endemic (e.g., a baby model in a diaper ad). Conversely, cues are regarded as schema-non-endemic when they do not easily mesh with the established semantic network (Mandler, 1982). Based on this theory, schema-endemicity plays a pivotal role in the processing and evaluation of advertising messages, influencing the success or failure of an advertisement (Heckler & Childers, 1992; Goodstein, 1993). When an individual encounters endemic advertising, it is immediately integrated into existing schemas and does not require further elaboration (Halkias & Kokkinaki, 2011). In contrast, exposure to a non-endemic message can trigger one of two responses: viewers may simply dismiss it, choosing to attend only to information that already fits their schema (Lee & Schumann, 2004; Lee & Mason, 1999); alternatively, they may engage in extra processing to reconcile the mismatch, which requires cognitive effort. Thus, audiences are typically more comfortable with endemic advertisements (Beals, 1998). Thematic endemicity has been found to produce stronger target associations and more positive evaluations than non-endemic ones (Dahlen, 2005). The positive impact of endemic advertising has been frequently documented in different formats. Studies have found that endemicity increased visual attention, favorable attitudes, and behavioral intentions toward digital ads (Janssens et al., 2012; Jeong & King, 2010; Kim & Sundar, 2010; Peters & Leshner, 2013; Rieger et al.,

2015; Segev et al., 2014). Another evidence showed that audiences feel more comfortable with endemic ads because details about the brand are already stored in their memory (Moorman et al., 2002). This aligns with the literature on endemicity, which suggests that an endemic context facilitates comprehension of advertising (Goodstein, 1993; Kamins et al., 1991). Nevertheless, non-endemic stimuli can also positively affect customers' behavior (Heckler & Childers, 1992; Mandler, 1982). In fact, Lee (2000) found that non-endemic advertising can encourage people to pay more attention to and process information more carefully, leading to increased viewing time compared to a typical advertisement (Halkias & Kokkinaki, 2011). However, when a non-endemic placement pushes the brand–message link so far that the incongruity becomes unresolvable, viewers feel frustration, which then results in negative evaluations and reduces advertising effectiveness (Mandler, 1982; Alina & Ioan, 2013; Fleck & Maille, 2010).

### 2.2 The halo effect

The halo effect comes from social psychology. It is defined as a mental bias where people use well-known traits of a person to make judgments about unknown qualities. It occurs when an overall impression created by a single prominent trait influences how other traits are evaluated (Hickman & Lawrence, 2010; Gräf & Unkelbach, 2016). According to Gräf & Unkelbach (2016), the halo effect works in two ways: first, positive information leads to a favorable view of traits; second, negative information results in a negative view. The halo effect has become a key concept in marketing, as it can boost the perceived value and attractiveness of products and services, helping them stand out in the minds of consumers (Rosenzweig, 2007). When adapted to endemic and non-endemic communication activities, brands can obtain a "halo" effect when they opt for endemic ads because their customers are mainly driven by previous judgements about those brands and their traditional placements. On the contrary, when brands opt for non-endemic ads, they can alter their audience's perceptions because they are not able to see the congruence with the out-of-category placement immediately (Rogers et al., 2020).

### 2.3 Endemic and non-endemic retail media networks

Retail media network refers to advertising on a retailer's owned and operated assets, third-party publishers' properties, and other media content powered by the retailer's first-party shopper data (eMarketer, 2023). In other words, a retail media network can be defined as an advertising platform provided by retailers that allows brands to show advertising on owned retailers' touchpoints (Choi et al., 2024). In this vein, a retail media network can be conceived as a complementary platform to traditional advertising through which brands can better reach and engage with new audiences in a relevant context for customers, such as the point of sale. Retail media networks provide brands with new marketing opportunities, harnessing endemic and non-endemic advertising placements (eMarketer, 2024). In this context, brands are struggling to understand how to allocate their ad budgets between endemic and non-endemic since endemic advertising may not be noticed, while non-endemic advertising may be perceived as an intruder (Rogers et al., 2020). Retail media is an emergent area with limited research. As a result, this study represents a step forward by empirically analyzing the decisionmaking process of brands towards retail media networks. Indeed, while the literature explains how consumers cognitively and emotionally respond to endemic versus nonendemic cues, it provides little insight into why brand managers increasingly select non-endemic placements, especially within retail media networks (RMNs). Therefore, drawing from the congruence theory and the halo effect theory, this study explores the drivers, the effects, and the customers' behavioral responses to brands' non-endemic communication by adopting a managerial perspective.

## 3. Research design

This research aims to uncover non-endemic advertising in retail media, highlighting (i) the reasons that lead firms to allocate budget for non-endemic advertising within RMNs and (ii) the key performance indicators (KPIs) managers expect to influence through such initiatives, and (iii) the consumers' behavioral responses toward non-endemic brand advertising. To achieve these results, an exploratory qualitative research design will be used. This study is exploratory in nature (Stake, 1995) and adopts a managerial perspective, as managers, due to the nascent stage of non-endemic advertising in the retail media context, have a comprehensive view and can provide valuable insights into this emerging phenomenon. Interviews, as a strategy of inquiry (Creswell, 2008), are adopted to gain a deeper understanding of the scarcely investigated phenomenon of non-endemic advertising in RMNs. In-depth interviews are the most suitable data collection method for this research because of their flexibility and exploratory capacity (Maxwell, 2005). Interview transcripts will be uploaded to NVivo and subjected to a systematic qualitative content analysis. A structural coding will be performed (Krippendorff & Bock, 2010). The brand managers we are planning to interview will be identified following successful brand case studies that employed non-endemic advertising within their communication strategy. Moreover, we intend to apply snowball sampling, starting from retailers who already provide both endemic and nonendemic media, and brands that leverage RMNs for advertising. The gathering data process will end up with the saturation of the collected data.

## 4. Expected results

Through this qualitative explanatory research, we expect the interviews to generate broad insights. First, it is expected that the reasons that lead brands to allocating spend to non-endemic placements are: (a) incremental reach and new customer acquisition enabled by retailer data; (b) higher attention and recall created by a moderate nonendemic communication that helps the message stand out; and (c) positive halo transfer from the trusted retailer environment that offsets placement mismatch and reduces brand image concerns. Second, it is supposed that the interviews will reveal the set of KPI that brands set to assess the performance of both endemic and non-endemic ad investments. In this perspective, it is expected to uncover contingency conditions (e.g., platform characteristics, creative guidelines, and targeting rules) that are useful to turn non-endemic exposure into effective outcomes. These contingencies should clarify when the benefits of non-endemic cues outweigh the cognitive costs predicted by schema theory. Overall, the study is expected to explain why brands see non-endemic retail-media advertising as a viable growth lever and how they balance its benefits against the risks of thematic incongruence. Third, the study is expected to shed light on customers' behavioral response toward non-endemic ads. In particular, it is presumed that non-endemic ads could capture consumers' attention and activate the memorability of the ad. In addition, non-endemic ads could activate associations in consumers' minds between judgments and attitudes toward retail and brands, promoting favorable behaviors toward the brand. Finally, the findings will offer practical guidance for practitioners who must decide whether to opt for or avoid non-endemic ads within retail media networks.

## References

Aguirre, E., Roggeveen, A. L., Grewal, D., & Wetzels, M. (2016). The personalization-privacy paradox: implications for new media. Journal of consumer marketing, 33(2), 98-110.

Alina, J. M., & Ioan, P. (2013). Schema congruity-A basis for evaluating ambient advertising effectiveness. Annals of Faculty of Economics, 1(1), 1765-1774.

Anderson, N.H. 1988. A functional approach to person cognition. In A dual process model of impression formation, ed. T.K. Srull and R.S. Wyer Jr, 37–51. Hillsdale, NJ: Lawrence Erlbaum Associates.

Bartlett, F.C. 1932. Remembering: A study in experimental and social psychology. Cambridge: Cambridge University Press.

Beals, D. E. (1998). Reappropriating schema: Conceptions of development from Bartlett and Bakhtin. Mind, Culture, and Activity, 5(1), 3-24.

Choi, J., Jerath, K., & Sayedi, A. (2024). Endemic and Non-Endemic Retail Media: The Role of Brand Response. Working paper, Columbia University.

Creswell, J. W. (2008). Research Design: Qualitative, Quantitative, and Mixed Methods Approaches. Sage Publications, Inc.

Dahlén, M. (2005), "The Medium as a Contextual Cue: Effects of Creative Media Choice," Journal of Advertising, 34 (3), 89-98.

Donnelly, P. (2025), "How Non-Endemic Partnerships Are Changing Advertising in 2025". https://www.mytotalretail.com/article/how-nonendemic-partnerships-are-changing-advertising-in-2025/

eMarketer (2023). Retail media explainer. https://content-na1.emarketer.com/retailmedia-explainer eMarketer (2024), "Non-Endemic Advertising Explainer 2024". https://www.emarketer.com/content/non-endemic-advertising-explainer-2024

Fleck, N., & Maille, V. (2010). Thirty years of conflicting studies on the influence of congruence as perceived by the consumer: Overview, limitations and avenues for research. Recherche Et Applications En Marketing (English Edition), 25(4), 69-92.

Germelmann, C.C., Herrmann, J.L., Kacha, M. and Darke, P.R. (2020), "Congruence and incongruence in thematic advertisement–medium combinations: role of awareness, fluency, and persuasion knowledge", Journal of Advertising, Vol. 49 No. 2, pp. 141-164.

Goodman, G. S. (1980). Picture memory: How the action schema affects retention. Cognitive Psychology, 12(4), 473-495.

Goodstein, R. C. (1993). Category-based applications and extensions in advertising: Motivating more extensive ad processing. Journal of consumer research, 20(1), 87-99.

Gräf, M., & Unkelbach, C. (2016). Halo Effects in Trait Assessment Depend on Information Valence: Why Being Honest Makes You Industrious, but Lying Does Not Make You Lazy. Personality and Social Psychology Bulletin, 42(3), 290-310

Halkias, G., & Kokkinaki, F. (2011). How schema incongruity influences consumer responses: Exploring the degree of incongruity for different sources of discrepancy. European Advances in Consumer Research, 9, 144-150.

Heckler, S. E., & Childers, T. L. (1992). The role of expectancy and relevancy in memory for verbal and visual information: what is incongruency?. Journal of consumer research, 18(4), 475-492.

Hickman, T. M., & Lawrence, K. E. (2010). The halo effect of goodwill sponsorship versus the pitchfork effect of supporting the enemy. Journal of Sponsorship, 3(3), 265-276

Huang, Z. and Benyoucef, M. (2013), "From e-commerce to social commerce: A close look at design features", Electronic Commerce Research and Applications, Elsevier B.V., Vol. 12 No. 4, pp. 246–259.

Huettermann, M., Trail, G. T., Pizzo, A. D., & Stallone, V. (2023). Esports sponsorship: An empirical examination of esports consumers' perceptions of non-endemic sponsors. Journal of Global Sport Management, 8(2), 524-549.

Janssens, W., De Pelsmacker, P. and Geuens, M. (2012), "Online advertising and congruency effects: it depends on how you look at it", International Journal of Advertising, Vol. 31 No. 3, pp. 579-604.

Jeong, Y. and King, C.M. (2010), "Impacts of website context relevance on banner advertisement effectiveness", Journal of Promotion Management, Vol. 16 No. 3, pp. 247-264.

Kamins, M.A., Marks, L. & Skinner, D. (199l) Television commercial evaluation in the context of program induced mood: congruency versus consistency effects. Journal of Advertising, 20(2), 1-14.

Kim, N.Y. and Sundar, S.S. (2010),"Relevance to the rescue: can 'smart ads' reduce negative response to online ad clutter?" Journalism and Mass Communication Quarterly, Vol. 87 No. 2, pp. 346-363.

Krippendorff, K., & Bock, M. A. (2010). The Content Analysis Reader. Sage Publications, Inc.

Kwon, E. S., King, K. W., Nyilasy, G., & Reid, L. N. (2019). Impact of media context on advertising memory: A meta-analysis of advertising effectiveness. Journal of Advertising Research, 59(1), 99-128.

Lee, E. J., & Schumann, D. W. (2004). Explaining the special case of incongruity in advertising: Combining classic theoretical approaches. Marketing Theory, 4(1-2), 59-90.

Lee, Y. H. (2000). Manipulating ad message involvement through information expectancy: Effects on attitude evaluation and confidence. Journal of Advertising, 29(2), 29-43.

Lee, Y. H., & Mason, C. (1999). Responses to information incongruency in advertising: The role of expectancy, relevancy, and humor. Journal of consumer research, 26(2), 156-169.

Lewins, A. and Silver, C. (2007), Using Software in Qualitative Research: A Step-by-Step Guide, Condo, Vol. 96, available at: http://www.amazon.com/dp/0761949224.

Mandler, G. (1982), "The structure of value: Accounting for taste", in Clark, M.S. and Fiske, S.T. (Eds), Affect and Cognition, Lawrence Erlbaum Associates, pp. 3-36.

Maxwell, J. A. (2005). Qualitative Research Design: An Interactive Approach. Applied social research methods series (Vol. 41).

Moorman, M., Neijens, P. C., & Smit, E. G. (2002). The effects of magazine-induced psychological responses and thematic congruence on memory and attitude toward the ad in a real-life setting. Journal of Advertising, 31(4), 27-40.

Peters, S. and Leshner, G. (2013), "Get in the game: the effects of game-product congruity and product placement proximity on game players processing of brands embedded in advergames", Journal of Advertising, Vol. 42 Nos 2/3, pp. 113-130.

Rieger, D., Bartz, F. and Bente, G. (2015), "Reintegrating the ad: effects of context congruency banner advertising in hybrid media", Journal of Media Psychology, Vol. 27 No. 2, pp. 64-77.

Rosenzweig, P. (2007). Misunderstanding the nature of company performance: The halo effect and other business delusions. California Management Review, 49(4), 6-20.

Segev, S., Wang, W. and Fernandes, J. (2014), "The effects of ad–context congruency on responses to advertising in blogs", International Journal of Advertising, Vol. 33 No. 1, pp. 17-36.

Stake, R.E. (1995), The Art of Case Study Research, Sage Publications, Inc.

Statista (2024). Digital retail media advertising worldwide. https://www.statista.com/study/133308/digital

# Promuovere le Scelte Sane attraverso il Micro-Marketing Nutrizionale: una Cluster Analysis sui Fattori di Scelta dei Consumatori

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## Abstract

Questo studio analizza i fattori che influenzano le scelte dei consumatori all'interno dei punti vendita, con un focus sui prodotti per la prima colazione. Utilizzando l'Analisi delle Componenti Principali (PCA) e la cluster analysis su un campione di 473 rispondenti, sono stati identificati cinque cluster di consumatori in base alle loro preferenze e comportamenti d'acquisto. I fattori di scelta considerati includono promozioni, visibilità a scaffale, comunicazione, prezzo, qualità, familiarità con il brand, packaging, sostenibilità, gusto, etichetta nutrizionale, ingredienti e benefici specifici come controllo del peso, riduzione dello stress, miglioramento dell'umore e esigenze dietetiche. I cinque cluster identificati sono: (1) i *Fedeli risparmiatori*, (2) i *Nomadi di prodotto*, (3) i *Paladini della nutrizione*, (4) gli *Esploratori del benessere* e (5) gli *Ottimizzatori*. Per ciascun cluster vengono delineate le caratteristiche distintive e le implicazioni per strategie di micro-marketing nutrizionale. Tuttavia, lo studio presenta limitazioni legate alla raccolta dati in un'area geografica specifica e su una singola categoria di prodotto. Future ricerche potrebbero estendere il campione a livello nazionale o internazionale e ad altre categorie alimentari per verificarne la replicabilità. Inoltre, si suggerisce l'integrazione di metodi di osservazione indiretta per superare i limiti dei dati auto-riportati e approfondire le motivazioni dei consumatori attraverso metodi qualitativi.

*Keywords: micro-marketing nutrizionale; in store communication; fattori di scelta; cluster analysis; analisi delle componenti principali.*

## 1. Introduzione

L'efficacia di strategie di micro-marketing nutrizionale all'interno del punto vendita dipende in larga misura dalla comprensione approfondita dei molteplici fattori che influenzano le scelte alimentari dei consumatori. Una volta all'interno del supermercato, infatti, gli individui sono esposti a un ambiente complesso, ricco di stimoli visivi, informativi ed emozionali, che contribuiscono a modellare il comportamento d'acquisto. Le decisioni vengono spesso prese in modo rapido e sotto l'influenza simultanea di fattori economici, percettivi, informativi e motivazionali. In questo contesto, diventa fondamentale analizzare nel dettaglio le leve che guidano le preferenze individuali per poter sviluppare strategie di comunicazione e posizionamento realmente efficaci Fra queste, si citano ad esempio il prezzo e le promozioni. Il prezzo continua ad essere uno dei driver più importanti nelle scelte d'acquisto (es. Levrini & Jeffman Dos Santos, 2021; Steenhuis et al., 2011), mentre le promozioni influiscono sulle abitudini di acquisto dei consumatori, in quanto incentivano sia la scelta di cibi scontati, sia l'acquisto ripetuto dei prodotti che rientrano in tali iniziative (es. Vigna & Mainardes, 2019).

Anche la visibilità di un prodotto all'interno dello scaffale è un fattore razionale importante: la visibilità, infatti, aumenta le probabilità di scelta del prodotto (Foster et al., 2014; Glanz et al., 2020). Un'altra leva capace di influenzare le scelte del consumatore è quella dell'in-store communication (es. Chitty et al., 2017), guidandolo verso scelte alimentare più consapevoli (es. Sutton et al., 2019).

Tra i driver di scelta di un prodotto, vi sono ovviamente anche le caratteristiche intrinseche del prodotto stesso, come il gusto, la qualità e la composizione degli ingredienti. Nel contesto delle scelte alimentari, infatti, è stato dimostrato che le aspettative dei consumatori riguardo al gusto di un prodotto influenzano i processi decisionali (Saba et al., 2019) e prevedono i livelli di consumo di cibo (Roininen et al., 1999). Inoltre, Grunert (2005) suggerisce che la qualità percepita è una costruzione multidimensionale che guida le preferenze e le intenzioni di acquisto. Uno studio condotto da Verbeke (2005) mostra che la trasparenza sulla lista ingredienti aumenta la fiducia e l'intenzione d'acquisto. La lettura dell'etichetta nutrizionale (FOP) è inoltre associata a scelte alimentari più sane (Campos et al., 2011) e funge da facilitatore per decisioni rapide e consapevoli (Hodgkins et al., 2012). Infatti, anche il packaging di un prodotto è uno dei fattori di scelta, sia a livello di comunicazione che del materiale stesso di cui è composto. Quest'ultimo, infatti è un vettore comunicativo per le percezioni ambientali e di salubrità: Ampuero & Vila (2006) hanno dimostrano che i packaging sostenibili migliorano la percezione del brand, mentre Piqueras-Fiszman & Spence (2012) sottolineano che l'effetto tattile e visivo dei materiali ha un impatto sull'apprezzamento del prodotto. Difatti, l'interesse dei consumatori per la sostenibilità è in costante crescita: secondo Aschemann-Witzel & Zielke (2017), i consumatori sono disposti a pagare di più per prodotti percepiti come sostenibili. Inoltre, anche la familiarità con il brand risulta essere un driver di scelta di un prodotto, in quanto aumenta la fiducia e riduce il rischio percepito dell'acquisto (Jacoby et al., 1971; Keller, 1993). Oltre ai fattori intrinsechi di prodotto, vi sono anche i benefici che il prodotto può portare ai consumatori. Ad esempio, Lowe et al. (2006) evidenziano che i consumatori orientati al controllo del peso preferiscono prodotti a basso contenuto calorico, con claim specifici legati peso; questo accade anche con i consumatori che seguono un regime alimentare specifico (es. celiaci, vegetariani, vegani, etc.), che risultano sono più attenti agli ingredienti e più inclini a leggere le etichette (Lea et al., 2006). Altri consumatori, invece, utilizzano il cibo per ottenere un effetto di "comfort" e vengono scelti per il loro effetto rilassante, soprattutto in situazioni emotivamente cariche (Macht, 2008). Infatti, il cibo può influenzare l'umore attraverso meccanismi biochimici e psicologici: Steenhuis et al. (2009) hanno dimostrato che la ricerca di gratificazione immediata, guida spesso l'acquisto di determinati alimenti, soprattutto i più indulgenti.

## 2. Inquadramento teorico

Negli studi di marketing e comportamento del consumatore, l'analisi degli Stili Decisionali dei Consumatori (Consumer Decision-Making Styles, CDM) si è affermata come un approccio teorico consolidato per interpretare le modalità attraverso cui gli individui effettuano scelte d'acquisto. Questo quadro interpretativo consente di identificare pattern ricorrenti di comportamento, che riflettono preferenze, attitudini e strategie decisionali distintive e si è dimostrato estremamente efficace nell'analisi del comportamento d'acquisto in una varietà di contesti di retail (es. Cowart & Goldsmith, 2007; Bakewell & Mitchell, 2003). Ricerche precedenti li hanno applicati con successo al fine di comprendere come i consumatori effettuano scelte in diversi ambiti, dall'abbigliamento (es. Thangavel et al., 2022; Walsh et al., 2001) al settore dell'auomotive (es. Nayeem & Marie-IpSooching, 2022). Nel contesto del grocery, i CDM sono stati utilizzati per studiare gli acquisti di prodotti alimentari (Anić et al., 2014, 2015; Thomas et al., 2013), ma anche prodotti per il benessere (es. Maggioni et al., 2019) e biologici (es. Prakash et al., 2018). In particolare, dallo studio di Maggioni et al. (2019) è emerso che l'ambiente di vendita incide sul benessere associato allo shopping, ma in

modo significativamente diverso tra i diversi profili di consumatori. Prakash et al. (2018) hanno riscontrato cinque stili decisionali che influenzato l'intenzione all'acquisto di prodotti biologici. Un filone crescente della letteratura supporta l'idea che degli interventi micro-targettizzati possano incrementare la probabilità di scelta di prodotti salutari (es. Bedard & Kuhn, 2015; Langen & Huber, 2022; John et al., 2024). Ad esempio, Langen & Huber (2022) hanno dimostrato che una campagna di couponing personalizzata per prodotti a basso contenuto di zuccheri ha incrementato le vendite rispetto al gruppo di controllo. Analogamente, John et al. (2024) hanno applicato un clustering algoritmico al fine di sviluppare profili comportamentali in un supermercato, mostrando che la promozione di snack salutari era significativamente più efficace nei cluster identificati come "consapevoli nutrizionalmente". Dunque, in questa prospettiva, il "micro-marketing nutrizionale" si propone come una leva d'intervento che ha lo scopo di raggiungere gruppi di consumatori specifici. Vi è dunque una forte connessione tra il micro-marketing e la segmentazione comportamentale, in quanto la possibilità di personalizzare campagne di marketing in funzione delle caratteristiche latenti dei consumatori permette non solo di incrementare l'efficacia comunicativa, ma anche di ottimizzare il rapporto costo/beneficio degli interventi (Reutterer et al., 2006). Il micro-marketing è nato al fine di raggiungere i consumatori con accurata precisione (Zhang, 2019). Oggi, le aziende creano e sviluppano campagne di marketing personalizzate al fine di raggiungi segmenti target di clienti (Dobson, 2006; Kotler e Armstrong, 2010), considerandola la strategia più efficace per far crescere il proprio brand e la propria impresa (Anyadighibe et al., 2014). L'obiettivo che si pongono è infatti quello di ottenere il maggior valore possibile da ciascun consumatore (Dobson, 2006). Infatti, le aziende sono capaci di influenzare le intenzioni di acquisto dei consumatori personalizzando le strategie di marketing, allineandole agli interessi e alle preferenze dei clienti (Tuan et al., 2025).

In questo contesto, la cluster analysis risulta essere una metodologia atta a identificare gruppi omogenei (es. Ngai & Wu, 2022). L'applicazione di tecniche di cluster analysis è già stata sperimentata in questi contesti, con risultati incoraggianti, in studi di network-based marketing (es. Hill et al., 2006) e targeting predittivo con modelli bayesiani (es. Braun & Bonfrer, 2010).

Nonostante l'ampia adozione di strategie di micro-marketing nel contesto del retail (es. Ali & Rao, 2001; Ziliani, 2000), vi sono ancora pochi contributi relativi alla sua applicazione nel contesto del marketing nutrizionale in-store. Il presente studio mira ad arricchire la letteratura esistente, attraverso un approccio di natura empirica, basato su metodi robusti quali l'Analisi delle Componenti Principali (PCA) e la cluster analysis, con l'obiettivo di identificare gruppi di consumatori in base ai fattori di scelta del prodotto all'interno del punto vendita. Il contributo è duplice: da un lato, si propone un framework operativo replicabile per l'analisi sulle preferenze legate ai prodotti sani; dall'altro, si suggerisce l'applicazione dei risultati in chiave di strategie micro-marketing che mirano a incentivare l'acquisto di prodotti sani.

## 3. Metodologia

In occasione di un esperimento di marketing nutrizionale in ambiente reale nella categoria della prima colazione (biscotti, cereali, merendine), sono stati condotti dei questionari ai consumatori davanti allo scaffale. I dati sono stati raccolti in due punti vendita di due città del nord Italia, che fanno parte di una grande catena della GDO italiana. L'esperimento implementato in punto vendita riguardava un'iniziativa di comunicazione in-store che, attraverso stopper, crowner, calpestabili e bandiere, ha avuto l'obiettivo di spingere i consumatori a comprare prodotti sani facendo leva sui benefici fisici e psicofisici che essi potevano apportare al benessere dell'individuo.

Il campione consta di 473 rispondenti. Il 66% è composto da donne, il 34% da uomini. L'età media è di 51 anni (mediana: 52), mentre il livello di istruzione è abbastanza eterogeneo: il 17% ha la terza media, il 45% ha il diploma e il 38% ha la laurea.

Ai rispondenti è stato chiesto, attraverso delle scale Likert a 7 punti, di valutare l'importanza di diversi fattori al momento della scelta di un prodotto. Sulla base di questi fattori (riportati in Tabella 1) è stata condotta una cluster analysis k-medie. Infatti, è stato dimostrato come la cluster analysis consenta di individuare segmenti omogenei rispetto a variabili psicografiche, attitudinali e comportamentali (Punj & Stewart, 1983; Gorton et al., 2013) e come svolgerla sia utile in contesti nel campo del retail alimentare (es. Mazanec, 1999; Reutterer & Dan, 2021).

| FATTORI DI SCELTA | ID VARIABILE |
|---|---|
| Promozioni e offerte | *promotions* |
| Visibilità a scaffale | *shelf_visibility* |
| Comunicazione | *communication* |
| Prezzo | *price* |
| Qualità complessiva | *quality* |
| Familiarità con il brand | *brand_knowledge* |
| Packaging (materiale) | *packaging_material* |
| Packaging (informazioni) | *fop_information* |
| Sostenibilità | *sustainability* |
| Gusto | *taste* |
| Etichetta nutrizionale | *nutritional_label;* |
| Ingredienti | *ingredients* |
| Controllo del peso | *weight* |
| Ridurre lo stress | *stress_reduction* |
| Migliorare l'umore | *mood* |
| Dieta/regime alimentare particolare | *diet* |

**Tabella 3:** I fattori di scelta di un prodotto

Al fine di gestire la multicollinearità e di ridurre la complessità degli indicatori (Barbaranelli, 2007), è stata svolta l'Analisi delle Componenti Principali (PCA) con rotazione Varimax (KMO = .685; Barlett <.001). A seguito della PCA, le 16 variabili sono state ridotte a 5 fattori (Tabella 2).

| FATTORE | VARIABILI |
|---|---|
| Attributi nutrizionali | nutritional_label; ingredients; fop_infomation; sustainability |
| Packaging | communication; packaging_material; fop_information; sustainability; shelf_visibility |
| Ricerca benefici | diet; weight; stress_reduction; mood |
| Convenienza | price; promotions |
| Soddisfazione attesa | taste; brand_knowledge; quality |

**Tabella 4:** Fattori derivati dalla PCA

## 4. Risultati

Sono stati individuati 5 cluster distribuiti come in Tabella 3. Il numero di cluster è stato scelto in base all'Indice di Calinski-Harabasz (Caliński & Harabasz, 1974), all'interpretabilità dei cluster sulla base dei centri finali, all'omogeneità nei cluster e ai Test F delle ANOVA.

La cluster analysis è stata sottoposta a test di validazione dividendo il campione in due sottocampioni (Lattin et al., 2003): *calibration sample S1* (che ricopre il 70% del campione) e il *validation sample S2* (che ricopre il 30% del campione). Infine, è stato calcolato il Rand Index (=0.917), ovvero il rapporto tra il numero di coppie di soggetti per le quali le soluzioni S1 e S2 coincidono rispetto al totale delle possibili coppie di soggetti (Rand, 1971).

| FATTORI DI SCELTA | CLUSTER 1 | CLUSTER 2 | CLUSTER 3 | CLUSTER 4 | CLUSTER 5 |
|---|---|---|---|---|---|
| *numerosità* | 124 | 62 | 75 | 137 | 75 |
| *% rispetto al campione* | *26%* | *13%* | *16%* | *29%* | *16%* |

**Tabella 5:** Distribuzione del campione all'interno dei cluster

Una volta clusterizzato il campione, sono state condotte delle analisi ANCOVA, tenendo come coviariate le variabili: *pl_attitude, banner_attitude; banner_health_commitment*. Ciascuna variabile (Tabella 4) è stata misurata attraverso delle scale Likert a 7 punti.

| Variabile | Reference | Alpha |
|---|---|---|
| HEALTH | Roininen et al., 1999 | .675 |
| SELF_EFFICACY | Armitage & Conner, 1999 | .909 |
| HEALTHINESS_PRODUCT | Bui et al., 2013 | .565 |
| FAMILIARITY | Heinberg et al., 2020 | .894 |

| | | |
|---|---|---|
| FREEDOM | Van Kleef et al., 2012 | .821 |
| HEALTHINESS_DISPLAY | Grandi et al., 2020 | .669 |
| ADV_EFFECTIVNESS | Kim & Lakshmanan, 2015; Lehnert et al., 2014 | .857 |
| ADV_BEHAVIOR | Lacroix et al., 2020 | .737 |
| PL_ATTITUDE | Liljander et al., 2009 | .929 |
| BANNER_ATTITUDE | Burton et al., 1998 | .871 |
| BANNER_HEALTH_COMMITMENT | Anselmsson & Johansson, 2007 | .929 |

**Tabella 6:** Variabili misurate

### Cluster 1 - Fedeli risparmiatori

Il cluster 1 (Grafico 1) rappresenta un gruppo di consumatori che cercano principalmente la convenienza nei loro acquisti. La loro attenzione è focalizzata sul prezzo e sulle promozioni, tendendo a preferire brand e prodotti a loro familiari. Nonostante si definiscano parzialmente interessati allo stato di salute generale, acquistano prodotti salutari abbastanza spesso. L'80% del cluster acquista prodotti salutari per un'attenzione al proprio benessere psico-fisico, il 9% per perdita di peso o mantenimento della forma fisica, l'8% per ragioni di salute, difatti solo il 12% di loro soffre di allergie. Conoscono parzialmente la categoria di prodotti della prima colazione, ma consumano raramente merendine e qualche volta a settimana cereali e biscotti. Rimangono indifferenti riguardo la qualità nutrizionale dei display della prima colazione. Si sono sentiti molto liberi nella scelta dei prodotti. Il 28% di loro ha notato l'iniziativa dell'in-store communication e il 38% di loro ha acquistato almeno un prodotto che fa parte dell'iniziativa. Tuttavia, si sono sentiti poco influenzati dalla comunicazione e rimangono neutrali a un possibile cambiamento del comportamento. L'efficacia dell'iniziativa per loro è parziale. Il 29% del cluster aveva pianificato il proprio acquisto a livello di segmento, il 27% a livello dello specifico prodotto e il 13% a livello solo di marca. La restante parte ha agito d'impulso, ricordandosi solo una volta aver visto il prodotto in punto vendita (17%) o totalmente d'impulso (14%). Questo rientra in linea con il profilo del cluster, in quanto più attenti al prezzo e al fatto di conoscere il prodotto.

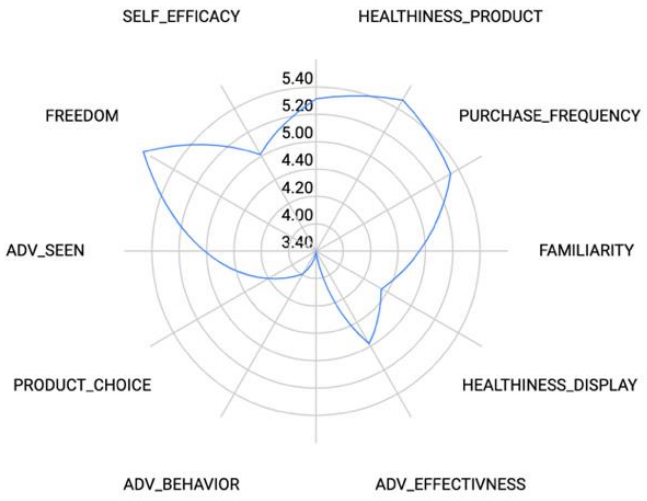



**Grafico 1:** Radiale riassuntivo del Cluster 1 - Elaborazione degli autori

L'età media del cluster è di 51.92 anni (età minima = 18; età massima più elevata = 92). Circa la metà (51%) del cluster ha solo il diploma di scuola superiore, mentre circa il 33% ha almeno la laurea. Il 16% invece ha conseguito solo la terza media. Più del 61% è impiegato presso un'azienda pubblica o privata, il 10% è studente e il 19% è in pensione. Inoltre, il 32% ha 2 componenti familiari, il 30% ne ha 3 e il 24% ne ha 4. Il 7% del cluster è monocomponente.

### Cluster 2 - Nomadi di prodotto

Il cluster 2 (Grafico 1) rappresenta un gruppo di consumatori giovani e sperimentatori attratti principalmente dalle novità. Infatti, la loro motivazione d'acquisto è fortemente orientata alla sperimentazione di nuovi prodotti, con una bassa fedeltà al marchio e una bassa considerazione per la convenienza e il packaging. Sono parzialmente interessati alla salute, tuttavia acquistano prodotti salutari abbastanza spesso. Il 66% del cluster li acquista per un'attenzione al proprio benessere psico-fisico, il 13% per perdita di peso o mantenimento della forma fisica, l'11 % per ragioni di salute e il 5% per prescrizione di un regime alimentare particolare. L'8% circa del cluster soffre di allergie o di malattie. Non conoscono molto la categoria della prima colazione, infatti consumano raramente merendine e occasionalmente biscotti e cereali. Rimangono indifferenti riguardo la qualità nutrizionale dei display della prima colazione. Si sono sentiti molto liberi nella scelta dei prodotti. Si ritengono indifferenti all'efficacia della comunicazione e poco influenzati. Ritengono che la possibilità che l'iniziativa possa far cambiare il loro comportamento è bassa. Tuttavia, il 32% di loro ha acquistato almeno un prodotto che faceva parte dell'iniziativa e il 29% di loro aveva notato la comunicazione. Il 39% aveva pianificato l'acquisto dello specifico prodotto, il 31% dello specifico segmento. Solo il 3% della specifica marca, questo a conferma che non rientra fra i loro fattori di scelta. La restante parte ha agito d'impulso, ricordandosi solo una volta aver visto il prodotto in punto vendita (13%) o totalmente d'impulso (14%). Questo a conferma che, nonostante si ritengano poco influenzati, subiscano comunque un'influenza da parte

della comunicazione, tanto che il, il 32% di loro ha acquistato almeno un prodotto che faceva parte dell'iniziativa.




**Grafico 2:** Radiale riassuntivo del Cluster 2 - Elaborazione degli autori

Il cluster 2 è il più giovane, con un'età media di 45.15 anni (età minima = 18; età massima = 84). Poco meno della metà (48%) del cluster ha solo il diploma di scuola superiore, mentre il 39% ha almeno la laurea. Il 24% è ancora studente, mentre il 37% è impiegato presso un'azienda pubblica o privata, e circa il 21% è in pensione. Inoltre, il 31% ha 2 componenti familiari, il 24% ne ha 3 e il 23% ne ha 4. Il 15% del cluster è monocomponente.

### Cluster 3 - Paladini della nutrizione

Il cluster 3 (Grafico 3) si distingue per essere composto da consumatori maturi e consapevoli. La loro priorità è la qualità e la salubrità dei prodotti, ma anche il prezzo e le caratteristiche del packaging. Sono consumatori fedeli al marchio e abitudinari nell'acquisto di specifici prodotti. Hanno un forte interesse per la salute, acquistano spesso prodotti salutari e conoscono abbastanza i prodotti della prima colazione. Il 61% del cluster acquista prodotti salutari per un'attenzione al proprio benessere psico-fisico, il 16% per perdita di peso o mantenimento della forma fisica, il 16% per ragioni di salute e circa 3% per prescrizione di un regime alimentare particolare. Circa l'11% di loro soffre di allergie o malattie. Consumano qualche volta a settimana cereali e biscotti, mentre molto raramente le merendine. A loro avviso, i display della prima colazione hanno una salubrità parziale. Si sono sentiti molto liberi nella scelta dei prodotti. L'efficacia dell'iniziativa di in-store comunication è parziale, mentre sono rimasti indifferenti riguardo l'influenza della comunicazione sulla scelta del loro prodotto, tanto da essere indifferenti anche rispetto a un eventuale cambiamento di comportamento. Nonostante ciò, è il cluster che ha acquistato maggiormente i prodotti che fanno parte dell'iniziativa (41%). Tuttavia, solo il 27% di loro l'aveva notata. Il 55% aveva pianificato l'acquisto dello specifico prodotto, l'11% dello specifico segmento e sempre l'11% dello specifico brand. Questo conferma l'attenzione alla soddisfazione attesa del prodotto. Tuttavia, il 24% del cluster ha agito d'impulso, di cui solo il 7% perché si è ricordato dell'acquisto in punto vendita. Il 18% ha agito invece totalmente d'impulso. Questo in parte

può spiegare che il 41% del cluster ha acquistato almeno un prodotto che fa parte dell'iniziativa.




**Grafico 3**: Radiale riassuntivo del Cluster 3 - Elaborazione degli autori

È il cluster con l'età media più alta (56.16, con l'età minima più elevata = 21; età massima = 84). Circa la metà (45%) del cluster ha solo il diploma di scuola superiore, mentre il 32% ha almeno la laurea. Tuttavia, è giusto sottolineare che è il cluster con il livello di istruzione minore (terza media) più elevato (23%). Il 20% svolge un lavoro autonomo, il 39% è impiegato e il 35% è in pensione. Inoltre, il 36 % ha 2 componenti familiari, il 23% ne ha 3 e il 24% ne ha 4. Il 15% del cluster è monocomponente.

### Cluster 4 - Esploratori del benessere

Il cluster 4 (Grafico 4) rappresenta un gruppo di consumatori che uniscono consapevolezza nutrizionale al desiderio di sperimentazione. I consumatori di questo cluster cercano infatti prodotti che offrano benefici e che siano convenienti, ma allo stesso tempo sono aperti a provare novità. Il comportamento di acquisto è caratterizzato da una buona consapevolezza nutrizionale e dalla ricerca di benefici specifici nei prodotti. Sono attenti al packaging e al prezzo, ma non sono fedeli a un singolo marchio o prodotto, preferendo variare le loro scelte. Hanno un discreto interesse generale verso la salute, tuttavia acquistano spesso prodotti salutari. Il 54% del cluster acquista prodotti salutari per un'attenzione al proprio benessere psico-fisico, il 26% per perdita di peso o mantenimento della forma fisica, il 13% per ragioni di salute e il 6% per prescrizione di un regime alimentare particolare, difatti è il cluster che soffre di allergie o malattie in percentuale più elevata (15%). Conoscono abbastanza bene i prodotti della prima colazione. Consumano biscotti quasi ogni giorno e occasionalmente cereali e merendine. Secondo loro, i display della prima colazione hanno una salubrità parziale. Si sono sentiti molto liberi nella scelta dei prodotti. L'efficacia dell'iniziativa di in-store comunication è parziale, mentre sono rimasti indifferenti riguardo l'influenza della comunicazione sulla scelta del loro prodotto, tanto da essere indifferenti anche rispetto a un eventuale cambiamento di comportamento. Il 37% di loro aveva visto la comunicazione (il cluster che l'ha notata di più fra tutti) e il 36% di loro ha acquistato prodotti che fanno parte dell'iniziativa. Il 34% del cluster aveva pianificato il proprio acquisto livello dello specifico prodotto, il 29% a livello di segmento, e solo il 10% a livello di marca. Questo conferma la loro caratteristica di voler sperimentare. La restante parte (27%) ha agito d'impulso, ricordandosi solo una volta aver visto il prodotto in punto vendita (15%) o totalmente

d'impulso (12%). Questo in parte può spiegare che il 36% del cluster ha acquistato almeno un prodotto che fa parte dell'iniziativa e che sia stato il cluster ad averla maggiormente notata.

**Grafico 4:** Radiale riassuntivo del Cluster 4 - Elaborazione degli autori




L'età media del cluster è di 50.28 (età minima = 18; età massima = 85). Circa la metà (49%) del cluster ha almeno la laura, mentre il 39% ha il diploma di scuola superiore, e il 21% ha solo la terza media. Circa il 50% è impiegato presso un'azienda pubblica o privata, il 9% è studente e il 27% è in pensione. Inoltre, il 29% ha 4 componenti familiari, il 26% ne ha 3 e il 27% ne ha 2. Il 16% del cluster è monocomponente.

### Cluster 5 – Ottimizzatori

Il cluster 5 (Grafico 5) rappresenta un gruppo di consumatori abitudinari e orientati al prezzo, con una bassa attenzione alla salute e agli attributi nutrizionali del prodotto, ma con un'elevata tendenza a ricercare benefici all'interno del prodotto. Il comportamento d'acquisto caratterizzato dalla ricerca della convenienza e dalla fedeltà al marchio. Sono quasi indifferenti alla salute in senso generale, difatti non acquistano prodotti salutari.

Il 65% del cluster acquista prodotti salutari per un'attenzione al proprio benessere psico-fisico, il 15% per perdita di peso o mantenimento della forma fisica, il 4% per ragioni di salute e meno del 2% per prescrizione di un regime particolare, difatti solo l'11 % di loro soffre di allergie o malattie. Non conoscono bene la categoria della prima colazione, ma consumano cereali e biscotti quasi ogni giorno, occasionalmente le merendine. Rimangono indifferenti riguardo la qualità nutrizionale dei display della prima colazione. Si sono sentiti molto liberi nella scelta dei prodotti e poco influenzati dalla comunicazione (meno rispetto a tutti gli altri cluster). Si ritengono indifferenti all'efficacia della comunicazione e rispetto a un eventuale cambiamento di comportamento (meno rispetto a tutti gli altri cluster). Difatti, solo il 20% di loro ha notato la comunicazione e sempre solo il 20% di loro ha acquistato uno dei prodotti comunicati. Il 34% aveva pianificato l'acquisto dello specifico prodotto, il 15% a livello di segmento e sempre il 15% a livello di marca. Il 36% restante ha acquistato d'impulso, di cui il 19% perché si è ricordato del prodotto in punto vendita e il 17% per impulso puro. Tuttavia, dato che si tratta di consumatori indifferenti agli attributi nutrizionali dei prodotti, l'iniziativa di comunicazione può non aver sortito un grande effetto. Nonostante ciò, il 20% di loro ha notato la comunicazione il 20% ha acquistato almeno un prodotto comunicato, questo potrebbe essere dovuto al fatto che è un tipo di consumatori che comunque ricerca i benefici nel prodotto. Dato che l'iniziativa di comunicazione faceva leva proprio su questi,

probabilmente avrà avuto effetto su quella parte di consumatori che ricerca benessere fisico o psicofisico.




**Grafico 5:** Radiale riassuntivo del Cluster 5 - Elaborazione degli autori

È il cluster con una delle età medie più basse (età minima = 18; età massima più bassa = 80). Il 41% del cluster ha solo il diploma di scuola superiore, l'11% ha la terza media, mentre circa il 14% ha almeno la laurea. Circa il 45% è impiegato presso un'azienda pubblica o privata, l'11% è studente e il 19% è in pensione. Inoltre, circa il 24% ha 4 componenti familiari, circa il 29% ne ha 3 e circa il 25% ne ha 2. Il 16% del cluster è monocomponente.

## 5. Conclusioni e Implicazioni Manageriali

Questa ricerca si è posta l'obiettivo di arricchire la letteratura esistente, attraverso un approccio di natura empirica, basato su metodi robusti, con l'obiettivo di identificare gruppi di consumatori in base ai fattori di scelta del prodotto all'interno del punto vendita. Di conseguenza, una volta segmentati i consumatori, è possibile pensare a delle strategie di micro-marketing utili alla promozione e all'acquisto di prodotti sani.

I consumatori del cluster *"Fedeli risparmiatori"* ricercano la convenienza e la familiarità con il brand. Potrebbero essere spinti all'acquisto di prodotti più sani facendo leva sulle promozioni. I marketer potrebbero pensare a sconti sui prodotti sani e implementare programmi fedeltà che premiano l'acquisto di tali prodotti. Inoltre, si potrebbe sfruttare il concetto di familiarità, proponendo versioni più sane di prodotti già leader di linea.

Il cluster dei *"Nomadi di prodotto"* è composto da consumatori giovani e sperimentatori attratti dalle novità. Per spingerli all'acquisto di prodotti più sani, bisogna puntare sull'effetto novità. Probabilmente, potrebbero ricoprire una fetta di consumatori che acquista il prodotto non appena viene lanciato sul mercato, ma difficilmente saranno fidelizzati. Tuttavia, essendo un cluster più giovane, nelle strategie di lancio potrebbero influire maggiormente le campagne pubblicitarie sui social media.

Il cluster dei "*Paladini della nutrizione*" si distinguono per l'attenzione alla qualità e salubrità dei prodotti, al prezzo e al packaging e per la fedeltà al marchio. In questo caso, le strategie di marketing dovranno concentrarsi soprattutto verso la promozione degli attributi nutrizionali

del prodotto. È un gruppo di consumatori che si fida del brand che sono soliti acquistare, quindi bisogna puntare sulla trasparenza della comunicazione. Probabilmente inserire informazioni sugli ingredienti, sulla provenienza e sui processi di produzione, potrebbe essere molto apprezzato. Fra le strategie di marketing, sia l'industria che la distribuzione potrebbero integrare anche programmi fedeltà, con premi inerenti a iniziative di un corretto stile di vita.

Il cluster degli *"Esploratori del benessere"* uniscono alla consapevolezza nutrizionale il desiderio di sperimentazione, cercando prodotti benefici e convenienti, ma sono aperti a provare novità. Per loro, la strategia più efficace per spingerli verso acquisti più salutari, potrebbe essere quella di comunicare i benefici nutrizionali dei prodotti, evidenziando gli attributi nutrizionali dello stesso. In secondo luogo, si potrebbe pensare a proporre prodotti sani innovativi e a iniziative per farli provare. Bisogna tenere in considerazione anche la loro attenzione al prezzo, magari attivando delle iniziative di couponing.

Il cluster degli *"Ottimizzatori"* è composto da consumatori abitudinari e orientati al prezzo con bassa attenzione agli attributi nutrizionali ma elevata tendenza a ricercare benefici. Analogamente alla strategia pensata per il cluster 4, per il cluster 5 potrebbe risultare efficace da un lato mettere in evidenza i benefici più "pratici" del prodotto, magari mettendo in luce attributi legati al gusto, essendo meno interessati agli attributi nutrizionali. Inoltre, sfruttando la predisposizione a scegliere prodotti conosciuti e ad affidarsi al brand, optare per una line extension verso prodotti più salutari potrebbe portarli all'acquisto di prodotti più salutari proposti dal loro brand preferito. Data l'attenzione al prezzo, sicuramente una strategia promozionale potrebbe risultare efficace.

## 6. Limiti e Future Ricerche

Questo studio non è privo di limiti. In primo luogo, i dati sono stati raccolti in due punti vendita di due città del Nord Italia, con il naturale limite di non poter generalizzare i risultati all'intero territorio nazionale o in altri contesti culturali e geografici. Sarebbe interessante che studi futuri potessero estendere il campione a un maggior numero di punti vendita e/o a altre regioni o anche in altri Paesi, per verificare se i cluster e le implicazioni di marketing individuate sono replicabili. Inoltre, l'esperimento ha riguardato la categoria della prima colazione (biscotti, cereali, merendine). Sebbene questa categoria sia un riferimento nelle abitudini alimentari degli italiani, l'estensione dei risultati ad altre categorie di prodotti alimentari sani potrebbe richiedere ulteriori indagini. Sarebbe interessante verificare se i cluster individuati presentano le stesse peculiarità o se emergono nuovi profili di consumatori al variare della categoria di prodotti, ad esempio, se si considerasse la categoria dei prodotti freschi o di frutta e verdura. Un'altra limitazione è rappresentata dalla natura auto-riportata dei dati, raccolti mediante scale Likert a 7 punti. Ciò che è auto-rapportato, difatti, non sempre corrisponde a reali comportamenti. Studi futuri potrebbero, quindi, integrare metodi di osservazione indiretta o indagare i dati di acquisto (es. scontrini, dati di carte fedeltà) per avere un'immagine più dettagliata del comportamento d'acquisto reale. Infine, lo studio ha individuato cinque principali cluster. Approfondire ulteriormente i fenomeni all'interno di ciascun cluster, attraverso metodi qualitativi, come focus group e interviste, potrebbe aiutare ad acquisire una comprensione ancora più ricca delle motivazioni e del processo decisionale da parte dei consumatori. Potrebbe essere anche interessante indagare la ricaduta a lungo termine delle strategie di micro-marketing proposte sulla salute dei consumatori e sulla qualità nutrizionale delle scelte in punto vendita.

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## Bibliografia

Ali, J., & Rao, C. P. (2001). Micro-market segmentation using a neural network model approach. *Journal of International Consumer Marketing*, *13*(2), 7-27.

Ampuero, O., & Vila, N. (2006). Consumer perceptions of product packaging. *Journal of consumer marketing*, *23*(2), 100-112.

Anić, I. D., Piri Rajh, S., & Rajh, E. (2014). Antecedents of food-related consumer decision-making styles. *British food journal*, *116*(3), 431-450.

Anić, I. D., Rajh, E., & Piri Rajh, S. (2015). Exploring consumers' food-related decision-making style groups and their shopping behaviour. *Economic research-Ekonomska istraživanja*, *28*(1), 63-74.

Anselmsson, J., & Johansson, U. (2007). Corporate social responsibility and the positioning of grocery brands: An exploratory study of retailer and manufacturer brands at point of purchase. *International Journal of Retail and Distribution Management*, *35*(10).

Anyadighibe, J.A. Ezekiel, M.S. & Awara, N.F. (2014) customer satisfaction and social media driven micromarketing: An empirical evidence. International Business and Management, 8 (1): 32-36.

Armitage, C. J., & Conner, M. (1999). Distinguishing perceptions of control from self-efficacy: Predicting consumption of a low-fat diet using the theory of planned behavior. *Journal of Applied Social Psychology*, *29*(1).

Aschemann-Witzel, J., & Zielke, S. (2017). Can't buy me green? A review of consumer perceptions of and behavior toward the price of organic food. *Journal of Consumer Affairs*, *51*(1), 211-251.

Bakewell, C., & Mitchell, V. W. (2003). Generation Y female consumer decision-making styles. *International journal of retail & distribution management*, *31*(2), 95-106.

Barbaranelli, C. (2007). Analisi dei dati.

Bedard, K., & Kuhn, P. (2015). Micro-marketing healthier choices: Effects of personalized ordering suggestions on restaurant purchases. *Journal of health economics*, *39*, 106-122.

Braun, M., & Bonfrer, A. (2011). Scalable inference of customer similarities from interactions data using Dirichlet processes. *Marketing Science*, *30*(3), 513-531.

Bui, M., Kaltcheva, V. D., Patino, A., & Leventhal, R. C. (2013). Front-of-package product labels: Influences of varying nutritional food labels on parental decisions. *Journal of Product and Brand Management*, *22*(5).

Burton, S., Lichtenstein, D. R., Netemeyer, R. G., & Garretson, J. A. (1998). A scale for measuring attitude toward private label products and an examination of its psychological and behavioral correlates. *Journal of the Academy of Marketing Science*, *26*(4).

Caliński, T., & Harabasz, J. (1974). A dendrite method for cluster analysis. *Communications in Statistics-theory and Methods*, *3*(1), 1-27.

Campos, S., Doxey, J., & Hammond, D. (2011). Nutrition labels on pre-packaged foods: a systematic review. *Public health nutrition*, *14*(8), 1496-1506.

Cascio, W. F., & Valenzi, E. R. (1977). Behaviorally anchored rating scales: Effects of education and job experience of raters and ratees. *Journal of Applied Psychology*, *62*(3), 278.

Chitty, B., Chitty, W., Luck, E., Barker, N., Sassenberg, A. M., Shimp, T. A., & Andrews, J. C. (2017). *Integrated marketing communications with online study tools 12 months*. Cengage AU.

Cowart, K. O., & Goldsmith, R. E. (2007). The influence of consumer decision-making styles on online apparel consumption by college students. *International Journal of Consumer Studies*, *31*(6), 639-647.

Dobson, P. (2006). Micro-Marketing and Discriminatory Practices in UK Grocery Retailing.

Glanz, K., Chung, A., Morales, K. H., Kwong, P. L., Wiebe, D., Giordano, D. P., ... & Karpyn, A. (2020). The healthy food marketing strategies study: design, baseline characteristics, and supermarket compliance. *Translational behavioral medicine*, *10*(6), 1266-1276.

Gorton, M., Ness, M., & White, J. (2013). Segmenting consumers using cluster analysis: an application to food motivations in the Western Balkan countries. *Food Consumer Science: Theories, Methods and Application to the Western Balkans*, 43-55.

Grandi, B., Cardinali, M. G., & Bellini, S. (2020). Health and self-control: promoting unconscious healthy food choices inside the store. *International Journal of Retail & Distribution Management*, *48*(3), 229–243.

Grunert, K. G. (2005). Food quality and safety: consumer perception and demand. *European review of agricultural economics*, *32*(3), 369-391.

Heinberg, M., Katsikeas, C. S., Ozkaya, H. E., & Taube, M. (2020). How nostalgic brand positioning shapes brand equity: differences between emerging and developed markets. *Journal of the Academy of Marketing Science*, *48*(5).

Hill, S., Provost, F., & Volinsky, C. (2006). Network-based marketing: Identifying likely adopters via consumer networks.

Hodgkins, C., Barnett, J., Wasowicz-Kirylo, G., Stysko-Kunkowska, M., Gulcan, Y., Kustepeli, Y., ... & Raats, M. (2012). Understanding how consumers categorise nutritional labels: a consumer derived typology for front-of-pack nutrition labelling. *Appetite*, *59*(3), 806-817.

Jacoby, J., Olson, J. C., & Haddock, R. A. (1971). Price, brand name, and product composition characteristics as determinants of perceived quality. *Journal of applied psychology*, *55*(6), 570.

John, J. M., Shobayo, O., & Ogunleye, B. (2023). An exploration of clustering algorithms for customer segmentation in the UK retail market. *Analytics*, *2*(4), 809-823.

Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of marketing*, *57*(1), 1-22.

Kim, J., & Lakshmanan, A. (2015). How kinetic property shapes novelty perceptions. *Journal of Marketing*, *79*(6).

Kotler, P., Armstrong, G., & Armstrong, G. M. (2010). Principles of marketing. Pearson Education India.

Lacroix, C., Rajaobelina, L., & St-Onge, A. (2020). Impact of perceived experientialadvertising on customers' responses: a multi-method approach. *International Journal of Bank Marketing*, *38*(6), 1237–1258.

Langen, H., & Huber, M. (2023). How causal machine learning can leverage marketing strategies: Assessing and improving the performance of a coupon campaign. *Plos one*, *18*(1), e0278937.

Lattin, J. M., Carroll, J. D., & Green, P. E. (2003). Analyzing Multivariate Data: Brooks. *Cole, an imprint of Thomson Learning, United States of America.*

Lehnert, K., Till, B. D., & Ospina, J. M. (2014). Advertising creativity: The role of divergence versus meaningfulness. *Journal of Advertising*, *43*(3).

Levrini, G. R., & Jeffman Dos Santos, M. (2021). The influence of price on purchase intentions: Comparative study between cognitive, sensory, and neurophysiological experiments. *Behavioral Sciences*, *11*(2), 16.

Liljander, V., Polsa, P., & van Riel, A. (2009). Modelling consumer responses to an apparel store brand: Store image as a risk reducer. *Journal of Retailing and Consumer Services*, *16*(4).

Lowe, M. R., Doshi, S. D., Katterman, S. N., & Feig, E. H. (2013). Dieting and restrained eating as prospective predictors of weight gain. *Frontiers in psychology*, *4*, 577.

Macht, M. (2008). How emotions affect eating: A five-way model. *Appetite*, *50*(1), 1-11.

Maggioni, I., Sands, S., Kachouie, R., & Tsarenko, Y. (2019). Shopping for well-being: The role of consumer decision-making styles. *Journal of Business Research*, *105*, 21-32.

Mazanec, J. A. (1999). Simultaneous positioning and segmentation analysis with topologically ordered feature maps: a tour operator example. *Journal of retailing and consumer services*, *6*(4), 219-235.

Nayeem, T., & Marie-IpSooching, J. (2022). Revisiting Sproles and Kendall's consumer styles inventory (CSI) in the 21st Century: A case of Australian consumers decision-making styles in the context of high and low-involvement purchases. *Marketing*, *7*(2), 7-17.

Ngai, E. W., & Wu, Y. (2022). Machine learning in marketing: A literature review, conceptual framework, and research agenda. *Journal of Business Research*, *145*, 35-48.

Piqueras-Fiszman, B., & Spence, C. (2012). The influence of the color of the cup on consumers' perception of a hot beverage. *Journal of Sensory Studies*, *27*(5), 324-331.

Prakash, G., Singh, P. K., & Yadav, R. (2018). Application of consumer style inventory (CSI) to predict young Indian consumer's intention to purchase organic food products. *Food quality and preference*, *68*, 90-97.

Punj, G., & Stewart, D. W. (1983). Cluster analysis in marketing research: Review and suggestions for application. *Journal of marketing research*, *20*(2), 134-148.

Rand, W. M. (1971). Objective criteria for the evaluation of clustering methods. *Journal of the American Statistical association*, *66*(336), 846-850.

Reutterer, T., & Dan, D. (2021). Cluster analysis in marketing research. In *Handbook of market research* (pp. 221-249). Cham: Springer International Publishing.

Reutterer, T., Mild, A., Natter, M., & Taudes, A. (2006). A dynamic segmentation approach for targeting and customizing direct marketing campaigns. *Journal of interactive Marketing*, *20*(3-4), 43-57.

Roininen, K., Lähteenmäki, L., & Tuorila, H. (1999). Quantification of consumer attitudes to health and hedonic characteristics of foods. *Appetite*, *33*(1), 71-88.

Saba, A., Sinesio, F., Moneta, E., Dinnella, C., Laureati, M., Torri, L., ... & Spinelli, S. (2019). Measuring consumers attitudes towards health and taste and their association with food-related life-styles and preferences. *Food quality and preference*, *73*, 25-37.

Steenhuis, I. H., Waterlander, W. E., & De Mul, A. (2011). Consumer food choices: the role of price and pricing strategies. *Public health nutrition*, *14*(12), 2220-2226.

Sutton, K., Caldwell, J., Yoshida, S., Thompson, J., & Kuo, T. (2019). Healthy food marketing and purchases of fruits and vegetables in large grocery stores. *Preventive medicine reports*, *14*, 100861.

Teng, C. C., & Wang, Y. M. (2015). Decisional factors driving organic food consumption: Generation of consumer purchase intentions. *British food journal*, *117*(3), 1066-1081.

Thangavel, P., Pathak, P., & Chandra, B. (2022). Consumer decision-making style of gen Z: A generational cohort analysis. *Global Business Review*, *23*(3), 710-728.

Thomas, T., Gunden, C., & Gray, B. (2013). Consumer decision-making styles in food purchase. *Agro Food Ind. Hi Tech*, *24*, 27-32.

Tuan, D. C., Hang, N. T. M., & Ngoc, L. T. M. (2025). The Impact Of Personalized Marketing On Purchase Intention In Online Shopping: The Mediation Role Of Trustable Experiences. In International Conference on Emerging Challenges: Sustainable Strategies in the Data-driven Economy (ICECH 2024) (pp. 225-236). Atlantis Press.

Van Kleef, E., Otten, K., & Van Trijp, H. C. M. (2012). Healthy snacks at the checkout counter: A lab and field study on the impact of shelf arrangement and assortment structure on consumer choices. *BMC Public Health*, *12*(1).

Verbeke, W. (2005). Consumer acceptance of functional foods: socio-demographic, cognitive and attitudinal determinants. *Food quality and preference*, *16*(1), 45-57.

Verbeke, W. (2008). Impact of communication on consumers' food choices: Plenary lecture. *Proceedings of the Nutrition Society*, *67*(3), 281-288.

Vigna, J. P., & Mainardes, E. W. (2019). Sales promotion and the purchasing behavior of food consumers. *Revista Brasileira de Marketing*, *18*(3), 101-126.

Walsh, G., Hennig-Thurau, T., Wayne-Mitchell, V., & Wiedmann, K. P. (2001). Consumers' decision-making style as a basis for market segmentation. *Journal of Targeting, Measurement and Analysis for Marketing*, *10*, 117-131.

Zhang, Y. (2019, February). Research on micro-marketing strategy of China time-honored Brands. In 2019 4th International Conference on Financial Innovation and Economic Development (ICFIED 2019) (pp. 102-106). Atlantis Press.

# Exploring Facilitating and Inhibiting Factors in Manufacturer–Retailer Relationships: An Empirical Case Study Within a Category Captainship Context

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## Abstract

In recent decades, supplier–retailer relationships have evolved toward more integrated, value-driven collaboration models, moving beyond traditionally divergent perspectives. This paper presents an emblematic case study of the collaboration between Procter & Gamble Italy and Gala Supermarkets, analysing the enablers and barriers in their supplier–retailer relationship within a Category Captainship theoretical framework.

*Keywords: Category Captainship; Category Management; Supplier-Retailer Relationship; Space-allocation; Display; Trade Marketing*

### 1. Introduction And Theoretical Background

Significant transformations in distribution channels have reshaped the relationship between manufacturers and retailers over time (Hibbard et al., 2001). These changes have enhanced the strategic salience of retailers in the value creation process within distribution channels. Consequently, recent decades have witnessed the development of a cooperative paradigm, promoting heightened collaboration and integration between suppliers and retailers (Day, 2000) from a value-centric perspective (Grönroos, 1997). This occurred despite the two parts traditionally holding different viewpoints. The manufacturer views the relationship from a brand-oriented perspective. At the same time, the retailer aims to optimise the whole assortment performance (Bandyopadhyay et al., 2009), or, from a Category Management perspective, to improve the categories' performance (Basuroy et al., 2001). And it is precisely within the literature on category management that the concept of Category Captainship (CC) emerged, serving as the theoretical framework for this paper. CC is defined as *"a practice wherein a retailer relies on a leading manufacturer (often referred to as the category captain) to make strategic recommendations regarding category management decisions"* (Kurtuluş et al., 2014). The existing literature on CC has primarily focused on the efficacy of this approach in addressing context-specific and technical issues. This includes studies on category results in terms of space allocation (Wu et al., 2024), the transmission of information (Timoumi et al., 2023), or the competitive implications among the leading manufacturer, the retailer, and other suppliers in the category (Alan et al., 2017). In most cases, benchmarking models were employed, often drawing on non-managerial literature. Very little attention has been given to this approach in terms of supplier-retailer interaction, delving into the repercussions that the CC can have on their dyadic relationship. Some insight emerged from the existing literature regarding the

effect of the dynamics underlying the relationship. Bandyopadhyay et al. (2009) highlighted how the CC approach is based on an intense exchange of information between the two parties, exposing them to sources of tensions such as information asymmetry or conflict of interest (Kurtulus and Toktay, 2005). No study, however, has specifically explored the factors that can positively impact the supplier-retailer relationship under category captainship, such as trust (Kumar, 1996).

This research aims to explore the factors that facilitate and inhibit the relationship between manufacturers and retailers in the context of applying a CC approach, and whether the perception of these factors creates alignment or misalignment between the two parties (Corsaro and Sneota, 2011).

## 2. Methodology

The methodological approach used in this research is the single case study (Yin, 2014), focusing on a specific supplier-retailer dyad (P&G Italy and Gala Supermarkets). This research design enabled the observation and comprehension of firm behaviour within a real-world setting (Easton, 2010) and the collection of detailed insights into the decisions firms undertook to solve practical issues (Gibbert and Ruigrok, 2010; Siggelkow, 2007). The choice of this specific case stems from a twofold consideration: on one hand the supplier's prominence is broadly acknowledged in the Category Captainship literature (Bandyopadhyay et al., 2009); on the other hand, the innovative nature of the initiative arises from the supplier's willingness to experiment with collaborative projects, even with small or medium-sized retailers. These conditions establish the case as unique and theoretically relevant (Yin, 1994). Furthermore, the study adopted a longitudinal nature, as one of the authors obtained information from the early stages of the project's implementation in stores, capturing all emerging dynamics during the observation period (Aaboen et al., 2012; Leonard-Barton, 1990). In terms of data gathering, the information needed to prepare the business case came from a variety of sources. First, several in-depth interviews were conducted, separately involving managers from both companies (Table 1).

| | **Procter & Gamble Italy** |
|---|---|
| RI | Category Development Manager |
| R2 | In-store Trade Marketing Manager |
| R3 | Trade Marketing Director |
| | **Abbondanza S.r.l. – GALA supermercati** |
| R4 | Category Manager |
| R5 | Category Manager |

**Table 1:** The interviewees' professional roles

Overall, during the two-year period 2024-2025, nine interviews were conducted, four with the supplier and five with the retailer. To address complex topics, a research protocol based on open-ended questions was followed. These questions were based on key themes from

existing literature and on insights from document analysis (Krosnick, 2018). All interviews were conducted face-to-face, recorded and then transcribed in full. The results were subsequently discussed between the authors. In case of uncertainties or missing details, clarifications were sought directly from the interviewees through telephone calls and emails (Dubois and Gadde, 2002). Secondly, two seminars were organised as part of a university course dedicated exclusively to this experience. The frequency of opportunities for discussion and data collection is the result of a decade-long relationship during which numerous initiatives and presentations of the supplier's activities were organised. Finally, the research also included the acquisition of secondary data such as reports, catalogues and company presentations. Another key secondary source was the reports of market research companies, which allowed us to identify the performance achieved by the project. To ensure the rigour of the research, all primary and secondary data that appeared ambiguous or needed clarification were shared with the interviewees for validation (Creswell and Miller, 2000). In the last phase of data analysis, the collected information was organised in a systematic way (Miles and Huberman, 1994). The transcribed interviews and all other data were examined separately by the authors. The main results were then compared to reach a shared perspective. In case of discrepancies, a crosscheck of the primary and secondary data was carried out through triangulation (Yin, 2014). This method, therefore, helped to understand the nature and magnitude of the factors that most influence the supplier-retailer relationship.

## 3. The Case Study

The emblematic case study presented focuses on the strategic collaboration between Procter & Gamble Italy (P&G Italy), the Italian branch of an American multinational consumer goods corporation, and Gala Supermarkets, a regional grocery retail chain belonging to the Abbondanza Group. Abbondanza manages 43 stores under the Gala brand across Central Italy. The group's operations are mainly concentrated in Umbria, with additional presence in the Tuscany and Marche regions. By 2020, Gala experienced a significant decline in sales within the shaving category, with negative trends affecting both the male and female segments. Products were placed near the checkout area, a choice initially driven more by theft prevention logic. To provide more space for impulse purchases in the checkout area (e.g., candy, chocolate, dried fruit), shaving products were relocated to an endcap in front of the checkout barrier. Nevertheless, the endcap end was populated with numerous other products, such as batteries and game cards, resulting in a non-optimal shopping experience.

The data analysis, based on a study of loyalty card data, revealed an opportunity gap. Performance in the shaving category was below the company average and underperformed relative to the market. While Gala's category managers began internally reflecting on potential strategies to improve category performance, they received an email from P&G's Category Manager proposing a joint collaboration. In fact, P&G internally developed a specific unit, namely the Shopper Based Design Team (SBD), dedicated to collaboration with retailers, focusing on category management strategies, implementing customised assortment revisions, planograms, and in-store display solutions. This unit operates independently of marketing and sales teams, often through non-disclosure agreements, helping every customer find the optimal category display solution. The SBD Team, prompted by the Gala's market concerns – despite their dominant position, with Gillette holding 90% of the market share – had initiated an internal reflection on what P&G could do differently or better to strengthen Gala's position and support growth in this key market. This reflection ultimately led to the first contact with Gala and the proposal of a potential solution. What began as a simple email exchange between the P&G and Gala Category Managers quickly evolved into a turning point, marking the beginning of a significant collaboration between the supplier and the retailer.

For nearly a year of negotiations, the two teams engaged in a joint design process that led to the customisation of an innovative and semi-permanent in-store solution, derived from an existing set of tools to support their clients' activities. Specifically, a wooden endcap display featuring the whole shaving category products was tailored to fit the design requirements. Both parties seized the opportunity by working closely together to align and satisfy their respective visions: a brand-oriented vision for P&G Italy and a category-oriented vision for Gala. The project was initially launched in November 2022 in the three top-performing Gala stores, showing trend increases in the shaving category of +37%, +24%, and +35% (source: Circana) after just six months. Following this success, the initiative was expanded to 12 additional stores, resulting in a 29.1% sales increase in the shaving category for Gala over the three years since the project's implementation.

The relationship described follows the principles of Category Captainship, which is applied to the collaboration between supplier and retailer with a focus on shelf-space allocation decisions. Although the project proved highly successful for both parties, it was not without challenges throughout its implementation. The proposed analysis aims to explore the factors that enable or hinder such collaborations, taking into account the perspectives and experiences of both parties.

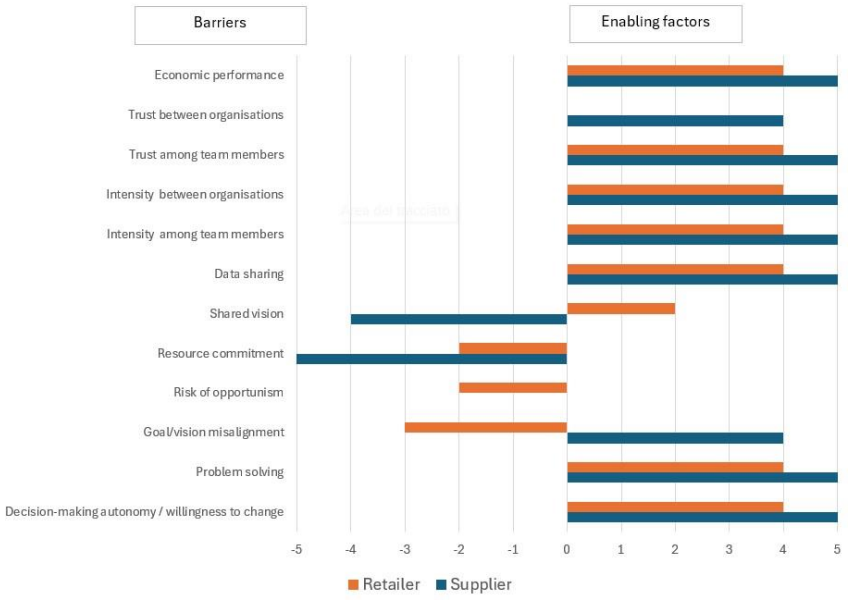



**Figure 1:** Perceived Barriers and Enablers in the Collaboration: Evaluation by Both Parties.

The factors under investigation were identified by reviewing the existing literature and analysing the specific case study. During two separate interviews, representatives from both companies were asked to evaluate each factor, indicating whether it acted as a barrier or an enabler. They were then asked to assign a score on a scale from -5 to +5: negative values (from -5 to 0) represent barriers, positive values (from 0 to +5) represent enabling factors, and a score of 0 indicates that the factor had no significant influence on the collaboration.

Figure 1 visually presents the results of the process, providing initial insights into the main differences and commonalities within the established relationship. The *economic performance*, intended as the expected benefit derived from the collaboration, proved to be a strong enabling element. Both parties identified it as a key starting point for the initiative, driven by the perceived opportunity for category and brand growth, especially considering previously

unsatisfactory sales trends and poor shelf presentation. In this study, *trust* refers to the belief in a partner's reliability, integrity, and consistent fulfilment of obligations (Sheu et al., 2006). This aspect was divided by distinguishing between *trust within the organisations*—P&G Italy and Gala—and *trust among the team members* involved in the project. While both companies consider trust between team members as a driver in the relationship, opinions diverge when it comes to inter-organisational trust: P&G Italy perceives it as a foundational element that later evolved into strong personal relationships, whereas Gala assigns a neutral value, highlighting the limited influence of the respective sales departments on the project's evolution and success. *Intensity*, identified as both the frequency and quality of communication, was also analysed from two different perspectives. The respondents were asked to define the intensity of formal communications between companies and informal ones between team members. The supplier highlighted a growing intensity over time in both dimensions: formal communication was necessary to ensure technical alignment at each stage of the project, while informal interactions among team members became more frequent and routine as the relationship progressed. The retailer rated both aspects positively, emphasising that inter-organisational communication was consistently formal, lean, and precise. Another aspect identified as fundamentally important by both companies is the *sharing of data* and results. Both companies emphasised the exceptional nature and value of data sharing in this project. P&G Italy described it as a rare, deeply collaborative case, defining their role as a knowledge sharer whose expertise was applied to the retailer's data to generate mutual advantage. Gala highlighted how the availability and exchange of objective data (e.g. on economic performance) significantly empowered the project's development. The first major misalignment in the ratings concerns the difficulty perceived by each company at the *intra-organisational* level in gaining *project approval* across different departments. While P&G Italy perceived this as a major challenge, as the relatively small size of the client was seen as insufficient to justify the significant resource investment, Gala stated that, despite the project's complexity, it progressed step by step without major internal obstacles or resistance, aside from some initial scepticism. The *resource commitment* differed between the two parties: the supplier invested financial resources, viewing the need to justify such investment in a complex context as a deterrent, while the retailer's commitment involved time and personnel, with complexity initially acting as a barrier, later overcome, yet still weighing on the relationship. Figure 1 shows that the *risk of opportunism* was perceived only by the retailer, who feared that the leader's strong positioning could steer the project toward a brand-oriented vision. P&G Italy rated this factor as neutral, acknowledging a minor, non-negative form of opportunism, viewed more as a drive for growth and change than as exploitation. The *vision misalignment at an inter-organisational level* received opposing scores: Gala rated it -3, linking the evaluation to the initial deep mediation stage between parties to shift from a supplieroriented to a category-oriented solution. Conversely, P&G Italy rated it +4, considering their brand vision aligned with the category vision due to their leading market share. *Problem-solving*, defined as the ability to effectively address arising issues, was described by both parties as a highly enabling factor in the success of the project. Gala highlighted the mutual determination to overcome obstacles and bring internally negotiated solutions forward, while P&G Italy emphasised their full commitment and availability throughout the process. Finally, *openness to change*, defined here as the internal willingness to embrace change through an entrepreneurial mindset and courage, was positively evaluated by both companies. The deliberate effort to break organisational inertia and challenge the status quo among team members was essential and enabled the project's success, making the experience feel unique and rewarding.

## 4. Conclusions And Implications

The investigation leads to very interesting results related to the differing perceptions of the relationship's nature. While the supplier tends to provide extremely positive evaluations

across most of the considered dimensions, the retailer, by contrast, highlights several critical issues. This misalignment in perception and assessments reveals a difference in the parties' attitudes: the supplier, backed by a stronger bargaining power, appears to take a somewhat "paternalistic" role, while the retailer, characterised by its minor dimensions, tries to "elevate" its own importance within the relationship. Although this overall dynamic supports the functioning of the commercial partnership, evident "areas of conflict" remain, considered as dimensions that are perceived in a diametrically opposed way (such as shared vision and goal/vision misalignment). This grey area is particularly intriguing and suggests avenues for future research aimed at understanding the intra-organisational dynamics that shape such decisions.

## References


Aaboen, L., Dubois, A., & Lind, F. (2012). Capturing processes in longitudinal multiple case studies. *Industrial Marketing Management*, *41*(2), 235-246.

Bandyopadhyay, S., Rominger, A., & Basaviah, S. (2009). Developing a framework to improve retail category management through category captain arrangements. *Journal of Retailing and Consumer Services*, *16*(4), 315-319.

Basuroy, S., Mantrala, M. K., & Walters, R. G. (2001). The impact of category management on retailer prices and performance: Theory and evidence. *Journal of Marketing*, *65*(4), 16-32.

Corsaro, D., & Snehota, I. (2011). Alignment and misalignment in business relationships. *Industrial Marketing Management*, *40*(6), 1042-1054.

Creswell, J.W. and Miller, D.L. (2000), "Determining validity in qualitative inquiry", *Theory Into Practice*, Vol. 39 No. 3, pp. 124-130.

Day, G. S. (2000). Managing market relationships. *Journal of the Academy of Marketing Science*, *28*, 24-30.
Dubois, A. and Gadde, L.E. (2002), "Systematic combining: an abductive approach to case research", *Journal of Business Research*, Vol. 55No. 7, pp. 553-560.

Easton, G. (2010), "Case study research: a critical realist approach", *Industrial Marketing Management*, Vol. 39No. 1, pp. 118-128.

Gibbert, M. and Ruigrok, W. (2010), "*T*he 'what' and 'how' of case study rigor: three strategies based on published work", *Organizational Research Methods*, Vol. 13 No. 4, pp. 710-737.

Grönroos, C. (1997). Value-driven relational marketing: from products to resources and competencies. *Journal of Marketing Management*, *13*(5), 407-419.

Hibbard, J. D., Kumar, N., & Stern, L. W. (2001). Examining the impact of destructive acts in marketing channel relationships. *Journal of Marketing Research*, *38*(1), 45-61.

Krosnick, J.A. (2018), "Questionnaire design", in Vannette, D., Krosnick, J. (Eds), *The Palgrave Handbook of Survey Research*, Palgrave Macmillan.

Kumar, N. (1996). The power of trust in manufacturer-retailer relationships. *Harvard Business Review*, *74*(6), 92.

Kurtulus, M., & Toktay, L. B. (2005). Category captainship: Who wins, who loses?. *International Commerce Review: ECR Journal*, *5*(1), 59.

Kurtuluş, M., Ülkü, S., Dotson, J. P., & Nakkas, A. (2014). The impact of category captainship on the breadth and appeal of a retailer's assortment. *Journal of Retailing*, *90*(3), 379-392.

Leonard-Barton, D. (1990). A dual methodology for case studies: Synergistic use of a longitudinal single site with replicated multiple sites. *Organization science*, *1*(3), 248-266.

Miles, M.B. and Huberman, A.M. (1994), *Qualitative Data Analysis: An Expanded Sourcebook*, SAGE Publications.

Siggelkow, N. (2007), "Persuasion with case studies", *Academy of Management Journal*, Vol. 50 No. 1, pp. 20-24.

Timoumi, A., Esseghaier, S., & Koçkesen, L. (2023). Should the fox guard the henhouse? Category captainship arrangement as a strategic information transmission mechanism. *Production and Operations Management*, *32*(10), 2985-3001.

Wu, M., Demirag, O. C., Xue, W., & Xu, M. (2024). Retail category management under shelf-space dependent demand: The effectiveness of category captainship. *International Journal of Production Economics*, *276*, 109365.

Sheu, C., Yen, H.J. & Chae, B.(2006). Determinants of supplier-retailer collaboration: Evidence from an international study. *International Journal of Operations & Production Management*, 26(1), 24-49.

10.1108/01443570610637003.

Yin, R.K. (2014), *Case Study Research: Design and Methods* (5th edition), Sage, Thousand Oaks, CA.

# Exploring Facilitating and Inhibiting Factors in Manufacturer–Retailer Relationships: An Empirical Case Study Within a Category Captainship Context

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## Abstract

In recent decades, supplier–retailer relationships have evolved toward more integrated, value-driven collaboration models, moving beyond traditionally divergent perspectives. This paper presents an emblematic case study of the collaboration between Procter & Gamble Italy and Gala Supermarkets, analysing the enablers and barriers in their supplier–retailer relationship within a Category Captainship theoretical framework.

*Keywords: Category Captainship; Category Management; Supplier-Retailer, Relationship; Space-allocation; Display; Trade Marketing*

## 1. Introduction and Theoretical Background

Significant transformations in distribution channels have reshaped the relationship between manufacturers and retailers over time (Hibbard et al., 2001). These changes have enhanced the strategic salience of retailers in the value creation process within distribution channels. Consequently, recent decades have witnessed the development of a cooperative paradigm, promoting heightened collaboration and integration between suppliers and retailers (Day, 2000) from a value-centric perspective (Grönroos, 1997). This occurred despite the two parts traditionally holding different viewpoints. The manufacturer views the relationship from a brand-oriented perspective. At the same time, the retailer aims to optimise the whole assortment performance (Bandyopadhyay et al., 2009), or, from a Category Management perspective, to improve the categories' performance (Basuroy et al., 2001). And it is precisely within the literature on category management that the concept of Category Captainship (CC) emerged, serving as the theoretical framework for this paper. CC is defined as "a practice wherein a retailer relies on a leading manufacturer (often referred to as the category captain) to make strategic recommendations regarding category management decisions" (Kurtuluş et al., 2014). The existing literature on CC has primarily focused on the efficacy of this approach in addressing context-specific and technical issues. This includes studies on category results in terms of space allocation (Wu et al., 2024), the transmission of information (Timoumi et al., 2023), or the competitive implications among the leading manufacturer, the retailer, and other suppliers in the category (Alan et al., 2017). In most cases, benchmarking models were employed, often drawing on non-managerial literature. Very little attention has been given to this approach in terms of supplier-retailer interaction, delving into the repercussions that the CC can have on their dyadic relationship. Some insight emerged from the existing literature regarding the effect of the dynamics underlying the relationship. Bandyopadhyay et al. (2009) highlighted how the CC approach is based on an intense exchange of information between

the two parties, exposing them to sources of tensions such as information asymmetry or conflict of interest (Kurtulus and Toktay, 2005). No study, however, has specifically explored the factors that can positively impact the supplier-retailer relationship under category captainship, such as trust (Kumar, 1996).

This research aims to explore the factors that facilitate and inhibit the relationship between manufacturers and retailers in the context of applying a CC approach, and whether the perception of these factors creates alignment or misalignment between the two parties (Corsaro and Sneota, 2011).

## 2. Methodology

The methodological approach used in this research is the single case study (Yin, 2014), focusing on a specific supplier-retailer dyad (P&G Italy and Gala Supermarkets). This research design enabled the observation and comprehension of firm behaviour within a real-world setting (Easton, 2010) and the collection of detailed insights into the decisions firms undertook to solve practical issues (Gibbert and Ruigrok, 2010; Siggelkow, 2007). The choice of this specific case stems from a twofold consideration: on one hand the supplier's prominence is broadly acknowledged in the Category Captainship literature (Bandyopadhyay et al., 2009); on the other hand, the innovative nature of the initiative arises from the supplier's willingness to experiment with collaborative projects, even with small or medium-sized retailers. These conditions establish the case as unique and theoretically relevant (Yin, 1994). Furthermore, the study adopted a longitudinal nature, as one of the authors obtained information from the early stages of the project's implementation in stores, capturing all emerging dynamics during the observation period (Aaboen et al., 2012; Leonard-Barton, 1990). In terms of data gathering, the information needed to prepare the business case came from a variety of sources. First, several in-depth interviews were conducted, separately involving managers from both companies (Table 1).

| | |
|---|---|
| | **Procter & Gamble Italy** |
| RI | Category Development Manager |
| R2 | In-store Trade Marketing Manager |
| R3 | Trade Marketing Director |
| | **Abbondanza S.r.l. – GALA supermercati** |
| R4 | Category Manager |
| R5 | Category Manager |

**Table 1:** The interviewees' professional roles

Overall, during the two-year period 2024-2025, nine interviews were conducted, four with the supplier and five with the retailer. To address complex topics, a research protocol based on open-ended questions was followed. These questions were based on key themes from existing literature and on insights from document analysis (Krosnick, 2018). All interviews were conducted face-to-face, recorded and then transcribed in full. The results were subsequently discussed between the authors. In case of uncertainties or missing details, clarifications were sought directly from the interviewees through telephone calls and emails (Dubois and Gadde, 2002). Secondly, two seminars were organised as part of a university course dedicated exclusively to this experience. The frequency of opportunities for

discussion and data collection is the result of a decade-long relationship during which numerous initiatives and presentations of the supplier's activities were organised. Finally, the research also included the acquisition of secondary data such as reports, catalogues and company presentations. Another key secondary source was the reports of market research companies, which allowed us to identify the performance achieved by the project. To ensure the rigour of the research, all primary and secondary data that appeared ambiguous or needed clarification were shared with the interviewees for validation (Creswell and Miller, 2000). In the last phase of data analysis, the collected information was organised in a systematic way (Miles and Huberman, 1994). The transcribed interviews and all other data were examined separately by the authors. The main results were then compared to reach a shared perspective. In case of discrepancies, a crosscheck of the primary and secondary data was carried out through triangulation (Yin, 2014). This method, therefore, helped to understand the nature and magnitude of the factors that most influence the supplier-retailer relationship.

## 3. The Case Study

The emblematic case study presented focuses on the strategic collaboration between Procter & Gamble Italy (P&G Italy), the Italian branch of an American multinational consumer goods corporation, and Gala Supermarkets, a regional grocery retail chain belonging to the Abbondanza Group. Abbondanza manages 43 stores under the Gala brand across Central Italy. The group's operations are mainly concentrated in Umbria, with additional presence in the Tuscany and Marche regions. By 2020, Gala experienced a significant decline in sales within the shaving category, with negative trends affecting both the male and female segments. Products were placed near the checkout area, a choice initially driven more by theft prevention logic. To provide more space for impulse purchases in the checkout area (e.g., candy, chocolate, dried fruit), shaving products were relocated to an endcap in front of the checkout barrier. Nevertheless, the endcap end was populated with numerous other products, such as batteries and game cards, resulting in a non-optimal shopping experience.

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Gala. The project was initially launched in November 2022 in the three top-performing Gala stores, showing trend increases in the shaving category of +37%, +24%, and +35% (source: Circana) after just six months. Following this success, the initiative was expanded to 12 additional stores, resulting in a 29.1% sales increase in the shaving category for Gala over the three years since the project's implementation.

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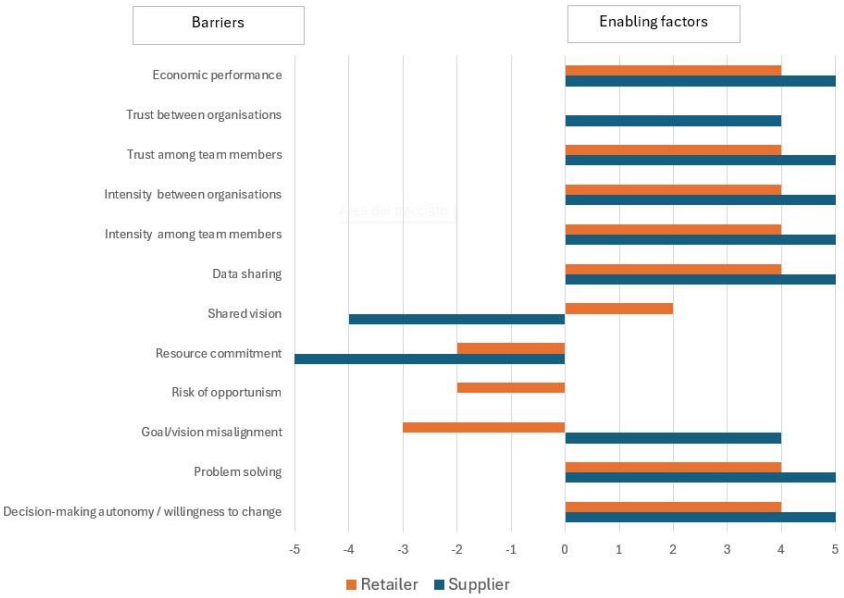



**Figure 1:** Perceived Barriers and Enablers in the Collaboration: Evaluation by Both Parties

The factors under investigation were identified by reviewing the existing literature and analysing the specific case study. During two separate interviews, representatives from both companies were asked to evaluate each factor, indicating whether it acted as a barrier or an enabler. They were then asked to assign a score on a scale from -5 to +5: negative values (from -5 to 0) represent barriers, positive values (from 0 to +5) represent enabling factors, and a score of 0 indicates that the factor had no significant influence on the collaboration.

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## References


Aaboen, L., Dubois, A., & Lind, F. (2012). Capturing processes in longitudinal multiple case studies. Industrial Marketing Management, 41(2), 235-246.

Bandyopadhyay, S., Rominger, A., & Basaviah, S. (2009). Developing a framework to improve retail category management through category captain arrangements. Journal of Retailing and Consumer Services, 16(4), 315-319.

Basuroy, S., Mantrala, M. K., & Walters, R. G. (2001). The impact of category management on retailer prices and performance: Theory and evidence. Journal of Marketing, 65(4), 16-32.

Corsaro, D., & Snehota, I. (2011). Alignment and misalignment in business relationships. Industrial Marketing Management, 40(6), 1042-1054.

Creswell, J.W. and Miller, D.L. (2000), "Determining validity in qualitative inquiry", Theory Into Practice, Vol. 39 No. 3, pp. 124-130.

Day, G. S. (2000). Managing market relationships. Journal of the Academy of Marketing Science, 28, 24-30. Dubois, A. and Gadde, L.E. (2002), "Systematic combining: an abductive approach to case research", Journal of Business Research, Vol. 55No. 7, pp. 553-560.

Easton, G. (2010), "Case study research: a critical realist approach", Industrial Marketing Management, Vol. 39No. 1, pp. 118-128.

Gibbert, M. and Ruigrok, W. (2010), "The 'what' and 'how' of case study rigor: three strategies based on published work", Organizational Research Methods, Vol. 13 No. 4, pp. 710-737.

Grönroos, C. (1997). Value-driven relational marketing: from products to resources and competencies. Journal of Marketing Management, 13(5), 407-419.

Hibbard, J. D., Kumar, N., & Stern, L. W. (2001). Examining the impact of destructive acts in marketing channel relationships. Journal of Marketing Research, 38(1), 45-61.

Krosnick, J.A. (2018), "Questionnaire design", in Vannette, D., Krosnick, J. (Eds), The Palgrave Handbook of Survey Research, Palgrave Macmillan.

Kumar, N. (1996). The power of trust in manufacturer-retailer relationships. Harvard Business Review, 74(6), 92.

Kurtulus, M., & Toktay, L. B. (2005). Category captainship: Who wins, who loses?. International Commerce Review: ECR Journal, 5(1), 59.

Kurtuluş, M., Ülkü, S., Dotson, J. P., & Nakkas, A. (2014). The impact of category captainship on the breadth and appeal of a retailer's assortment. Journal of Retailing, 90(3), 379-392.

Leonard-Barton, D. (1990). A dual methodology for case studies: Synergistic use of a longitudinal single site with replicated multiple sites. Organization science, 1(3), 248-266.

Miles, M.B. and Huberman, A.M. (1994), Qualitative Data Analysis: An Expanded Sourcebook, SAGE Publications.

Siggelkow, N. (2007), "Persuasion with case studies", Academy of Management Journal, Vol. 50 No. 1, pp. 20-24.

Timoumi, A., Esseghaier, S., & Koçkesen, L. (2023). Should the fox guard the henhouse? Category captainship arrangement as a strategic information transmission mechanism. Production and Operations Management, 32(10), 2985-3001.

Wu, M., Demirag, O. C., Xue, W., & Xu, M. (2024). Retail category management under shelf-space dependent demand: The effectiveness of category captainship. International Journal of Production Economics, 276, 109365.

Sheu, C., Yen, H.J. & Chae, B.(2006). Determinants of supplier-retailer collaboration: Evidence from an international study. International Journal of Operations & Production Management, 26(1), 24-49.

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Yin, R.K. (2014), Case Study Research: Design and Methods (5th edition), Sage, Thousand Oaks, CA.

# Cambiano le Norme, Cambiano le Scelte: l'Influenza delle Norme Sociali Descrittive Dinamiche sulle Preferenze d'Acquisto

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## Abstract

Sono molti gli studi che hanno evidenziato come la manovra delle leve dell'in-store marketing da parte dei retailer possa influenzare il comportamento e le scelte d'acquisto dei consumatori. Tuttavia, benché siano stati condotti molteplici esperimenti aventi l'obiettivo di dimostrare quali strategie adottare per raggiungere tale scopo con riferimento ai prodotti a più alta marginalità, lo stesso non accade per la promozione delle alternative più sane. Infatti, gli acquisti delle referenze dal miglior indice nutrizionale vengono considerati a maggior pianificazione e per questo si presuppone siano meno influenzati dall'ambiente di vendita. Questa prospettiva trascura il potenziale della comunicazione in store e delle norme sociali descrittive dinamiche nel modellare le decisioni d'acquisto dei consumatori. Tali norme possono, infatti, fungere da scorciatoie cognitive (euristiche), semplificando il processo decisionale in contesti caratterizzati da sovraccarico informativo come quello del punto vendita grocery. Il presente studio esplora il potenziale delle norme sociali descrittive dinamiche nell'orientare le preferenze alimentari. In particolare, si presentano i risultati di un esperimento condotto per testare l'efficacia di una comunicazione a scaffale basata su messaggi contenenti una norma sociale descrittiva dinamica. Le evidenze empiriche mostrano un aumento significativo nella scelta dei prodotti dal miglior indice nutrizionale comunicati, soprattutto tra i consumatori con basso autocontrollo. Inoltre, si dimostra come questo tipo di comunicazione possa migliorare la percezione di salubrità sia dei prodotti offerti sia dell'assortimento nel suo complesso.

*Keywords: Social norms, dynamic norms, in-store communication, self-control, healthy food choices.*

## 1. Introduzione

Negli ultimi 50 anni il fenomeno dell'obesità si è diffuso in misura crescente a livello globale, al punto da essere considerato una vera e propria epidemia (d'Errico et al., 2022). L'adiposità eccessiva rappresenta uno dei principali fattori di rischio per la morbilità e la mortalità per diabete mellito di tipo 2, malattie cardiovascolari, ictus e 13 tipi di cancro (Higgs et al., 2019; Malik et al., 2013; Abbade & Dewes, 2015; World Health Organization, 2022); contribuendo ad una riduzione dell'aspettativa di vita che va dai 5 fino ai 20 anni (d'Errico et al., 2022; Bittner & Kulesz, 2015). È stato stimato che entro il 2030 le malattie non trasmissibili (NCDs) causeranno oltre il 75% di tutti i decessi a livello globale (Doustmohammadian & Bazhan, 2021). Secondo l'OMS (World Health Organization, 2022), se non vi sarà un'inversione di tendenza, i costi globali del sovrappeso e dell'obesità raggiungeranno i 3

trilioni di dollari statunitensi all'anno entro il 2030 e supereranno i 18 trilioni di dollari statunitensi entro il 2060. Dato l'impatto negativo dell'epidemia di obesità sulla salute, sulle finanze pubbliche e sul benessere complessivo della società, è di fondamentale importanza incoraggiare gli individui ad adottare un'alimentazione sana.

È ormai largamente condiviso come una dieta equilibrata promuova la longevità e contribuisca a prevenire malattie croniche e degenerative (Cicero et al., 2023). Sebbene esistano diverse definizioni di "alimentazione sana", in generale, si considerano sani gli alimenti sicuri e nutrienti. Un alimento nutriente "fornisce nutrienti benefici (come proteine, vitamine, minerali, amminoacidi essenziali, acidi grassi essenziali, fibre alimentari) ed è caratterizzato da una minima presenza di elementi potenzialmente dannosi (ad esempio anti-nutrienti, quantità eccessive di sodio, grassi saturi, zuccheri)" (Neufeld et al., 2021, p.24). In particolare, il termine "fibra alimentare" fa riferimento ai carboidrati non digeribili di origine vegetale, che rappresentano uno dei componenti fondamentali di una dieta sana (Abdullah et al., 2015). Un adeguato apporto di fibre comporta molteplici benefici per la salute e riduce significativamente il rischio di sviluppare una condizione di obesità e le malattie non trasmissibili ad essa correlate (Kaczmarczyk et al., 2012; Gouseti et al., 2019). Tuttavia, sia in Italia che negli altri Paesi occidentali, il consumo di fibre - nonostante mostri una tendenza in crescita - rimane comunque al di sotto dei livelli raccomandati (Tao et al., 2023; GS1 Italy, 2022; 2024; AIRC - Fondazione per la Ricerca sul Cancro, 2021). Inoltre, recenti indagini condotte in Italia confermano come il consumo di alimenti ricchi di fibre sia ancora disomogeneo, con frequenze più elevate nelle donne e nei soggetti fisicamente attivi, ma significativamente più basse tra le persone obese o inattive (Galfo et al., 2024).

Alla luce di tali evidenze, appare opportuno definire strategie di marketing mirate, volte a stimolare il consumo di alimenti ricchi di fibre e caratterizzati, in generale, da profili nutrizionali migliori. Tra le principali leve di marketing è ampiamente riconosciuta l'importanza strategica del punto vendita, che funge da media critico, capace - mediante una pluralità di stimoli sensoriali - di riattivare nei consumatori esigenze momentaneamente dimenticate, sollecitare bisogni latenti e orientare i processi decisionali verso comportamenti d'acquisto non pianificati (Bellini et al., 2017). Tuttavia, sebbene il contesto di vendita rappresenti un potente strumento di influenza comportamentale, molti retailer continuano a promuovere prodotti e bevande ad alta densità energetica e poveri di nutrienti, aumentandone visibilità e accessibilità, con il risultato di rendere l'ambiente di acquisto "obesogeno" (Larsen et al., 2022).

Benché numerosi studi abbiano indagato i fattori che promuovono comportamenti alimentari più salutari, relativamente pochi si sono concentrati sul ruolo dei retailer nell'incoraggiare scelte alimentari più sane attraverso strategie di marketing in-store (Escaron et al., 2013; Cameron et al., 2016; Chan et al., 2021). Inoltre, diversi approcci di marketing nutrizionale si basano sull'idea che fare scelte alimentari sane richieda intenzionalità, pianificazione e autocontrollo (Glanz et al., 2012; Karpyn et al., 2020). Questa prospettiva non riconosce il potenziale della comunicazione in-store e delle norme sociali - in particolare delle norme descrittive - nel plasmare le decisioni dei consumatori.

È ampiamente riconosciuto come gli interventi basati sulle norme sociali possano influenzare fortemente il comportamento, specificamente i comportamenti prosociali, inclusi quelli alimentari (Robinson et al., 2014; Cruwys et al., 2015; Higgs et al., 2019). Se intese nella loro dimensione dinamica, queste norme non si limitano a descrivere consuetudini diffuse ma trasmettono l'idea che un cambiamento sia già in atto e socialmente approvato (es. "Negli ultimi anni, i clienti di questo punto vendita hanno consumato più fibre"). Ciò può spingere le persone a rivalutare gli ostacoli percepiti, ritenendoli più gestibili e il cambiamento più desiderabile (Gelfand et al., 2024; Sparkman & Walton, 2017).

Nonostante le prove emergenti sul potere persuasivo delle norme descrittive dinamiche, poche ricerche le hanno applicate direttamente alla comunicazione in punto vendita e, almeno a conoscenza degli autori, è stata riposta minore attenzione su prodotti dal miglior indice nutrizionale. Inoltre, benché la letteratura suggerisca che il gruppo di riferimento (es. "altri clienti") che mette in atto un determinato comportamento – se "vicino" al soggetto esposto alla norma sociale – possa amplificare la conformità ai messaggi normativi (Çoker et al., 2022), non è stato ancora approfondito tale aspetto con riferimento all'utilizzo delle norme sociali descrittive dinamiche per la promozione di opzioni di prodotto più sane in punto vendita.

## 2. Revisione della letteratura

### 2.1. La comunicazione a scaffale come leva di Nutrition Shopper Marketing

Gli studi comportamentali e neuroscientifici che hanno esaminato gli effetti delle promozioni in-store sul comportamento dei consumatori sono concordi nell'affermare che le attività di shopper marketing - definito come "l'utilizzo di stimoli di marketing, sviluppati sulla base di una profonda comprensione del comportamento dell'acquirente, progettati per costruire il valore del marchio, coinvolgere l'acquirente e indurlo ad effettuare un acquisto" (GMA e Deloitte, 2007) - aumentano la salienza degli stimoli sensoriali e contribuiscono alla perdita di autocontrollo da parte dei consumatori che, di conseguenza, attuano comportamenti gratificanti scegliendo referenze ipercaloriche (Labban et al., 2021).

La probabilità di effettuare acquisti non pianificati all'interno dei negozi alimentari è particolarmente elevata (dal 42% al 93%) (Payne et al., 2014), e si stima che un tipico carrello della spesa sia costituito per una percentuale che va dal 20% al 60% da prodotti non presenti sulla lista della spesa (Adam et al., 2017). Gli acquisti d'impulso, nonostante generino maggiori profitti per i retailer spesso hanno un impatto negativo sulla salute dei consumatori, contribuendo ad aumentare il rischio che questi ultimi sviluppino una condizione di obesità e malattie croniche ad essa connesse (Thorndike, 2020; Grandi et al., 2019).

Dunque, in quanto punto diretto di contatto tra domanda e offerta, i retailer possono svolgere un ruolo strategico nell'orientare le scelte dei consumatori verso prodotti più salutari e nel migliorare la qualità complessiva della dieta attraverso l'implementazione di strategie di 'Nutrition Shopper Marketing' (Grandi & Cardinali, 2021a). Il Nutrition Shopper Marketing attribuisce una propria dimensione al comportamento d'acquisto, riconosce la complessità dell'ambiente di vendita e non presuppone la razionalità dei processi decisionali. Secondo tale prospettiva le attività e gli stimoli dell'in-store marketing possono essere utilizzati in chiave salutistica per orientare le scelte verso prodotti dal miglior indice nutrizionale (Grandi & Cardinali, 2021a).

Tuttavia, è importante notare come nel contesto della GDO, la promozione di scelte alimentari salutari debba confrontarsi con vincoli economici e operativi che rendono difficile l'adozione di interventi strutturali permanenti (Gupta et al., 2022). In questo scenario, la comunicazione a scaffale rappresenta una leva d'intervento economica, flessibile e facilmente replicabile (Hobin et al., 2017). Messaggi visivi - come stopper o banner - possono essere inseriti senza modificare l'organizzazione dello scaffale e, se ben progettati, possono influenzare efficacemente le preferenze dei consumatori (Cadario & Chandon, 2020; Slapø et al., 2021; Wolgast et al., 2022). La comunicazione a scaffale può, pertanto, fungere da veicolo ideale per messaggi comportamentali ispirati alla psicologia sociale. In particolare, l'inserimento di messaggi contenenti norme sociali descrittive nella comunicazione a scaffale potrebbe configurarsi come una strategia ad alto potenziale persuasivo, in grado di orientare il comportamento dei consumatori senza ricorrere a restrizioni o incentivi economici diretti.

## 2.2. Le norme sociali descrittive dinamiche per scelte più sane

Numerosi studi hanno evidenziato come le decisioni individuali siano fortemente influenzate dal comportamento degli altri, soprattutto di persone percepite come simili o appartenenti allo stesso gruppo di riferimento (Farrow et al., 2017). In questo contesto, i concetti di *riprova sociale* ed *effetto gregge* descrivono due dinamiche distinte ma complementari: la prima si riferisce alla percezione di un comportamento come appropriato perché ampiamente diffuso, la seconda alla tendenza a conformarsi al comportamento altrui (Begho & Liu, 2024). Questi meccanismi contribuiscono a definire quanto viene comunemente inteso come *norma sociale*. Le norme sociali sono regole o aspettative condivise che orientano il comportamento degli individui all'interno di un gruppo, anche in assenza di obblighi formali o coercizione. Esse operano come guide vincolanti che definiscono ciò che è appropriato o atteso in un determinato contesto sociale (Cialdini & Trost, 1998).

Anche il comportamento alimentare viene influenzato da dinamiche ambientali esogene e, di conseguenza, dal contesto sociale (Ball et al., 2010; Abbade & Dewes, 2015). Infatti, un'ampia letteratura ha dimostrato come le persone tendano a imitare i propri pari nel momento in cui devono prendere decisioni relative alla scelta del cibo (Farrow et al., 2017; Cruwys et al., 2015). Questo fenomeno è noto come *modelling* e si riferisce alla tendenza degli individui a modellare le proprie scelte alimentari osservando quelle altrui. Il comportamento dei membri del gruppo di riferimento può così trasformarsi in una norma implicita, che fornisce indicazioni su ciò che è considerato socialmente appropriato in ambito alimentare. Poiché l'essere umano è, per sua natura, un animale sociale, tende a conformarsi a tali norme anche per ricavarne approvazione e gratificazione (Higgs et al., 2019).

In particolare, la Focus Theory of Normative Conduct (Cialdini et al., 1990) distingue tra norme ingiuntive (comportamenti socialmente approvati o disapprovati) e norme descrittive (comportamenti comunemente attuati). Le norme descrittive influenzano il comportamento attraverso un meccanismo di prova sociale implicita. L'osservazione del comportamento altrui, infatti, fornisce informazioni presuntivamente corrette sull'azione da intraprendere, contribuendo a soddisfare il bisogno di agire in modo adeguato (Mollen et al., 2021; Cialdini & Trost, 1998). In contesti di scelta caratterizzati da incertezza o sovraccarico informativo - come nel caso dei punti vendita grocery - le norme sociali descrittive possono fungere da scorciatoie cognitive (o euristiche) per semplificare il processo decisionale (Higgs, 2015). Infatti, affinché le informazioni nutrizionali possano essere incorporate nel processo decisionale dei consumatori , queste non dovrebbero essere solo disponibili al momento dell'acquisto, ma anche facilmente "elaborabili" (Grandi et al., 2021b).

L'efficacia di tali norme nel promuovere scelte alimentari salutari è stata confermata da numerosi studi condotti in contesti sperimentali e reali, come mense scolastiche e ristoranti (Mollen et al., 2013; Higgs et al., 2019; Robinson et al., 2014). Oltre a influenzare direttamente il comportamento alimentare, le norme sociali descrittive possono modificare il modo in cui le persone percepiscono le caratteristiche qualitative dei cibi. Infatti, quando un alimento è presentato come scelto dalla maggioranza, può essere considerato più sano o appetibile (Drolet-Labelle et al., 2025; Maldoy et al., 2021; Higgs, 2015; Templeton et al., 2016)

Le norme descrittive appaiono maggiormente efficaci quando i consumatori si identificano con il gruppo di riferimento che attua un determinato comportamento (Chung & Rimal, 2016). Tale efficacia risulta ancora più marcata quando il gruppo è percepito come socialmente vicino, rilevante e saliente, ad esempio nel caso di una comunità locale rispetto a una nazionale (Lapinski & Rimal, 2005). Studi sperimentali hanno dimostrato che riferimenti normativi a gruppi percepiti come prossimi (es. ospiti della stessa stanza o residenti locali) risultano più persuasivi rispetto a quelli rivolti a gruppi distanti o generalizzati

(Goldstein et al., 2008), suggerendo come sia proprio la vicinanza sociale e identitaria del gruppo di riferimento a rafforzare la pressione normativa e, di conseguenza, la probabilità di conformarsi. Nel contesto del comportamento alimentare, gli studi hanno trovato prove di come il gruppo di riferimento presentato nel messaggio contenente una norma sociale sia in grado di moderare il livello di influenza delle norme sociali nel consumo o nell'evitamento di determinati alimenti dimostrando, anche in questo caso, come una maggiore identificazione con il gruppo di riferimento sia in grado di aumentare la conformità alla norma (Stok et al., 2012; Çoker et al., 2022; Sharps & Robinson, 2016)

È importante notare come le norme sociali non siano statiche ma, piuttosto, evolvano continuamente. In particolare, l'allineamento con le tendenze sociali più ampie può favorire l'adozione di nuove norme. Infatti, le persone sono più propense a cambiare i propri comportamenti se percepiscono il cambiamento in linea con un trend generale. Dunque, le norme dinamiche possono portare le persone a rivalutare gli ostacoli al cambiamento e a percepirli come meno significativi rispetto a quanto inizialmente previsto (Gelfand et al., 2024). Di conseguenza, i messaggi contenenti una norma sociale descrittiva dinamica si rivelano, talvolta, più efficaci di quelli statici nel modificare comportamenti prosociali e sostenibili (Sparkman & Walton, 2017; Sparkman et al., 2020; Carfora et al., 2022).

Nel contesto della necessità di aumentare il consumo di fibre, il comportamento au- spicabile di scegliere alimenti che contribuiscano ad un maggiore apporto di tale nutriente nella dieta non rappresenta la norma. Di conseguenza, fare riferimento ad una norma descrittiva statica implicherebbe comunicare che solo una minoranza della popolazione consuma alimenti ricchi di fibre, con il rischio di demotivare i destinatari dall'adottare tale comportamento; dunque, ricorrere ad una norma descrittiva dinamica permetterebbe di superare tale limite. Sulla base di queste evidenze, sono state formulate le seguenti ipotesi:

- H1: la presenza di una comunicazione di marketing nutrizionale a scaffale, che fa ricorso ad un messaggio basato su una norma sociale descrittiva dinamica, aumenta la scelta di prodotti dal miglior indice nutrizionale (ricchi di fibre).
- H2: la presenza di una comunicazione di marketing nutrizionale a scaffale, che fa ricorso ad un messaggio basato su una norma sociale descrittiva dinamica, migliora la percezione di salubrità dei prodotti scelti e dell'assortimento presente a scaffale.
- H3: l'efficacia della comunicazione di marketing nutrizionale a scaffale, che fa ricorso ad un messaggio basato su una norma sociale descrittiva dinamica, è influenzata dal gruppo di riferimento.

Le norme sociali descrittive operano come scorciatoie cognitive e permettono agli individui di basarsi su modelli sociali osservati piuttosto che su ragionamenti deliberati. Di conseguenza, la loro efficacia tende ad aumentare in contesti caratterizzati da carichi cognitivi elevati o da situazioni in cui le risorse attentive e di autocontrollo sono limitate (Mollen et al., 2013). Alla luce di tali evidenze, il presente studio intende anche dimostrare come i consumatori con basso autocontrollo - che, secondo la letteratura, può essere misurato attraverso, ad esempio, il livello di fame (Cheung et al., 2017) o il 'Need for Cognition' (NFC) (Cacioppo & Petty., 1982) - siano più propensi a scegliere prodotti contrassegnati da una comunicazione basata su norme sociali in circostanze in cui l'impegno cognitivo richiesto è maggiore come in un contesto di vendita. In particolare, secondo la concettualizzazione di Cacioppo e Petty (1982), il NFC indica la misura in cui gli individui differiscono nella loro propensione a impegnarsi e a provare piacere nelle attività cognitive che richiedono uno sforzo. Alcune persone manifestano una motivazione relativamente bassa per compiti che implicano un notevole impegno mentale, mentre altre si dedicano con costanza e apprezzamento ad attività cognitivamente impegnative (Petty et al., 2009). Ne consegue la definizione di una quarta ed ultima ipotesi:

- H4: **a**: I consumatori in condizioni di basso autocontrollo, misurato tramite il livello di fame, sono più inclini a scegliere prodotti salutari in presenza di una comunicazione normativa. **b**: I consumatori con basso Need for Cognition (NFC) sono più inclini a scegliere prodotti salutari in presenza di una comunicazione normativa.

## 3. Metodologia

Con l'obiettivo di implementare un esperimento in ambiente reale, in due punti vendita di una grande catena della GDO italiana, è stato preliminarmente condotto un pre-test in ambiente simulato, su un campione di 200 partecipanti (Tabella A in Appendice). Il pre-test ha seguito un disegno sperimentale misto 3 (categoria merceologica) × 2 (gruppo di riferimento nella comunicazione) con componenti between e within-subjects. In particolare, è stato testato l'effetto della comunicazione a scaffale contenente un messaggio basato su norme sociali descrittive dinamiche sulla scelta di prodotti a marchio del distributore ricchi di fibre, appartenenti alla categoria della prima colazione. Ogni partecipante è stato esposto a tutte le condizioni sperimentali previste (within-subjects), ma assegnato casualmente a uno dei tre scaffali virtuali (biscotti, cereali o merendine) e a una delle due versioni del messaggio normativo (gruppo di riferimento locale vs nazionale) secondo uno schema between-subjects.

### 3.1. Procedura e stimoli sperimentali

Dopo il reclutamento, i partecipanti hanno compilato un questionario di profilazione per raccogliere informazioni socio-demografiche, psicografiche e comportamentali. Successivamente, ogni soggetto riceveva un codice alfanumerico indicante la condizione sperimentale assegnata (tipo di comunicazione, categoria merceologica) e l'ordine di convocazione individuale, utile alla randomizzazione complessiva del campione. Il compito consisteva nello svolgere una shopping mission simulata finalizzata a rilevare cambiamenti nella percezione dell'assortimento presente a scaffale e dei prodotti sani scelti e nella scelta di tre referenze per il proprio benessere prima e dopo l'esposizione al messaggio (Tabella 1). I dati venivano raccolti tramite questionari somministrati dallo sperimentatore (Tabella B. in Appendice per scale utilizzate).

| Fase | Condizione di scelta | Stimolo visivo | Compito del partecipante | Misure raccolte |
|---|---|---|---|---|
| Prima scelta | Libera, senza indicazioni specifiche | Scaffale con prodotti appartenenti a una delle tre categorie oggetto dello studio | Scegliere 3 referenze immaginando di fare la spesa | Livello di fame (scala Likert 1-7) |
| Seconda scelta | Condizionata al benessere personale | Stesso scaffale della prima scelta | Scegliere 3 referenze immaginando di fare la spesa, pensando al proprio | Grado di accordo/disaccordo su affermazioni relative alla scelta effettuata e alla percezione dell'assortimento presente a scaffale |

| | | | | |
|---|---|---|---|---|
| | | | benessere personale | |
| Terza scelta | Condizionata al benessere personale, con comunicazione normativa | Scaffale con banner normativo (inizio/fine scaffale) e reglette sotto i prodotti salutari | Scegliere 3 referenze immaginando di fare la spesa, pensando al proprio benessere personale | Grado di accordo/disaccordo su affermazioni relative alla scelta effettuata e alla percezione dell'assortimento presente a scaffale |

**Tabella 1:** Descrizione delle tre fasi di scelta nel protocollo sperimentale

Il test è avvenuto proiettando la ricostruzione in scala degli scaffali contenenti le categorie d'interesse realizzata attraverso il programma di grafica "Canva". La riproduzione degli scaffali consisteva in un video che permetteva al partecipante di osservare l'intero scaffale nel verso di percorrenza e nel verso opposto, per tentare di smorzare l'effetto di tale variabile.

Per quanto riguarda gli stimoli sperimentali, è stato scelto di cambiare la fonte del messaggio e di presentare il comportamento di differenti gruppi di riferimento nella comunicazione a inizio scaffale. Infatti, quando il gruppo di riferimento è rappresentato dai clienti del punto vendita la fonte del messaggio è il retailer stesso; mentre nel caso in cui il gruppo di riferimento è costituito dalla popolazione italiana, la fonte del messaggio è un osservatorio specializzato su etichette e consumi nella GDO italiana. La comunicazione è stata presentata su banner posti all'inizio e alla fine dello scaffale e richiamata da stopper di prodotto. Più nel dettaglio:

- Messaggio con gruppo di riferimento locale: "negli ultimi anni, i clienti di questo negozio hanno consumato più fibre"
- Messaggio con gruppo di riferimento nazionale: "negli ultimi anni, gli italiani hanno consumato più fibre"

## 4. Analisi e Risultati

Le analisi statistiche sono state condotte utilizzando il software IBM SPSS Statistics, con l'obiettivo di verificare le ipotesi sperimentali e valutare l'efficacia della comunicazione a scaffale basata su norme sociali descrittive dinamiche. Sono stati impiegati modelli di ANOVA a misure ripetute, test t a campioni indipendenti e regressioni logistiche, in base alla natura delle ipotesi, per analizzare sia gli effetti principali che le interazioni tra le variabili sperimentali.

L'ipotesi H1 ("La presenza di una comunicazione di marketing nutrizionale a scaffale, che fa ricorso ad un messaggio basato su una norma sociale descrittiva dinamica, aumenta la scelta di prodotti dal miglior indice nutrizionale") è stata verificata attraverso un'ANOVA a misure ripetute sulla variabile dipendente "numero di prodotti ricchi di fibre comunicati selezionati" (range: 0–3), confrontando le scelte effettuate prima e dopo l'esposizione al messaggio normativo nella seconda e terza fase della procedura sperimentale (Tabella 1). Le variabili indipendenti between-subjects erano la tipologia di comunicazione (gruppo di riferimento locale vs. gruppo di riferimento nazionale) e la categoria merceologica (biscotti, cereali, merendine). L'analisi ha evidenziato un effetto principale significativo del tempo ($F = 53.046$, $p < 0.001$, $\eta^2 = 0.215$), indicando un incremento delle scelte salutari a seguito dell'esposizione alla comunicazione, in linea con l'ipotesi H1 come mostrato anche dalla Tabella 2. Tuttavia, le interazioni tra tempo e stimolo ($p = 0.779$), tempo e categoria ($p = 0.365$) e l'interazione a tre vie ($p = 0.222$) non sono risultate significative. Ciò suggerisce che l'incremento nelle

scelte salutari è indipendente dalla tipologia di messaggio mostrato (gruppo di riferimento nazionale vs. gruppo di riferimento locale) e dalla categoria di prodotto presente a scaffale. Infine, l'analisi tra soggetti ha evidenziato un effetto significativo della categoria di prodotto sulla scelta di alimenti sani ($F = 26.115$, $p < 0.001$). In particolare, i test post-hoc indicano che i cereali sono stati scelti significativamente più spesso rispetto a biscotti e merendine ($p < 0.001$).

In generale, i partecipanti hanno selezionato più prodotti dal miglior indice nutrizionale dallo scaffale dei cereali, indipendentemente dalla condizione di esposizione alla comunicazione, probabilmente anche per via della maggiore disponibilità di referenze ricche di fibre in tale categoria.

| | Gruppo riferimento "locale" | | | Gruppo riferimento "nazionale" | | |
|---|---|---|---|---|---|---|
| Categorie | N° di prodotti sani selezionati | | | N° di prodotti sani selezionati | | |
| | 1ª scelta | 2ª scelta | 3ª scelta | 1ª scelta | 2ª scelta | 3ª scelta |
| Biscotti | 0 | 4 | 20 | 0 | 1 | 25 |
| Cereali | 11 | 29 | 40 | 15 | 27 | 44 |
| Merendine | 7 | 12 | 30 | 3 | 4 | 12 |
| **TOT.** | **18** | **45** | **90** | **18** | **32** | **81** |

**Tabella 2:** Statistiche descrittive

La seconda ipotesi H2 ("La presenza di una comunicazione di marketing nutrizionale a scaffale, che fa ricorso ad un messaggio basato su una norma sociale descrittiva dinamica, migliora la percezione di salubrità dei prodotti scelti e dell'assortimento presente a scaffale") è stata verificata attraverso due ANOVA a misure ripetute, con le variabili dipendenti "salubrità dello scaffale" e "salubrità percepita dei prodotti scelti" (Tabella B. in Appendice). Anche in questo caso le variabili between-subjects incluse nell'analisi erano la tipologia di comunicazione e la categoria di prodotto. Entrambe le analisi hanno rivelato un effetto principale significativo del tempo: $F = 79.204$, $p < 0.001$, $\eta^2 = 0.290$ per lo scaffale; $F = 24.435$, $p < 0.001$, $\eta^2 = 0.112$ per i prodotti, confermando un miglioramento nella percezione di salubrità in seguito all'esposizione al messaggio normativo. Le interazioni tra tempo e stimolo, tempo e categoria, e l'interazione a tre vie non sono risultate significative, suggerendo che l'effetto della comunicazione è indipendente sia dal tipo di messaggio sia dalla categoria merceologica.

Tuttavia, i test post-hoc hanno evidenziato differenze significative tra le categorie: la salubrità percepita dell'assortimento presente a scaffale e dei prodotti scelti è risultata significativamente più alta per la categoria dei cereali rispetto a biscotti e merendine, mentre non sono emerse differenze significative tra le categorie dei biscotti e delle merendine.

L'ipotesi H3 ("L'efficacia della comunicazione di marketing nutrizionale a scaffale, che fa ricorso ad un messaggio basato su una norma sociale descrittiva dinamica, è influenzata dal gruppo di riferimento") è stata testata attraverso un Test-T a campioni indipendenti sulle valutazioni medie relative alla comunicazione normativa tra i due gruppi sperimentali: comunicazione con gruppo di riferimento locale (i clienti di questo punto vendita) vs. comunicazione con gruppo di riferimento nazionale (gli italiani). L'analisi, tuttavia, non ha mostrato differenze statisticamente significative tra i due gruppi.

Infine, la quarta ipotesi H4 ("I consumatori con basso autocontrollo – misurato tramite livello di fame o NFC – sono più inclini a scegliere prodotti sani in presenza di comunicazione normativa") è stata verificata tramite un approccio misto. Una regressione

logistica ha rilevato un effetto significativo del livello di fame (B = 0.190, p = 0.023), indicando un incremento del 20.8% nella probabilità di selezionare il prodotto comunicato per ogni unità di aumento nel punteggio di fame. Il NFC non ha prodotto effetti significativi. Successivamente, sono state condotte due ANOVA a misure ripetute, con gruppi suddivisi tramite median split per livello di fame e NFC, al fine di indagare le interazioni tra tempo (pre/post comunicazione) e livello di autocontrollo. Anche in questo caso, il NFC non ha generato effetti significativi, mentre l'analisi relativa alla fame ha mostrato un'interazione significativa (F = 4.078, p = 0.045): i partecipanti con un livello elevato di fame hanno selezionato un numero significativamente maggiore di prodotti ricchi di fibre dopo l'introduzione della comunicazione normativa. Questi risultati suggeriscono che, in condizioni di basso autocontrollo, i consumatori tendono a fare maggiore affidamento su euristiche normative - cioè scorciatoie decisionali basate sul comportamento osservato degli altri - nel guidare le proprie scelte alimentari.

## 5. Discussione

I risultati ottenuti dalla ricerca confermano che il ricorso ad un messaggio a scaffale basato su una norma sociale descrittiva dinamica può facilitare la selezione di prodotti dal miglior indice nutrizionale, in particolare per i consumatori in condizioni di basso autocontrollo, misurato attraverso il livello di fame.

L'analisi ha evidenziato un aumento significativo nel numero medio di prodotti sani selezionati dopo l'esposizione alla comunicazione, senza differenze rilevanti tra le categorie merceologiche considerate. Tale incremento è stato più marcato tra i partecipanti con un livello di fame elevato, suggerendo che, in condizioni di vulnerabilità decisionale, l'euristica della norma sociale può fungere da guida utile per effettuare scelte salutari coerentemente con quanto dimostrato da altri studi (Cheung et al., 2017). Al contrario, il livello di Need for Cognition (NFC) non ha mostrato un effetto significativo sul comportamento d'acquisto, in parziale contrasto con quanto ipotizzato. Ciò potrebbe essere dovuto al fatto che il livello di fame, a differenza del Need for Cognition, permette di misurare la mancanza di autocontrollo nel momento stesso in cui viene effettuata la scelta mentre, al contrario, il Need for Cognition è una misura di un'attitudine (Cacioppo & Petty, 1982). In linea con le aspettative, la comunicazione ha migliorato la percezione di salubrità sia dell'assortimento presente a scaffale sia dei prodotti scelti. Tuttavia, si è osservato che la categoria merceologica influisce in modo indipendente sulla percezione di salubrità, con i cereali percepiti come significativamente più sani rispetto a biscotti e merendine. Tale effetto non interagisce con la presenza della comunicazione, indicando che l'efficacia del messaggio normativo si distribuisce uniformemente tra le categorie analizzate.

Per quanto riguarda l'effetto della fonte e del gruppo di riferimento del messaggio, non sono emerse differenze significative nell'efficacia delle due diverse modalità di comunicazione (gruppo di riferimento locale vs. gruppo di riferimento nazionale). Sebbene si ipotizzasse una maggiore efficacia della comunicazione locale, i dati non hanno supportato tale previsione. È plausibile che la comunicazione basata sul comportamento attuato da un gruppo di riferimento locale non abbia influenzato significativamente le scelte dei partecipanti, in quanto la vicinanza del gruppo potrebbe non essere stata percepita come rilevante o significativa in assenza di un contesto sociale reale o di elementi che attivassero un senso di appartenenza. Nel complesso, la comunicazione normativa ha mostrato effetti significativi sul comportamento di scelta dei prodotti, soprattutto in condizioni di scarso autocontrollo, e sulla percezione di salubrità. Al contrario, l'influenza del gruppo di riferimento e della fonte, pur teoricamente fondata, non ha trovato riscontro empirico in questo contesto sperimentale.

## 6. Limiti della ricerca

La ricerca condotta presenta diversi limiti. Innanzitutto, non è stato possibile valutare correttamente le scelte sane effettuate dai partecipanti dal momento che non si era a conoscenza di quali fossero le referenze dal miglior indice nutrizionale tra quelle a marchio industriale ma solo tra quelle a marchio commerciale. Inoltre, il questionario è stato sottoposto ai partecipanti da un intervistatore, dunque, non è possibile non considerare gli eventuali bias legati alla sua presenza. È importante notare come il campione fosse omogeneo con riferimento alle variabili socio-demografiche considerate e ,di conseguenza, non rappresentativo della popolazione, restringendo la generalizzabilità dei risultati a contesti reali di consumo. Una limitazione importante è rappresentata dal contesto di scelta in quanto la simulazione dello scaffale proiettata non permetteva una visione realistica del contesto di scelta. Infine, le scale impiegate per rilevare la percezione di salubrità dello scaffale e del prodotto hanno mostrato livelli di affidabilità moderati nella prima misurazione (rispettivamente $\alpha = 0.632$ e $\alpha = 0.686$) e solo accettabili nella seconda ($\alpha = 0.756$ e $\alpha = 0.765$), suggerendo una coerenza interna non pienamente soddisfacente, che potrebbe aver influenzato la solidità delle analisi svolte.

## 7. Conclusioni e considerazioni per la ricerca futura

Per concludere, possiamo affermare che la comunicazione a scaffale che fa ricorso ad un messaggio basato su una norma sociale descrittiva dinamica potrebbe avere un effetto positivo sulla promozione delle opzioni più sane in un contesto come quello del punto vendita, in cui spesso le scelte vengono effettuate in condizioni di basso autocontrollo. Tuttavia, contrariamente rispetto a quanto ipotizzato, l'efficacia del messaggio non è risultata influenzata dal gruppo di riferimento, suggerendo che la percezione di vicinanza sociale potrebbe non attivarsi automaticamente in un contesto di acquisto simulato. Alla luce di tali evidenze, risulta necessario testare la validità della comunicazione normativa in contesti reali di acquisto e approfondire le modalità più efficaci di presentazione del messaggio, anche in funzione delle caratteristiche e delle specifiche esigenze dei diversi segmenti di consumatori.

## Bibliografia


Abbade, E. B., & Dewes, H. (2015). Behavioral and societal drivers of an obesogenic environment worldwide. Nutrition & Food Science, 45(2), 229-241.

Abdullah, M. M., Gyles, C. L., Marinangeli, C. P., Carlberg, J. G., & Jones, P. J. (2015). Dietary fibre intakes and reduction in functional constipation rates among canadian adults: a cost-of-illness analysis. Food & Nutrition Research, 59(1), 28646.

Adam, A., Jensen, J. D., Sommer, I., & Hansen, G. L. (2017). Does shelf space management intervention have an effect on calorie turnover at supermarkets? Journal of Retailing and Consumer Services, 34, 311–318.

AIRC - Fondazione per la Ricerca sul Cancro. (2021). Le fibre alimentari: amiche della prevenzione. URL https://www.airc.it/cancro/prevenzione-tumore/alimentazione/le-fibre-alimentari-amiche-dell. Accessed: 2025-06-02.

Ball, K., Jeffery, R. W., Abbott, G., McNaughton, S. A., & Crawford, D. (2010). Is healthy beha- vior contagious: associations of social norms with physical activity and healthy eating. International Journal of Behavioral Nutrition and Physical Activity, 7, 1–9.

Begho, T., & Liu, S. (2024). Does social proof and herd behaviour drive food choices of consumers? British Food Journal, 126(3), 1050–1064.

Bellini, S., Cardinali, M. G., & Grandi, B. (2017). A structural equation model of impulse buying behaviour in grocery retailing. Journal of Retailing and Consumer Services, 36, 164-171.

Bittner, J. V., & Kulesz, M. M. (2015). Health promotion messages: The role of social presence for food choices. Appetite, 87, 336–343.

Bui, M., D. Kaltcheva, V., Patino, A., & C. Leventhal, R. (2013). Front-of-package product labels: influences of varying nutritional food labels on parental decisions. Journal of Product & Brand Management, 22(5/6), 352-361.

Cacioppo, J. T., & Petty, R. E. (1982). The need for cognition. Journal of personality and social psychology, 42(1), 116.

Cacioppo, J.T. and Petty R.E. (2011), "Need for cognition scale", American Psychological Association, doi: 10.1037/t04601-000.

Cadario, R., & Chandon, P. (2020). Which healthy eating nudges work best? A meta-analysis of field experiments. Marketing Science, 39(3), 465-486.

Cameron, A. J., Charlton, E., Ngan, W. W., & Sacks, G. (2016). A systematic review of the effectiveness of supermarket-based interventions involving product, promotion, or place on the healthiness of consumer purchases. Current Nutrition Reports, 5, 129–138.

Carfora, V., Zeiske, N., van der Werff, E., Steg, L., & Catellani, P. (2022). Adding dy- namic norm to environmental information in messages promoting the reduction of meat consumption. Environmental Communication, 16(7), 900–919. https://doi.org/10.1080/17524032.2022.2062019

Chan, J., McMahon, E., & Brimblecombe, J. (2021). Point-of-sale nutrition information interventions in food retail stores to promote healthier food purchase and intake: A systematic review. Obesity Reviews, 22(10), e13311.

Cheung, T. T., Kroese, F. M., Fennis, B. M., & De Ridder, D. T. (2017). The hunger games: Using hunger to promote healthy choices in self-control conflicts. Appetite, 116, 401–409.

Chung, A., & Rimal, R. N. (2016). Social norms: A review. Review of Communication Research, 4, 1–28. https://doi.org/10.12840/issn.2255-4165.2016.04.01.008

Cialdini, R. B., & Trost, M. R. (1998). Social influence: Social norms, conformity and compliance. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), The Handbook of Social Psychology (4th ed., pp. 151–192). McGraw-Hill.

Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. Journal of Personality and Social Psychology, 58(6), 1015–1026. https://doi.org/10.1037/0022-3514.58.6.1015

Cicero, A. F. G., Fogacci, F., & Borghi, C. (2023). An evolving definition of a "healthy diet". Nutrients, 15(9), 2212. https://doi.org/10.3390/nu15092212

Çoker, E. N., Jebb, S. A., Stewart, C., Clark, M., & Pechey, R. (2022). Perceptions of social norms around healthy and environmentally-friendly food choices: Linking the role of referent groups to behavior. Frontiers in Psychology, 13, 974830.

Cruwys, T., Bevelander, K. E., & Hermans, R. C. (2015). Social modeling of eating: A review of when and why social influence affects food intake and choice. Appetite, 86, 3–18.

d'Errico, M., Pavlova, M., & Spandonaro, F. (2022). The economic burden of obesity in italy: a cost-of-illness study. The European Journal of Health Economics, 1(16). https://doi.org/10.1007/s10198-022-01470-9

Doustmohammadian, A., & Bazhan, M. (2021). Social marketing-based interventions to promote healthy nutrition behaviors: a systematic review protocol. Systematic Reviews, 10, 1–8. https://doi.org/10.1186/s13643-021-01705-7

Drolet-Labelle, V., White, C. M., Adams, J., Kirkpatrick, S. I., Jáuregui, A., Pedraza, L. S., ... & Vanderlee, L. (2025). Perceived healthiness of sugary drinks and related social norms among adults in five countries: evidence from the International Food Policy Study. Nutrition Journal, 24(1), 1-19.

Escaron, A. L., Meinen, A. M., Nitzke, S. A., & Martinez-Donate, A. P. (2013). Supermarket and grocery store–based interventions to promote healthful food choices and eating practices: a systematic review. Preventing Chronic Disease, 10, E50.

Farrow, K., Grolleau, G., & Ibanez, L. (2017). Social norms and pro-environmental beha- vior: A review of the evidence. Ecological Economics, 140, 1–13. https://doi.org/10.1016/j.ecolecon.2017.04.017

Galfo, M., Maccati, F., Melini, F., & Melini, V. (2024). Dietary Fibre Consumption in a Sample of Italian Adults: Relationship Between Dietary Habits and Gender, Ponderal Status and Physical Activity. Journal of Health Science and Medical Research, 42(2), 20231011.

Gelfand, M. J., Gavrilets, S., & Nunn, N. (2024). Norm dynamics: interdisciplinary perspectives on social norm emergence, persistence, and change. Annual Review of Psychology, 75, 341–378. https://doi.org/10.1146/annurev-psych-032420-031316

Glanz, K., Bader, M. D., & Iyer, S. (2012). Retail grocery store marketing strategies and obesity: an integrative review. American Journal of Preventive Medicine, 42(5), 503–512.

GMA/Deloitte. (2008). Delivering the Promise of Shopper Marketing: Mastering Execution for Competitive Advantage. Washington: The Grocery Manufacturers Association.

Goldstein, N. J., Cialdini, R. B., & Griskevicius, V. (2008). A room with a viewpoint: Using social norms to motivate environmental conservation in hotels. Journal of Consumer Research, 35(3), 472–482. https://doi.org/10.1086/586910

Gouseti, O., Lovegrove, A., Kosik, O., Fryer, P., Mills, C., Gates, F., Tucker, G., Latty, C., Shewry, P., & Bakalis, S. (2019). Exploring the role of cereal dietary fiber in digestion. Journal of Agricultural and Food Chemistry, 67(30), 8419–8424.

Grandi, B., Cardinali, M. G., & Bellini, S. (2019). How to communicate healthy products inside grocery stores. British Food Journal, 121(11), 2637–2650.

Grandi, B., & Cardinali, M. G. (2021a). Nutrition Shopper Marketing. How retailers can influence healthy consumer behaviors. Lambert Academic Publishing.

Grandi, B., Burt, S., & Cardinali, M. G. (2021b). Encouraging healthy choices in the retail store environment: Combining product information and shelf allocation. Journal of Retailing and Consumer Services, 61, 102522.

GS1 Italy (2022). Osservatorio Immagino – Undicesima edizione.

GS1 Italy (2024). Osservatorio Immagino – Sedicesima edizione.

Gupta, A., Alston, L., Needham, C., Robinson, E., Marshall, J., Boelsen-Robinson, T., ... & Peeters, A. (2022). Factors influencing implementation, sustainability and scalability of healthy food retail interventions: a systematic review of reviews. Nutrients, 14(2), 294.

Higgs, S. (2015). Social norms and their influence on eating behaviours. Appetite, 86, 38–44. https://doi.org/10.1016/j.appet.2014.10.021

Higgs, S., Liu, J., Collins, E. I., & Thomas, J. M. (2019). Using social norms to encourage healthier eating. Nutrition Bulletin, 44(1), 43–52.

Hobin, E., Bollinger, B., Sacco, J., Liebman, E. L. I., Vanderlee, L., Zuo, F. E. I., ... & Hammond, D. (2017). Consumers' response to an on-shelf nutrition labelling system in supermarkets: evidence to inform policy and practice. The Milbank Quarterly, 95(3), 494-534.

Kaczmarczyk, M. M., Miller, M. J., & Freund, G. G. (2012). The health benefits of dietary fiber: Beyond the usual suspects of type 2 diabetes mellitus, cardiovascular disease and colon cancer. Metabolism, 61(8), 1058–1066. https://doi.org/10.1016/j.metabol.2012.01.017

Karpyn, A., McCallops, K., Wolgast, H., & Glanz, K. (2020). Improving consumption and purchases of healthier foods in retail environments: a systematic review. International Journal of Environmental Research and Public Health, 17(20), 7524.

Labban, A., Ma, Y., & Dube, L. (2021). A neurobehavioral account of differential consumer responses to price and in-store display between un/healthy food. European Journal of Marketing, 55(11), 2988–3009.

Lacroix, C., Rajaobelina, L., & St-Onge, A. (2020). Impact of perceived experiential advertising on customers' responses: a multi-method approach. International Journal of Bank Marketing, 38(6), 1237-1258.

Lapinski, M. K., & Rimal, R. N. (2005). An explication of social norms. Communication Theory, 15(2), 127–147. https://doi.org/10.1111/j.1468-2885.2005.tb00329.x

Larsen, N. M., Sigurdsson, V., & Gunnarsson, D. (2022). Environmental cues for healthy food marketing: The importance of in-store research into three conversions. Frontiers in Nutrition, 9, 1078672. https://doi.org/10.3389/fnut.2022.1078672

Maldoy, K., De Backer, C. J. S., & Poels, K. (2021). The pleasure of sharing: Can social context make healthy food more appealing? Psychology & Marketing, 38(2), 359–370. https://doi.org/10.1002/mar.21358

Malik, V. S., Willett, W. C., & Hu, F. B. (2013). Global obesity: trends, risk factors and policy implications. Nature Reviews Endocrinology, 9(1), 13–27. https://doi.org/10.1038/nrendo.2012.199

Mollen, S., Rimal, R. N., Ruiter, R. A., & Kok, G. (2013). Healthy and unhealthy social norms and food selection. findings from a field-experiment. Appetite, 65, 83–89.

Mollen, S., Holland, R. W., Ruiter, R. A., Rimal, R. N., & Kok, G. (2021). When the frame fits the social picture: The effects of framed social norm messages on healthy and unhealthy food consumption. Communication Research, 48(3), 346-378.

Neufeld, L. M., Hendriks, S., & Hugas, M. (2021). Healthy diet: A definition for the united nations food systems summit. Science and Innovations, 41, 21–30.

Paakki, M., Kantola, M., Junkkari, T., Arjanne, L., Luomala, H., & Hopia, A. (2022). "Unhealthy= Tasty": How Does It Affect Consumers'(Un) Healthy Food Expectations?. Foods, 11(19), 3139.

Payne, C. R., Niculescu, M., Just, D. R., & Kelly, M. P. (2014). Shopper marketing nutrition interventions. Physiology & Behavior, 136, 111–120.

Petty, R. E., Briñol, P., Loersch, C., & McCaslin, M. J. (2009). The need for cognition. Handbook of individual differences in social behavior, 318, 329.

Raghunathan, R., Naylor, R. W., & Hoyer, W. D. (2006). The unhealthy= tasty intuition and its effects on taste inferences, enjoyment, and choice of food products. Journal of Marketing, 70(4), 170-184.

Robinson, E., Thomas, J., Aveyard, P., & Higgs, S. (2014). What everyone else is eating: a systematic review and meta-analysis of the effect of informational eating norms on eating behavior. Journal of the Academy of Nutrition and Dietetics, 114(3), 414–429.

Sharps, M., & Robinson, E. (2016). Encouraging children to eat more fruit and vegetables: Health vs. descriptive social norm-based messages. Appetite, 100, 18-25.

Slapø, H., Schjøll, A., Strømgren, B., Sandaker, I., & Lekhal, S. (2021). Efficiency of in-store interventions to impact customers to purchase healthier food and beverage products in real-life grocery stores: a systematic review and meta-analysis. Foods, 10(5), 922.

Sparkman, G., & Walton, G. M. (2017). Dynamic norms promote sustainable behavior, even if it is counternormative. Psychological Science, 28(11), 1663–1674.

Sparkman, G., Weitz, E., Robinson, T. N., Malhotra, N., & Walton, G. M. (2020). Developing a scalable dynamic norm menu-based intervention to reduce meat consumption. Sustainability, 12(6), 2453.

Stok, F. M., De Ridder, D. T., De Vet, E., & De Wit, J. B. (2014). Don't tell me what I should do, but what others do: The influence of descriptive and injunctive peer norms on fruit consumption in adolescents. British journal of health psychology, 19(1), 52-64.

Tao, J., Quan, J., El Helali, A., Lam, W. W., & Pang, H. (2023). Global trends indicate increasing consumption of dietary sodium and fiber in middle-income countries: A study of 30-year global macrotrends. Nutrition Research, 118, 63–69.

Templeton, E. M., Stanton, M. V., & Zaki, J. (2016). Social norms shift preferences for healthy and unhealthy foods. PLoS One, 11(11), e0166286.

Thorndike, A. N. (2020). Healthy choice architecture in the supermarket: Does it work? Social Science & Medicine, 266, 113459.

Van Kleef, E., Otten, K., & van Trijp, H. C. (2012). Healthy snacks at the checkout counter: A lab and field study on the impact of shelf arrangement and assortment structure on consumer choices. BMC public health, 12, 1-10.

Wolgast, H., Halverson, M. M., Kennedy, N., Gallard, I., & Karpyn, A. (2022). Encouraging healthier food and beverage purchasing and consumption: A review of interventions within grocery retail settings. International Journal of Environmental Research and Public Health, 19(23), 16107.

World Health Organization. (2022). WHO European regional obesity report 2022. URL https://www.who.int/europe/publications/i/item/9789289057738

## Appendice

**Tabella A.** Composizione del campione sperimentale

| Variabile | Opzioni | F(n) | % |
|---|---|---|---|
| GENERE | Femmina | 96 | 48.0 |
| | Maschio | 104 | 52.0 |
| ETÀ | 18–20 | 30 | 15.0 |
| | 20–24 | 120 | 60.0 |
| | 25–34 | 41 | 20.5 |
| | 35–44 | 2 | 1.0 |
| | 45–54 | 5 | 2.5 |
| | 55–65 | 2 | 1.0 |
| IMC (Kg/$m^2$) | Grave magrezza | 1 | 0.5 |
| | Sottopeso (16–18.49) | 15 | 7.5 |
| | Normopeso (18.5–24.99) | 104 | 52.0 |
| | Sovrappeso (25.00–29.99) | 38 | 19.0 |
| | Obeso classe 1 (30.00–34.99) | 38 | 19.0 |
| | Obeso classe 2 (35.00–39.99) | 3 | 1.5 |
| | Obeso classe 3 (≥40.00) | 1 | 0.5 |
| LIVELLO DI ISTRUZIONE | Diploma scuola superiore | 109 | 54.5 |
| | Laurea triennale | 67 | 33.5 |
| | Laurea magistrale | 24 | 12.0 |
| OCCUPAZIONE | Studente | 172 | 86.0 |
| | Lavoratore autonomo | 2 | 1.0 |
| | Dipendente settore privato | 16 | 8.0 |
| | Dipendente settore pubblico | 4 | 2.0 |
| | Non occupato / in cerca di lavoro | 1 | 0.5 |
| ZONA DI RESIDENZA | Italia Nord-occidentale | 106 | 53.0 |
| | Italia Nord-orientale | 37 | 18.5 |
| | Italia centrale | 22 | 11.0 |
| | Italia meridionale | 27 | 13.5 |
| | Italia insulare | 8 | 4.0 |
| COMPOSIZIONE NUCLEO FAMILIARE | 1 persona | 49 | 24.5 |
| | 2 persone | 65 | 32.5 |
| | 3 persone | 55 | 27.5 |
| | 4 o più persone | 31 | 15.5 |

**Tabella B.** Variabili questionario

| **Variabili misurate** | **α di Cronbach** | | **Media** | |
|---|---|---|---|---|
| **Need For Cognition Scale** (Adattata da Cacioppo e Petty, 2011)<br>1. Preferisco i problemi complessi a quelli semplici<br>2. Preferisco pensare a progetti a lungo termine piuttosto che a piccoli progetti quotidiani<br>3. Trovo soddisfazione nel deliberare intensamente e per lunghe ore<br>4. Mi sento soddisfatto dopo aver completato un compito che richiede un grande sforzo mentale<br>5. Il più delle volte, pensare di più porta a fare meno errori<br>6. Credo che, se penso abbastanza intensamente, sarò in grado di raggiungere i miei obiettivi nella vita | 0,741 | | 4,673 | |
| **Variabili Misurate – seconda e terza scelta** | **Seconda scelta** | | **Terza scelta** | |
| | α di Cronbach | Media | α di Cronbach | Media |
| **Shelf display healthiness** (adattata da Van Kleef et al., 2012)<br>1. È uno scaffale che rende semplice la scelta di prodotti salutari<br>2. È uno scaffale con prodotti salutari | 0,632* | 3,878 | 0,765 | 4,633 |
| **Perceived Product Healthiness (a**dattata da Bui et al., 2013**)**<br>1. Ritieni che i prodotti scelti siano fonte povera di nutrienti/fonte ricca di nutrienti<br>2. Ritieni che i prodotti scelti siano non salutari/salutari | 0,686* | 4,785 | 0,756 | 5,103 |

# Customer Recovery as a Strategic Lever in CRM: Evidence from an Empirical Case Study

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## Abstract

This study explores the strategic role of Customer Relationship Management (CRM) in reactivating dormant customer relationships, an area often overlooked compared to acquisition and retention. Drawing on a mixed-methods experimental approach, the research examines a customer recovery initiative implemented in Leroy Merlin's garden department. The intervention combined CRM systems, predictive analytics, and personalized outreach targeting 37 high-value inactive customers. Results show a conversion rate of 29.73%, with over €60,000 in recovered orders and positive engagement from 75% of the sample. These findings highlight that proactive recovery, supported by segmentation and tailored incentives, can generate immediate economic returns and foster long-term loyalty. The study contributes to CRM literature by framing recovery not as a reactive response but as a strategic pillar capable of sustaining profitability and customer lifetime value. Implications for practice include the need to integrate recovery protocols within broader CRM strategies and to leverage automation and personalization to maximize impact.

*Keywords: Customer Relationship Management (CRM); Customer Recovery; Customer Lifetime Value (CLV), Retail Management.*

## 1. Introduction

Customer Relationship Management (CRM) has evolved into a strategic discipline focused on maximizing customer lifetime value through personalized, data-driven engagement (Guerola-Navarro *et al.*, 2024; Ledro *et al.*, 2022). While extensive research has examined customer acquisition and retention, an essential phase of the customer lifecycle remains underexplored: customer recovery. This concept refers to systematic initiatives aimed at re-engaging dormant or inactive customers and restoring their contribution to firm profitability (Kotler *et al.*, 2014).

Despite growing interest in churn—the rate at which customers stop doing business with a company—and efforts to prevent it, recovery is still commonly treated as a reactive response to dissatisfaction or service failures (Nowak *et al.*, 2023), rather than as a proactive, strategic pillar of CRM (Devriendt *et al.*, 2021). This gap is particularly relevant in mature markets where the cost of acquiring new customers often exceeds the cost of reactivating existing ones.

This study seeks to address this gap by examining the case of Leroy Merlin, a major European home improvement retailer that developed and tested a structured recovery protocol integrating segmentation, digital CRM systems, and tailored engagement practices. The paper contributes to CRM scholarship by positioning customer recovery as a strategic lever to enhance long-term relationship value. It also provides empirical evidence on the operational and economic outcomes of a proactive recovery approach.

## 2. Theoretical background

### 2.1 Customer Relationship Management

CRM has evolved from a purely operational tool to a strategic framework that combines technology, behavioral insights, and organizational processes to support personalized engagement throughout the customer lifecycle (Khashab *et al.*, 2022; Prior *et al.*, 2024; Sun *et al.*, 2022). Recent studies highlight the shift from transactional logic to customer-centric strategies that leverage predictive analytics and Big Data to sustain loyalty and profitability (Hossain *et al.*, 2024; Rosário, 2025; Sestino *et al.*, 2020). However, while acquisition and retention have received extensive attention, systematic recovery of inactive customers remains less explored, suggesting the need to integrate proactive re-engagement into CRM strategies.

### 2.2 Customer Lifetime Value and Churn Management

CLV is a cornerstone of CRM, informing resource allocation and prioritization of high-potential customers (Onifade *et al.*, 2024; Potla & Pottla, 2024). CLV-oriented approaches emphasize understanding long-term contributions to guide personalized engagement and recovery initiatives (Ali & Shabn, 2024; Antonakakis, 2025). Although churn prevention strategies such as loyalty programs and early warning systems are widely applied, they often fail to identify segments most responsive to reactivation (Devriendt *et al.*, 2021; Hossain *et al.*, 2023). Integrating uplift modeling and predictive analytics into CRM systems is increasingly recognized as essential for sustaining customer value (Rosário, 2025).

### 2.3 From Complaint Handling to Strategic Customer Recovery

While service recovery practices after failures are well documented (Nowak *et al.*, 2023), broader proactive recovery efforts remain marginal in CRM literature. Most contributions focus on dissatisfaction resolution, overlooking cases of silent disengagement (Honora *et al.*, 2022). Reframing recovery as a deliberate relational investment—rather than a reactive measure—can help firms rebuild trust and re-integrate dormant customers into profitable segments (Devriendt *et al.*, 2021; Kotler *et al.*, 2014). This study contributes to this perspective by empirically examining a structured recovery process in the home improvement sector.

## 3. Methodology

This study employed an experimental mixed-methods approach to evaluate the effectiveness of a structured customer recovery strategy implemented in Leroy Merlin's garden department. The objective was to assess the impact of CRM-driven reactivation initiatives on customer engagement and economic performance over a defined period (Creswell & Plano Clark, 2017).

Data were collected from two main sources. First, the CRM systems Pyxis and Elo were used to analyze customer profiles, track purchasing histories, and estimate Customer Lifetime Value. Pyxis – a platform supporting sales force automation – facilitated customer interactions, while Elo – focused on segmentation capabilities – enabled the identification of high-potential dormant customers (Guerola-Navarro *et al.*, 2024). Internal records and

analytics dashboards were also reviewed to document transactions, recovery outcomes, and customer contacts.

The intervention began by identifying customers who had interrupted their purchasing journeys. Based on CRM data, a sample was selected, characterized by high historical spend and an estimated CLV exceeding €5,000. Personalized outreach was conducted by the sales team through phone calls, emails, and WhatsApp messages, combining promotional incentives with tailored recommendations to address individual needs.

To assess outcomes, both quantitative and qualitative indicators were collected. Quantitative measures included – conversion rate after contact, re-engagement rate, repurchase rate, Customer Lifetime Value (CLV), historical spend, and ROI of recovery actions – while qualitative observations focused on – customer response categories and observed motivations and barriers.

This design enabled a comprehensive evaluation of behavioral outcomes and operational effectiveness within a strategic CRM framework, offering insights into the potential scalability of structured recovery protocols.

## 4. Results and discussions

The experimental intervention targeted 37 dormant customers with high economic potential and an average relationship duration of 7.9 years. This profile suggests that their inactivity was situational rather than indicative of weak prior engagement, consistent with evidence highlighting the value of reactivating loyal segments (Kotler *et al.*, 2014).

As shown in Table 1, the recovery strategy achieved a conversion rate of 29.73%, with 11 customers placing orders and 45.94% re-engaging for future follow-up. Overall, more than 75% of the sample responded positively, demonstrating that structured, personalized outreach can effectively rekindle interest and engagement.

Economically, the initiative generated €60,100 in recovered orders versus an estimated potential of €108,086. While this gap highlights opportunities for optimization, capturing over one-third of the forecasted value in an initial test confirms the approach's profitability. The average actual order value (€1,581), though lower than the theoretical potential (€2,844), underscores the importance of refining incentive structures and addressing residual barriers. For example, the partial gap between estimated and actual spending suggests that even highly engaged dormant customers may require more substantial or customized incentives to reactivate fully. In addition, the timing of outreach and the perceived relevance of offers likely influenced conversion rates, as observed in qualitative feedback.

Notably, 45% of converted customers made subsequent purchases, reinforcing the idea that recovery initiatives can create relational momentum beyond immediate transactions. Compared to previous studies reporting reactivation rates below 20% (Devriendt *et al.*, 2021), these results demonstrate the effectiveness of structured recovery protocols supported by CRM analytics. The estimated ROI of 17–31% is significant for a pilot program, suggesting that such strategies can sustainably complement acquisition efforts. Collectively, these findings provide a robust empirical foundation for discussing managerial implications and opportunities for future development of recovery strategies.

| Category | Indicator | Result |
|---|---|---|
| **Quantitative** | Conversion rate after contact | 29.73% (11 customers converted) |
| | Re-engagement rate | 45.94% (17 customers re-engaged) |
| | Repurchase rate | 45% of converted customers |
| | Customer Lifetime Value (CLV) | €1,136,062 total (€30,704 per customer) |
| | Historical spend | €141,354 total (€3,820 per customer) |
| | ROI of recovery actions | Estimated 17–31% |
| **Qualitative** | Customer response categories | Converted, Re-engaged, Not responsive |
| | Observed motivations and barriers | Price sensitivity, timing, need for tailored offers |

**Table 1:** Main Results

## 5. Managerial Implications and Future Research

Managerially, these findings confirm that dormant high-value customers can be profitably reactivated through segmentation, tailored outreach, and integrated CRM tools. More broadly, the results illustrate how recovery initiatives can play a crucial role in mature retail environments, where the incremental cost of customer acquisition continues to rise and lifetime value optimization becomes a competitive necessity. To maximize outcomes, continuous adjustments in offer design, messaging, and incentives remain essential. Future research could explore how automation, dynamic personalization, and cross-channel integration further enhance recovery effectiveness over time.

## References


Ali, N., & Shabn, O. S. (2024). Customer lifetime value (CLV) insights for strategic marketing success and its impact on organizational financial performance. *Cogent Business & Management*, 11(1), 2361321.

Antonakakis, C. E. (2025). Beyond Lifetime Value: A Customer Journey Analysis to Fan Engagement and Spending in Professional Sports (Doctoral dissertation, Massachusetts Institute of Technology).

Creswell, J. W., & Clark, V. L. P. (2017). Designing and conducting mixed methods research. *Sage publications*.

Devriendt, F., Berrevoets, J., & Verbeke, W. (2021). Why you should stop predicting customer churn and start using uplift models. *Information Sciences*, 548, 497-515.

Guerola-Navarro, V., Gil-Gomez, H., Oltra-Badenes, R., & Soto-Acosta, P. (2024). Customer relationship management and its impact on entrepreneurial marketing: A literature review. *International Entrepreneurship and Management Journal*, 20(2), 507-547.

Honora, A., Chih, W. H., & Wang, K. Y. (2022). Managing social media recovery: The important role of service recovery transparency in retaining customers. *Journal of Retailing and Consumer Services, 64*, 102814.

Hossain, M. A., Akter, S., Yanamandram, V., & Wamba, S. F. (2023). Data-driven market effectiveness: The role of a sustained customer analytics capability in business operations. *Technological Forecasting and Social Change*, 194, 122745.

Khashab, B., Gulliver, S., Ayoubi, R., & Strong, C. (2022). Analysing enterprise resources for developing CRM framework in higher education institutions. *Journal of Enterprise Information Management*, 35(6), 1639-1657.

Kotler, P., Keller, K. L., Ancarani, F., & Costabile, M. (2014). Marketing management 14/e. *Pearson*.

Ledro, C., Nosella, A., & Vinelli, A. (2022). Artificial intelligence in customer relationship management: literature review and future research directions. *Journal of Business & Industrial Marketing*, 37(13), 48-63.

Nowak, D. P., Dahl, A. J., & Peltier, J. W. (2023). An updated historical review of the journal of consumer satisfaction, dissatisfaction and complaining behavior. *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behavior*, 36(1), 82-96.

Onifade, A. Y., Ogeawuchi, J. C., Abayomi, A. A., & Aderemi, O. (2024) Advances in CRM-Driven Marketing Intelligence for Enhancing Conversion Rates and Lifetime Value Models.

Potla, R. T., & Pottla, V. K. (2024). Artificial Intelligence and Machine Learning in CRM: Leveraging Data for Predictive Analytics. *Journal of Artificial Intelligence Research*, 4(2), 31-50.

Prior, D. D., Buttle, F., & Maklan, S. (2024). Customer relationship management: Concepts, applications and technologies. *Routledge*

Rosário, A. T., & Cruz, R. N. (2025). Data-Driven Decision-Making in Marketing.

Sestino, A., Prete, M. I., Piper, L., & Guido, G. (2020). Internet of Things and Big Data as enablers for business digitalization strategies. *Technovation*, 98, 102173.

Sun, Y., Liu, H., & Gao, Y. (2023). Research on customer lifetime value based on machine learning algorithms and customer relationship management analysis model. *Heliyon*, 9(2).

# Beyond the Dyad: Exploring Sales Interactions Across Multiple Buying-Center Roles in the Professional Imaging Sector

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## Abstract

In business-to-business (B2B) markets, the interaction between salespeople and buying organizations has changed markedly (Ahearne et al., 2022); recent studies show that the growing complexity of both selling and buying processes (Jalkala & Salminen, 2010) makes commercial activity increasingly demanding. Despite the extensive interest in B2B selling, two gaps persist. First, literature tends to examine research streams such as salesperson activities, buying centers and business relationships in isolation. Second, it often focuses on dyadic, "one-to-one" interactions or treats the customer firm as a single, homogeneous entity, thereby overlooking the heterogeneous needs of the individual actors who compose today's buying centers.

This study addresses these deficiencies by adopting a Social Network Theory lens—combined with insights from the complex-sales and buying-center literatures—to investigate how salespeople sequentially orchestrate different typologies of interactions (RQ1); which competencies they deploy and adapt along the way (RQ2); how they reallocate time and resources as the process unfolds (RQ3); and how these choices influence overall sales-cycle effectiveness (RQ4), while also identifying the main challenges encountered and the coping strategies employed (RQ5). Evidence comes from an in-depth dyadic case study in the professional-imaging sector, emblematic of complex selling, which serves as the empirical setting for exploring these questions. Results indicate a three-gate choreography—clinician validation, engineering reliability, procurement economics—sustained by modular resource orchestration and the KAM's positional centrality. Sequencing interactions in this order shortens the negotiation by about one-third, while an "impact × influence" approach mobilizes specialists on demand, shifts the conversation from price to life-cycle value, and resolves role conflicts through a single commercial owner and early service-uptime proofs.

*Keywords: B2B complex selling; buyer-seller interaction; buying center; social network theory; salesperson-multiactors interaction*

## 1. Theoretical Background

### 1.2 Complexity in b2b sales and Buying centre

In business-to-business (B2B) marketing, a complex sale denotes a sales process that is highly demanding and protracted, involving multiple actors and resources on both the supplier and customer sides (Rangarajan et al., 2022). Scholars have converged on several hallmark features of such sales (Arndt & Harkins, 2013; Delpechitre et al., 2020). First, complex sales mobilise numerous individuals and organisational functions in both firms: the seller typically operates in teams and interfaces with an articulated buying centre that comprises, on average, six or seven members of the decision-making unit, each with distinct needs (Toman et al., 2017).

A second defining element is the length and structure of the sales cycle. Negotiations for complex solutions unfold over extended pre-sale, bargaining and implementation phases (Rodriguez et al., 2020). Lastly, these transactions are usually high-value and strategically significant; they involve infrequent purchase decisions that absorb considerable resources and entail long-term consequences for both parties (Ulaga & Sharma, 2001).

Research also identifies several drivers of complexity that act singly or in combination and originate inside and outside the selling organisation. Internal organisational complexity stems from supplier-side factors that obstruct sales efforts (Schmitz & Ganesan, 2014), whereas external market complexity reflects customer and environmental conditions (Ingram, 2004; Jones et al., 2005). In addition, relational complexity concerns the multiplicity and management of ties during the sales process (Jones et al., 2005). More specific forms include cognitive complexity, the information load a salesperson must process (Jones et al., 2005), and technological complexity, referring both to the sophistication of the offering and to the technologies deployed in selling (Srinivasan et al., 2020).

Confronted with these complexities, contemporary B2B salespeople play increasingly varied roles from resource orchestrator (Weitz & Bradford, 1999) to relational facilitator, cognitive navigator and portfolio/solution innovator (Jones et al., 2005). These roles must be viewed against the backdrop of organisational buying behaviour, which is inherently more complex than consumer purchasing. Foundational models (Robinson et al., 1967) portray organisational buying as a need-recognition, search and evaluation process that often culminates in a "satisficing" rather than optimal choice. Salespeople interact with multiple individuals who jointly influence the decision (Johnston & Bonoma, 1981) and the multifaceted nature of organisational buying thus emerges from factors extending beyond individual actors (Weigand, 1968). As Hartmann, Wieland and Vargo (2018) emphasise, salespeople must coordinate with diverse stakeholders inside the customer firm and with third-party partners to co-create value-driving solutions.

### 1.2 Social network theory in sale

Social Network Theory (SNT) conceptualises markets as webs of actors linked by ties (Borgatti & Foster, 2003). In sales research this relational lens explains why some salespeople convert opportunities more effectively than others (Van den Bulte & Wuyts, 2007). Two structural metrics matter most: centrality, a node's prominence, and density, the overall interconnectedness that shapes information flow. Bolander et al. (2015) distinguish relational centrality—ties to well-connected stakeholders—from positional centrality, where the salesperson bridges otherwise disconnected actors.

Recent work shifts attention from static attributes to network choreography. Forkmann et al. (2022) show that dynamically adjusting the frequency and functional mix of visits across the buying centre raises win rates, echoing Villena et al. (2011). SNT also informs partner selection. Homophily encourages functionally similar "matching" ties, yet cross-functional "more-than-matching" ties broaden influence and buffer turnover risk (Murtha et al., 2014). This overlapping is named "relationship multiplexity", linking multiple tie types to more

stable sales (Tuli et al., 2010). Extending these insights, a recent work (Burchett et al.,2024) introduces thin crossing points: critical interfaces where resources are exchanged. Optimising such crossings—by engaging high-eigenvector actors while diversifying contacts—emerges as a core competence in complex B2B selling.

## 2. Methodology

We conducted a qualitative single-case study centered on a dyadic relationship between a multinational supplier in the professional-imaging sector and a large Italian healthcare organization. This dyad, emblematic of complex B2B exchange, served as the unit of analysis and was examined from both seller and customer perspectives. Data were gathered between January and March 2025 through semi-structured interviews: on the seller side, informants represented key account management, area/sales manager and product-marketing specialist; on the customer side, respondents covered procurement, clinical engineering, end-user leadership (director of imaging) and operations (chief operating officer).

The interview guide probed concrete interaction episodes, practices of resource orchestration and network positioning, with particular attention to how these dimensions shift when the salesperson engages each specific role within the buying centre. Sessions lasted 60–90 minutes, were recorded, transcribed verbatim and anonymised.

Data analysis adhered to the Gioia methodology and was conducted in NVivo, enabling inductive code development and constant comparison across informants.

## 3. Results

Regarding RQ1, interview evidence shows that in the dyad, commercial adaptation is not episodic; rather, it unfolds through a sequential choreography of three distinct, interactive acts that mirror the buying-centre hierarchy. In the first act the emphasis is on clinician buy-in: roughly two-thirds of the initial selling time is invested in in-room demonstrations and image trials for radiologists and radiography technicians, jointly conducted by the Key Account Manager (KAM) and the product specialist to ensure real-time technical answers. Once diagnostic validation is secured, the second act engages Clinical Engineering; here the salesperson brings in the Service Manager and reframes the offer around reliability, presenting uptime metrics and maintenance plans. The third act introduces Procurement: the salesperson discusses cost-related aspects (e.g. TCO, leasing options) deliberately avoiding price-only bargaining. Should the price be raised before technical sign-off, the entire process is cancelled and restarted, prolonging the cycle. Across all three acts, content, tone, channel and timing are rigorously tailored to the focal actor— "one talks clinical with physicians, technology with engineers, and numbers with purchasing." (quote from Sales Area Manager). This progressive orchestration reduces intra-functional conflict, preserves message coherence and shortens the overall negotiation, converting multi-actor complexity into a stepwise consensus path.

Turning to RQ2, cross-interview analysis reveals several capabilities sets. First, both the KAM and Sales Area Manager practise modular resource orchestration, informally applying an "impact × influence" grid to decide whom to involve and when (e.g., product specialist for clinicians, in-house counsel for procurement), thereby cutting redundant meetings and maximising the "time invested/value perceived" ratio. Second, they retain sufficient technical–clinical vocabulary to converse with radiologists, physicians and technicians, while delegating deep dives to the specialist. Third, they demonstrate political–organizational brokerage rooted in their positional centrality: acting as a unified interface, the salesperson aligns internal voices from marketing, service, and finance, while also mediating conflicts among clinicians, engineers, and procurement. The remaining two competences are service

& uptime literacy where Operations notes that "two days of downtime equal thirty lost patients," ( quote form CPO) so the salesperson converts this sensitivity into uptime KPIs, shifting the focus from price to total value—and contractual–financial agility, as procurement "wants interlocutors able to model TCO and service bundles, not merely discounts" (quote from Procurement Director).

For RQ3 (time and resource allocation), the criterion is binary, combining product complexity and the decision weight of the current stakeholder; the KAM adjusts meeting frequency by revisiting the "impact × influence" grid after each touch-point. Findings from RQ4 shows that relationships shape the sales cycle in three concentric rings. In the personal ring, one-to-one ties with end-users and clinical engineers hinge on technical credibility and rapid follow-up. Success there unlocks the functional ring, where the seller mediates among clinicians, engineering and procurement, translating clinical value into reliability KPIs and total-cost logic. Only after this alignment does the process reach the institutional ring, where C-suite actors legitimize the deal; engaging highly connected executives' triggers endorsement cascades that speed approval. Progression must be sequential: skipping a ring reopens specifications and prolongs negotiation, while orderly movement shortens the cycle. Finally, for RQ5, the structural conflict between performance-oriented clinicians and budget-driven procurement is mitigated by postponing economic issues: technical approval first, then life-cycle-cost scenarios, leasing and service bundles, thus avoiding reopening clinical debates. To prevent information short-circuits, both firms agree on a single commercial point of contact who circulates shared minutes; legal back-and-forth is shortened by involving the supplier's legal counsel before the final draft, halving signature time. When a dissenting clinician temporarily stalls the purchase, the sales team reallocates effort to less controversial equipment while preparing additional clinical evidence, thereby avoiding unproductive visits and sustaining team morale.

## 4. Theoretical and managerial contributions

From a theoretical standpoint, the findings first refine the literature on B2B sales complexity showing that the key driver of complexity is not merely the absolute number of actors but the sequence in which each actor is engaged. This insight extends the set of complexity drivers identified by Schmitz and Ganesan (2014), introducing a new dimension—procedural complexity—that can be mitigated by choreographing contacts in the clinical-technical-economic order observed in the case.

Second, the study advances Social Network Theory in sales. KAM's positional centrality operates as a resource-orchestration mechanism that activates matching and more-than-matching ties at different moments, turning multiplexity (Tuli et al., 2010) into a dynamic process rather than a static configuration. Moreover, the uptime proofs presented to the buyer function as thin crossing points (Burchett et al., 2024)—critical interfaces where high-reputation resources are exchanged, thereby reinforcing network density and trust. From a managerial perspective, the findings call for an institutionalised, three-gate sales discipline. First, roughly two-thirds of the initial effort should be devoted to the clinical cluster, securing diagnostic endorsement before any economic negotiation. Only after this green light should the salesperson co-translate clinical value into reliability KPIs together with clinical engineering. Cost-related aspects must be introduced exclusively once the technical sign-off has been obtained. Secondly, resource deployment should follow the impact-by-influence logic observed in the case: whenever deeper technical expertise is required, the specialist must flank the salesperson, thereby maximizing the competence perceived by the stakeholder in question. Finally, if a dissenting clinician within the buying center stalls progress, redirecting effort toward less controversial equipment—while simultaneously assembling new clinical evidence—preserves team morale and keeps the account alive.

## 5. Limitations and Future Research

This exploratory study is the first to frame complex B2B selling through a sequential choreography lens, grounded in Social Network Theory and integrating positional centrality, resource orchestration and buying-center dynamics. The case findings suggest that commercial success hinges on the orderly sequencing of clinical, technical and economic interactions rather than on episodic adaptations. As the inquiry relies on a single dyadic case, its generalizability is limited. Future research could strengthen external validity through multi-case comparisons—juxtaposing the focal dyad with other complex B2B relationships in different sectors—or by analyzing a second dyadic engagement involving the same selling organization and a different customer, to assess whether the findings and managerial insights hold or diverge from this case.

## References


Ahearne, M., Atefi, Y., Lam, S. K., & Pourmasoudi, M. (2022). The future of buyer–seller interactions: A conceptual framework and research agenda. Journal of the Academy of Marketing Science, 1-24.

Arndt, A. D., & Harkins, J. (2013). A framework for configuring sales support structure. Journal of Business & Industrial Marketing, 28(5), 432-443.

Bolander, W., Satornino, C. B., Hughes, D. E., & Ferris, G. R. (2015). Social networks within sales organizations: Their development and importance for salesperson performance. Journal of Marketing, 79(6), 1-16.

Borgatti, S. P., & Foster, P. C. (2003). The network paradigm in organizational research: A review and typology. Journal of Management, 29(6), 991-1013.

Burchett, M. R., Epler, R. T., Pappas, A., Butler, T. D., Rouziou, M., Bolander, W., & Lussier, B. (2024). Charting the course: A framework for networking across the selling ecosystem. European Journal of Marketing, 58(3), 733-755.

Delpechitre, D., Gupta, A., Zadeh, A. H., Lim, J. H., & Taylor, S. A. (2020). Toward a new perspective on salesperson success and motivation: A trifocal framework. Journal of Personal Selling & Sales Management, 40(4), 267-288.

Forkmann, S., Mullins, R., Henneberg, S. C., & Baker, T. L. (2022). Choreographing salesperson face-to-face visits with a buyer organization: A social network perspective. Journal of the Academy of Marketing Science, 1-24.

Hartmann, N. N., Wieland, H., & Vargo, S. L. (2018). Converging on a new theoretical foundation for selling. Journal of Marketing, 82(2), 1-18.

Ingram, T. N. (2004). Future themes in sales and sales management: Complexity, collaboration, and accountability. Journal of Marketing Theory and Practice, 12(4), 18-28.

Jalkala, A., & Salminen, R. T. (2010). Practices and functions of customer reference marketing—Leveraging customer references as marketing assets. Industrial Marketing Management, 39(6), 975-985.

Johnston, W. J., & Bonoma, T. V. (1981). The buying center: Structure and interaction patterns. Journal of Marketing, 45(3), 143-156.

Jones, E., Dixon, A. L., Chonko, L. B., & Cannon, J. P. (2005). Key accounts and team selling: A review, framework, and research agenda. Journal of Personal Selling & Sales Management, 25(2), 181-198.

Murtha, B. R., Shervani, T. A., Challagalla, G. N., & Kirkman, B. L. (2014). Control system diversity: Implications for selling centers. Journal of Business Research, 67(9), 1870-1876.

Rangarajan, D., Hochstein, B., Nagel, D., & Lyngdoh, T. (2022). Sales complexity and value appropriation: A taxonomy of sales situations. Journal of Business & Industrial Marketing, 37(11), 2298-2314.

Robinson, P. J. (1967). Industrial Buying and Creative Marketing. Allyn & Bacon.

Rodríguez, R., Svensson, G., & Mehl, E. J. (2020). Digitalization process of complex B2B sales processes – Enablers and obstacles. Technology in Society, 62, 101324.

Schmitz, C., & Ganesan, S. (2014). Managing customer and organizational complexity in sales organizations. Journal of Marketing, 78(6), 59-77.

Srinivasan, M., Srivastava, P., & Iyer, K. N. (2020). An empirical model of salesperson competence, buyer-seller trust and collaboration: The moderating role of technological turbulence and product complexity. Journal of Marketing Theory and Practice, 28(4), 447-459.

Toman, N., Adamson, B., & Gomez, C. (2017). The new sales imperative. Harvard Business Review, 95(2), 118-125.

Tuli, K. R., Bharadwaj, S. G., & Kohli, A. K. (2010). Ties that bind: The impact of multiple types of ties with a customer on sales growth and sales volatility. Journal of Marketing Research, 47(1), 36-50.

Ulaga, W., & Sharma, A. (2001). Complex and strategic decision making in organizations: Implications for personal selling and sales management. Industrial Marketing Management, 30(5), 427-440.

Van den Bulte, C., & Wuyts, S. (2007). Social Networks in Marketing. Marketing Science Institute.

Villena, V. H., Revilla, E., & Choi, T. Y. (2011). The dark side of buyer–supplier relationships: A social capital perspective. Journal of Operations Management, 29(6), 561-576.

Weigand, R. E. (1968). Why studying the purchasing agent is not enough. Journal of Marketing, 32(1), 41-45.

Weitz, B. A., & Bradford, K. D. (1999). Personal selling and sales management: A relationship marketing perspective. Journal of the Academy of Marketing Science, 27, 241-254.

# The Role of Private Labels Display Visibility in Grocery Retail Online Platforms

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## Abstract

The work herein deals with the impact of display share as a driver for private label sales in the online grocery retail setting. The research is motivated by preliminary evidence from QBerg, an Italian market intelligence firm specializing in online retail analytics, whose data reveal that although national brands largely outnumber private labels also in online assortments, private labels receive significantly higher average display visibility per brand.

This suggests that online retailers may deliberately enhance the digital visibility of PLs, prompting the question of whether greater and deeper PL assortment share translates into higher PL sales share in the online environment, as established in traditional "brick-and-mortar" retailers. Starting from the well-documented assumption that an increase in assortment share drives higher sales share in physical stores, we empirically test whether the same effect applies in the online channel. Our study uses a cross-sectional analysis based on secondary scanner data provided by Circana in Italy across 190 food and beverage categories and confirms the existence of a direct and robust relationship between private label online assortment and its sales share. Additionally, this relationship is found to be positively influenced by category assortment depth (used as a proxy for display share), a moderating factor that does not hold significance in the offline channel.

*Keywords: display visibility, private label, online grocery retail, assortment*

## 1. Introduction

"*If I can't see it, I won't buy it*". This principle, acknowledged in traditional retailing, holds even greater relevance in the digital sphere, where online visibility becomes a critical determinant of sales performance.

This research is grounded in an empirical observation derived from data collected by QBerg, a leading Italian market intelligence company specializing in online retail analytics. QBerg operates as a digital shelf monitoring platform, systematically scraping and aggregating data from grocery retailers' e-commerce websites to capture the full scope of online assortment, pricing, promotional activities, and product visibility. Their proprietary data provide granular insights into how products are displayed and prioritized on digital shelves, offering a unique lens into the competitive dynamics of online grocery retailing.

According to QBerg's 2023 data on the Italian online grocery market, a striking asymmetry emerges between national brands (NBs) and private labels (PLs) in both assortment breadth and online display visibility. Despite the fact that the number of national brands available online vastly exceeds that of private labels (71938 NBs versus 2424 PL brands), the average display share allocated to each private label brand within individual categories (0.0063%) is markedly higher than that for national brands (0.0012%). Yet, in aggregate terms, national brands collectively occupy the majority of total digital shelf space (84.57%), while private labels account for only 15.32%.

This apparent contradiction highlights a strategic insight: although NBs dominate the overall shelf purely due to their numerical breadth, retailers deliberately allocate disproportionately greater online visibility to PLs on a per-brand basis, thereby leveraging the digital shelf as a strategic tool to amplify PL presence and salience. This pattern suggests that in digital environments, where physical shelf constraints are absent, product visibility is the critical lever through which retailers drive private label performance and differentiation.

QBerg managers attribute this greater visibility of PLs online to two primary factors: (i) the flexibility of e-commerce platforms to host a broader array of products without physical space limitations, and (ii) comparatively lower investment and strategic focus from national brands in the online channel relative to traditional brick-andmortar retail environments. Furthermore, PLs offer comparatively smaller average discounts online than national brands, suggesting that PLs rely more on inherent price competitiveness rather than promotional tactics in the digital environment. These empirical insights serve as robust empirical foundation for investigating how assortment strategies and specifically PL assortment share influence PL sales performance in online grocery retailing, forming the foundation of the present study's research objectives.

Motivated by these first insights, the present study adopts an Empirics First approach, which emphasizes grounding research questions in observed market phenomena before moving to theoretical modeling and hypothesis testing (Golder et al. 2023).

It focuses on understanding whether greater PL assortment share contributes to higher PL sales share in online grocery retailing, and how this relationship is moderated by assortment depth - a variable serving as a proxy for display visibility and digital shelf allocation (i.e. display share). To this extent, we conducted an empirical analysis on secondary scanner data provided by Circana, in controls for online versus offline FMCG channels, to test whether the positive relationship between assortment share and PL sales established in brick-and-mortar settings also holds online.

Our findings indicate that while assortment depth amplifies the positive impact of PL assortment share on PL sales in the online channel, it exerts a diminishing effect in physical stores, where excessive assortment may induce choice overload and reduce purchasing efficiency (Sethuraman et al. 2022; Chernev et al. 2015). Thus, the empirical starting point provided by QBerg's data not only reveals significant retailer strategies in online environments but also underscores the necessity of incorporating assortment dynamics into models when analyzing private label performance.

The work is structured as follows: a brief literature review is provided, theoretical framework and research hypotheses are formulated, the method of analysis of the two studies is explained. Lastly, results are presented and discussed.

## 2. Literature review and research hypotheses

In the last decade, private label sales have significantly increased globally[11]. Initially seen as a cheaper but inferior alternative to national brands, retailers have progressively enhanced PL's quality, making it more attractive and competitive through "smarter" strategies of development (Brüggemann et al., 2020; Gielens et al., 2021). This resulted in a 19.4% global market share in the Fast-Moving Consumer Goods (FMCG) sector in 2022, with even higher shares in Europe and North America[12]. In Europe, the overall private label share touched 36% in 2022 (Statista 2024). According to Verstraeten et al. (2023), online grocery shopping has not only normalized but also facilitated private label purchases: grocery digitalization is growing, with online sales increasing globally from less than 3.5% in 2019 to 7.2% in 2022 (Verstraeten et al., 2023).

Previous research indicates that consumers view online shopping as riskier than the offline one, leading to a preference for established national brands over lesser-known ones, such as PL, when they buy in the virtual channel (Bezes, 2016). On the contrary, other research suggests that the less vivid product presentation online (Huyghe et al., 2017) could boost PL sales to the detriment of national brands, since choices are made upon easier price and characteristics comparisons. This is especially true because of smart characteristics filtering and price sorting options that prioritize specific product features (Turri and Watson, 2023), raising questions about the impact of assortment strategies on PL sales within the online grocery retail setting. Nevertheless, consensus is reached when it comes to the role of product range, as empirical research on physical stores proving a strong positive effect of assortment on PL's sales (Fornari et al., 2013).

### 2.1 Shelf space allocation (assortment share) in online and offline retail settings

Shelf space is a critical asset for retailers, representing a finite resource that requires strategic allocation across various product categories, brands, and channels. The topic of how shelf space is distributed and its consequential effects on inter-brand competition is thus well-established in retail marketing literature (Amrouche and Zaccour, 2007; Sethuraman et al., 2022). In the offline channel, the allocation strategy impacts product/brand visibility, shopper's choice, and, ultimately, sales performance. In this regard, numerous studies indicate that both the purchase intent and market share of PL increase with more dedicated shelf space (Fornari et al., 2013). This relationship between shelf space and each brand's sales, though diminishing over time, is linked to reduced perceived risk associated with lesser-known brands as items and facing numbers grow. High shelf visibility serves as a decisive lever of advertisement for PL, compensating for its lower media exposure compared to national brands (Nenycz-Thiel et al., 2016).

Additionally, brand visibility is crucial to a retailer's assortment strategy, impacting store image and positioning. Recent research highlights the importance of range variety in consumers' perception of a grocery store's assortment quality, with the inclusion of private label products in various categories enhancing this perception, thereby boosting consumer loyalty, sales, and profits (Arce-Urriza and Cebollada, 2012).

The impact of online and offline channels on consumer purchasing behaviour, particularly in relation to private labels and national brands, has been a topic largely discussed in literature. Prior studies examining the shopping channel effect on PL (vs. NB) choices reveal contradictory evidence, with some documenting more PL purchases online than offline

11 Living with and responding to uncertainty. State of grocery retail, 2023, McKinsey and Company, April 2023.

12 How inflation is impacting private label sales trends globally, NIQ, 16 September 2022.

(Arce-Urriza and Cebollada 2012; Cebollada, Chu, and Jiang 2019; Nenycz-Thiel, Romaniuk, and Dawes 2016), others the opposite (van Herpen et al. 2016), and others found no effect (Dawes and Nenycz-Thiel 2014). Generally, private labels tend to be more affordable (Steenkamp & Geyskens 2014; Gielens et al., 2021) because retailers invest less in advertising and marketing for PLs, and often have less elaborate packaging (McKinsey & Company 2020), making them more appealing in the online shopping environment where these factors are less critical.

Several studies have shown that the channel through which consumers shop can significantly influence their product choices. Research by Brüggemann and Pauwels (2022) emphasizes differences in product purchase share between online and offline grocery shoppers, suggesting that the composition of the assortment, including private label products, influence consumer preferences and consequently impacts sales across both retail channels. Verstraeten et al. (2023) argue that the degree to which consumers rely on external cues to assess product quality - such as price, brand, and product appearance - varies depending on whether they shop online or offline. For instance, factual information (e.g., ingredients, nutritional information) has a stronger impact in online shopping, while visual cues (e.g., attractive packaging) have a greater influence in the offline setting (Degeratu, Rangaswamy, & Wu, 2000). Additionally, the online environment lacks sensory stimuli, store atmospherics (Spence et al. 2014), the touchand-feel dimension (Gielens et al., 2021) and, social interactions (Ramus and Nielsen, 2005), which can reduce cognitive fatigue for consumers when shopping online (Benn et al. 2015). The symbolic presentation of products online, such as product images, reduces product vividness, which in turn diminishes affective responses like instant gratification. As a result, online shoppers are less likely to rely on affective responses, which are typically triggered by the vividness of physical products (Huyghe et al., 2017). However, the convenience of online shopping, including easy access to product information, faster price comparisons (Ramus and Nielsen 2005), and reduced search costs (Chintagunta, Chu and Cebollada 2012; Chu et al. 2008), represents distinct advantages of online shopping.

These distinctions between the two retail channels suggest that consumers are less dependent on external factors when shopping online (vs. offline). In the context of grocery shopping, where internal product attributes cannot be directly evaluated, external cues such as price, brand name, and packaging visibility become relevant for consumers to infer product quality (Dick, Jain & Richardson, 1996) and make purchasing decisions. This is in line with the findings of Verstraeten et al. (2023) who demonstrated that consumers rely less on external cue heuristics to infer product quality when shopping online (compared to offline), thus perceiving a smaller quality gap between private labels and national brands, which leads to an increase in private label purchases compared to national brands in the grocery retail.

Thus, we formulate the following hypotheses:

**$H_{1A}$**: an increase in online PL assortment share drives directly to an increase in online PL sales share.

**$H_{1B}$**: an increase in offline PL assortment share drives directly to an increase in offline PL sales share.

## 2.2 Display visibility (assortment depth and breadth)

Broniarczyk, Hoyer, and McAlister (1998) found that consumer assortment perceptions are significantly influenced by the amount of space devoted to the category. In categories with a smaller display, a change might be more visible than in categories with a larger display.

Products on a shelf are arranged next to one another at different height levels and with a different number of facings. The number of facings indicates the number of units visible to the customer, and it has been proven that the number of shelf facings strongly influences consumers' visual attention (Chandon et al. 2009). External factors may also influence visual attention, suggesting that a product has a better chance of being noticed when it occupies a bigger portion of consumers' visual space (Chandon et al. 2009).

Visual attention has a fundamental role in consumers' purchasing decisions about what to buy within a retail environment (Gidlöf et al. 2017). It is an essential step in the purchase process, which is the mechanism by which individuals select a particular piece or a subset of the available information for further processing.

In a grocery retail setting, visual attention refers to anything that captures customer's sight when they are navigating the shelf or browsing an online shopping platform. This is one of the first actions taken by a customer when entering the store or when starting browsing in the online platform. Before choosing a product, consumer attention usually shifts among different products during the decision-making process. This phenomenon has been defined in literature as the "gaze-cascade effect", indicating that consumer behaviour is significantly influenced by their visual attention (Gidlöf et al. 2017; Atalay, Bodur and Rasolofoarison 2012). Products that fail to attract consumers' visual attention are usually not purchased, evidencing the importance for a retailer to capture customer interest (Olson 1972).

For these reasons, the attributes of assortment depth (i.e., the total number of SKUs presented in the display for each brand) and breadth (i.e., the total number of brands per each product category) are used as a proxy for display visibility, representing a crucial category-specific attribute that can have an impact on the influence of visibility and visual attention on sales per each brand type (Broniarczyk and Hoyer 2009). Their work emphasizes that increased shelf space for a product in bricks-and-mortars can amplify the effect of visibility (i.e. display share) on sales thanks to the presence of "brand blocks" or number of facings of the same brand's items, streamlining the decision-making process.

However, relevant studies suggest that larger assortments in the physical store could create issues such as information overload and customer confusion, resulting in choice inaccuracy or deferral, search difficulty and complexity (Sethuraman et al. 2022). When consumers face an overwhelming variety of alternatives can incur in the phenomenon of "choice overload" (Chernev et al. 2015). Furthermore, Hamilton and Richards (2009) found a negative relationship between assortment depth and sales in categories with more differentiated product variants in the offline channel.

In essence, building on previous research that has established a strong association between shelf facings and visual attention – showing that increased number of facings enhance product visibility on the shelf and subsequently drives sales (Chandon et al., 2009) – our study adopts assortment depth and/or breadth as a proxy for display visibility.

Our study seeks to investigate whether this relationship still holds in the physical retail setting and whether it also applies within the online retail environment.

Thus, we formulate the following hypotheses:

**$H_{2A}$**: an increase in the total category assortment depth/breadth reinforces the positive impact of online PL assortment share on its sales share.

**$H_{2B}$**: an increase in the total category assortment depth/breadth reinforces the positive impact of offline PL assortment share on its sales share.

Building on these insights and considering both online and offline grocery retail contexts, our study aims to examine whether a greater assortment share of PLs contributes to increasing PL sales. Specifically, this study investigates whether the relationship between PL assortment share and PL sales observed in physical stores persists also in the online channel. Furthermore, we hypothesize that category assortment depth serving as a proxy for display visibility positively moderates the relationship between PL assortment share and PL sales in both offline and online settings. To guide this inquiry, we present the research framework depicted in Figure 1.

Based on what we observe in the real world of retailing (Van Heerde et al. 2021) and inspired by an empirics-first approach (Golder et al. 2023), the study employs IRI scanner data on 190 food and beverage categories from the Italian grocery retail to test the proposed hypotheses.

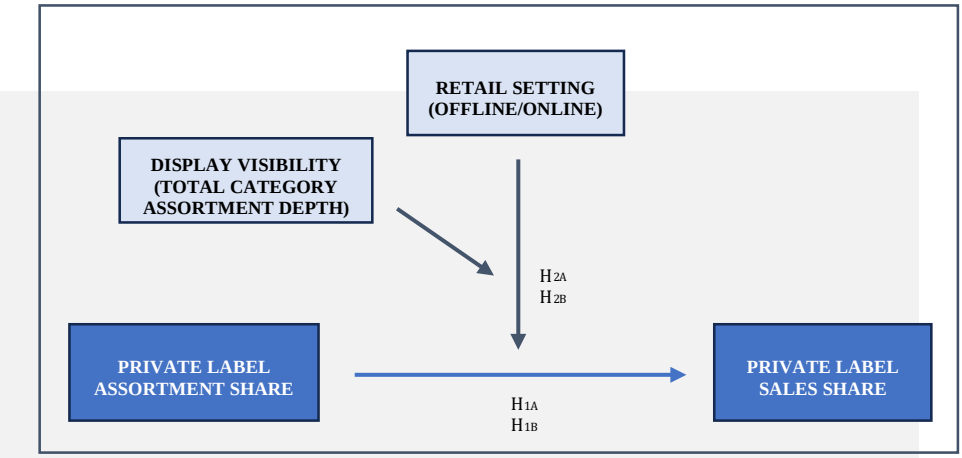



**Figure 1**: Research framework of study 1

## 3. Methodology

The present study is based on secondary data sourced from Circana, including a range of 190 FMCG categories throughout the full year of 2023[13]. The analysis employs a three-way interaction (i.e., moderated and moderation) test to investigate the relationship between PL assortment share and its sales share across both online and offline channels within the Italian food and beverage retail sector (Hayes, 2018);

The study focuses on two primary retail platforms: online grocery retailers, which collectively account for 2.1% of the overall FMCG turnover in Italy, and conventional supermarkets,

13 The total number of FMCG categories monitored by Circana is 467. However, to make the dataset as robust as possible, we cleaned it up excluding from analysis: (i) 69 personal care categories, (ii) 50 home care categories, (iii) 8 pet care categories, (iv) 57 fresh fruit & veg categories, (v) 6 fresh meat categories, (vi) 87 categories in which online PL sales in 2023 were lower than 50,000 euros, the minimum threshold to consider them statistically significant.

representing the predominant offline grocery retail type, with a substantial market share of 52.2%.

### 3.1 Operationalization of variables

In the model, we calculate the following variables for each of the 190 considered categories, examining both online and offline channels, for the entire year of 2023 (Tab. 1).

| Variables | Operationalization | |
|---|---|---|
| Private Label (PL) sales share | % of PL value sales on total value sales (online/offline) | Dependent variable (Y) |
| Private Label (PL) assortment share | % of PL items on total items listed (average per month) in each store (online/offline) | Independent variable (X) |
| Total category assortment depth | Total number of items listed (average per month) in each store (online/offline) | Moderator (W) |
| Retail setting | Dummy variable, coded 0 for offline and 1 for online retail | Moderator (Z) |

**Table 1**: Operationalization of variables

Online PL sales share is the dependent variable, while online PL assortment share is the independent variable. Total category assortment depth is a moderator, which has been hypothesized as variable that can mitigate the magnitude of the effect of the relationship between PL assortment share and PL sales share, both in the online and in the offline settings.

### 3.2 Model estimation

| | Min | Max | Mean | Std. Dev. | Variance | Skewness | Kurtosis |
|---|---|---|---|---|---|---|---|
| PL assortment share online | .2 | 72.3 | 15.68 | 12.34 | 152.38 | 1.56 | 3.94 |
| PL assortment share offline | 1.2 | 55.7 | 22.34 | 10.02 | 100.57 | .395 | .032 |
| Total category assortment depth online | .7 | 224.9 | 25.57 | 31.20 | 973.87 | 3.10 | 12.83 |
| Total category assortment depth offline | 1.4 | 200.0 | 34.67 | 34.36 | 1180.76 | 2.16 | 5.96 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| PL sales share online | .4 | 85.6 | 25.05 | 16.95 | 287.52 | .808 | .36 |
| PL sales share offline | 1.5 | 72.1 | 25.01 | 13.53 | 183.23 | .426 | -.15 |

***Table 2**: Descriptive statistics table*

After performing the descriptive statistics (Tab. 2), the impact of PL assortment share on PL sales share sales, moderated by the total category assortment depth, has been analysed formulating the following model:

$$Y = \beta_0 + \beta_1 X + \beta_2 W + \beta_3 Z + \beta_4 XW + \beta_5 XZ + \beta_6 WZ + \beta_7 XWZ + \varepsilon$$

so, in our analysis, we have that:

$$Private\ Label\ (PL)\ Sales\ Share\ (Y)_i = \beta_0 + \beta_1 PLAssortmentShare_i + \beta_2 AssortmentDepth_i + \beta_3 RetailSettingi + \beta_4 (PLAssortmentSharei * AssortmentDepth_i) + \beta_5 (PLAssortmentShare_i * RetailSetting_i) + \beta_6 (RetailSetting_i * AssortmentDepth_i) + \beta_7 (PLAssortmentShare_i * RetailSetting_i * AssortmentDepth_i) + \varepsilon_i$$

This specification enables testing not only the direct effect of PL assortment share on PL sales share but also how this relationship is conditioned by assortment depth and retail setting.

## 4. Results

*Direct relationship*. Firstly, we examine the direct and linear relationship between PL assortment share and PL sales share across both online and offline channels. Both relationships have been found to be significant, with positive coefficients, indicating that PL sales share is positively influenced by its assortment share.

The R-squared value for the online channel is 36.3%, implying the potential presence of additional variables that could further explain the model. The R-squared value for the offline channel is considerably higher at 82%, suggesting that the direct relationship explains a substantial part of the model. Results have been summarized in Table 3. Thus, $H_{1A}$ and $H_{1B}$ are both verified.

| | R-sq | Coef. | P>\|t\| |
|---|---|---|---|
| **Online channel** PL assortment share | .363 | .828 | .000 |
| **Offline channel** PL assortment share | .820 | 1.223 | .000 |

Outcome variable: Online/Offline PL sales share

**Table 3**: Summary table of the direct relationships

*Three-way interaction effect*. In the online channel, the interaction effect (Tab. 4) among the three independent variables (PL assortment share, retail setting, and assortment depth) is statistically significant (p = 0.0145) with a positive coefficient (0.0096), indicating that the moderating effect of assortment depth differs by channel. This validates the inclusion of moderated moderation in the model and allow us to further explore the effect of the moderator.

| | coeff. | se | t | p | LLCI | ULCI |
|---|---|---|---|---|---|---|
| constant | -2.7570 | 2.5255 | -0.9407 | 0.3475 | -7.3417 | 2.5902 |
| SKUSHARE | 1.2513 | 0.1043 | 11.9964 | 0.0000 | 1.0462 | 1.4564 |
| DUMMY_OF | 18.4235 | 2.9666 | 6.2104 | 0.0000 | 12.5902 | 24.2568 |
| Int_1 | -0.5952 | 0.1271 | -4.6848 | 0.0000 | -0.8450 | -0.3454 |
| AVGSKUST | 0.0096 | 0.0442 | 0.2162 | 0.8290 | -0.0774 | 0.0966 |
| Int_2 | -0.0013 | 0.0096 | -0.5553 | 0.5790 | -0.0059 | 0.0033 |
| Int_3 | -0.1473 | 0.0536 | -2.7470 | 0.0063 | -0.2527 | -0.0418 |
| Int_4 | 0.0096 | 0.0039 | 2.4557 | 0.0145 | 0.0019 | 0.0172 |

Outcome variable: online PL sales share

**Tab. 4**. Results of the three-way interaction

Table 5 reports the conditional effects of PL assortment share on PL sales share in the offline setting, evaluated at three representative values of assortment depth:

- At low assortment depth (56352 SKUs), the relationship is negative and significant (effect = -0.5413, p < 0.0001).
- At moderate assortment depth (210499 SKUs), the relationship remains negative and significant (effect = -0.3937, p < 0.0002).
- At high assortment depth (517428 SKUs), the relationship becomes non-significant (effect = -0.0999, p = 0.5538). this suggests that the presence of too many SKUs may overwhelm or dilute PL impact in the physical retail setting.

| Assort. depth | Effect | F | df1 | df2 | p |
|---|---|---|---|---|---|
| 5.6352 | -0.5413 | 21.6518 | 1 | 372 | 0.0000 |
| 21.0499 | -0.3937 | 13.6942 | 1 | 372 | 0.0002 |

| | | | | | |
|---|---|---|---|---|---|
| 51.7428 | -0.0999 | 0.3511 | 1 | 372 | 0.5538 |

**Table 5**: Results of the conditional interaction between assortment share and the offline setting at value(s) of assortment depth

These findings suggest that while increasing PL assortment share can enhance PL sales share, this effect diminishes or even turns negative in physical stores as assortment depth grows, potentially due to consumer choice overload or brand loyalty effects. Therefore, hypothesis $H_{2B}$ is not supported. Finally, Table 6 shows the conditional effects of PL assortment share on PL sales share across both channels, evaluated at different levels of assortment depth.

| Retail setting | Assort. depth | Effect | se | t | p |
|---|---|---|---|---|---|
| offline | 5.6352 | 1.2439 | 0.0957 | 12.9922 | <0.001*** |
| | 21.0499 | 1.2237 | 0.0793 | 15.4333 | <0.001*** |
| | 51.7428 | 1.1835 | 0.0918 | 12.8909 | <0.001*** |
| online | 5.6352 | 0.7027 | 0.0661 | 10.6365 | <0.001*** |
| | 21.0499 | 0.8300 | 0.0709 | 11.701 | <0.001*** |
| | 51.7428 | 1.0836 | 0.1414 | 7.6645 | <0.001*** |

**Table 6**. Results of testing the conditional effects of the focal predictor at values of the moderator(s)

These results show that in the offline setting there is a decreasing effect. When PL assortment depth increases, the effect of PL assortment share on PL sales share decreases; while in the online setting there is an increasing effect, meaning that when PL assortment depth increases, the effect of PL assortment share on PL sales share increases too. Thus, hypothesis $2_A$ is supported.

In sum, these results confirm that while a broader PL assortment consistently benefits PL sales share, the impact of assortment depth differs significantly between online and offline settings. In the online environment display visibility reinforces PL performance, supporting richer navigation and discovery without physical constraints, while in the physical store excessive depth may dilute PL effectiveness due to choice overload or strong national brand loyalty.

## 5. Managerial implications

The results of this study offer significant managerial insights for grocery retail managers aiming to strategically optimize private label performance across online and offline channels.

First, the evidence that PL assortment share exerts a positive effect on PL sales share across both channels highlights the importance of actively managing the depth and/or breadth of PL assortments. Managers should therefore prioritize expanding the proportion of PL items within categories to capture higher sales shares, leveraging PL as a strategic asset for margin

improvement and differentiation from competitors. This is particularly relevant in contexts where price-sensitive consumers perceive a broader PL presence as a signal of retailer quality and value positioning. Retailers can select categories in which to expand PL assortment and ensure consistent visibility of these products.

Second, the evidence that assortment depth moderates the impact of PL assortment share, albeit differently by channel, has relevant operational consequence for managers. In the online channel, the positive moderation effect indicates that increasing total assortment depth amplifies the beneficial impact of PL assortment share on PL sales share. Practically, this means that online retailers should not only expand their PL ranges but also ensure that categories are deep enough to support consumer exploration and discovery without triggering overload. The flexibility of digital shelves enables retailers to present broad and deep assortments without physical constraints, allowing for richer navigation experiences, greater online visibility, and improved cross-selling opportunities. Managers should therefore invest in website architecture, filtering tools, and personalized recommendations that help consumers efficiently navigate extensive assortments and locate PL options, thereby converting visibility into purchase.

Conversely, the offline environment seems to be more characterized by stronger consumer loyalty toward NBs. This is because we found that increasing the depth of PL assortment in the physical store attenuates the impact of PL assortment share on its sales share. This means that an excessively broad PL assortment could potentially alienate NB-loyal shoppers, who might perceive the overwhelming PL presence as a reduction in quality or as a deviation from trusted NB offerings. This suggests that physical retailers should pursue a curated PL strategy to expand PL assortments selectively in categories where consumer acceptance is high, while maintaining balanced shelf space for prominent NBs to retain loyal NB shoppers.

In sum, these insights emphasize that PL assortment strategies should be channelspecific. While online retailers can exploit greater assortment breadth as a lever to enhance PL performance, offline retailers should focus on optimizing shelf space and assortment simplicity. Retail managers can thus deploy tailored assortment strategies that align with the unique dynamics of each channel, ultimately improving PL sales outcomes and competitive positioning in an increasingly omnichannel grocery market.

## 6. Discussion and conclusion

The paper provides empirical evidence about the existence of a direct and positive relationship between PL assortment and PL sales in the FMCG industry, both offline and online, although the same relationship is stronger in "bricks-and-mortar" stores than in the e-commerce channel. Likewise, the research conducted by Brüggemann and Pauwels (2022) highlights differences in the purchase share of products between online and offline grocery shoppers. This suggests that assortment composition, including PL products, plays a role in shaping consumer preferences and, consequently, impacts sales across both online and offline retail channels.

The findings thus confirm the significant role of assortment as a key-driver for PL sales in the online retailer setting as well as in the offline one. This is due to an enhanced level of PL visibility/exposure, which induces an increase in the willingness-to-buy PL items by e-shoppers.

Moreover, the study reveals that the total category assortment depth moderates the above positive impact of assortment share on sales share online only, while offline this category-specific attribute results to be not significative. This means that if in the offline retail setting a higher assortment share always drives PL to a higher sales share, independently from the

total number of items listed in each food and beverage category, in the online retail setting the same effect is differentiated according to the magnitude of the category's range. The higher the number of items listed in the category online, the higher the importance of online assortment share as a key driver to online sales share for PL.

This evidence opens field for further research within the online channel, where one of the biggest retail marketing issues lies in the limited visibility given to each brand/item compared to what happens in the offline channel. While online each single item typically occupies only one virtual "facing", thereby reducing the opportunity for prominent visibility, offline the same item can be strategically presented multiple times on the shelf, increasing its in-store visibility. Nevertheless, the online environment is characterized by potentially infinite shelves, allowing for the presence of a wider range, but this must be combined with solutions that are able to offer a user-friendly navigation experience. All the above drives to the need for innovative merchandising management practices for e-tailers, based on the manoeuvring of brands' visibility levers more in *qualitative* terms (i.e. working on the algorithm determining the ranking of items showed in each category, as well as on smart characteristics filtering and price sorting options) than in offline-typical *quantitative* terms (i.e. number of facing allocated to each item listed in the same category).

The limitations of this work are threefold. First, it is limited in time, as it focuses on one year only (2023); a longitudinal analysis including a wider timespan would surely enrich and reinforce the analysis. Second, it is based on a dataset regarding the whole retailing industry, while an analysis comparing different players through elaboration of firm-specific data would give interesting insights related to various business models co-existing in the same competitive arena. Lastly, we consider one moderator only (i.e. total category assortment depth); controlling for other potential moderator would enrich the analysis. According to the extant literature, national brands sales share and SB price gap vs. national brands appear to be particularly promising moderators to be tested.

## References


Amrouche, N., & Zaccour, G. (2007). Shelf-space allocation of national and private brands. European Journal of Operational Research, 180(2), 648-663.

Arce-Urriza, M., & Cebollada, J. (2012). Private labels and national brands across online and offline channels. Management Decision, 50(10), 1772-1789.

Benn, Y., T. L. Webb, B. P. Chang, and J. Reddy (2015), "What Information Do Consumers Consider, and How Do They Look for It, When Shopping for Groceries Online?" Appetite, 89, 265-273.

Bezes, C. (2016). Comparing online and in-store risks in multichannel shopping. International Journal of Retail & Distribution Management, 44(3).

Broniarczyk, S. M., & Hoyer, W. D. (2009). Retail assortment: more≠ better. In Retailing in the 21st century: Current and future trends (pp. 271-284). Berlin, Heidelberg: Springer Berlin Heidelberg.

Broniarczyk, S. M., W. D. Hoyer, and L. McAlister (1998), "Consumers' Perceptions of the Assortment Offered in a Grocery Category: The Impact of Item Reduction," Journal of Marketing Research, 35 (2), 166-176.

Brüggemann, P., & Pauwels, K. (2022, May). Consumers' attitudes and purchases in online versus offline grocery shopping. In Advances in National Brand and Private Label Marketing: Ninth International Conference, 2022 (pp. 39-46). Cham: Springer International Publishing.

Brüggemann, P., Olbrich, R., & Schultz, C. D. (2020). Competition between national brands and private labels: determinants of the market share of national brands. In Advances in National Brand and Private Label Marketing: Seventh International Conference, 2020 (pp. 39-49). Springer International Publishing.

Cebollada, J., Y. Chu, and Z. Jiang (2019), "Online Category Pricing at a Multichannel Grocery Retailer," Journal of Interactive Marketing, 46, 52-69.

Chandon, P., J. W. Hutchinson, E. T. Bradlow, and S. H. Young (2009), "Does In-Store

Marketing Work? Effects of the Number and Position of Shelf Facings on Brand Attention and Evaluation at the Point of Purchase," Journal of Marketing, 73 (6), 117.

Chernev, A., Böckenholt, U., & Goodman, J. (2015). Choice overload: A conceptual review and meta-analysis. Journal of Consumer Psychology, 25(2), 333-358.

Chu, J., Arce-Urriza, M., Cebollada-Calvo, J., & Chintagunta, P. K. (2010). An empirical analysis of shopping behavior across online and offline channels for grocery products: The moderating effects of household and product characteristics. Journal of Interactive Marketing, 24(4), 251–268.

Chu, J., Chintagunta, P. K., & Cebollada, J. (2008). A comparison of within-household price sensitivity across online and offline channels. Marketing Science, 27(2), 283– 299.

Dawes, J., and M. Nenycz-Thiel (2014), "Comparing Retailer Purchase Patterns and Brand Metrics for In-Store and Online Grocery Purchasing," Journal of Marketing Management, 30 (3/4), 364-382.

Degeratu, A., Rangaswamy, A., & Wu, J. (2000). Consumer choice behavior in online and traditional supermarkets: The effects of brand name, price, and other search attributes. International Journal of Research in Marketing, 17(1), 55–78.

Dick, A., A. Jain, and P. Richardson (1996), "How Consumers Evaluate Store Brands," Journal of Product and Brand Management, 5 (2), 19-28.

Fornari E., Fornari D., Grandi S. and M. Menegatti (2013). "The influence of retailingmix levers on private label market share: the case of the Italian FMCG market." Journal of Retailing and Consumer Services, 20(6), pp. 617-624.

Gidlöf, K., A. Anikin, M. Lingonblad, and A. Wallin (2017), "Looking is Buying: How Visual Attention and Choice Are Affected by Consumer Preferences and Properties of the Supermarket Shelf," Appetite, 116, 29-38.

Gielens, K., Ma, Y., Namin, A., Sethuraman, R., Smith, R. J., Bachtel, R. C., & Jervis, S. (2021). The future of private labels: towards a smart private label strategy. Journal of Retailing, 97(1), 99-115.

Golder, P. N., M. G. Dekimpe, J. T. An, H. J. van Heerde, D. S. Kim, and J. W. Alba (2023), "Learning from Data: An Empirics-First Approach to Relevant Knowledge Generation," Journal of Marketing, 87 (3), 319-336.

Hamilton, S. F., and T. J. Richards (2009), "Product Differentiation, Store Differentiation, and Assortment Depth," Management Science, 55 (8), 1368-1376.

Hayes, A. F. (2018). Introduction to mediation, moderation, and conditional process analysis: A regression-based approach (2nd ed., p. 320). The Guilford Press.

Huyghe, E., Verstraeten, J., Geuens, M., & Van Kerckhove, A. (2017). Clicks as a healthy alternative to bricks: how online grocery shopping reduces vice purchases. Journal of Marketing Research, 54(1), 61-74.

Keller, K. O., Dekimpe, M. G., & Geyskens, I. (2016). Let your banner wave? Antecedents and performance implications of retailers' private-label branding strategies. Journal of Marketing, 80(4), 1-19.

Mao, Z., Duan, Y., & Liu, W. (2023). Consumers' choice of private label considering reference price and moderating effect. Journal of Retailing and Consumer Services, 71, 103216.

McKinsey & Company (2020), "Turning Private Labels into Powerhouse Brands," Retrieved from https://www.mckinsey.com/industries/retail/our-insights/turning-privatelabels-into-powerhouse-brands.

McKinsey & Company (2023), Living with and Responding to Uncertainty: State of Grocery Retail, 2023.

Nenycz-Thiel, M., Romaniuk, J., & Dawes, J. (2016). Is being private better or worse online? Private labels performance in online grocery channel. In Advances in National Brand and Private Label Marketing: Third International Conference, 2016 (pp. 63-65). Springer International Publishing.

Olson, J. C. (1972), Cue Utilization in the Quality Perception Process: A Cognitive Model and an Empirical Test (Doctoral dissertation, Purdue University).

Ramus, K., and N. Nielsen (2005), "Online Grocery Retailing: What Do Consumers Think?" Internet Research, 15 (3), 335-352.

Sethuraman, R. and Cole, C. (1999), "Factors influencing the price premiums that consumers pay for national brands over store brands", Journal of Product & Brand Management, Vol. 8 No. 4, pp. 340-351. https://doi.org/10.1108/10610429910284319

Sethuraman, R., Gázquez-Abad, J. C., & Martínez-López, F. J. (2022). The effect of retail assortment size on perceptions, choice, and sales: Review and research directions. Journal of Retailing, 98(1), 24-45.

Spence, C., N. Puccinelli, D. Grewal, and A. L. Roggeveen (2014), "Store Atmospherics: A Multisensory Perspective," Psychology & Marketing, 31 (7), 472-488.

Statista (2024), "Private Label in Europe: Statistics & Facts," https://www.statista.com/topics/7952/private-label-in-europe/#topicOverview.

Steenkamp, J., and I. Geyskens (2014), "Manufacturer and Retailer Strategies to Impact Store Brand Share: Global Integration, Local Adaptation, and Worldwide Learning," Marketing Science, 33 (1), 6-26.

Togawa, T., Ishii, H., Kwon, S., Hiraki, I., & Onzo, N. (2024). Effects of Offline Versus Online Promotional Media on Consumer Response: Can Print versus Online Coupons Be More Effective At Increasing Redemption Behavior?. Journal of Advertising Research, 64(4), 416-429.

Turri, A. M., & Watson, A. (2023). Product Assortment, Choice Overload, and Filtering Technology across Retail Contexts. The International Review of Retail, Distribution and Consumer Research, 33(3), 219-239.

Van Heerde, H. J., C. Moorman, C. P. Moreau, and R. W. Palmatier (2021), "Reality Check: Infusing Ecological Value into Academic Marketing Research," Journal of Marketing, 85 (2), 1-13.

van Herpen, E., E. van den Broek, H. van Trijp, and T. Yu (2016), "Can a Virtual Supermarket Bring Realism into the Lab? Comparing Shopping Behavior Using Virtual and Pictorial Store Representations to Behavior in a Physical Store," Appetite, 107, 196-207.

Verstraeten, J., Heeremans, E., Geuens, M., & Vermeir, I. (2023). How online grocery shopping drives private label food purchases. Journal of Business Research, 167, 114057.

# Nonlinear trade-offs in customer acquisition and retention

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## Abstract

The nonlinear trade-off between customer acquisition and retention presents a critical challenge in marketing strategy. While both are essential for sustained business growth, they draw on shared, limited resources and influence growth trajectories in distinct—and often nonlinear—ways. Overinvesting in customer acquisition can lead to churn-heavy expansion, resulting in high costs and unsustainable growth. Conversely, overemphasizing retention may constrain short-term expansion but can paradoxically strengthen acquisition through improved brand reputation and customer advocacy. These nonlinear interdependencies mean that small imbalances in resource allocation can produce disproportionately large outcomes, including volatile or even chaotic growth dynamics. As a result, marketers must continuously recalibrate their acquisition–retention strategies, guided by data-driven insights, contextual awareness, and long-term objectives. However, this process must be approached with caution: even minor adjustments or prudent, incremental refinements can introduce deterministic chaos, leading to instability and unpredictability in acquisition and retention dynamics. Understanding these nonlinear effects, and their potential, such as chaos being a necessary condition for ontogeny and innovation, is crucial for designing sustainable marketing strategies.

*Keyword: Customer Acquisition, Customer Retention, Nonlinear Trade-offs, Deterministic Chaos*

## 1. Introduction

Customer acquisition and customer retention (AR) are both fundamental pillars of business growth and sustainability (Reinartz & Cumar, 2003; Lianos & Sloev, 2016, Voss & Voss, 2008). However, they compete for limited resources: budget, time, talent, and attention (Kumar &, Reinartz, 2016; Livne et al., 2011; Min et al., 2016). This trade-off is not simply a matter of dividing efforts evenly—it is inherently nonlinear. Investing more in one area does not result in proportional gains. We will demonstrate that, under specific conditions, the evolution of new customer acquisition and the retention of existing customers can transition into deterministic chaos. As a result, the system may exhibit long-term unpredictability, where small differences in initial conditions lead to drastically different long-run outcomes.

## 2. Understanding the trade-off

Customer acquisition refers to the strategies and efforts made to attract new customers to a business. We refer to marketing activities such as digital advertising, search engine marketing, influencer partnerships, public relations, and product trials. On the other hand, customer

retention refers to the strategies used to keep existing customers engaged, satisfied, and loyal over time. These include email marketing, loyalty programs, personalized experiences, exceptional customer support, and post-purchase engagement.

In theory, a business would do well to invest equally in both. However, in practice, budgets are limited, and marketing teams must prioritize. This forces a trade-off: investing more in customer acquisition typically means less resources in retention—and vice versa (Tsao, 2013). This trade-off becomes particularly important in highly competitive markets, earlystage startups with a finite runway, or during economic downturns when efficiency becomes paramount.

The consequence is a nonlinear co-evolution of the number of new and retained consumers. Retention has a compounding effect that makes it disproportionately impactful over time. Loyal customers (Nasir, 2017) tend to make repeat purchases, refer others, and cost less to serve. As a result, even small improvements in retention can have a significant impact on long-term profitability. Conversely, neglecting retention may not immediately affect revenue, but it creates a leaky bucket scenario in which acquisition spending is wasted, as new customers churn out as quickly as they arrive. This creates a nonlinear risk: even minimal underinvestment in retention can drastically erode the value of otherwise effective acquisition efforts.

At the same time, over-investing in acquisition can inadvertently harm retention. For instance, aggressive promotional offers aimed at attracting new customers might alienate loyal customers who previously paid full price. A sudden influx of new users may also overload customer service teams, degrading the overall experience and prompting existing users to leave. This implies that the cost of acquisition goes beyond monetary investment—it also affects organizational focus and the quality of customer experience—introducing additional layers of nonlinearity (Reichheld, 1996).

Given the nonlinear nature of the acquisition–retention trade-off, there is no one-size-fits-all solution for optimal resource allocation. The right balance depends on several dynamic and context-specific factors (King et al., 2016). Startups and early-stage companies tend to prioritize acquisition as they seek product–market fit and aim to grow their customer base rapidly. In contrast, mature companies in saturated markets often shift their focus toward retention, especially as the cost of acquiring new customers rises.

Business models also shape strategic emphasis. In subscription-based models such as Netflix, retention is typically more critical, as recurring revenue drives customer lifetime value. In transactional models like e-commerce, acquisition may initially appear more important, but strategies such as loyalty programs and customer lifetime value optimization remain essential for profitability (Kvíčala et al., 2024). Industry dynamics play a role as well: sectors characterized by high switching costs or strong brand loyalty (e.g., financial services, luxury goods) can afford to concentrate more on retention, while commoditized markets (e.g., fast fashion, consumer electronics) may need to maintain a steady focus on acquisition to stay competitive.

Despite the intuitive appeal and apparent success of many strategies for managing the acquisition–retention trade-off (Farquhar et al., 2008), significant challenges arise from the uncertainty inherent in their implementation. This uncertainty is not limited to time lags between strategic actions and observable results, or the constantly shifting nature of market environments. It also stems from a deeper, intrinsic uncertainty rooted in the nonlinear evolution of customer dynamics. In this context, the interaction between acquisition and retention can exhibit chaotic behavior (Strogatz, 2024), in which outcomes become highly sensitive to initial conditions. This chaos renders future performance difficult to predict and

manage, challenging more deterministic approaches (e.g., Fader & Hardie, 2007; Ovchinnikov et al., 2014) and calling for new frameworks that can account for the complexity and instability of these systems.

## 3. The model

We model the nonlinear trade-off evolution between customer acquisition and retention through the following discrete system:

$$R_{t+1} = a - bA_t \qquad (1)$$

$$A_{t+1} = -cR_t + dR_t^2 \qquad (2)$$

with not negative coefficients. A and R may represent the number of newly acquired and retained customers, respectively. They can also be interpreted as the corresponding growth rates. The coefficients b and c represent the proportion of resources allocated to acquisition (A) and retention (R), respectively. Since the total resource allocation is fixed, we can assume $b + c = 1$, and therefore $c = 1 - b$.

The parameter a represents the number of retained customers at time $t + 1$ when $A_t = 0$. It can be considered an intrinsic property of the product or service that drives customer loyalty. The parameter $d$ captures the nonlinear effect of investments in retention—and the resulting number of retained customers—on the number of new acquisitions.

At time t+1, customer retention (i.e., the number of retained customers) negatively depends on the resources allocated to customer acquisition (or the number of new customers). This reflects a kind of "jealousy" among existing customers: when companies focus heavily on attracting new customers, current customers may perceive this as a loss of exclusivity or reduced attention. As a result, the perceived value of being a client may decrease (see Equation 1).

Customer acquisition $A_{t+1}$ at time t+1 also negatively depends on customer retention $R_t$, reflecting the inherent trade-off between acquisition and retention. However, beyond this linear relationship, a high $R_t$ can have a positive, nonlinear effect on acquisition at time t+1. This is because efforts and strategies aimed at retaining existing customers enhance the perceived value of becoming a new customer (see Equation 2), as prospective clients expect to receive consistent and growing benefits.

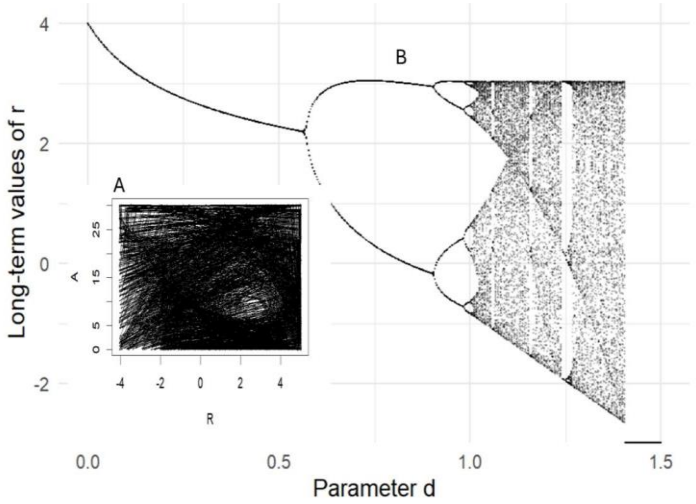



**Figure 1:** A: Dense trajectories of R and A as typical of chaotic behavior, parameters fixed at. a=5, b=0.3, c= 0.5; d= 1.3; initial conditions: R=1.1; A=1.3. B: bifurcation in the long-run values of customer retention as parameter controlling nonlinearity (*d*) changes. The other parameters are fixed at: a=3; b=0.5, initial conditions: A=R=1. System (1-2) may transit to deterministic chaos for some specific values of the model parameters a, b, c, d, e. Nonlinearity controlled by parameter *d* trigger bifurcations in the long-run values of the considered variable, as typical of chaotic behavior (See Fig. 1 B).

## 4. Conclusion

The nonlinear trade-off between customer acquisition and retention is a central issue in both marketing theory and practice. While both are essential, they compete for scarce resources and influence growth in very different—and often nonlinear—ways. Over-investing in acquisition can lead to churn-heavy growth that is costly and unsustainable. Conversely, overinvesting in retention may leave growth opportunities untapped, although, in nonlinear fashion, it can also positively impact acquisition. Understanding the nonlinear dynamics of this trade-off is critical: effects compound over time, and small imbalances can produce outsized consequences, including chaotic behavior. Smart marketers must continually recalibrate their strategies, guided by data, context, and long-term goals. However, this recalibration must be approached with caution, as it may not always increase opportunities and can, under certain conditions, trigger unmanageable and unpredictable outcomes. The identified nonlinear trade-off between Acquisition and Retention may be amplified or diminished depending on the specific industry, business model, or market context. Based on this short contribution a full-length paper investigates the effect of A-R dynamics for different strategies governed by parameter *b*. The full paper identifies conditions for stability, instability, and chaos, and discusses the impact of strategies that are not constant but depend on the observed composition of customers over time.

## References

Fader, P. S., & Hardie, B. G. (2007). How to project customer retention. Journal of Interactive Marketing, 21(1), 76-90.

Farquhar, J. D., & Panther, T. (2008). Acquiring and retaining customers in UK banks: An exploratory study. Journal of Retailing and Consumer Services, 15(1), 9-21

Lianos, G., Sloev, I. (2016). Customer Acquisition and Customer Retention in a Competitive Industry. In: Petruzzellis, L., Winer, R. (eds) Rediscovering the Essentiality of Marketing. Developments in Marketing Science: Proceedings of the Academy of Marketing Science. Springer, Cham. https://doi.org/10.1007/978-3-319-29877-1_111

King, G. J., Chao, X., & Duenyas, I. (2016). Dynamic Customer Acquisition and Retention Management. Production and Operations Management, 25(8), 1332-1343. https://doi.org/10.1111/poms.12559 (Original work published 2016)

Kumar, V., & Reinartz, W. (2016). Creating enduring customer value. Journal of marketing, 80(6), 36-68. Reichheld, F. F. (1996). The loyalty effect: The hidden force behind growth, profits, and lasting value.

Kvíčala, D., Králová, M., & Suchánek, P. (2024). The impact of online purchase behaviour on customer lifetime value. Journal of Marketing Analytics, 1-18.Livne, G., Simpson, A., & Talmor, E. (2011). Do customer acquisition cost, retention and usage matter to firm performance and valuation?. Journal of Business Finance & Accounting, 38(34), 334-363.

Min, S., Zhang, X., Kim, N., & Srivastava, R. K. (2016). Customer acquisition and retention spending: An analytical model and empirical investigation in wireless telecommunications markets. Journal of marketing research, 53(5), 728-744.

Nasır, S. (2017). Customer retention strategies and customer loyalty. In Advertising and branding: concepts, methodologies, tools, and applications (pp. 1178-1201). IGI Global.

Ovchinnikov, A., Boulu-Reshef, B., & Pfeifer, P. E. (2014). Balancing acquisition and retention spending for firms with limited capacity. Management science, 60(8), 20022019.

Reinartz, W. J., & Kumar, V. (2003). The Impact of Customer Relationship Characteristics on Profitable Lifetime Duration. Journal of Marketing, 67(1), 77-

99. https://doi.org/10.1509/jmkg.67.1.77.18589 (Original work published 2003)

Strogatz, S. H. (2024). Nonlinear dynamics and chaos: with applications to physics, biology, chemistry, and engineering. Chapman and Hall/CRC.

Tsao, H. Y. (2013). Budget allocation for customer acquisition and retention while balancing market share growth and customer equity. Marketing Letters, 24, 1-11.

Voss, G. B., & Voss, Z. G. (2008). Competitive density and the customer acquisition– retention trade-off. Journal of Marketing, 72(6), 3-18.

# Track 6
# Tourism, Culture & Arts Marketing

Coordinators: Marcello Atzeni & Serena Volo

Il turismo, l'arte e la cultura rappresentano asset strategici dell'economia e della società, sia a livello nazionale che internazionale. Questa sezione tematica intende stimolare il dibattito scientifico e manageriale sui temi dell'analisi del comportamento della domanda turistica (nelle sue diverse declinazioni tematiche) e, quindi, sulle strategie di marketing che imprese e intere destinazioni possono attuare, anche come risultato di percorsi di imprenditorialità, per soddisfare i bisogni e le aspettative dei visitatori, stimolarne la fedeltà e rendere memorabili le esperienze vissute. In questa direzione, la sezione tematica intende anche incentivare lo sviluppo di nuova conoscenza in merito alle tematiche del destination marketing e management (network governance, branding, destination smartness, ecc.) e, quindi, all'analisi delle strategie di co-marketing che imprese e organizzazioni possono porre in essere tramite l'attivazione di rapporti di collaborazione orizzontali, verticali e obliqui con l'obiettivo di creare valore a livello economico, socio-culturale e ambientale per i propri stakeholders. Infine, ma non certamente meno importante, l'attenzione è posta all'analisi del contributo di internet e delle nuove tecnologie (robotica, intelligenza artificiale, realtà aumentata e virtuale, big data, ecc.) nella pianificazione e nell'implementazione delle strategie di experience design nel contesto turistico e culturale.

Con l'obiettivo di rendere ancor più visibile la ricerca che nel corso del tempo l'accademia italiana ha prodotto sulle tematiche di riferimento, e con l'obiettivo di favorirne il confronto e l'integrazione con il contesto scientifico internazionale, uno dei propositi chiave di questa sezione è quello di promuovere la partecipazione di studiosi di università straniere, anche allo scopo di incoraggiare la creazione e lo sviluppo di progetti di ricerca transfrontalieri.

Tourism, art, and culture are strategic assets for economies and societies worldwide. This section promotes scientific and managerial debate on tourist demand behavior and on the marketing strategies—often driven by entrepreneurial initiatives—that firms and destinations can adopt to meet visitor needs, build loyalty, and create memorable experiences. It also supports research on destination marketing and management, including governance networks, branding, smart destinations, and co-marketing strategies enabled through horizontal, vertical, and diagonal collaborations that generate economic, socio-cultural, and environmental value.

A further focus is the role of digital technologies—such as robotics, AI, AR/VR, and big data—in planning and implementing experience-design strategies in tourism and cultural contexts. To enhance the visibility of Italian research and strengthen its connection with international scholarship, the section aims to involve foreign academics and encourage the development of cross-border research projects.

# Oltre l'hype: il ruolo dei social media nella formazione degli overtourism hot spots. Un'analisi esplorativa del caso di Roccaraso

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## Abstract

Il presente working paper mira ad indagare l'influenza dei social media sulle decisioni di escursione giornaliera e la loro potenziale connessione con fenomeni di overtourism. Sebbene la letteratura accademica riconosca il ruolo dei media digitali nel processo decisionale turistico, permane incertezza circa la loro capacità di generare direttamente forme di pressione turistica "non sostenibile". Seguendo un approccio *mixed method* sequenziale su un caso studio esemplare, la nota "invasione di Roccaraso", il disegno della ricerca si articola in una prima fase esplorativa, qui presentata, di tipo quantitativo che combina tecniche di content analysis automatica e sentiment analysis applicate a contenuti pubblicati sul web e sui social nel periodo compreso tra dicembre 2024 e febbraio 2025. In una seconda fase, si condurranno una serie di interviste semistrutturate, finalizzata ad approfondire le motivazioni che hanno orientato le scelte di visita degli escursionisti interessati. I risultati preliminari indicano che i contenuti generati dagli utenti e l'attività degli influencer sembrano non costituire un driver determinante.

*Keywords: Social media-induced tourism, overtourism, content analysis, sentiment analysis, Roccaraso.*

## 1. Inquadramento della ricerca

La pervasiva diffusione dei social media ha innescato una trasformazione radicale nelle dinamiche di scelta e fruizione delle destinazioni turistiche. Piattaforme quali Instagram, Facebook e, in tempi più recenti, TikTok, sono assurte al ruolo non solo di vetrine globali capaci di generare desiderio e orientare i flussi turistici (Leung, Law, Van Hoof & Buhalis, 2013), ma anche di potenziali catalizzatori di fenomeni complessi quali l'overtourism (Gössling, 2017; Butler & Dodds, 2022). Se da un lato la condivisione di esperienze di viaggio attraverso contenuti generati dagli utenti (UGC) offre prospettive percepite come più autentiche e personali rispetto alle tradizionali forme di comunicazione istituzionale (Lim, Chung & Weaver, 2012), dall'altro solleva interrogativi cruciali sulla sostenibilità di tali dinamiche e sull'impatto che queste esercitano sulle località. Nonostante la letteratura esistente abbia iniziato a esplorare il concetto di "turismo indotto dai social media" e alle scelte determinate dall'"instagrammabilità" delle mete (Siegel, Tussyadiah & Scarleset, 2023), permane un significativo gap di ricerca sulla decisione iniziale di visitare una specifica destinazione per un'escursione breve, a differenza delle decisioni prese relative a singole

componenti dell'esperienza, quali la scelta di un hotel, di un ristorante o un'attrazione da visitare (Varkaris & Neuhofer, 2017).

In questo scenario, emerge la necessità di una più approfondita comprensione della relazione tra l'esposizione ai contenuti dei social media, le motivazioni dei viaggiatori (Xiang & Gretzel, 2010) e le conseguenti pressioni esercitate sulle destinazioni, specialmente quelle che esperiscono picchi di popolarità improvvisi ed intensi (*social media-driven overtourism hotspots*) a seguito di campagne virali su piattaforme digitali, come TikTok (Gretzel, 2019). Le analisi esistenti, pur riconoscendo il problema, non riescono a spiegare in modo esaustivo *come* i social media alimentino concretamente l'overtourism (Alonso-Almeida, Borrajo-Millán & Yi, 2019) o tendono a focalizzarsi su singole piattaforme senza considerare l'ecosistema mediale nel suo complesso (Book, Tanford, Montgomery & Love, 2018). Vi è, inoltre, una limitata comprensione del ruolo specifico di piattaforme emergenti, soprattutto in relazione a fenomeni di sovraffollamento improvviso e alla teoria dell'interazione parasociale con gli influencer (Zhu, Fong, Gao & Liu 2023). Recenti studi hanno persino iniziato a mettere in discussione l'assunto di un'influenza preponderante dei social media sulla scelta iniziale della destinazione, suggerendo un impatto più limitato di quanto comunemente percepito (Song & Wondirad, 2023).

Questo studio intende contribuire a colmare parte di questo vuoto conoscitivo attraverso un'analisi esplorativa focalizzata sul caso studio di Roccaraso, una destinazione turistica montana italiana che, secondo resoconti mediatici, avrebbe esperito un episodio di overtourism, a seguito delle attività di alcuni noti influencer su Tik Tok.

## 2. Metodologia

Il research design adottato in questo studio si fonda un approccio *mixed method* di tipo *sequential explanatory* (Ivankova, Creswell & Stick, 2006), integrando una prima fase di analisi quantitativa e una seconda qualitativa, con l'obiettivo di offrire una comprensione completa del fenomeno analizzato. L'uso combinato di analisi di contenuto e testimonianze dirette consente di superare i limiti intrinseci di ciascun metodo considerato isolatamente. In particolare, la content analysis dei post e commenti raccolti sui social media ha permesso di mappare il sentiment, le narrative prevalenti e le dinamiche discorsive emerse in relazione al "fenomeno" Roccaraso, fornendo indicazioni preziose sulle rappresentazioni digitali della destinazione e sul ruolo degli influencer, che saranno poi usate nella seconda fase.

Il dataset, suddiviso in tre periodi per comprendere meglio le dinamiche pre e postevento, è composto da circa 70.000 contenuti online (3.500 a dicembre 2024; 5.500 dal 1° al 25 gennaio 2025; 61.000 dal 25 gennaio fino alla fine del mese successivo) ed è stato estratto tramite la piattaforma di social listening YouScan. L'analisi tematica, basata su metodi lessicali, è stata condotta in due fasi: un approccio top-down, tramite l'assegnazione automatica di 13 categorie a circa 2.000 indicatori lessicali mediante intelligenza artificiale, e un approccio bottom-up, attraverso l'estrazione delle espressioni più frequenti dal dataset. La sentiment analysis è stata realizzata utilizzando il lessico italiano SentIta (Pelosi, 2015), che comprende oltre 15.000 voci annotate manualmente, con adattamenti specifici al caso di studio.

## 3. Analisi dei risultati preliminari

I risultati preliminari di questa analisi esplorativa evidenziano che l'evento verificatosi a Roccaraso il 26 gennaio non risponde alle dinamiche tipiche dell'overtourism attivato o amplificato dall'azione degli influencer. Contrariamente alle ipotesi iniziali, gli influencer non sembrano aver avuto un ruolo determinante nel generare un afflusso eccessivo di turisti nella località.

Nel Periodo 1 (dicembre 2024), i contenuti si concentrano prevalentemente su Roccaraso come destinazione turistica e sulle condizioni meteo-nevose, temi largamente discussi ma connotati da sentiment misto, oscillante tra l'attesa della neve e alcune delusioni legate alla scarsità di precipitazioni. Emergono in modo significativo anche le esperienze personali e ricordi, spesso legati alla dimensione affettiva delle vacanze natalizie, così come una generale valorizzazione delle attività ricreative, delle infrastrutture locali e delle offerte turistiche. Il tono dei post riflette una narrazione prevalentemente celebrativa o promozionale, con contenuti positivi o neutri. Gli aspetti critici, quali il comportamento dei turisti, l'affollamento, il ruolo degli influencer o l'overtourism, risultano marginali sia in termini quantitativi sia in termini di polarizzazione del sentiment. Si osservano le prime tracce di offerte di viaggio organizzato e promozioni via social, ma non emergono ancora segnali di conflitto o disagio percepito.

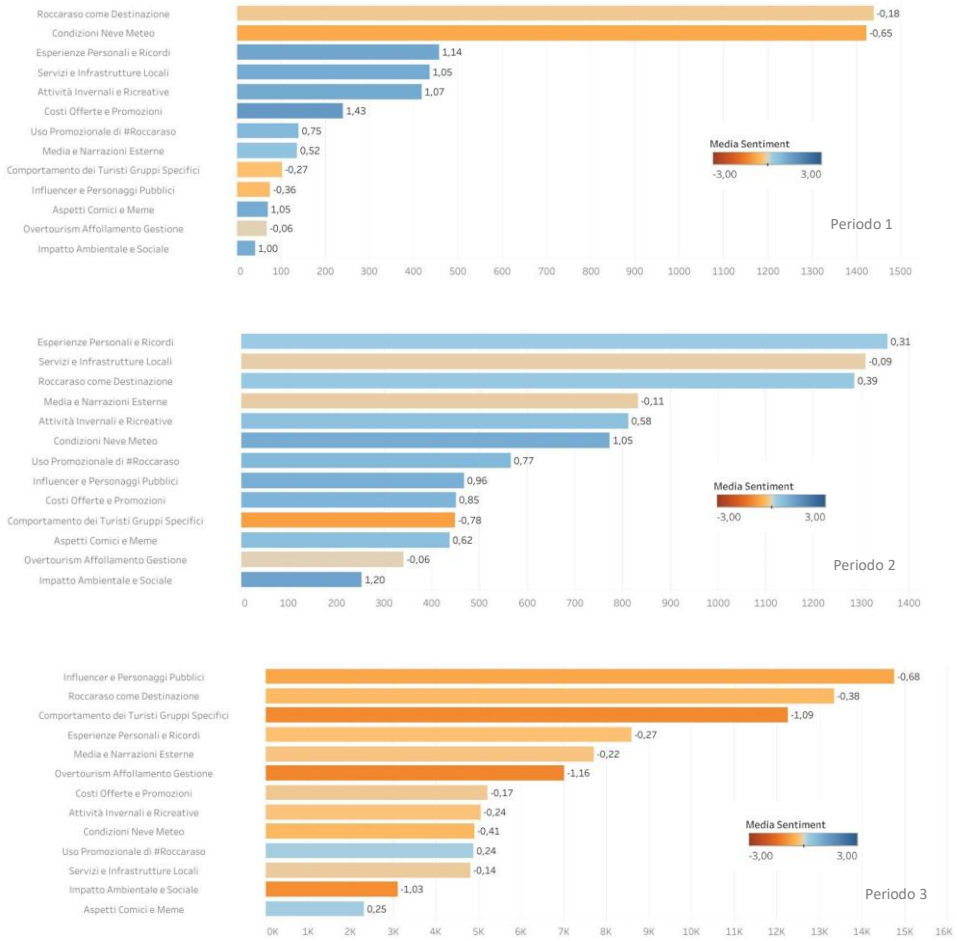



**Figura 1:** Evoluzione del numero di post per categoria tematica e sentiment

Alla luce dei risultati riportati nel grafico per il Periodo 2 (1–25 gennaio), si osserva una situazione ancora marcatamente positiva, sebbene emergano i primi segnali di tensione legati alla crescita della pressione turistica. I contenuti si focalizzano in gran parte su esperienze personali, ricordi legati alla destinazione Roccaraso, con sentiment generalmente favorevole. La narrazione sull'attività ricreativa sulla neve mantiene un tono entusiasta, supportato da condizioni meteo favorevoli. Parallelamente, si rafforzano gli elementi legati alla promozione commerciale, con un alto volume di post su offerte, pacchetti e viaggi organizzati. In questa fase emergono però con maggiore visibilità aspetti problematici, tra cui il comportamento

percepito di gruppi specifici di turisti (sentiment negativo) e le prime menzioni all'overtourism, seppur in forma ancora contenuta.

Nel terzo periodo (26 gennaio – 28 febbraio), si assiste innanzitutto alla crescita esponenziale dei contenuti relativi a Roccaraso determinati dal fenomeno "invasione" del 26 gennaio. La narrazione cambia significativamente rispetto ai periodi precedenti, con un forte aumento di contenuti critici, polemici e satirici. La figura di Rita De Crescenzo e di altri noti TikToker diventa centrale in queste discussioni, così come il dibattito sul comportamento dei turisti (in particolare napoletani) e la gestione dell'overtourism da parte delle autorità locali e dei media. Nonostante ciò, persistono post che celebrano la neve e le attività invernali, sebbene in un contesto più polarizzato.

## 4. Discussione e future ricerche

Dalle prime evidenze del caso di Roccaraso, si evidenzia la complessità del ruolo dei social media nella costruzione delle dinamiche turistiche temporanee. Solo in un momento successivo, la forte copertura mediatica dell'evento, tanto sui media tradizionali quanto su quelli digitali, ha generato un effetto di risonanza sui social network. Influencer locali, micro-influencer e utenti comuni hanno pubblicato contenuti sull'accaduto, impiegando hashtag virali e strategie di visibilità digitale che hanno prodotto livelli di engagement e visualizzazioni particolarmente elevati. L'impatto di questi contenuti appare più di tipo reattivo e amplificativo che causale: la maggior parte degli utenti ha reagito alla notizia e alla visibilità dell'evento piuttosto che averla originata.

Dall'analisi dei contenuti, sembra che un ruolo centrale possa essere stato svolto invece da alcune agenzie di viaggio, che hanno sfruttato in modo strategico i social media per promuovere, in modo capillare, offerte di viaggio organizzato in autobus per trascorrere una giornata a Roccaraso. Attraverso post sponsorizzati, condivisioni virali e l'utilizzo di community digitali, queste agenzie sono riuscite a mobilitare rapidamente un elevato numero di visitatori, rivolgendosi in particolare a un pubblico giovane e sensibile alle proposte low-cost per brevi fughe dalla città.

Emerge la necessità di sviluppare un quadro analitico più ampio per superare il paradigma di turismo indotto dai social media centrato esclusivamente sugli influencer ed abbracciare una lettura più articolata che tenga conto delle diverse logiche di attivazione degli attori commerciali (agenzie), delle piattaforme digitali, degli utenti e dei media nel co-costruire l'esperienza turistica e le relative percezioni di impatto.

Alla luce dei risultati emersi, la fase successiva dello studio permetterà di confrontare le narrazioni online emerse dall'analisi dei contenuti social con le motivazioni individuali degli escursionisti, offrendo così una visione più articolata dei meccanismi.

Al termine di questa fase, si attende di poter fornire indicazioni alle DMO e agli altri enti di governance del territorio per meglio comprendere i meccanismi attraverso i quali i social media plasmano le decisioni dei visitatori, al fine di progettare strategie di marketing territoriale più consapevoli ed efficaci. Questo può tradursi, ad esempio, nella capacità di anticipare picchi di affluenza generati da contenuti virali, come osservato nel caso di Roccaraso, o nella gestione proattiva della reputazione online per mitigare gli effetti negativi di eventuali crisi (Liu, Zhang, & Yao, 2021), dove la reazione negativa sui social media ha costretto le autorità a interventi correttivi.

## Bibliografia


Alonso-Almeida, M. D. M., Borrajo-Millán, F., & Yi, L. (2019). Are social media data pushing overtourism? The case of Barcelona and Chinese tourists. *Sustainability*, *11*(12), 3356.

Book, L. A., Tanford, S., Montgomery, R., & Love, C. (2018). Online traveler reviews as social influence: Price is no longer king. *Journal of Hospitality & Tourism Research*, *42*(3), 445475.

Butler, R. W., & Dodds, R. (2022). Overcoming overtourism: a review of failure. *Tourism Review*, *77*(1), 35-53.

Gössling, S. (2017). Tourism, information technologies and sustainability: an exploratory review. *Journal of Sustainable Tourism*, *25*(7), 1024-1041.

Gretzel, U. (2019). The role of social media in creating and addressing overtourism. In: Dodds R. & Butler R. (eds.), *Overtourism: Issues, realities and solutions*, *1*, 62-75.

Ivankova, N.V., Creswell, J.W., Stick, S.L., 2006. Using mixed-methods sequential explanatory design: from theory to practice. *Field methods* 18 (1), 3–20.

Leung, D., Law, R., Van Hoof, H., & Buhalis, D. (2013). Social media in tourism and hospitality: A literature review. *Journal of Travel & Tourism Marketing*, *30*(1-2), 3-22.

Lim, Y., Chung, Y., & Weaver, P. A. (2012). The impact of social media on destination branding: Consumer-generated videos versus destination marketer-generated videos. *Journal of Vacation Marketing*, *18*(3), 197-206.

Liu, Y., Zhang, R., & Yao, Y. (2021). How tourist power in social media affects tourism market regulation after unethical incidents: Evidence from China. *Annals of Tourism Research*, 91, 103296.

Pelosi, S. (2015). SentIta and doxa: Italian databases and tools for sentiment analysis purposes. In: Bosco C., Tonelli S. & Zanzotto F.M., *Proceedings of the Second Italian Conference on Computational Linguistics* (CLiC-it), 3-4 December 2015, Trento, Accademia University Press.

Siegel, L. A., Tussyadiah, I., & Scarles, C. (2023). Exploring behaviors of social media-induced tourists and the use of behavioral interventions as salient destination response strategy. *Journal of Destination Marketing & Management*, 27, 100765.

Song, Q., & Wondirad, A. (2023). Demystifying the nexus between social media usage and overtourism: evidence from Hangzhou, China. *Asia Pacific Journal of Tourism Research*, *28*(4), 364-385.

Varkaris, E., & Neuhofer, B. (2017). The influence of social media on the consumers' hotel decision journey. *Journal of Hospitality and Tourism Technology*, 8(1), 101-118.

Xiang, Z., & Gretzel, U. (2010). Role of social media in online travel information search. *Tourism Management*, 31(2), 179-188.

Zhu, C., Fong, L. H. N., Gao, H., & Liu, C. Y. N. (2023). When TikTok meets celebrity: An investigation of how celebrity attachment influences visit intention. *Current Issues in Tourism*, 26(17), 2762-2776.

# From Expectations to Emotions: Are Memorable Tourism Experiences Reshaping the Image of Naples as a Tourist Destination?

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## Abstract

Historically associated with negative stereotypes such as crime, disorder, and urban decay, Naples has undergone a significant transformation in its perception as a tourist destination. This working paper investigates the role of Memorable Tourism Experiences (MTEs) in reshaping visitors' perceptions of Naples, with particular attention to the influence of social media–mediated imagery and narratives. Grounded in expectancy-(dis)confirmation theory, the research explores how low or ambiguous pre-visit expectations—often rooted in second-hand representations—can be overturned through emotionally salient and meaningful on-site experiences. A qualitative exploratory study was conducted using semi-structured interviews with both domestic and international tourists. The thematic analysis reveals that actual experiences frequently exceeded initial expectations, particularly in relation to local culture, hospitality, food, and urban vitality. These encounters align with core MTE dimensions such as knowledge, novelty, cultural immersion, and meaningfulness, and contribute to an emotional reappraisal of the destination. Furthermore, social media played a mixed yet significant role—both shaping expectations and enhancing postvisit storytelling—thereby amplifying the reach and impact of MTEs within digital ecosystems. While overtourism was not universally perceived as problematic, some respondents highlighted critical thresholds in specific high-density areas, suggesting potential risks for the sustainability of MTEs.

*Keywords: Memorable Tourism Experiences (MTEs), Digital Narratives, Expectancy Theory, Destination Image, Tourist Perception*

## 1. Conceptual background and context of the research

In recent years, tourism has undergone a shift in focus from traditional products and services to the so-called Memorable Tourism Experiences (MTEs)—that is, positive experiences that remain vividly embedded in tourists' long-term memory (Kim, Ritchie, & McCormick, 2012). MTEs are of strategic importance, as existing literature highlights their capacity to directly influence future travel decisions. This is based on the idea that past travel experiences and the associated memories play a key role in shaping the planning of future destinations (Zhang, Wu & Buhalis, 2018). Constitutive elements of MTEs include several aspects such as hedonism, refreshment, local culture, novelty, meaningfulness, involvement and knowledge (Kim et al., 2012). Further studies have broadened these aspects by including relational and environmental dimensions (de Freitas Coelho, de Sevilha Gosling & de Almeida, 2018), also highlighting the importance of personal interaction with locals,

perceived authenticity, and the quality of emotions experienced in shaping MTEs (Chandralal, Rindfleish & Valenzuela, 2015; Rasoolimanesh, Seyfi, Hall & Hatamifar 2021). Moreover, MTEs assume relevance in the current destination marketing landscape not only because they can enhance Destination Image (DI), but also because they reinforce relational bonds between tourists and the destination, while encouraging other positive behavioral outcomes such as revisit intention and positive electronic word-of-mouth (e-WOM) (Cifci, 2022; Zhang et al., 2018).

However, despite the growing interest in the literature on MTEs and the general consensus regarding their influence on DI (Kim, 2018), the potential role of MTEs in reshaping or altering DI within tourists' minds—and vice versa—remains relatively underexplored (Zhang et al., 2018).

This study investigates how tourists' low expectations—shaped by user-generated destination storytelling on social media, which influences DI (Lu and Stepchenkova, 2015)—can be disconfirmed by real-life experiences, favouring the perception of MTEs. It also examines how such experiences may rehabilitate a positive DI and foster favorable behavioral outcomes toward the destination. The analysis focuses on the case of Naples, Italy, a city whose DI has long been shaped by persistent negative stereotypes—such as crime, safety issues, and decay—especially in online narratives (Micera & Crispino, 2017), using as the theoretical framework the ExpectationConfirmation Theory (ECT) (Oliver, 1980). This theory is particularly relevant within the destination marketing literature, as it has been found that when experience exceeds pre-visit expectations, it triggers satisfaction, cognitive dissonance, and a reworking of tourists' perceptions of a destination.

## 2. Methodology

A sequential mixed-method research design combining qualitative and quantitative approaches has been adopted. The qualitative phase (presented hereby) involved semistructured interviews conducted face-to-face in Naples between November and December 2024 with a total of 16 participants, with different gender, occupations, nationalities, and ages. Respondents were selected using purposive, non-probability sampling to ensure a diverse representation in terms of demographics, cultural backgrounds, and travel motivations. The interview guide was structured to investigate several key dimensions: (1) general travel habits, (2) the perception of Naples prior to the visit, (3) the influence of social media and the digital ecosystem in shaping expectations, (4) the extent to which on-site experiences met or exceeded those expectations—both digitally constructed and pre-existing, (5) the memorability of specific experiences (cultural, culinary, interpersonal, etc.), (6) the perception of overtourism and its potential impact on the visitor experience, and (7) future intentions to revisit the city. The qualitative data were analyzed using thematic analysis (Braun and Clarke, 2006; Gioia, Corley & Hamilton, 2013), proceeding from inductive open coding to the development of first-order, second-order themes and finally aggregate theoretical dimensions (see Table 1).

## 3. Preliminary findings

Several interviewees conveyed that their perception of Naples prior to visiting was shaped by prevailing stereotypes, often negative in tone. These were largely informed by media portrayals, second-hand narratives, or warnings from acquaintances.

Concerns about safety, cleanliness, and disorder were recurrent elements in this imaginary ("*Before I came to Naples, my friends all told me to be careful, even my Italian friends said the same*." - Int. 13). These preconceptions act as a cognitive filter through which the destination is

initially approached. However, they are often revised or overturned by the lived experience, highlighting the transformative power of direct encounter with place.

Expectations prior to the visit were, in most cases, met or exceeded, particularly with regard to the atmosphere, hospitality, and vibrancy of the city ("*Naples exceeded my expectations, particularly regarding the care of the places I have visited so far.*" - Int. 8). Nonetheless, some participants reported mismatches, especially concerning the perceived authenticity of the city experience ("*I expected more authenticity... it seemed to me that many shopkeepers behaved that way on purpose for tourists.*" - Int. 15). The influence of social media on destination choice and experience formation appears highly variable and context-dependent. While some respondents consider platforms such as Instagram and TikTok instrumental in inspiring trips or suggesting itineraries, others adopt a more selective and critical approach ("*I use Instagram to find beautiful places... I find social media reliable, yes, but I base it on my own opinion*." - Int. 8). This utilitarian use of social media functions not merely as a source of inspiration but as a mechanism for emotional anticipation and expectation framing, both of which are crucial in shaping MTEs. Visual content—especially reels and short videos—may prime visitors to seek out specific sensory or emotional engagements, thereby influencing the actual experience.

| **Interview excerpts** | **First-order** | **Second-order** | **Aggregate dimensions** |
|---|---|---|---|
| "Before I came to Naples, my friends all told me to be careful…" (Int. 13) | Safety concerns | Negative stereotypes | Pre-visit destination image |
| "Naples exceeded my expectations, particularly regarding the care…" (Int. 8) | Positive surprise | Expectation exceeded | Pre-visit expectations |
| "I use Instagram to find beautiful places… I base it on my own opinion." (Int. 8) | Selective media use | Critical engagement | Social media influence |
| "I loved walking aimlessly, getting lost in the alleys...visiting museums like Capodimonte." (Int. 1) | Cultural exploration | Knowledge | Lived experiences (MTEs) |
| "Anatomical human organs on display...it's my favorite kind of place." (Int. 13) | Unusual attractions | Novelty | Lived experiences (MTEs) |
| "It's the most lively city I've ever visited in Europe…" (Int. 11) | Emotional involvement | Meaningfulness | Lived experiences (MTEs) |
| "The energy, the culture, and the people are amazing…" (Int. 11) | Cultural immersion | Local culture | Lived experiences (MTEs) |
| "Having very narrow main streets, you perceive it more." (Int. 15) | Spatial discomfort | Amplified crowding | Overtourism perception |
| "I would come back with a local person who knows Naples well." (Int. 15) | Conditional return | Need for deeper discovery | Intention to revisit |

**Table 1:** Thematic code analysis – example

Across the interviews, a broad spectrum of MTE components emerged, consistent with the framework by Kim, Ritchie, and McCormick (2012), in the form of novel "food and wine" experience ("*I wanted to try the rough sfogliatelle, 'o pere e 'o musso, and fried pizza*." - Int. 10), local culture ("*The energy, the culture, and the people are amazing... Even with all the poverty and challenges, it has so much life*" - Int. 11;*"the atmosphere at the Maradona mural was my favorite attraction"* - Int. 9), meaningfulness ("*It's the most lively city I've ever visited in Europe […] so much life and warmth"*- Int. 11), knowledge ("*I loved walking aimlessly, getting lost in the alleys...visiting museums like Capodimonte*. – Int. 1) and novelty ("*Anatomical human organs on display...it's my favorite kind of place to visit*." - Int. 13). While not always explicitly labeled as "memorable," many experiences exhibit high emotional salience, uniqueness, and cognitive impact, aligning with the core criteria of MTEs.

Although not uniformly described as problematic, overtourism was frequently noted in specific high-density zones, such as the Historic City Center or popular food districts. The issue appears amplified by the city's spatial morphology, with narrow streets exacerbating the perception of crowding. ("*You couldn't walk... very chaotic, especially in the Spanish Quarters*." - Int. 14; "*Having very narrow main streets, you perceive it more*." - Int. 15). However, respondents often relativized the phenomenon by comparing Naples to other major Italian destinations (e.g., Rome, Venice), concluding that the situation was manageable, yet potentially detrimental to the quality of tourist experiences if not addressed adequately.

A strong intention to return and positive WOM was expressed by the majority of respondents, frequently tied to experiences not yet lived (e.g., the coast, hidden gems), thus indicating that the destination holds latent potential for future MTEs ("*I would come back with a local person who knows Naples well*." - Int. 15). This forward-looking orientation reflects a sense of unfinished narrative and emotional attachment, both of which are known precursors to destination loyalty (Hendler, LaTour & Cotte, 2022).

## 4. Implications and future research directions

Early findings provide valuable insights for the development of future research. The disconfirmation of expectations through tourists' actual experiences points out the potential of MTEs in rehabilitating the destination image, triggering positive WOM and reputational revision. From a methodological perspective, to adequately explore these phenomena, further research could integrate quantitative and qualitative analyses, to gain a deeper and more nuanced understanding of MTEs and expectationdisconfirmation processes. Drawing on the ECT, future studies will integrate these results with a quantitative approach aimed at modeling the relationship between how digital narratives shape expectations and how subsequent MTEs can reshape a DI— either reinforcing a positive perception and encouraging further MTEs through digital storytelling, or rehabilitating a previously negative DI. Future studies could be applied also to other tourism contexts where perceived DI is strongly influenced by biases, stereotypes, or negative media-driven narratives. The cross-context application of the model would allow for testing its validity across different destinations.

Furthermore, the use of multiple measurements (pre-visit, during-visit, and post-visit) would be interesting to allow for tracking the evolution of tourist perceptions in real time, overcoming the limitations of post-experience recall (Kim et al., 2024). Future research could further investigate the extent to which MTEs influence dominant narratives about destinations on social media, as well as the role of these platforms as facilitators in processes of destination image rehabilitation. At the same time, it is crucial to acknowledge that increased attractiveness—if inadequately managed—may result in overtourism, potentially undermining the reputational gains achieved.

## References


Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, *3*(2), 77-101.

Chandralal, L., Rindfleish, J., & Valenzuela, F. (2015). An application of travel blog narratives to explore memorable tourism experiences. Asia Pacific Journal of Tourism Research, 20(6), 680-693.

Cifci, I. (2022). Testing self-congruity theory in Bektashi faith destinations: The roles of memorable tourism experience and destination attachment. *Journal of Vacation Marketing*, *28*(1), 3-19.

de Freitas Coelho, M., de Sevilha Gosling, M., & de Almeida, A. S. A. (2018). Tourism experiences: Core processes of memorable trips. Journal of Hospitality and Tourism Management, 37, 11-22.

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational research methods*, *16*(1), 15-31.

Hendler, F., LaTour, K. A., & Cotte, J. (2022). Temporal orientation and customer loyalty programs. *Cornell Hospitality Quarterly*, 63(4), 448-464.

Kim, J. H., Ritchie, J. B., & McCormick, B. (2012). Development of a scale to measure memorable tourism experiences. Journal of Travel research, 51(1), 12-25.

Kim, J. H. (2018). The impact of memorable tourism experiences on loyalty behaviors: The mediating effects of destination image and satisfaction. Journal of Travel Research, 57(7), 856-870.

Kim, J. H., Badu-Baiden, F., Kim, S., Koseoglu, M. A., & Baah, N. G. (2024). Evolution of the memorable tourism experience and future research prospects. Journal of Travel Research, 63(6), 1315-1334.

Lu, W., & Stepchenkova, S. (2015). User-generated content as a research mode in tourism and hospitality applications: Topics, methods, and software. *Journal of Hospitality Marketing & Management*, *24*(2), 119-154.

Micera, R., & Crispino, R. (2017). Destination web reputation as "smart tool" for image building: the case analysis of Naples city-destination. *International Journal of Tourism Cities*, *3*(4), 406-423.

Oliver, R. L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of marketing research*, *17*(4), 460-469.

Rasoolimanesh, S. M., Seyfi, S., Hall, C. M., & Hatamifar, P. (2021). Understanding memorable tourism experiences and behavioural intentions of heritage tourists. Journal of Destination Marketing & Management, 21, 100621.

Zhang, H., Wu, Y., & Buhalis, D. (2018). A model of perceived image, memorable tourism experiences and revisit intention. *Journal of Destination Marketing & Management*, 8, 326336.

# Captured by the story: the power of influencer storytelling in shaping travel choices

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## Abstract

This study explores the effectiveness of influencer storytelling in tourism through narrative transportation theory. Using a quantitative approach, we analyse how influencer credibility, narrative coherence, story authenticity, and narrative style (cognitive vs. emotional) influence narrative transportation, and how the latter generates travel inspiration and travel intention. The expected results aim to enrich the literature on narrative persuasion and provide operational implications for the design of digital content capable of inspiring audiences and guiding their travel decisions.

*Keywords: influencer storytelling; travel influencer; narrative transportation; tourism.*

## 1. Introduction

In the contemporary digital communication landscape, storytelling - understood as the communication technique that involves sharing knowledge and experiences through a narrative structure (Kim et al., 2020) - has emerged as a strategic lever for engaging consumers, especially in experiential contexts such as tourism (Woodside et al., 2008). In this context, influencer storytelling is playing an important role, i.e., the use of storytelling through influential figures on social media, such as travel influencers, who recount authentic and emotional experiences, establishing a relationship of trust with their followers (Chong & Gottipati, 2020; Gross et al., 2024). Travel influencers act as co-creators of meaning and destination brand intermediaries, blending emotional engagement with content strategies aimed at fostering parasocial intimacy and perceived authenticity (Sokolova & Kefi, 2020). This evolution has redefined the dynamics of trust and persuasion within social media ecosystems. Travel influencers are storytellers capable of transforming real places into engaging visual narratives, influencing the tourist imagination and travel decisions (Femenia-Serra & Gretzel, 2020). Their communicative effectiveness is based on the process of narrative transportation, i.e., the cognitive-emotional immersion that is activated when the individual becomes completely absorbed in the narrative, temporarily suspending external reality and becoming more receptive to the messages conveyed (Green & Brock, 2000). Although several studies have highlighted the impact of travel influencer storytelling on engagement, trust, and the image of the tourist destination (e.g., Atiq et al., 2022; Sattar & Sfodera, 2025), the phenomenon remains largely unexplored, especially with regard to the psychological mechanisms that determine the effectiveness of influencer storytelling in tourism. In particular, the role of narrative transportation - widely recognized in the literature as a central element in narrative persuasion - has so far been neglected in the context of narratives conveyed by travel influencers. Consequently, there is a lack of clear understanding

of how influencer storytelling activates narrative transportation, inspiring and influencing consumers' behavioural intentions. To fill these gaps, this study explores the emerging topic of influencer storytelling in tourism through the lens of narrative transportation theory, with a twofold objective: to explore the antecedents of transportation - influencer credibility, narrative coherence, story authenticity, and narrative style (cognitive vs. emotional) - and to analyse its consequences on travel inspiration and travel intention. The expected results aim to enrich the theory and provide operational guidance to destinations and marketers on how to design narratives that inspire and guide visit intentions.

## 2. Narrative Transportation Theory

To explain the effectiveness of storytelling in marketing, narrative transportation theory is often used (e.g., Deb et al., 2025), according to which narratives activate a psychological process that mentally and emotionally transports the audience into the story (Choi, 2024). As stated by Green and Brock (2000), when a narrative is built around a coherent plot, the recipient experiences a cognitive-emotional immersion that momentarily suspends contact with external reality. In this state, attention is focused exclusively on the narrated world, favouring openness to persuasive influences. Van Laer et al. (2014) identify three structural antecedents of narrative transport: character, which allows emotional identification with recognizable and consistent figures; narrative structure, that is, the logical and fluid sequence of events capable of activating the imagination; and verisimilitude, which relates to the perceived plausibility and authenticity of the story, an essential element in generating involvement and disbelief. The interaction of these three factors facilitates the immersive experience typical of narrative transportation. Although narrative transportation theory has been widely applied to traditional advertising, its use in the study of influencer storytelling remains limited (Chong & Gottipati, 2020), thus representing a significant theoretical gap.

## 3. Hypothesis development and research model

Based on the model of Van Laer et al. (2014), narrative transportation is influenced by three key elements: characters, narrative structure and verisimilitude. In this study, these dimensions are translated into influencer credibility, narrative coherence, and story authenticity, respectively. The influencer, as the protagonist of the narrative, represents the central character: credibility - based on trust, competence and attractiveness (Ohanian, 1990) - fosters identification and narrative immersion. Narrative coherence reflects the linearity and comprehensibility of the plot, while the perceived authenticity of the story, refers to consistency with real experiences (Chong & Gottipati, 2020). Therefore, based on the theory, in this study we hypothesize that:

*H1. Influencer credibility positively influences narrative transportation;*

*H2. Narrative coherence positively influences narrative transportation; H3. Story authenticity positively influences narrative transportation.*

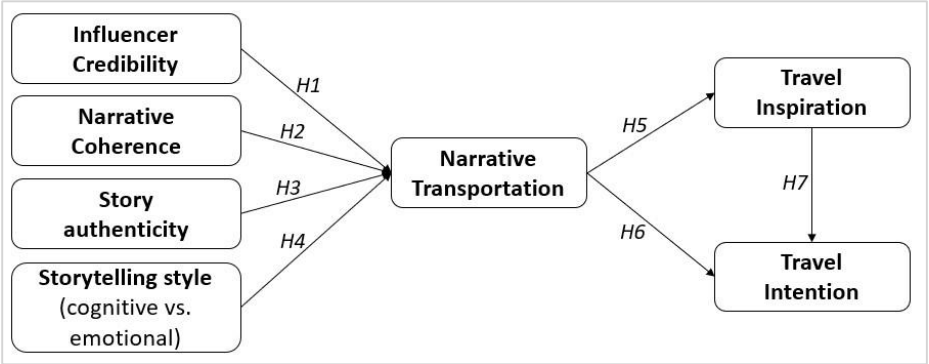
In addition to the antecedents of narrative transportation identified in the literature (van Laer et al., 2014), in the present study it is hypothesized for the first time that, the narrative style adopted by the influencer may also influence the audience's level of immersion in the narrative. In particular, the distinction between cognitive style and emotional style emerges as relevant in the field of storytelling (Hamelin et al., 2020). Cognitive style is oriented toward the rational and orderly transmission of information, characterized by objective and analytical language, centred on data and explanations. In contrast, the emotional style is based on subjective and engaging language, which enhances personal experiences and affective elements, promoting identification and empathic connection with the audience (Hamelin et al., 2020). Therefore, in this study we hypothesize that:

*H4. Cognitive and emotional style perception influences narrative transportation.*

Immersion in narrative, typical of the narrative transportation process, stimulates imagination and interest in the destination, generating a state of travel inspiration that can be the starting point of travel decision making. In fact, travel inspiration is a temporary psychological condition that is activated in response to stimuli that can evoke desire, imagination and motivation toward travel (Chen et al., 2025). In addition to generating inspiration, narrative transportation can directly influence travel intention: as evidenced in the literature, immersion in the narrative can induce in the recipient a desire to experience the narrated experience first-hand (Wang et al., 2025). However, in this study we also hypothesize that it is the same inspiration generated by the influencers' storytelling that activates a desire to emulate, thus reinforcing the intention to travel the promoted destination. Therefore, in this study we hypothesize that: *H5. Narrative transportation positively influences travel inspiration;*

*H6. Narrative transportation positively influences travel intention; H7. Travel inspiration positively influences travel intention.*

**Fig 1** Research model




## 4. Methodology

The present study adopts a quantitative approach aimed at investigating the psychological and behavioural dynamics that are activated following exposure to narrative content conveyed by travel influencers. Data will be collected through a structured questionnaire, preceded by viewing a video posted on Instagram. Based on the guidance of Hamelin et al. (2020), two narrative styles were selected: cognitive and emotional. Each participant will view only one stimulus. The use of video content will reflect the evolution of digital languages toward short, immersive formats, with Instagram as a key platform for influencer marketing in tourism (Gross et al., 2023). The study will be set in Mallorca, a Spanish tourist destination included in Lonely Planet's "Best in Travel 2025" list. The sample will consist of young Britons from Generation Z (1995-2010), digitally savvy and influenced by social media (Sun & Xing, 2022), chosen because of the strong presence of British tourism on the island (Statista, 2023). Data will be collected through an online questionnaire distributed on Prolific, which will include watching a narrative video of an influencer followed by questions designed to measure model variables. The scales adopted will measure: narrative style (Hamelin et al., 2020), story authenticity (Zniva et al., 2023), narrative coherence (Huang et al., 2025), narrative transportation (Pachucki et al, 2022), influencer credibility (Ohanian, 1990), travel intention (Zhou et al., 2024) and travel inspiration (Chen et al., 2025), with items rated on a Likert scale of 1 (completely disagree) to 7 (completely agree). A structural equation model

(SEM) will be applied to test the internal consistency of the theoretical model and to analyse the causal relationships between the latent constructs.

## 5. Expected results

The study predicts that narrative transportation acts as a key mediator between influencer storytelling characteristics and audience behavioural responses. It is hypothesized that influencer credibility, narrative coherence, and story authenticity positively influence the degree of narrative transportation. In addition, we hypothesize that emotional style may positively influence narrative transportation, while cognitive style may attenuate this effect. In turn, narrative transportation is expected to generate travel inspiration and increase travel intention. In addition, travel inspiration is expected to partially mediate the relationship between narrative transportation and travel intention. The expected results will help clarify the psychological mechanisms that make travel influencers' storytelling effective, filling an important theoretical gap.

## 6. Conclusion

In conclusion, the study aims to clarify how influencer storytelling, through the mechanism of narrative transportation, can inspire and guide consumers' intentions. At the theoretical level, the study explores an as-yet unexplored topic, that of influencer storytelling, and extends the application of narrative transportation theory to this context, introducing narrative style as a new antecedent and travel inspiration as a further consequence of transportation. This allows existing models on narrative persuasion to be expanded. From a managerial perspective, the results will provide practical guidance to tourism promotion boards and marketing professionals on how to structure effective digital narratives. In particular, they will emphasize the importance of paying attention to a multitude of elements to maximize the audience's immersion, inspire them and guide their intention to visit.

## References


Atiq, M., Abid, G., Anwar, A., & Ijaz, M. F. (2022). Influencer marketing on Instagram: A sequential mediation model of storytelling content and audience engagement via relatability and trust. *Information*, 13, 345.

Chen, Y., Shang, Y., & Li, H. (2025). How narrative message features enhance travel inspiration and behavioral intentions: Evidence from influencer marketing. *Tourism Management*, 96, 104760.

Choi, M. W. (2024). A typology of storytelling marketing: A case analysis. *Journal of Logistics, Informatics and Service Science*, 11(1), 379–391.

Chong, M., & Gottipati, S. (2020). Social media influencers and Instagram storytelling: Case study of Singapore Instagram influencers. *Journal of Applied Business and Economics*, 22(10), 81–96.

Deb, M., Ghosh, A., & Shukla, Y. (2025). Storytelling ads, narrative transportation, retrospective reflexivity, and attitude towards brands: Role of independent versus interdependence self-construal. *Psychology & Marketing*, 1–16.

Femenia-Serra, F., & Gretzel, U. (2020). Influencer marketing for tourism destinations: Lessons from a mature destination. In J. Neidhardt & W. Wörndl (Eds.), *Information and Communication Technologies in Tourism 2020* (pp. 65–78). Springer.

Green, M. C., & Brock, T. C. (2000). The role of transportation in the persuasiveness of public narratives. *Journal of Personality and Social Psychology*, 79(5), 701–721.

Gross, J., Cui, Z., & von Wangenheim, F. (2024). How to make influencer advertising engaging on Instagram: Emotional storytelling in sponsored posts. *Journal of Interactive Advertising*, 23(4), 388–408.

Hamelin, N., Thaichon, P., Abraham, C., Driver, N., Lipscombe, J., & Pillai, J. (2020). Storytelling, the scale of persuasion and retention: A neuromarketing approach. *Journal of Retailing and Consumer Services*, 55, 102099.

Huang, J., Huang, D. & Huang, K. (2025). Enhancing tourist visit intentions through virtual endorsers' short videos: A narrative transportation theory. *Tourism Management Perspectives*, 58, 101389.

Kim, S. H., Song, M. K., & Shim, C. (2020). Storytelling by medical tourism agents and its effect on trust and behavioral intention. *Journal of Travel & Tourism Marketing*, 37(6), 679–694.

Ohanian, R. (1990). Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness. *Journal of Advertising*, 19(3), 39–52.

Pachucki, C., Grohs, R., & Scholl-Grissemann, U. (2022). No story without a storyteller: The impact of the storyteller as a narrative element in online destination marketing. *Journal of Travel Research*, 61(8), 1703–1718.

Sattar, M. M., & Sfodera, F. (2025). Examining the role of travel vloggers in creating destination as well as country image: an analysis through netnographic approach. *Consumer Behavior in Tourism and Hospitality*.

Sokolova, K., & Kefi, H. (2020). Instagram and YouTube bloggers promote it, why should I buy? How credibility and parasocial interaction influence purchase intentions. *Journal of Retailing and Consumer Services*, 53, 101742.

Sun, Y., & Xing, J. (2022). The impact of social media information sharing on the green purchase intention among Generation Z. *Sustainability*, 14(11), 6879.

Van Laer, T., De Ruyter, K., Visconti, L. M., & Wetzels, M. (2014). The extended transportation-imagery model: A meta-analysis of the antecedents and consequences of consumers' narrative transportation. *Journal of Consumer Research*, 40(5), 797–817.

Wang, J., Wu, Y., & Wang, Z. (2025). Effect of short video storytelling on festival attractiveness: The moderating role of temporal orientation and novelty. *Current Issues in Tourism*, 28(9), 1427–1444.

Woodside, A. G., Sood, S., & Miller, K. E. (2008). When consumers and brands talk: Storytelling theory and research in psychology and marketing. *Psychology & Marketing*, 25(2), 97–145.

Zniva, J., Weitzl, W., & Lindmoser, A. (2023). Be constantly different! How to manage influencer authenticity: Conceptualization, nature and nomological role. *Journal of Strategic Marketing*, 31(5), 345–361.

Zhou, W., Xu, H., & Zhang, L. (2024). Narrative engagement and travel intention: Exploring the role of emotional responses in social media marketing. *Journal of Destination Marketing & Management*, 33, 100789.

# How value is co-created in a cultural festival context: The case of the "Scottish International Storytelling Festival"

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## Abstract

This study explores the dynamics of value co-creation within the context of cultural festivals, focusing on the Scottish International Storytelling Festival (SISF) as a single case study. Drawing from the CIF model - Context, Interactions, Feelings - proposed by Alexiou (2019), this research extends the framework by integrating a fourth dimension: Social Media. The objective is to understand how these four variables collectively enable the co-creation of value in a heritage-based festival environment. Data were collected through 60 open-ended questionnaires administered to festival participants and subsequently analyzed using thematic analysis via Leximancer software. The findings confirm that value is co-created not only through the content of the festival but also through affective engagement, social exchanges, and digital interaction. Contextual immersion in tradition, emotional resonance, spontaneous social connections, and user-generated digital narratives all emerged as core mechanisms of co-creation. This study contributes to the broader literature on servicedominant and consumer-dominant logic, experiential marketing, and festival studies, offering both theoretical insights and practical implications for cultural event design in the digital age.

*Keywords: value co-creation, cultural festival, experiential marketing, digital participation*

## 1. Theoretical Background

Cultural festivals are increasingly recognized not only as spaces for leisure and entertainment but as complex cultural systems where value is co-created through emotional engagement, social interaction, and symbolic participation. These events, especially those rooted in intangible heritage such as storytelling, offer attendees the opportunity to act not only as consumers but also as contributors, interpreters, and coauthors of meaning. This aligns with the broader shift in marketing and cultural theory from transactional to experiential paradigms, as outlined by Pine and Gilmore (1998), who argue that economic value increasingly derives from the staging of emotionally resonant and memorable experiences. Despite this theoretical development, existing research on festivals remains largely descriptive (Gyimóthy and Larson, 2015), with limited attention to how value is co-created in such contexts (Chathoth et al., 2013; Crespi-Vallabona and Richards, 2007). While the co-creation of value has been widely explored in sectors like tourism, hospitality, and retail

(Vargo and Lusch, 2008; Zhang et al., 2024), there is a gap in its application to cultural festivals, particularly those emphasizing symbolic interaction, tradition, and narrative performance. Addressing this gap, this study draws on the theoretical lens of Service-Dominant Logic (Vargo and Lusch, 2004) and Consumer-Dominant Logic (Heinonen and Strandvik, 2015), emphasizing value as something emergent from user experience, context, and relational meaning-making.

Concurrently, digital platforms have reshaped how festival experiences unfold and are remembered. Social media not only supports promotion but functions as a co-creative layer where users share impressions, emotions, and narratives in real time and asynchronously (Mangold and Faulds, 2009; Gilstrap et al., 2021). User-generated content - hashtags, images, stories, and reactions - extends the affective and symbolic life of the festival, helping to construct a shared sense of identity and meaning (Kozinets, 2015). However, much of the current literature still treats social media as a marketing tool rather than as a fully integrated space of value co-creation - especially in heritage-based festivals where oral tradition and symbolic immersion play a central role. In response to this theoretical shortcoming, the study proposes an expanded version of Alexiou's CIF model (2019), which originally framed value co-creation through Context, Interactions, and Feelings, by adding Social Media as a transversal and mediating dimension. This CIF+SM model reflects the reality of hybrid cultural experiences and positions digital participation as essential in shaping perceptions, emotions, and community bonds.

Using the Scottish International Storytelling Festival (SISF) as a case study, the research explores how value is co-created through both embodied participation and mediated expression, offering a framework that can help cultural practitioners and scholars understand festivals as emotionally charged, socially negotiated, and digitally extended events. To do so, the study addresses the following research questions:

**RQ1**: How is value co-created in the cultural festival context?

**RQ2**: How does context enable the co-creation of value?

**RQ3**: How does interaction enable value co-creation?

**RQ4**: How do feelings enable value co-creation?

**RQ5**: How does social media enable value co-creation?

By explicitly addressing the under-theorization of value co-creation in the cultural festival domain, this research contributes both conceptually and practically. It offers a multidimensional model that integrates digital and analog layers of participation, and it supports the development of more inclusive, meaningful, and community-driven cultural events in an increasingly hybrid cultural landscape.

## 2. Methodology

This study adopts a qualitative, single case study approach (Yin, 2003), focusing on the Scottish International Storytelling Festival (SISF) as a contemporary and context-rich example of cultural value co-creation. The case study design was chosen for its appropriateness in exploring phenomena in real-life settings, with the aim of generating deep insight into participants' perspectives, rather than statistically generalizable conclusions (Eisenhardt, 1989; Cassell and Symon, 2004). SISF, organized by TRACS (Traditional Arts

and Culture Scotland), is embedded within a broader ecosystem of traditional Scottish arts and offers a fertile ground for studying participatory cultural experiences in both physical and digital environments. Data were collected during the 2022 edition of SISF, held in Edinburgh from October 1st to 15th. A total of 70 questionnaires were distributed among attendees, with 60 completed and deemed valid for analysis. The questionnaire consisted of ten items - nine open-ended - designed to elicit reflections on four core elements of the festival experience: context, interactions, emotions, and social media engagement. The questions were based on Alexiou's (2019) CIF model, with an added focus on the digital dimension to reflect the updated CIF+SM framework. Participants were approached after festival events, primarily at the Scottish Storytelling Centre, and were briefed on the research purpose and provided informed consent prior to participation. In addition to the audience survey, a semi-structured interview was conducted with the Marketing and Communication Manager of TRACS to gain insight into the organization's strategic and communicative vision. The sampling strategy was non-probability and purposive, targeting attendees who were available and willing to contribute, thereby enabling the collection of rich, subjective narratives (Blaikie, 2009). The analysis was carried out using Leximancer, a conceptual mapping software that identifies dominant themes and relationships within qualitative data (Braun and Clarke, 2006; Saldaña, 2009). This inductive method allowed for visualizing and interpreting thematic clusters in the responses, later aligned with the CIF+SM model to answer the five guiding research questions. The automated results were supplemented by a manual thematic review to ensure contextual relevance and theoretical consistency. This triangulation of tools and perspectives strengthened the reliability and depth of the analysis, enabling a nuanced understanding of how value is co-created at SISF through spatial, emotional, relational, and digital dimensions.

## 3. Findings and discussion

The findings of this study, drawn from thematic analysis of participant responses and Leximancer-generated concept maps, confirm the multidimensional nature of value cocreation within the Scottish International Storytelling Festival (SISF). Context played a foundational role, with attendees expressing a strong alignment between their personal interests - particularly in storytelling, folklore, and Scottish culture - and the symbolic, spatial, and atmospheric setting of the festival. The immersive environment of SISF, its historical venues, and cultural specificity created a powerful backdrop for meaningful engagement. Interactions emerged as a second key axis of co-creation, encompassing both formal (performer–audience) and informal (audience–audience) exchanges. These interactions generated shared emotional responses, strengthened a sense of belonging, and allowed attendees to co-author their experience alongside storytellers and fellow participants. Echoing Turner's concept of "communitas," participants described spontaneous conversations, emotional resonance during performances, and a general sense of human connection as essential components of the festival's value. Feelings represented the third pillar of the CIFS model, with participants reporting a wide range of affective responses - from joy, nostalgia, and inspiration to catharsis and introspection. Emotional engagement was not secondary but central to the experience, as attendees frequently connected stories to personal memories and cultural identity, reinforcing the transformative and immersive nature of the event. Finally, social media emerged as a transversal and increasingly integral component of co-creation. Platforms like Instagram and Facebook served not only to document and disseminate the experience, but to extend it - allowing for reflection, community building, and user-generated creativity. Participants used digital platforms to engage with the festival before, during, and after the event, creating a parallel narrative space that amplified symbolic and emotional value. In some cases, attendees even contributed original content or reinterpretations, confirming that co-creation extends beyond physical

presence into the digital sphere. Together, these four dimensions demonstrate that value at SISF is not merely delivered by organizers but emerges through a complex interplay of spatial immersion, social interaction, emotional resonance, and mediated participation - supporting the utility and coherence of the CIFS model in understanding hybrid cultural events.

## 4. Limitations and Conclusion

This study investigated value co-creation within the Scottish International Storytelling Festival (SISF) using the CIF model - Context, Interactions, Feelings - with the addition of Social Media as a fourth dimension. Through qualitative data collection (n = 60), thematic analysis, and Leximancer software, the research confirmed that co-creation in cultural festivals is a complex, multi-layered process rooted in physical, symbolic, and emotional elements. Context fostered immersion in Scottish heritage; interactions created relational value and a sense of belonging; feelings enabled personal reflection and symbolic resonance; and social media extended participation, supporting creative expression and memory sharing. The study contributes to existing literature by enriching the CIF model with digital engagement and offers a framework for designing participatory and emotionally resonant cultural events. Limitations include the single case study, sample size, and reliance on self-reported data. Future research may apply the CIFS model to other festivals, use longitudinal methods, or incorporate quantitative social media analysis. By extending the CIF model, this study offers new analytical tools for understanding hybrid cultural participation and contributes to a more comprehensive theory of value co-creation in narrative-based cultural festivals.

## References


Alexiou, C. (2019). Context, interactions, and feelings: A multidimensional model of value co-creation in cultural festivals. *Journal of Cultural Heritage Management and Sustainable Development*, 9(3), 336–352.

Blaikie, N. (2009). *Designing social research: The logic of anticipation* (2nd ed.). Polity Press.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77–101.

Cassell, C., & Symon, G. (2004). *Essential guide to qualitative methods in organizational research*. SAGE Publications.

Chathoth, P., Altinay, L., Harrington, R. J., Okumus, F., & Chan, E. S. (2013). Co-Production versus Co-Creation: A process based continuum in the hotel service context. *International Journal of Hospitality Management*, 32, 11–20.

Crespi-Vallabona, M., & Richards, G. (2007). The meaning of cultural festivals: Stakeholder perspectives in Catalunya. *International Journal of Cultural Policy*, 13(1), 103–122.

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, 14(4), 532–550.

Gilstrap, C., Teggart, A., Cabodi, K., Hills, J., & Price, S. (2021). Social music festival brandscapes: A lexical analysis of music festival social conversations. *Journal of Destination Marketing and Management*, 20, 100567.

Gyimóthy, S., & Larson, M. (2015). Social media cocreation strategies: The 3Cs. *Event Management*, 19(3), 331–348.

Heinonen, K., & Strandvik, T. (2015). Customer-dominant logic: Foundations and implications. *Journal of Services Marketing*, 29, 472–484.

Kozinets, R. V. (2015). *Netnography: Redefined*. SAGE Publications.

Mangold, W. G., & Faulds, D. J. (2009). Social media: The new hybrid element of the promotion mix. *Business Horizons*, 52(4), 357–365.

Pine, B. J., & Gilmore, J. H. (1998). Welcome to the experience economy. *Harvard Business Review*, 76(4), 97–105.

Saldaña, J. (2009). *The coding manual for qualitative researchers*. SAGE Publications.

Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 68(1), 1–17.

Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: Continuing the evolution. *Journal of the Academy of Marketing Science*, 36(1), 1–10.

Yin, R. K. (2003). *Case study research: Design and methods* (3rd ed.). SAGE Publications.

Zhang, X., Singh, S., Li, J., & Shao, X. (2024). Exploring the effects of value cocreation strategies in event services on attendees' citizenship behaviors: The roles of customer empowerment and psychological ownership. *Journal of Retailing and Consumer Services*, 76, 103619.

# The Relationship Between User Review Topics and Airbnb Listings' Revenue

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## Abstract

Despite notable advances in extracting insights from peer-to-peer accommodation users' reviews through topic modeling, a gap exists in linking topics with accommodations' economic performance in order to predict their revenue. This study addresses this gap by applying text mining to Airbnb online reviews and integrating it with regression analysis. We collected 538,428 reviews from 30,665 Airbnb listings in a tourist region and employed Supervised Latent Dirichlet Allocation (sLDA) to extract nine distinct topics and then predict the listings' revenue. All topics proved to exert highly significant effects on revenue. The implemented model also confirms the expected effect of relevant covariates, such as coastal proximity and host multi-listing. These findings contribute to the literature on peer-to-peer accommodation by providing a scalable framework for leveraging user-generated content to increase the short-term rental industry's revenue.

*Keywords: Airbnb, Topic modeling, Online Reviews, Tourism, Customer experience*

## 1. Introduction

The continuous growth peer-to-peer platforms like Airbnb in the accommodation service sector has determined a significant increase in User Generated Content (UGC), such as online reviews. With an estimated 80% of this data being unstructured text an important challenge arises, namely the extraction of valuable insights that can reveal antecedents and consequences of consumer behavior and market dynamics (Bi et al. 2024). To effectively extract insights from this abundant data, objective and scalable methods capable to convert textual data into meaningful information are required (Berger et al. 2022). This study attempts to bridge traditional techniques like regression analysis with modern Text Mining approaches to gather useful insights from the UGC data. Despite the significant advancements in extracting meaningful information from online reviews and understanding various facets of the Airbnb guest experience, there is still a notable gap in directly integrating the granular insights from topic modeling into a comprehensive econometric framework for quantitative revenue prediction. While existing studies have identified key themes related to consumer preferences and satisfaction drivers and explored the impact of review volume or sentiment on bookings, there is a lack of systematic research that directly links the semantically derived topics with listings' revenue. By demonstrating that meaningful topics can be derived from

vast collections of unstructured text data, and that these can effectively be transformed into quantitative variables to be fed to a traditional statistical model, the present research attempts to fill in this literature gap.

## 2. Application of topic modeling to guests' reviews

Among the increasing plethora of Text Mining techniques, topic modeling is a powerful technique to extract from a very large corpus of documents hidden conceptual structures, generally in an unsupervised way. Rather than relying on top-down, pre- determined constructs, topic modeling typically uses a bottom-up approach, analyzing words that co-occur within and across texts to identify latent topics. It is typically used to explore, organize, and classify the information embedded in vast collections of documents (Bi et al. 2024; Pandey et al. 2023). Popular topic modeling algorithms include Latent Dirichlet Allocation (LDA) and Structural Topic Modeling (STM), which offer advantages such as automatic topic extraction and reduced subjective bias compared to manual content analysis (Ding et al. 2020; Ding et al. 2024). Available studies have frequently employed topic modeling techniques to identify key drivers of guest satisfaction and experiences in Airbnb accommodation, such as host service, physical aspects of the property, and location (Cavique et al. 2022; Ding et al 2020; Gao et al 2022, Zhang et al 2025). Researchers have also investigated the impact of online reviews on consumer purchasing decisions, booking intentions, and overall sales performance, and highlighted that negative reviews generally exert detrimental effects on sales and brand reputation (Sim et al. 2021). Notably, some scholars have started to integrate textual analysis with relevant quantitative data; for example, Gao et al. (2022) examined how review topic proportions change based on price and property ratings, revealing that topics such as "Host," "Location," and "Facilities" are key factors for high-priced Airbnb listings.

## 3. Data and Methods

We analyzed data obtained from AirDNA, one of the most important providers of data and analytics concerning the short-term rental industry. For each Airbnb listing, AirDNA data covers a wide range of features like Revenues, Occupancy Rates, Location type. To gather reviews, we built a python scraper using *Selenium*, a multilanguage framework that enables and supports the automation of web browsers, which was pivotal for handling dynamic loading of the pages and mimicking user behavior. By running the scraper on each listing URL from the AirDNA dataset collected a total of 538,428 reviews for 30665 listings. Since Airbnb reviews are written in various languages, to homogenize the data we utilized Airbnb's automatic translation feature to obtain a dataset composed solely of English-language comments. The texts were then preprocessed using standard NLP rules: the comments were lowercased and tokenized at the word level. We dealt with contractions such as "don't, can't, wouldn't" leveraging the python package *contractions*. We removed all links, punctuation signs, unusual patterns and words with a length less than two characters. We then removed common English stop words leveraging the python package NLTK. In text mining, reviews often pose challenges due to their varying lengths. Short reviews may lack sufficient information, only adding noise to the dataset. Conversely, long reviews can be computationally taxing to process. We thus decided to consider only reviews whose cleaned texts' length was between the tenth and ninety-fifth quantile of the distribution resulting in

a total of 453132 documents. We employed Supervised Latent Dirichlet Allocation, or sLDA (Mcauliffe & Blei, 2010) which extends the popular Latent Dirichlet Allocation model (Blei et al. 2003) by incorporating a response variable for each document (e.g., star ratings, download counts). It can simultaneously learn latent topics and assign regression coefficients to find the best possible estimate of the response variable. This is possible because sLDA trains a Generalized Linear Regression model of topic proportions in relation to the response variable. Training a topic model requires carefully fine-tuning several important hyperparameters the most important of which is the number $K$ of topics in the corpus. We set $K$ by considering objective measures such as $C_v$ coherence and perplexity but since these values not always result in human-interpretable models, we manually selected the most interpretable model from the list of "objectively best models". To train the model we aggregated reviews for each location and used the yearly revenue as response variable. To enrich the analysis, we have added six additional control variables.

## 4. Results

The resulting model achieved a relatively high Coherence of 0.562 (Martin et al. 2025) and 9 topics as displayed in Table 1. The analysis identified nine distinct topics:

- *Problem Solving*: captures issues related to in-room facilities like bathrooms and beds, often accompanied by complaints;
- *Relaxation and Nature*: reflects rural and peaceful stays with mentions of trulli, pools, and countryside;
- *Accessibility*: focuses on ease of transport and location, referencing train stations and central areas;
- *Amenities*: highlights functional features and recreational aspects, particularly useful for families (e.g., supermarkets, outdoor services, etc.);
- *Comfort*: emphasizes the overall comfort of the accommodation;
- *Hospitality*: captures the hosts' welcoming ability which typically manifests through breakfast offerings;
- *City Centre*: relates to centrally located and historic settings;
- *Sociality*: captures social interactions and local tips shared by hosts; • *Scenery*: describes scenic elements such as sunsets and balcony views.

In a subsequent step, we regressed revenue on the extracted topics. The resulting model (Table 2) revealed significant positive effects of all topics on revenue. In interpreting the results, we must consider that the topics are proportions, hence, their coefficients must be read as if the proportion of the reviews concerning the $i$ host and the $j$ topic increases by 1, the $i$ host's revenue can be expected to increase by $\beta_j$ on average. Out of all the topic variables, *Accessibility* has the strongest positive impact (€ 8,016) and a similarly high value is also found for *City Centre*, which indicates that the spatial location of each listing is a

relevant predictor of revenue. Strong predictors are also *Problem solving* and the *Hospitality* which indicate that the interaction between guests and hosts plays an important impact on revenue. Regarding the covariates, we found that listings near the coast do have a premium over distant ones, as 1 km increase in distance from the coast is expected to determine a €19 decrease in revenue. Consistent with past research (Xie et al. 2021), we also found that the professional management of accommodations, captured by multi-listing, results in higher revenue.

## 5. Conclusions

This study shows that supervised topic modeling can effectively convert Airbnb reviews into meaningful predictors of revenue. Applying supervised LDA to over 450,000 reviews, nine key topics were identified, with *Accessibility* and *City Centre* emerging resulting the strongest revenue drivers, followed by *Problem Solving* and *Hospitality*. The results also highlight the importance of both location and service quality. Methodologically, the study bridges text mining and econometric analysis, offering a scalable approach for turning qualitative user feedback into economic- relevant quantitative insights. Managerially, the study identifies meaningful aspects that might help peer-to-peer accommodation providers improve their economic performance.

## References


Berger, J., Packard, G., Boghrati, R., Hsu, M., Humphreys, A., Luangrath, A., ... & Rocklage, M. (2022). Wisdom from words: marketing insights from text. *Marketing letters*, *33*(3), 365-377.Bi, J. W., Zhu, X.

E., & Han, T. Y. (2024). Text analysis in tourism and hospitality: a comprehensive review. *Journal of Travel Research*, *63*(8), 1847-1869.

Blei, D. M., Ng, A. Y., & Jordan, M. I. (2003). Latent Dirichlet Allocation. *Journal of Machine Learning Research*, *3*.

Cavique, M., Ribeiro, R., Batista, F., & Correia, A. (2022). Examining Airbnb guest satisfaction tendencies: a text mining approach. *Current issues in tourism*, *25*(22), 3607-3622.

Ding, K., Choo, W. C., Ng, K. Y., & Ng, S. I. (2020). Employing structural topic modelling to explore perceived service quality attributes in Airbnb accommodation. *International Journal of Hospitality Management*, *91*, 102676.

Ding, K., Gong, X. Y., Huang, T., & Choo, W. C. (2024). Recommend or not: A comparative analysis of customer reviews to uncover factors influencing explicit online recommendation behavior in peer-to- peer accommodation. *European Research on Management and Business Economics*, *30*(1), 100236.

Gao, B., Zhu, M., Liu, S., & Jiang, M. (2022). Different voices between Airbnb and hotel customers: An integrated analysis of online reviews using structural topic model. *Journal of Hospitality and Tourism Management*, *51*, 119-131.

Pandey, S., Pandey, N., & Chawla, D. (2023). Market segmentation based on customer experience dimensions extracted from online reviews using data mining. *Journal of Consumer Marketing*, *40*(7), 854-868.

Barcos-Redín, L., Pereira-Delgado, J., Aguado-Correa, F., & Padilla-Garrido, N. (2025). Topic-based engagement analysis: focusing on hotel industry Twitter accounts.

Sim, Y., Lee, S. K., & Sutherland, I. (2021). The impact of latent topic valence of online reviews on purchase intention for the accommodation industry. *Tourism Management Perspectives*, *40*, 100903.

Xie, K., Heo, C. Y., & Mao, Z. E. (2021). Do professional hosts matter?: Evidence from multi-listing and full-time hosts in Airbnb. *Journal of hospitality and tourism management*.

Zhang, X., Pan, G., Meng, F., & Tang, J. (2025). What tourists seek in peer-to-peer tour experiences? A topic modeling approach of online reviews. *Journal of Vacation Marketing*, *31*(1), 206-222.

## Appendix

| **Problem Solving** | **Nature** | **Accessibility** | **Amenities** | **Comfort** | **Hospitality** | **City Centre** | **Sociality** | **Scenery** |
|---|---|---|---|---|---|---|---|---|
| bathroom | trullo | train station | large | every | delicious | historic | amazing | vista |
| bed | pool | station | outdoor | comfort | morning | heart | come | overlooking |
| shower | trulli | street | family | recommended | welcoming | street | local | peschici |
| problem | countryside | responsive | two | welcoming | made | right | best | gargano |
| bit | family | historic | otranto | reach | fresh | roof | gave | breathtaking |
| could | swimming pool | central | week | cleanliness | bathroom | central | tip | sunset |
| however | outdoor | communication | holiday | owner | fruit | bar | like | enjoy |
| communication | relaxing | foot | villa | welcomed | warm | centre | made | fantastic |
| thing | property | near | supermarket | impeccable | cake | rooftop | could | balcony |
| water | peaceful | min | vacation | made | guest | free | feel | village |

**Table 1:** Top words for each sLDA topic

| | |
|---|---|
| Dep. Variable: Revenue LTM (Native) | No. Observations: 14,160 |
| Model: GLM | *Df* Residuals: 14,145 |
| Model Family: Gaussian | *Df* Model: 14 |
| Link Function: Identity | Method: IRLS |
| Pearson Chi²: 1.13e+11 | Pseudo R-squ.(CS): 0.08197 |

| **Variable** | **Coef.** | **Std.Err.** | **z** | $P > \|z\|$ |
|---|---|---|---|---|
| Problem Solving | 6100.3031 | 167.029 | 36.522 | 0.000 |
| Nature | 6061.7508 | 262.333 | 23.107 | 0.000 |
| Accessibility | 8016.1574 | 216.875 | 36.962 | 0.000 |
| Amenities | 4290.3040 | 200.176 | 21.433 | 0.000 |
| Comfort | 3384.7878 | 173.755 | 19.480 | 0.000 |
| Hospitality | 4921.2016 | 477.301 | 10.310 | 0.000 |
| City Centre | 7010.8911 | 296.799 | 23.622 | 0.000 |
| Sociality | 7556.4462 | 194.081 | 38.934 | 0.000 |
| Scenery | 4957.8694 | 453.207 | 10.940 | 0.000 |
| Bedrooms | 225.2568 | 27.795 | 8.104 | 0.000 |
| Has Air Con | 513.0834 | 76.329 | 6.722 | 0.000 |
| Has Pool | 894.0681 | 81.925 | 10.913 | 0.000 |
| Has Kitchen | 236.1804 | 73.125 | 3.230 | 0.001 |
| Multiple owner | 426.9959 | 50.413 | 8.470 | 0.000 |
| Distance | -18.9309 | 3.730 | -5.075 | 0.000 |

**Table 2:** Generalized Linear Regression Model Results

# Decoding Sustainability Through Tourist Reviews: A Multimodal Big Data Analysis of User-Generated Content

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## Abstract

The aim of this ongoing project is to identify how user-generated content (UGC) related to tourist destinations conveys dimensions of sustainability and how these, in turn, affect recipients' reactions. Adopting a triple bottom line approach to sustainability and leveraging big data analysis techniques, including machine learning and deep learning, to different content (i.e., textual and visual), this work sheds light on how tourists discuss sustainability-related issues online.

By analyzing more than 6,000 texts and over 11,000 image reviews, this research offers a methodological contribution by isolating sustainability-related associations in tourist reviews, providing a useful tool to monitor tourists' behaviors and perceptions concerning sustainability in tourist destinations. Theoretically, it contributes to the literature on sustainable tourism by revealing how tourists articulate sustainability and how this discourse relates to their behavior. From a managerial perspective, it offers destination management organizations and institutions a tool to monitor tourists' perceptions and associations related to sustainability, with the aim of aligning destinations' communication more closely with tourists' discourses.

*Keywords: sustainability; reviews; user-generated content; image analysis, text analysis; triple bottom line*

Sustainability has become one of the most prominent issues on the agenda of tourism policy makers, destination managers, and scientific research. Despite the importance given by the United Nations World Tourism Organization (UNWTO) to sustainable tourism, many studies have demonstrated that tourism is far from reaching its sustainability goals. Only in recent times have researchers begun to include big data analytics from user-generated content (UGC) to capture, describe, and monitor tourists' perceptions and behaviors regarding sustainability (e.g., Confente et al., 2024; Mariani & Borghi, 2021).

This study seeks to 1) define online tourists' sustainability discourse, exploring all sustainability dimensions and identifying topics in each dimension; 2) based on the definitions of presence and depth of sustainability discourse (Mariani & Borghi, 2021),

operationalize these variables and track them in tourists' discourse over an extended period of time, across multimodal types of UGC (i.e., visual and textual).

This approach is guided by the following research question: "*What are the main online tourists' discourses surrounding sustainability dimensions and how are these evolved over time*?" This work makes a relevant contribution to the sustainable tourism research by applying big data analytics employing machine learning and deep learning techniques. The originality of this work stems from its capacity to combine different disciplines, such as destination marketing with data science and data analytics. This allows to track longitudinally both the presence and depth of online tourists' discourse surrounding all sustainability dimensions by using different types of UGC.

The combination of different big data analytics techniques also offers a methodological contribution that paves the way for further research and applications of big data for sustainable tourism. To achieve this, we employ established big data analysis techniques to identify sustainability-related topics and track their evolution over time. Furthermore, the multimodal approach adopted provides a richer characterization of tourists' online discourse around sustainability. From a theoretical perspective, this research contributes to the sustainable tourism literature by capturing actual tourist perceptions and behaviors across the three dimensions of sustainability. This approach helps overcome common limitations in existing research, such as the intention-behavior gap and social desirability bias (Viglia & Acuti, 2022). Methodologically, the study offers a novel approach by integrating textual and visual analysis, addressing a need highlighted in recent tourism studies (Vidaurreta-Apesteguia et al., 2025). From a managerial standpoint, the project provides destination managers and municipalities with a practical tool to monitor tourists' perceptions and behaviors within specific destinations. This is achieved by analyzing diverse content types across multiple online platforms. Finally, the combination of multiple big data analytics techniques paves the way for future research and applications in sustainable tourism, including the integration of social media platforms to capture emerging destination images, not only through textual analysis but also via image-based insights (Acuti et al., 2018).

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## References

Acuti, D., Mazzoli, V., Donvito, R., & Chan, P. (2018). An instagram content analysis for city branding in London and Florence. Journal of Global Fashion Marketing, 9(3), 185–204. https://doi.org/10.1080/20932685.2018.1463859.

Confente, I., Mazzoli, V., Camatti, N., & Bertocchi, D. (2024). Integrating tourists' walk and talk: a methodological approach for tracking and analysing tourists' real behaviours for more sustainable destinations. Journal of Sustainable Tourism, 32(11), 2323-2343.

Mariani, M., & Borghi, M. (2021). Are environmental-related online reviews more helpful? A big data analytics approach. International Journal of Contemporary Hospitality Management, 33(6), 2065-2090.

Viglia, G., & Acuti, D. (2022). How to overcome the intention-behavior gap in sustainable tourism: a perspective article for Tourism Agenda 2030. Tourism Review.

Vidaurreta-Apesteguia, P., Alzate, M., Arce-Urriza, M., Armendáriz-Iñigo, J. E., & D'Acunto, D. (2025). When reviews Speak through Pictures: Visual content and its influence on helpfulness. Journal of Business Research, 199, 115432.

# The Effects of Destination Corporate Social Responsibility on Tourist Satisfaction in Salento's Coastal Areas

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## Abstract

The objective of this study is to examine the impact of Destination CSR on tourist satisfaction, contingent on the utilitarian or hedonistic attitudes of tourists visiting coastal tourist destinations in Salento. Tourists with hedonistic attitudes may experience a form of dissonance, feeling implicitly judged or limited such as encountering frequent moral reminders or environmental instructions on leisure sites, and consequently less satisfied with their holiday.

### 1. Literature Review

Coastal and maritime tourism is recognised as a pillar of the European blue economy (Philipp et al., 2020). According to the latest European Commission report, this sector accounts for 53% of total employment and 33% of gross value added of the entire EU blue economy (European Commission, 2024). This economic centrality is driving institutions to promote development models that balance profitability with environmental and social sustainability, a crucial balance for the long-term vitality of destinations.

In response to the need for sustainability, the concept of Destination Corporate Social Responsibility (D-CSR) has emerged in the literature. Destination CSR refers to the activities carried out by all stakeholders to protect and improve the social and environmental aspects of an entire destination, beyond the economic interests of individual organisations (Su et al., 2018).

To comprehend the way D-CSR initiatives influence tourists, marketing literature frequently makes use of the theoretical paradigm of Signalling Theory (Chung & Kalnins, 2001; Connelly et al., 2011). As proposed by this theory, in a market characterised by information asymmetry, social responsibility actions function as credible "signals" of a destination's intrinsic quality and values. A visible commitment to sustainable practices (e.g., use of renewable energy, support for local communities) signals to tourists that the destination is well managed, reliable and of high quality, reducing perceived uncertainty and positively influencing their evaluations. Furthermore, the extant literature indicates that the positive impact of CSR signals, in the specific context of D-CSR, is contingent upon their congruence with consumer motivation. When the message appears to be "morally out of place", it has the potential to elicit reactance or negative evaluations (Becker-Olsen et al., 2006). This

phenomenon, occasionally referred to as "moral disruption" in the domain of applied psychology (Bublitz et al., 2010).

A significant corpus of research has demonstrated a positive and direct relationship between the perception of CSR practices and consumer satisfaction (Luo & Bhattacharya, 2006; Martínez García de Leaniz et al., 2025). In the domain of tourism, this relationship is validated by the finding that tourists who perceive a strong commitment by the destination to economic, social and environmental sustainability tend to report higher levels of satisfaction (Martínez & Del Bosque, 2013). Marketing literature has demonstrated that elevated levels of satisfaction are associated with a heightened intention to revisit the destination and the generation of positive word-ofmouth (WOM) (Su et al., 2020), both online and offline. Concurrently, satisfaction contributes to the establishment of a place attachment, defined as an emotional and functional bond between the tourist and the destination (Yuksel et al., 2010). This attachment, in turn, has been demonstrated to engender feelings of loyalty and to increase the probability of a future return (Vada et al., 2019).

The study posits that consumer behaviour is driven by both utilitarian and hedonistic attitudes (Babin et al., 1994). The domain of beach tourism is characterised by a predominant hedonistic orientation, wherein the fundamental objective is the pursuit of pleasure, relaxation, recreation and sensory gratification (Hirschman & Holbrook, 1982). It has been demonstrated that tourists with a strong hedonistic motivation seek an escape from routine and immersion in pleasurable experiences, often with little tolerance for messages that interrupt this state.

The existing literature operates under the assumption of a positive correlation between D-CSR and satisfaction; however, this assumption disregards the fact that tourists are frequently motivated by hedonistic factors. The research gap pertains precisely to this potential friction: namely, the lack of investigation into whether social responsibility signals, when in conflict with the pursuit of pure enjoyment, can generate negative rather than positive reactions. The present study aims to investigate the moderating role of hedonistic motivation in the relationship between D-CSR and tourist satisfaction.

## 2. Conceptual model

To address the research question, this study offers a conceptual framework for understanding the impact of D-CSR on tourist satisfaction, contingent on the utilitarian or hedonistic attitudes of tourists visiting coastal tourist destinations in Salento. All factors were identified by literature. Among those, Destination CSR refer to tourists' perceptions of the activities of all stakeholders that protect and enhance the social and environmental aspects of an entire destination, beyond the economic interests of individual organisations (Su et al., 2018). The preceding variable exerts an influence on satisfaction levels, measured by Tourist Satisfaction (Choong-Ki Lee et al., 2007). The model also incorporates three outcomes resulting from tourist satisfaction: WordOf-Mouth (positive) (Arnet et al., 2003), Place Attachment (Vada et al., 2019) and Intention to Revisit (Bonn et al. 2007). A salient factor that may act as a moderator pertains to the hedonistic or utilitarian attitudes adopted by tourists. These attitudes are measured using the Hedonic and Utilitarian Consumer Attitudes scale (Batra & Ahtola, 1991). Furthermore, the model will assess the moderating effect of touristic Environmental Consciousness (Kilbourne & Pickett, 2008) on satisfaction acting as a green booster afterward.

## 3. Methodology

The present study will adopt a quantitative approach to empirically verify how tourists' perceptions of D-CSR, depending on their attitudes, influence their satisfaction with the holiday.

The sampling strategy employed is a mixed non-probabilistic type (Etikan et al., 2016), primarily based on convenience sampling, integrated with a heterogeneous sampling component by location. The data will be collected through a structured online questionnaire, distributed via digital channels (e.g. social media, WhatsApp) and at locations with high tourist concentrations, such as municipal information points and accommodation facilities in Salento, with the aim of reaching tourists who have stayed in the region in the last year. Mixed non-probability sampling strategies, which combine convenience with heterogeneity by location, have already been successfully adopted in numerous studies in the field of marketing and tourism (Prayag & Ryan, 2012; Miller et al., 2010), especially in contexts where access to probability samples is limited and the objective is to obtain a broad spectrum of perspectives in an efficient manner. The sampling strategy will ensure the representativeness of the Italian population in terms of gender, age, education and income level.

The survey will include two main sections. The first one will begin with a screening item, enquiring about the respondents' vacationing experiences in Salento within the past one year, followed by the items belonging to the theoretical constructs included in the model. The second section will gather socio-demographic information. Only respondents who pass the attention check question will be included in the core model analysis.

The proposed conceptual model comprises seven latent described in the previous section and two control variables (age and gender). The constructs will be measured by adopting scales well validated in prior literature and adapted to meet the aim of the study. All constructs will be measured using 7-point Likert scales (1= strongly disagree; 7= strongly agree), except Hedonic and Utilitarian consumer attitudes (Batra & Ahtola 1991) and Touristic Satisfaction (Choong-Ki Lee et al., 2007) that will be assessed via a 7-point semantic differential scale.

Collected data will be analysed using SmartPLS software and the methodology will follow two main steps: validation of the measurement model (convergent validity and one-dimensionality), and test of the structural model using Partial Least Squares Structural Equation Modelling (PLS-SEM) using a 5,000 bootstrap resamples verifying the significance of the relationships (Sarstedt et al., 2021).

## 4. Expected results

For tourists with strong hedonistic attitudes, high levels of perceived D-CSR could lead to a reduction in holiday enjoyment, lowering touristic satisfaction levels (red mood). This could consequently have a negative impact on the intention to return, place attachment and positive word of mouth. Conversely, tourists with utilitarian attitudes would be positively influenced by D-CSR claims or other actions, leading to an increase in their level of satisfaction with their holiday and generating positive effects on word of mouth, attachment to Salento's coastal tourist destinations and intention to return to the destination. Finally, environmental consciousness could play a moderating role in the relationship between D-CSR and touristic satisfaction, generating an effect known as the "green boost". It is hypothesised that tourists who claim to be particularly sensitive to environmental issues would experience heightened levels of satisfaction if they encountered claims or other indications of D-CSR during their holiday.

## 5. Expected Contribution

This study makes a significant contribution to the theoretical debate on the role of Corporate Social Responsibility (CSR) in the tourism context, extending the literature traditionally focused on private companies. The expected results suggest that the perception of CSR practices by a tourist destination can generate significant effects on tourists' cognitive and emotional evaluations, influencing key behaviours such as the intention to return and positive word of mouth.

The most salient theoretical contribution of this study resides in the incorporation of the tourist's hedonistic/utilitarian attitude construct as a moderating variable into the model. The expected results could show that the effectiveness of D-CSR communication varies significantly according to the attitudes inherent in tourists. This would serve to enhance the necessity to consider individual differences in theoretical models of response to CSR, thereby establishing the foundation for future investigations into the personalisation of the value experience in tourism.

Furthermore, this work offers an original contribution to the emerging literature on the Blue Economy, with reference to sustainable coastal tourism. By setting the analysis in coastal locations in Salento, the model could explore the potential of D-CSR as a tool for promoting responsible tourist behaviour and generating shared value at an environmental, social and economic level. In this sense, the study proposes an integrated reading of tourism marketing, sustainable marketing, sustainable marine resource management and tourist loyalty strategies in the context of coastal economies.

From an empirical perspective, the expected results would provide relevant data for destination managers (DMOs) and operators in the sector. Firstly, it is important to emphasise the value of D-CSR as a strategic tool for enhancing tourist loyalty and fostering positive word-of-mouth communication, especially among visitors who express sensitivity to environmental and social issues. However, the effectiveness of DCSR communication is not universal: for tourists with predominantly hedonistic attitudes, exposure to D-CSR messages that are overly explicit or not harmoniously integrated into the holiday experience may be dissonant or even counterproductive. Finally, it is suggested that tourism staff be trained in the consistent and contextual communication of the D-CSR values, with the aim of transforming every touchpoint of the experience into an opportunity for value-based engagement which is tailored to the type of tourist. This implies the need to tailor CSR communication to match not only the content but also the emotional climate of the tourist experience.

## References

Arnett, D. B., German, S. D., & Hunt, S. D. (2003). The identity salience model of relationship marketing success: The case of nonprofit marketing. Journal of Marketing, 67(2), 89-105.

Babin, B. J., Darden, W. R., & Griffin, M. (1994). Work and/or fun: measuring hedonic and utilitarian shopping value. Journal of Consumer Research, 20(4), 644-656.

Batra, R., & Ahtola, O. T. (1991). Measuring the hedonic and utilitarian sources of consumer attitudes. Marketing Letters, 2, 159-170.

Becker-Olsen, K. L., Cudmore, B. A., & Hill, R. P. (2006). The impact of perceived corporate social responsibility on consumer behavior. Journal of Business Research, 59(1), 46-53.

Bonn, M. A., Joseph-Mathews, S. M., Dai, M., Hayes, S., & Cave, J. (2007). Heritage/cultural attraction atmospherics: Creating the right environment for the heritage/cultural visitor. Journal of Travel Research, 45(3), 345-354.

Bublitz, M. G., Peracchio, L. A., & Block, L. G. (2010). Why did I eat that? Perspectives on food decision making and dietary restraint. Journal of Consumer Psychology, 20(3), 239-258.

Chung, W., & Kalnins, A. (2001). Agglomeration effects and performance: A test of the Texas lodging industry. Strategic Management Journal, 22(10), 969-988.

Connelly, B. L., Certo, S. T., Ireland, R. D., & Reutzel, C. R. (2011). Signaling theory: A review and assessment. Journal of Management, 37(1), 39-67.

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. American Journal of Theoretical and Applied Statistics, 5(1), 1-4.

European Commission. (2024). The EU Blue Economy Report 2024. Publications Office of the European Union.

Kilbourne, W., & Pickett, G. (2008). How materialism affects environmental beliefs, concern, and environmentally responsible behavior. Journal of Business Research, 61(9), 885-893.

Hirschman, E. C., & Holbrook, M. B. (1982). Hedonic consumption: emerging concepts, methods and propositions. Journal of Marketing, 46(3), 92-101.

Lee, C. K., Yoon, Y. S., & Lee, S. K. (2007). Investigating the relationships among perceived value, satisfaction, and recommendations: The case of the Korean DMZ. Tourism Management, 28(1), 204-214.

Luo, X., & Bhattacharya, C. B. (2006). Corporate social responsibility, customer satisfaction, and market value. Journal of Marketing, 70(4), 1-18.

Martínez, P., & Del Bosque, I. R. (2013). CSR and customer loyalty: The roles of trust, customer identification with the company and satisfaction. International Journal of Hospitality Management, 35, 89-99.

Martínez García de Leaniz, P., Herrero, Á., & García de los Salmones, M. D. M. (2025). Communicating destination social responsibility through social media: the roles of tourists' social engagement, citizenship behaviors, and emotions. Journal of Travel Research, 64(4).

Miller, G., Rathouse, K., Scarles, C., Holmes, K., & Tribe, J. (2010). Public understanding of sustainable tourism. Annals of Tourism Research, 37(3), 627-645.

Philipp, R., Prause, G., & Meyer, C. (2020). Blue growth potential in south Baltic Sea region. Transport and Telecommunication, 21(1), 69-83.

Prayag, G., & Ryan, C. (2012). Antecedents of tourists' loyalty to Mauritius: The role and influence of destination image, place attachment, personal involvement, and satisfaction. Journal of Travel Research, 51(3), 342-356.

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2021). Partial least squares structural equation modeling. In Handbook of Market Research (pp. 587-632). Cham: Springer International Publishing.

Su, L., Huang, S., & Huang, J. (2018). Effects of destination social responsibility and tourism impacts on residents' support for tourism and perceived quality of life. Journal of Hospitality & Tourism Research, 42(7), 1039-1057.

Su, L., Lian, Q., & Huang, Y. (2020). How do tourists' attribution of destination social responsibility motives impact trust and intention to visit? The moderating role of destination reputation. Tourism Management, 77, 103970.

Vada, S., Prentice, C., & Hsiao, A. (2019). The influence of tourism experience and well-being on place attachment. Journal of Retailing and Consumer Services, 47, 322-330.

**Yuksel, A., Yuksel, F., & Bilim, Y. (2010). Destination attachment: Effects on customer satisfaction and cognitive, affective and conative loyalty. Tourism Management, 31(2), 274284.**

# Can a Training Course Foster Value Co-Creation in Rural Tourism? An Exploratory Study of a Local Community Initiative

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## Abstract

This study investigates whether a structured training course can serve as a platform for value co-creation in the context of rural tourism development. Grounded in the DART model of value co-creation and the concept of sense of community, the research examines changes in participants' perceptions of collaboration, value co-creation perceptions and sense of community. Adopting a simple pre-post design, the study revealed a significant decrease in perceived collaboration and a moderate but not significant improvement in perceived dialogue. These findings suggest that training initiatives can enhance awareness of co-creation mechanisms but can also reveal existing relational and structural limits within local communities. The study contributes to the limited literature on educational platforms for value co-creation in rural tourism contexts and offers practical insights for strengthening cooperation among local stakeholders in tourism development.

*Keywords: value co-creation platform, sense of community, rural tourism, training*

## 1. Framing of the research

Value co-creation is a foundational concept in tourism and service marketing, initially understood as an interaction between firms and customers (Prahalad & Ramaswamy, 2004) and later expanded to a broader perspective, considering Actor-to-Actor (A2A) relationships (Vargo & Lusch, 2011). One of the main models of value co-creation is represented by the DART model (Prahalad & Ramaswamy, 2004), which defines value co-creation through the dimensions of Dialogue, Accessibility, Risk assessment, and Transparency, defining the ways that firms should adopt to interact with customers. These dimensions particularly represent the interactive nature of the value co-creation process (Taghizadeh et al., 2016). While co-creation in tourism has traditionally focused on tourists and businesses, recent research has highlighted the importance of other stakeholders, like residents and local communities (Ribeiro et al., 2023; John & Supramaniam, 2024). Some studies highlighted how value co-creation processes can occur between residents and tourists and are influenced by the perception of potential economic and social benefits for the community (Lin et al., 2017). Moreover, Chen and colleagues (2020) highlighted that residents-tourists value co-creation is associated with residents' well-being (Chen et al., 2020). In general terms, residents' participation (and more broadly local community participation) represents an important element in determining the success of tourism initiatives, and the success of value co-creation processes (Presenza et al., 2013; Del Chiappa et al., 2018). A notable concept that is associated to both civic and political participation, as well as to community involvement is

the sense of community (McMillan & Chavis, 1986; Talò, 2018), which is a psychological construct referring to individuals' perception of community quality and belonging. It represents a concept that has been understudied in tourism literature. Cai and colleagues (2024) demonstrated that there is a relationship between residents' sense of community and their well-being, thus representing an important resource. So, the involvement of local communities in tourism initiatives and their capacity to co-create value represents an important challenge for tourism literature. In this light, platforms for value co-creation can be considered critical tools. Although often digital, such platforms can also be physical and context-based, where actors can interact directly and with a collaborative attitude (Ramaswamy & Ozcan, 2018). In rural settings with limited digital infrastructure, physical platforms—such as structured training—may offer more effective opportunities for interaction and learning how to collaborate and co-create value. Also, a structured training dedicated to local community members can help them gain useful knowledge and skills, thereby making it easier for them to overcome limitations related to insufficient competencies that can represent an obstacle to community participation (Tosun, 2000). Based on these premises, this study explores whether a local training course can act as a value co-creation platform by stimulating learning, cooperation, and shared purpose among participants. The following research questions guided the study:

**RQ1**: Can a training course in a rural context be considered a value co-creation platform?
**RQ2**: What are its short-term effects in terms of perceived collaboration and value co-creation?

## 2. Methodology

This study adopted a simple pre-post design with a mixed-method approach. The independent variable was participation in the training course described above. The course was implemented as a part of a broader tourism development project carried out in the town. Its main objective was to give residents and local stakeholders the knowledge and skills needed to support local tourism initiatives and to promote an understanding of entrepreneurial and collaborative dynamics. It was held from March 21 to May 17, 2025, with weekend sessions scheduled on Friday evenings and Saturday mornings. Each session lasted three hours and was characterized by the combination of a theoretical part with practical group activities, for a total of 36 training hours. Each session was led by professionals—including university professors, technical experts, and entrepreneurs—following a learning-by-doing approach and adopting an interactive methodology that encouraged active collaboration and critical thinking, by also considering real-world examples of tourism projects. The course concluded with a group project in which each participant collaborated to design and present a guided tour showcasing elements of their town. Three outcome variables were measured before and after the course: (1) participants' perception of value co-creation, especially in their relationships with local operators and other stakeholders; (2) their sense of community; and (3) their perceived potential for collaboration within the local context. A custom questionnaire was developed to assess these variables. No socio-demographic data was collected to guarantee anonymity, as the small sample and close-knit community made participants easily identifiable. The questionnaire included italian-adapted items from the DART model scale (Taghizadeh et al., 2016) and the Sense of Community Scale (McMillan & Chavis, 1986). Four custom items assessed participants' willingness to collaborate in local initiatives, rated on a 5-point Likert scale. An open-ended section allowed participants to share additional reflections and ideas related to the project. To integrate the questionnaire measures, also participatory observation was employed. A researcher attended all course sessions, annotating group interactions and behavioral changes throughout the program. These qualitative notes were used to enrich and contextualize the quantitative findings. The initial sample included 17 participants; however, only 11 completed both the

pre- and post-course questionnaires. All participants were current or aspiring entrepreneurs with an interest in developing tourism-related activities. Quantitative data were analyzed using descriptive statistics and a Mann-Whitney U test to compare pre- and post-intervention responses. This non-parametric test was chosen due to the small sample size, the non-normal distribution of the data, and due to the inability to match individual pre- and post-responses anonymously. For these reasons, an independent samples test was considered as more suitable (Siegel & Castellan, 1988).

## 3. Results

Results showed no statistically significant differences across most outcome dimensions. However, two exceptions emerged. First, a significant decrease was found in the perception of collaboration within the community ($U = 51$, $p < .05$; $r$[14] $= –0.45$). In other words, participants perceived fewer opportunities for collaboration after the course. Observational data support this finding, highlighting concerns expressed by some participants regarding limited engagement from other attendees and community members more broadly. and suggesting a greater awareness of structural and relational barriers within the local context. The second exception concerned the Dialogue dimension of the DART model. Although the observed difference was not statistically significant ($U = 52.5$, $p = .054$), the effect size was moderate and positive ($r = 0.44$), indicating a slight improvement in participants' perception of dialogue. Observational notes confirm this trend, showing increased active participation and openness during the seminars. For the remaining DART dimensions, no significant changes were found. Regarding sense of community, overall perceptions were positive. However, the "Influence" sub-dimension showed the lowest scores, suggesting that, while participants felt a sense of belonging and emotional connection to the community, they perceive a low capacity to influence other actors and to be influenced. This was further supported by observational data, with some participants expressing concern that other important local actors (e.g., local administration) scarcely participated in the course and the project, even knowing that it existed. Moreover, one participant expressed this in the open-ended box section: "*Especially in rural contexts like this, it's crucial the participation of local actors — municipal administrators, associations and operators such as restaurateurs, bar owners, and shopkeepers — because they can truly benefit from these training opportunities. After all, there's always something new to learn*". This reflection highlights a perceived "disconnection" between community members and different stakeholders, consequently mining the chance to (positively) influence themselves.

## 4. Discussion and Implications

Although statistical evidence was limited, the study can offer some valuable insights. From a theoretical perspective, it presents a case study of a training course in a small rural tourism context—an area still underexplored in the literature. Given the scarcity of research on the role of education in empowering residents and communities to support sustainable tourism development, these findings contribute to addressing this gap. The study highlights participants' reactions and perceptions, offering insights into how training initiatives like the one presented can influence community perceptions, value co-creation perceptions and cooperation perceptions. The results and the participants' feedback suggest that initiatives like the one presented can function as value co-creation platforms. Specifically, they offer participants an opportunity to understand and practice value co-creation processes. In this case, the course culminated in a collaboratively developed tourism product, created by participants using shared resources (e.g. historical and environmental places of the town) and cooperation, demonstrating how—apart from the measured perceptions—such a platform can foster genuine co-creation. This is particularly relevant in contexts where common digital

[14] Here, *r* refers to the rank-biserial correlation coefficient, considered as the effect size of the test

co-creation platforms are less applicable. This study contributes to rethinking training as a tangible, analogic platform for value co-creation—especially in rural areas where digital infrastructures are often lacking. Unlike virtual platforms, in-person training enables embodied dialogue, direct peer interaction, and situated learning. Such analogic platforms not only convey knowledge but also generate the relational conditions necessary for co-creation: mutual trust, shared purpose, and local agency. In this regard, training initiatives act as systemic interfaces that activate latent resources within the community. From a practical standpoint, the initiative serves as a replicable model for similar rural destinations. It provides a model that can be adapted by policymakers or tourism professionals aiming to foster local engagement. Considering the importance of local entrepreneurs within a systemic approach to territorial marketing, and the key role of residents in value co-creation (Golinelli et al., 2006; Ribeiro et al., 2023; John & Supramaniam, 2024), offering structured opportunities for learning and collaboration emerges as a crucial strategy.

## 5. Limitations and Future Research

This study presents several limitations, primarily related to the research design adopted. The absence of a control group prevents establishing a causal link between participation in the course and the observed outcomes. Additionally, the small sample size limits the statistical power of the findings, reducing their generalizability and making it difficult to draw broad conclusions. It is important to note that this short paper represents a preliminary account within a broader research project. The same participant group will be monitored over time to assess longer-term changes, both in the dimensions already explored and through the inclusion of additional indicators (e.g. economic indicators) to evaluate the overall impact of the initiative more comprehensively. Future studies can adopt more rigorous and robust research designs, such as randomized controlled trials or mixed method approaches to strengthen the validity of the findings and to explore actual relationships between the considered variables. Moreover, subsequent research could explore alternative impact variables, while maintaining the same teaching and engagement framework. Finally, future research could compare similar contexts, distinguishing between those exposed to training interventions like the one presented and those not exposed, to try and assess differential impacts on value co-creation capacity, sense of community and collaboration willingness.

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## References


Cai, R., Chi, C. G. Q., & Del Chiappa, G. D. (2024). How sense of community and social environment influence residents' subjective well-being? Moderating role of trust. *International Journal of Hospitality & Tourism Administration*, 1–26.

Chen, Y., Cottam, E., & Lin, Z. (2020). The effect of resident-tourist value co-creation on residents' well-being. *Journal of Hospitality and Tourism Management*, *44*, 30–37.

Del Chiappa, G., Atzeni, M., & Ghasemi, V. (2018). Community-based collaborative tourism planning in islands: A cluster analysis in the context of Costa Smeralda. *Journal of Destination Marketing & Management*, *8*, 41–48.

Golinelli, C. M., Trunfio, M., & Liguori, M. (2006). Governo e marketing del territorio. *Sinergie, Rapporti di ricerca*, *23*, 17–44.

John, S. P., & Supramaniam, S. (2024). Value co-creation research in tourism and hospitality management: A systematic literature review. *Journal of Hospitality and Tourism Management*, *58*, 96–114.

Lin, Z., Chen, Y., & Filieri, R. (2017). Resident-tourist value co-creation: The role of residents' perceived tourism impacts and life satisfaction. *Tourism Management*, *61*, 436–442.

McMillan, D. W., & Chavis, D. M. (1986). Sense of community: A definition and theory. *Journal of Community Psychology*, *14*(1), 6–23.

Prahalad, C. K., & Ramaswamy, V. (2004). Co-creating unique value with customers. *Strategy & Leadership*, *32*(3), 4–9.

Presenza, A., Del Chiappa, G., & Sheehan, L. (2013). Residents' engagement and local tourism governance in maturing beach destinations: Evidence from an Italian case study. *Journal of Destination Marketing & Management*, *2*(1), 22–30.

Ramaswamy, V., & Ozcan, K. (2018). What is co-creation? An interactional creation framework and its implications for value creation. *Journal of Business Research*, *84*, 196–205.

Ribeiro, T. D. L. S. A., Costa, B. K., Ferreira, M. P., & De Lamônica Freire, O. B. (2023). Value co-creation in tourism and hospitality: A systematic literature review. *European Management Journal*, *41*(6), 985–999.

Siegel, S. and Castellan Jr., N.J. (1988). Nonparametric Statistics for the Behavioral Sciences. 2nd Edition, McGrawHill, New York.

Taghizadeh, S. K., Jayaraman, K., Ismail, I., & Rahman, S. A. (2016). Scale development and validation for DART model of value co-creation process on innovation strategy. *Journal of Business & Industrial Marketing*, *31*(1), 24–35.

Talò, C. (2018). Community-based determinants of community engagement: A meta-analysis research. *Social Indicators Research*, *140*(2), 571–596.

Tosun, C. (2000). Limits to community participation in the tourism development process in developing countries. *Tourism Management*, *21*(6), 613–633.

Vargo, S. L., & Lusch, R .F. (2011). It's All B2B and Beyond: Toward a Systems Perspective of the Market. *Industrial Marketing Management*, *40*, 181-187.

# Pursuing Authenticity: Tourists' and Residents' Perceptions of the Impact of Overtourism in Venice

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## Abstract

The consequences of overtourism are becoming an increasingly relevant issue in the European public debate. The growing accessibility of tourist destinations, facilitated by low-cost travel options, prompts a shift in the dominant paradigm—from destinations as mere commodities to destinations as communities of residents who host tourists. This research responds to this call, designing a theoretical model to examine the impact of overtourism in Venice, considering both tourists' and residents' perspectives. Specifically, the study assesses how the city's level of adaptation to tourists influences the authenticity of experiences and how these relate to satisfaction, as well as the likelihood of revisiting or recommending the destination. Based on recent literature, the proposed model presents an innovative approach to identifying differences and similarities between residents and tourists, offering promising insights for future researchers and policymakers.

*Keywords: overtourism, Venice, authenticity, gastronomy, touristification*

## 1. Introduction

The term "overtourism" has gained increasing popularity, entering the popular debate surrounding mass tourism and its consequences (Papadopoulou et al., 2023). The complexity of the problem is reflected in its visible consequences. Besides the physical obstruction caused by the mass of tourists in major hotspots (Oklevik et al., 2019), overtourism is also pushing the proliferation of short-term stays, driving residents out of the housing market (Santos-Rojo et al., 2023). Moreover, it is affecting the local gastronomic scene, with new businesses designed for tourists displacing local shops (Freire Varela, 2025; Şengül et al., 2024). Additionally, overcrowding affects cultural venues, disrupting the quality of experience and heritage preservation (Adie et al., 2020). The manifestation of these negative consequences impacts the authenticity of the tourist experience and the quality of life for residents (Díaz-Parra & Jover, 2021).

These challenges, fueled by the increasing accessibility of destinations through low-cost travel and accommodation, and the influence of social media (Papadopoulou et al., 2023), have led scholars to consider new paradigms for guiding tourist conceptualisation. From the traditional view of destinations as commodities towards focusing on the destination's local communities hosting tourists (Higgins-Desbiolles et al., 2019). However, empirical research remains scattered, often focusing on either tourists or residents, or specific consequences of overtourism, such as gastronomy (e.g., Freire Varela, 2025; Şengül et al., 2024), cultural heritage (e.g., Adie et al., 2020), or destination attractiveness (Jacobsen et al., 2019). In light of these considerations, this research attempts to disentangle the complexity of the

experience in a touristic destination from both tourist and resident perspectives, aiming at addressing the following research questions:

RQ1: How do tourists and residents perceive a destination's adaptation to the tourist flow? Are there any differences in how these perceptions affect the perceived authenticity?

RQ2: Are there any differences in how authenticity is perceived based on the different attractions/activities at the site?

RQ3: How do these perceptions affect satisfaction and the intention to revisit or recommend?

## 2. Theoretical Background

To answer the proposed research question, a theoretical model was developed (Figure 1). Specifically, the model builds upon the one proposed by Papadopoulou et al. (2023), introducing the concept of perceived authenticity. Moreover, instead of considering the overall experience as in previous studies (e.g., Jopp et al. 2015) without distinguishing the type of experience tourists and residents look for we analyse authenticity they perceive across the two categories of experiences offered by the city: touristic (i.e., sightseeing, which for residents was adapted as "moving around the city", and the visit to buildings and museums), and gastronomic. The same design is applied to both tourists and residents.

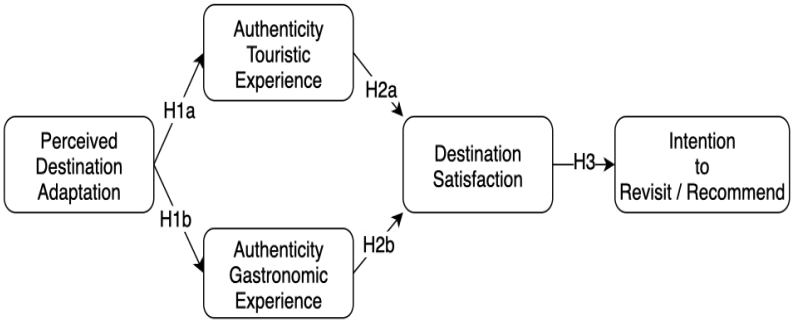



**Figure 1:** The theoretical model.

The model is grounded in expectancy-disconfirmation theory (EDT), stimulus-overload theory (SOT), and social interference theory (SIT). These three theories are frequently used in research on overtourism and crowding at destinations. EDT assesses how perceptions of a destination's adaptation influence tourists' satisfaction (e.g., Neuts & Nijkamp, 2012). SOT was utilised to examine residents' opinions regarding overtourism in Barcelona (e.g., González-Reverté, 2022), and SIT was employed to explain low tourist satisfaction at world heritage sites (e.g., Phi et al., 2024). Based on this foundation and following Papadopoulou et al.'s (2023) framework, our research examines how the perceived level of a city's adaptation to tourism influences tourists' and residents' perceptions of authenticity. However, the presence and perception of crowds can vary across different areas of the destination and depend on the type of experience an individual is having. In other words, a crowded square might be viewed differently from a crowded restaurant or museum, hence:

H1: High perceived destination adaptation (pda) negatively influences the perceived authenticity of the touristic (au_turexp; H1a) and gastronomic (au_gasexp; H1b) experiences.

In turn, authenticity was found to be positively associated with satisfaction in tourist destinations (Park et al., 2019); therefore:

H2: au_turexp (H2a) and au_gasexp (H2b) experiences positively influence destination satisfaction (sat).

Consequently, satisfaction will influence intention to revisit and recommend (Papadopoulou et al., 2023); thus:

H3: High sat will positively influence the intention to revisit and recommend (int).

## 3. Methodological Design

A 40-item survey was designed to represent the various groups of people who visit Venice daily, including tourists, residents and commuters. To facilitate understanding among respondents of different nationalities, the questionnaire was produced in both Italian and English. To better organise the design of the theoretical model and the questionnaire, the research team also conducted interviews with a group of 21 Venetian restaurateurs regarding overtourism in the city and its effects. From these discussions with practitioners, the need for a clearer understanding of overtourism emerged, breaking it down into the two main types of experiences the city offers. Specifically, restaurateurs argue that most tourists visit Venice mainly for sightseeing, without a clear motivation to explore the city's gastronomic and cultural offerings. This shared opinion prompted the research team to investigate tourists' relationship with the city's experience offerings, further supporting the proposed theoretical model. 26 individuals have tested the questionnaire in both Italian and English versions, and the first data collection granted 155 valid answers. Data analysis was conducted applying multi-group structural equation modelling (SEM) to account for differences between residents and tourists.

## 4. Preliminary Findings

Table 1 displays the results of the SEM depicted in Figure 1, considering the entire sample of tourists and residents (No MG), and accounting for group differences based on their interest in gastronomy (1st MG) and their relationship with the city (tourists vs. non-tourists; 2nd MG). The analysis, conducted after confirmatory factor analysis, depicts how pda negatively affects au_turexp when analysing the whole sample. On the other hand, it does not have a significant effect on au_gasexp. Moreover, au_turexp positively influences sat and, in turn, sat influences int. Hence, H1a, H2a and H3 are confirmed, while there is not enough statistical evidence to confirm H1b and H2b. To dig deep into the differences among groups of people spending time in Venice, once metric invariance was established (Chen, 2007), two multi-group SEM were conducted. The 1st MG accounted for people who signalled in the questionnaire their interest in the gastronomy offer of the city, against those who did not share the same interest. The analysis confirmed the findings of the first analysis in the group of respondents who did not show interest in gastronomy. However, no significant relationships were found in the other group. The 2nd MG analysis highlights how, for residents, au_turexp (which for them was interpreted as moving around the city) has a greater influence on sat than it does for tourists. For tourists, au_gasexp has a significant impact on sat, while the relationship is not deemed significant for residents.

| | No MG | | 1st MG: respondents grouped by preferences related to interest in gastronomy or not | | | | 2nd MG: residents (including commuters) vs. Tourists. | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | G1: some interest in gastronomy. | | G2: no interest in gastronomy. | | G1: residents | | G2: tourists. | |
| | Std. Coef. | p-val. | Std. Coeff. | p-val. | Std. Coeff. | p-val. | Std. Coeff. | p-val. | Std. Coeff. | p-val. |
| pda ~ au_turexp | **- .273** | **0.034** | - .115 | .520 | **-.387** | **.031** | - .309 | .067 | -.214 | .433 |
| pda ~ au_gasexp | - .202 | 0.063 | - .209 | .299 | -.190 | .121 | - .102 | .392 | -.310 | .302 |
| au_turexp ~ sat | **.403** | **0.001** | .403 | .111 | **.455** | **.002** | **.613** | **.000** | **.130** | **.002** |
| au_gasexp ~ sat | .046 | 0.660 | .046 | .495 | .051 | .716 | .001 | .994 | **.345** | **.017** |
| sat ~ int | **.658** | **0.000** | .658 | .066 | **.791** | **.000** | **.588** | **.000** | **.807** | **.000** |
| **X²:** 261.296 | **CFI:** .892 | **RMSEA:** .098 | **X²:** 435.269 | **Dof:** 198 | **RMSEA:** .127 | **SRMR:** .137 | **X²:** 406.622 | **Dof:** 198 | **RMSEA:** .119 | **SRMR:** .137 |
| **Dof:** 99 | **TLI:** .869 | **SRMR:** .131 | **CFI:** .874 | **TLI:** .847 | Metric invariance was established | | **CFI:** .889 | **TLI:** .865 | Metric invariance was established | |

**Note:** significant relationships in bold. Group invariance was established following Chen (2007) recommendations. All $X^2$ were found significant.

**Table 1:** Preliminary results.

## 5. Discussion and Implications

From the analysis, it emerged that pda negatively affects perceived authenticity. However, due to the policies designed to protect the architectural heritage, Venice does not alter its physical attributes to accommodate tourists. Hence, adaptations are more likely perceived through "soft" elements (e.g., shops, restaurants and queues in venues) rather than "hard" aspects like the city's architecture. Moreover, considering authenticity perception related to specific experiences allows for a more comprehensive understanding of the drivers of satisfaction. Hence, future research in this field should investigate the interplay between the soft and hard elements of adaptations in accordance with the experiences they impact, employing a qualitative or mixed-methods study.

The focus on different types of experiences allowed the research to highlight that gastronomic offer significantly influences tourists' satisfaction, but not the residents'. The soft elements of adaptations may have caused this, which only residents (or loyal tourists) can depict. Hence, in the over-touristed destination, pda is not an antecedent of authenticity: tourists can find a gastronomic offer designed for them, which is perceived as authentic and triggers satisfaction. On the other hand, residents may take for granted the less-touristic establishments. Another possible explanation, also considering the non-significant relationship in G1 of the 1st MG, is that interest in authentic gastronomic offer is not a crucial factor in influencing tourists' and residents' satisfaction. However, qualitative studies (Cunico et al., 2025) and research on social media (Ganzaroli et al., 2021) point out the relevant role played by authentic gastronomy offerings in maintaining a destination's identity. In light of these considerations, future research may apply a measure of involvement connected to gastronomy to better explore the impact of pda on gastronomic experience in Venice.

## 6. Limitations and future developments

The research design has some limitations. First, self-reported questionnaires may be biased, particularly concerning differences between reported behaviour on paper and actual behaviour of people in the city, especially when they are part of a larger group, where some diffusion of responsibility may occur. Future research could explore this aspect by comparing survey data with big data analytics on people's behaviour in cities affected by overtourism. Additionally, for respondents who are non-native speakers of one of the two languages used in the questionnaire, specific linguistic barriers that were not apparent in initial tests may arise. Finally, to promote further progress towards more inclusive research on overtouristed destinations, studies could consider residents in vulnerable situations, creating opportunities for social marketing-based research and policies.

## References


Adie, B. A., Falk, M., & Savioli, M. (2020). Overtourism as a perceived threat to cultural heritage in Europe. Current Issues in Tourism, 23(14), 1737–1741. https://doi.org/10.1080/13683500.2019.1687661

Cunico, P., Checchinato, F., Finotto, V. (2025). Authentic for whom? The role of tradition in restaurants and the impact of overtourism, Global Marketing Conference Proceedings, 978-983

Chen, F. F. (2007). Sensitivity of Goodness of Fit Indexes to Lack of Measurement Invariance. Structural Equation Modeling: A Multidisciplinary Journal, 14(3), 464–504. https://doi.org/10.1080/10705510701301834

Diaz-Parra, I., & Jover, J. (2021). Overtourism, place alienation and the right to the city: Insights from the historic centre of Seville, Spain. Journal of Sustainable Tourism, 29(2–3), 158–175. https://doi.org/10.1080/09669582.2020.1717504

Freire Varela, A. (2025). Eating the city: Socio-spatial analysis of the foodification process in the city of Naples (Italy). International Journal of Gastronomy and Food Science, 39, 101130. https://doi.org/10.1016/j.ijgfs.2025.101130

Ganzaroli, A., De Noni, I., & Bonera, M. (2021). The influence of foreigners' buzzing on TripAdvisor ranking of restaurants in Venice: Implications for the sustainability of over-touristed heritage cities. Current Issues in Tourism, 24(14), 2044–2058. https://doi.org/10.1080/13683500.2020.1806791

González-Reverté, F. (2022). The Perception of Overtourism in Urban Destinations. Empirical Evidence Based on Residents' Emotional Response. Tourism Planning & Development, 19(5), 451–477. https://doi.org/10.1080/21568316.2021.1980094

Higgins-Desbiolles, F., Carnicelli, S., Krolikowski, C., Wijesinghe, G., & Boluk, K. (2019). Degrowing tourism: Rethinking tourism. Journal of Sustainable Tourism, 27(12), 1926–1944. https://doi.org/10.1080/09669582.2019.1601732

Jacobsen, J. Kr. S., Iversen, N. M., & Hem, L. E. (2019). Hotspot crowding and over-tourism: Antecedents of destination attractiveness. Annals of Tourism Research, 76, 53–66. https://doi.org/10.1016/j.annals.2019.02.011

Jopp, R., Mair, J., DeLacy, T., & Fluker, M. (2015). Climate Change Adaptation: Destination Management and the Green Tourist. Tourism Planning & Development, 12(3), 300–320. https://doi.org/10.1080/21568316.2014.988879

Neuts, B., & Nijkamp, P. (2012). Tourist crowding perception and acceptability in cities. Annals of Tourism Research, 39(4), 2133–2153. https://doi.org/10.1016/j.annals.2012.07.016

Oklevik, O., Gössling, S., Hall, C. M., Steen Jacobsen, J. K., Grøtte, I. P., & McCabe, S. (2019). Overtourism, optimisation, and destination performance indicators: A case study of activities in Fjord Norway. Journal of Sustainable Tourism, 27(12), 1804–1824. https://doi.org/10.1080/09669582.2018.1533020

Papadopoulou, N. M., Ribeiro, M. A., & Prayag, G. (2023). Psychological Determinants of Tourist Satisfaction and Destination Loyalty: The Influence of Perceived Overcrowding and Overtourism. Journal of Travel Research, 62(3), 644–662. https://doi.org/10.1177/00472875221089049

Park, E., Choi, B.-K., & Lee, T. J. (2019). The role and dimensions of authenticity in heritage tourism. Tourism Management, 74, 99–109. https://doi.org/10.1016/j.tourman.2019.03.001

Phi, L. N., Phuong, D. H., & Huy, T. V. (2024). How perceived crowding changes the interrelationships between perceived value, tourist satisfaction and destination loyalty: The empirical study at Hoi An. International Journal of Tourism Cities, 10(1), 324–352. https://doi.org/10.1108/IJTC-08-2023-0155

Santos-Rojo, C., Llopis-Amorós, M., & García-García, J. M. (2023). Overtourism and sustainability: A bibliometric study (2018–2021). Technological Forecasting and Social Change, 188, 122285. https://doi.org/10.1016/j.techfore.2022.122285

Şengül, S., Usta Dişsiz, S., & Uçkan Çakır, M. (2024). Over-gastronomy: Conceptualisation of the problems in gastronomy. Current Issues in Tourism, 1–18. https://doi.org/10.1080/13683500.2024.2390675

# Unmasking the Chatbot: Reader Reactions to AI-Generated Travel Narratives

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## Abstract

Generative AI has shifted from novelty to mainstream production tool in barely three years. Generative language models led by OpenAI's ChatGPT have reached a level of syntactic fluency and topical breadth that allows them to draft destination stories in seconds. Yet marketers still lack evidence about how real readers respond to machine prose once its origin is revealed. This study compares a human-written travel blog about the picturesque destination of Dürnstein, Austria, with an AI remake produced through few-shot prompting, focussing on three perceptual constructs, i.e., trustworthiness, empathy, and intention to visit, and examines how revealing AI authorship alters those constructs. Two randomly assigned groups of international students (N = 176) read one version and rated such constructs; the AI group repeated the battery after being told that ChatGPT was the author. Before disclosure, the machine text matched the human article on perceived informativeness but evoked lower empathy and slightly weaker behavioural intent. After disclosure, trust, empathy, and intention all fell sharply. The results extend credibility research from newsrooms to tourism storytelling, refine technology-acceptance models by foregrounding narrative empathy, and argue for transparent "AI-assisted, human-edited" workflows. The study further examined how disclosing AI authorship affected perceptions, thereby offering timely guidance for tourism marketers considering generative AI for routine content production.

*Keywords: AI-generated content; tourism blogs; human vs. AI; credibility*

## 1. Introduction

Travel blogs first emerged as a form of electronic word-of-mouth two decades ago when Pan, MacLaurin and Crotts (2007) showed that peer narratives influence destination image and trip choice. Their persuasive power depends on vivid, first-person description, what Staff and George (2017) call the "show, don't tell" ethic—and on emotional contagion transmitted through story. The Cambridge Dictionary (2024) now defines a blog as a frequently updated record of ideas, underscoring its conversational lineage.

At the same time, transformer-based language models have taken centre stage in AI research. Brown et al. (2020) demonstrated that such models perform "few-shot" learning, reproducing style from minimal cues. Tourism scholars quickly framed the opportunity. Buhalis (2020) portrayed AI as the next stage of ambient-intelligence tourism, while Carvalho and Ivanov (2023) described use-cases ranging from automated translation to rapid blog drafting. In practice, industry surveys already show bloggers who deploy AI save up to half the drafting time and reported early search-engine gains when ChatGPT writes product snippets (Maglione, 2023). However, caution accompanies enthusiasm. Borji (2023) catalogued hallucinations that undermine factual reliability. Aydın and Karaarslan (2023) warned that media hype may outrun technical reality, while professional authors interviewed by Davis and Grierson (2022) expressed ambivalence about losing an authentic voice.

Credibility experiments intensify such concerns. Clerwall (2014) found that algorithmic news receives lower quality ratings; Jakesch et al. (2019) showed that disclosure of machine authorship reduces trust even in otherwise human texts; Tewari et al. (2021) reported similar scepticism in general news. In the travel domain empathy is pivotal. Clark (1980) defined empathy as vicarious experience, Escalas and Stern (2003) operationalised it for advertising, and Hsiao, Lu and Lan (2013) confirmed its role in motivating travel planning, a result echoed by Akgün et al. (2015). Trustworthiness exerts an equally decisive influence; Gursoy et al. (2019) showed that perceived reliability shapes acceptance of AI devices, and Tourimpampa et al. (2018) linked comprehension ease to credibility. Against this backdrop the current study asks whether an AI-generated travel blog can match a human blog on empathy, trust and persuasion and how authorship disclosure alters perceptions. By embedding narrative empathy into technology-acceptance thinking and by offering guidance for hybrid workflows, the present work addresses both theory and managerial practice.

## 2. Theoretical background

Technical capability, organisational adoption and user response provide a helpful analytic triad. On capability, Liu et al. (2023) surveyed prompting techniques that allow precise style transfer, while Kutela et al. (2023) documented a burgeoning labour market for "prompt engineers." Harahap et al. (2023) noted that tourism chatbots already offer multilingual, round-the-clock assistance. Adoption studies mirror this trajectory as Huang, De La Mora Velasco, Haney and Alvarez (2022) mapped how destination-marketing organisations (DMOs) integrate AI analytics into strategy, whereas Huang, Yung and Yang (2011) showed that agencies leverage blogs for competitive advantage. Neuburger, Barbe and Fedeli (2024) added that social-media influencers are now rival information sources, raising the stakes for professional DMO storytelling.

User-response research remains more ambivalent. Beyond the newsroom work already cited, Borji's (2023) taxonomy of chatbot failures underscores reputational risk. Dwivedi et al. (2023) argued that policy must evolve to manage generative-AI ethics. McKinsey & Company (2023) nevertheless projected up to USD 4.4 trillion in annual productivity upside, with marketing content among the largest beneficiaries. Yang, Yang, Jansen and Lalmas (2017) located this projection within a broader shift toward computational advertising. Collectively, the literature predicts that AI copy will score well on surface coherence yet lag on empathy; that source disclosure will magnify any deficits; and that hybrid "AI-assisted, human-edited" workflows may offer the best balance, a stance consistent with Grundner and Neuhofer's (2021) bright–dark AI futures.

## 3. Methods

Following Field and Hole's (2003) design principles, a true experimental, between-subjects design was employed and hosted in Qualtrics. One hundred and seventy-six international

bachelor and master students (age 18-27) at universities in Lower Austria were randomly assigned to two equal groups (n = 88 each). The human stimulus was an 800-word extract from Rhonda Krause's Dürnstein article (Krause, 2015b). Two earlier posts from the same author set in Salzburg and the Wachau Valley (Krause, 2014; 2015a) served as style seeds. Guided by Ellis's (2023) and McNulty's (n.d.) prompting advice, ChatGPT-3.5 was instructed to mimic tone, narrative structure and sensory richness, producing an AI blog of identical length. Photographs and layout were held constant thus duplicated to control visual variables in line with well-accepted SEO guidance (see Semrush.com). Group 1 read an 800-word blog written by a professional travel writer; Group 2 read an 800-word piece on the identical topic generated by ChatGPT-3.5-turbo using few-shot prompts that mimicked the human author's style.

After reading, participants completed a five-point Likert questionnaire measuring trustworthiness (four items adapted from Tewari et al., 2019), empathy (two items from Escalas & Stern, 2003) and intention to visit (three items from Cheng, Wei and Zhang, 2020). Because normality assumptions were violated, the study used Mann-Whitney U tests for between-group comparisons and Wilcoxon signed-rank tests for within-group changes after authorship disclosure. Independent t tests and Mann–Whitney U tests compared groups before disclosure; paired t tests and Wilcoxon tests assessed change after disclosure.

## 4. Findings and analysis

Random assignment produced two demographically comparable groups: the 176 international students retained after quality checks averaged 22.4 years old (SD = 2.0), with 53 percent identifying as female. Prior visits to Dürnstein, frequency of online trip planning and leisure-travel frequency did not differ significantly between groups (all $p > .40$), confirming that any perceptual differences can be attributed to the blog condition rather than to background factors.

Table 1 summarises the pre-disclosure comparison. Despite close parity in perceived writing quality, the human narrative elicited higher trust, stronger empathy and a greater intention to visit. Mann–Whitney U tests rejected the null hypothesis for all three constructs, and the associated effect sizes ranged from medium ($d \approx 0.4$ for visit intention) to large ($d \approx 1.1$ for empathy). Only 31 percent of the AI group correctly guessed the blog's machine origin, indicating that stylistic imitation was broadly convincing; nevertheless, readers responded to it less favourably, particularly at the emotional level.

| Construct | Human blog (n = 88) M ± SD | AI blog (n = 88) M ± SD | U | *p* |
|---|---|---|---|---|
| **Trustworthiness** | 4.37 ± 0.75 | 4.00 ± 0.83 | 2 838 | .002 |
| **Empathy** | 3.31 ± 1.05 | 2.83 ± 1.06 | 2 899 | .004 |
| **Intention to visit** | 3.60 ± 0.90 | 3.42 ± 0.89 | 3 195 | .043 |

**Table 1:** Pre-disclosure scores (5-point scales)

Immediately after completing the first questionnaire, participants in the AI condition were told that the article they had evaluated had been produced with ChatGPT. A second, identical scale followed. Wilcoxon signed-rank tests (Table 2) show significant declines on every construct: trustworthiness fell by 18 percent, empathy by 15 percent and behavioural intention by 11 percent (all $p < .001$). Seventy-five of the 88 respondents reduced their trust rating, confirming a pronounced "replicant effect."

| Construct | Pre M ± SD | Post M ± SD | Z | *p* |
|---|---|---|---|---|
| **Trustworthiness** | 4.00 ± 0.83 | 3.29 ± 0.94 | −7.51 | < .001 |
| **Empathy** | 2.83 ± 1.06 | 2.41 ± 1.10 | −5.00 | < .001 |
| **Intention to visit** | 3.42 ± 0.89 | 3.04 ± 0.95 | −5.03 | < .001 |

**Table 2:** Post-disclosure change in the AI group (n = 88)

Several robustness checks support these findings. Re-running the analyses with bootstrap confidence intervals yielded identical significance patterns. Switching to parametric *t*-tests for the near-normal trust scores did not alter conclusions. Finally, the drop in perceptions after disclosure cannot be explained by pre-existing suspicion: most participants originally believed the text was human-authored, so the observed decline represents a genuine reaction to explicit AI labelling. Together, the data demonstrate that while ChatGPT can approximate human style, its narratives generate weaker affective and persuasive responses, and transparency about authorship magnifies the gap.

## 5. Discussion

A carefully prompted ChatGPT can craft destination prose that two-thirds of readers do not recognise as machine written, confirming Kutela et al.'s (2023) argument that prompt engineering is a crucial skill. Yet even without disclosure the AI text delivered weaker empathy, echoing Clark's (1980) view that true empathy draws on lived experience and Akgün et al.'s (2015) evidence that authentic narrative voice drives travel planning. Once authorship was revealed, trust collapsed in line with the Replicant effect documented by Clerwall (2014), Jakesch et al. (2019) and Tewari et al. (2021). These findings suggest that the perceived usefulness highlighted by Gursoy et al. (2019) is not sufficient; narrative affect moderates the path from information to intention.

Managerially, DMOs can still profit from AI speed. Brown et al. (2020) showed that few-shot learning enables rapid drafting; Liu et al. (2023) detailed prompting methods for style fidelity. Human editors should then inject personal anecdote, perform fact-checks to mitigate hallucinations (Borji, 2023) and ensure conformity with brand values, addressing the expectations gap warned by Aydın and Karaarslan (2023). Transparent labelling such as "AI-assisted and human-approved" may ease ethical concerns raised by Dwivedi et al. (2023) while preserving authenticity.

## 6. Conclusion

This study provides novel controlled evidence on how AI-authored travel blogs compare with human narratives in evoking empathy, trust and behavioural intent and on how disclosure reshapes those perceptions. Contributions include an expanded technology-acceptance model that embeds narrative empathy, a replicable few-shot prompting protocol and actionable guidance for hybrid content strategies. Limitations concern the student sample, single-story stimulus and self-reported outcomes. Future research should test broader audiences, integrate multimodal AI storytelling as anticipated by Yuan et al. (2022) and follow behavioural data such as click-through and booking rates. Despite these caveats, the message is clear: generative AI is a potent co-author but cannot yet replace the human storyteller whose lived perspective sustains empathy and trust, the emotional currencies of destination persuasion.

## References


Akgün, A. E., Keskin, H., Ayar, H., & Erdoğan, E. (2015). The influence of storytelling approach in travel writings on readers' empathy and travel intentions. *Procedia – Social and Behavioral Sciences, 207*, 577–586.

Aydın, Ö., & Karaarslan, E. (2023). *Is ChatGPT leading generative AI? What is beyond expectations?* SSRN 4341500. https://doi.org/10.2139/ssrn.4341500

Borji, A. (2023). *A categorical archive of ChatGPT failures.* arXiv. https://arxiv.org/abs/2302.03494

Brown, T. B., Mann, B., Ryder, N., Subbiah, M., Kaplan, J., Dhariwal, P., … Amodei, D. (2020). Language models are few-shot learners. *Advances in Neural Information Processing Systems, 33*, 1877–1901.

Buhalis, D. (2020). Technology in tourism: From ICT to smart tourism. *Tourism Review, 75*(1), 267–272. https://doi.org/10.1108/TR-06-2019-0258

Cambridge University Press. (2024, June 12). *Blog* [Definition]. In *Cambridge Dictionary*. https://dictionary.cambridge.org/dictionary/english/blog

Carvalho, I., & Ivanov, S. (2023). ChatGPT for tourism: Applications, benefits and risks. *Tourism Review*. https://doi.org/10.1108/TR-03-2023-0120

Cheng, Y., Wei, W., & Zhang, L. (2020). Seeing destinations through vlogs: Implications for engagement and travel intention. *International Journal of Contemporary Hospitality Management, 32*(10), 3227–3248. https://doi.org/10.1108/IJCHM-02-2020-0187

Clark, K. B. (1980). Empathy: A neglected topic in psychological research. *American Psychologist, 35*(2), 187–190. https://doi.org/10.1037/0003-066X.35.2.187

Clerwall, C. (2014). Enter the robot journalist: Users' perceptions of automated content. *Journalism Practice, 8*(5), 519–531. https://doi.org/10.1080/17512786.2014.883116

Davis, G., & Grierson, M. (2022). Investigating attitudes of professional writers to GPT text generation. In *Proceedings of the 1st Workshop on Creative AI Writing* (pp. 15–25). Association for Computational Linguistics.

Dwivedi, Y. K., Kshetri, N., Hughes, L., Kar, A. K., Baabdullah, A. M., Koohang, A., … Wade, M. (2023). "So what if ChatGPT wrote it?" Multidisciplinary perspectives on generative conversational AI. *International Journal of Information Management, 71*, 102642. https://doi.org/10.1016/j.ijinfomgt.2023.102642

Ellis, M. (2023, August 8). The nine best tips for using AI prompts for writing. *Grammarly Blog*. https://www.grammarly.com/blog/ai-writing-prompts-tips/

Escalas, J. E., & Stern, B. B. (2003). Sympathy and empathy: Emotional responses to advertising dramas. *Journal of Consumer Research, 29*(4), 566–578. https://doi.org/10.1086/346251

Field, A. P., & Hole, G. (2003). *How to design and report experiments*. Sage.

Graham Hole. (2009). *Research skills problem sheet 6*. University of Sussex.

Grundner, L., & Neuhofer, B. (2021). The bright and dark sides of artificial intelligence: A futures perspective on tourist destination experiences. *Journal of Destination Marketing & Management, 19*, 100511. https://doi.org/10.1016/j.jdmm.2020.100511

Gursoy, D., Chi, O. H., Lu, L., & Nunkoo, R. (2019). Consumers' acceptance of artificially intelligent device use in service delivery. *International Journal of Information Management, 49*, 157–169. https://doi.org/10.1016/j.ijinfomgt.2019.03.008

Harahap, M. A. K., Ausat, A. M. A., Rachman, A., Riady, Y., & Azzaakiyyah, H. K. (2023). Overview of ChatGPT technology and its potential to improve tourism information services. *Jurnal Minfo Polgan, 12*(1), 424–431.

Hsiao, K., Lu, H., & Lan, W. (2013). The influence of components of storytelling blogs on readers' travel intentions. *Internet Research, 23*(2), 160–182. https://doi.org/10.1108/10662241311313244

Huang, A., De La Mora Velasco, E., Haney, A., & Alvarez, S. (2022). The future of destination-marketing organisations in the insight era. *Tourism and Hospitality, 3*(3), 803–808. https://doi.org/10.3390/tourhosp3030047

Huang, L., Yung, C.-Y., & Yang, E. (2011). How travel-blog marketing can be a competitive advantage for tourism agencies. *Journal of Vacation Marketing, 17*(2), 139–149. https://doi.org/10.1177/1356766710391139

Jakesch, M., French, M., Ma, X., Hancock, J. T., & Naaman, M. (2019). AI-mediated communication: How the perception that profile text was written by AI affects trustworthiness. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems* (Paper 239). https://doi.org/10.1145/3290605.3300479

Kocoń, J., Cichecki, I., Kaszyca, O., … Kowalski, T. (2023). *ChatGPT: Jack of all trades, master of none.* arXiv. https://arxiv.org/abs/2303.10130

Krause, R. (2014, January 6). Salzburg's old town – A self-guided walking tour. Travel? Yes Please! https://www.travelyesplease.com/blog/salzburg-old-town-walking-tour/

Krause, R. (2015a, June 12). Cruising Austria's scenic Wachau Valley. Travel? Yes Please! https://www.travelyesplease.com/blog/wachau-valley-cruise/

Krause, R. (2015b, July 24). Discovering the beauty and intrigue of Dürnstein. Travel? Yes Please! https://www.travelyesplease.com/blog/things-to-do-in-durnstein-austria/

Kutela, B., Novat, N., Herman, J., Kinero, A., & Lyimo, S. (2023). The rise of prompt-engineering jobs: A review and future research agenda. SSRN 4625139. https://doi.org/10.2139/ssrn.4625139

Liu, P., Yuan, W., Fu, J., Jiang, Z., Hayashi, H., & Neubig, G. (2023). Pre-train, prompt and predict: A systematic survey of prompting methods. *ACM Computing Surveys, 55*(9), Article 195. https://doi.org/10.1145/3564447

Maglione, A. (2023, February 9). ChatGPT for the travel industry: Pros and cons. *Regiondo Blog.* https://pro.regiondo.com/chatgpt-for-the-travel-industry/

McKinsey & Company. (2023, June). *The economic potential of generative AI: The next productivity frontier.* https://www.mckinsey.com/

McNulty, N. (n.d.). *Prompt engineering for educational content: Few-shot and chain-of-thought prompting.* Unpublished white paper.

Neuburger, L., Barbe, D., & Fedeli, G. (2024). Users' perceptions of DMOs versus influencers on Instagram: A comparative study. In *Information and Communication Technologies in Tourism 2024* (pp. 410–420). Springer. https://doi.org/10.1007/978-3-031-34048-9_33

Pan, B., MacLaurin, T., & Crotts, J. C. (2007). Travel blogs and the implications for destination marketing. *Journal of Travel Research, 46*(1), 35–45. https://doi.org/10.1177/0047287507302381

Semrush. (n.d.). *What is SEO? The 2025 beginner's guide.* https://www.semrush.com/blog/what-is-seo/

Staff, L. P. P., & George, D. (2017). *How to be a travel writer* (4th ed.). Lonely Planet.

Tewari, S., Zabounidis, R., Kothari, A., Bailey, R., & Alm, C. O. (2021). Perceptions of human- and machine-generated articles: An exploratory study. *Digital Threats: Research and Practice, 2*(2), Article 6. https://doi.org/10.1145/3452191

Tourimpampa, A., Drigas, A., Economou, A., & Roussos, P. (2018). Perception and text comprehension: It's a matter of perception! *International Journal of Emerging Technologies in Learning, 13*(7), 228–240. https://doi.org/10.3991/ijet.v13i07.8063

Tussyadiah, I., Li, S., & Miller, G. (2019). Privacy protection in tourism: Where we are and where we should be heading. In Z. Xiang & M. Fuchs (Eds.), *Information and Communication Technologies in Tourism 2019* (pp. 278–290). Springer. https://doi.org/10.1007/978-3-030-05940-8_22

Yang, Y., Yang, Y. C., Jansen, B. J., & Lalmas, M. (2017). Computational advertising: A paradigm shift. *IEEE Intelligent Systems, 32*(3), 3–6. https://doi.org/10.1109/MIS.2017.24

Yuan, A., Coenen, A., Reif, E., & Ippolito, D. (2022). Wordcraft: Story writing with large language models. In *Proceedings of the 27th International Conference on Intelligent User Interfaces* (pp. 841–852). Association for Computing Machinery. https://doi.org/10.1145/3490099.3511105

# Transformative Tourism: Insights from Online Narratives of Italian Route Walkers

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## Abstract

This study explores the transformative potential of route-based tourism by analysing online comments related to Italian trails. The research is based on theories of transformative tourism and Maslow's concept of peak experiences. Building on the work of Kirillova et al. (2017), we identify the presence of triggering episodes during long-distance walks.

This paper adopts an asynchronous netnographic approach supported by software (TLab 10). The study was conducted on a database consisting of 759 reviews left by walkers of four Italian Routes. The results highlight the ability of route-based tourism to promote personal growth and provide insights for designing travel experiences that deeply resonate with individuals.

*Keyword: Transformative tourism, route-based tourism, travel experience, netnography, transformation economy*

## 1. Introduction

Transformative tourism, defined by Christie and Mason (2003, p.9) as "the practice of organized tourism that leads to a positive change in attitudes and values among those who participate in tourist experience" represents a significant area of study within tourism research. This concept builds upon earlier psychological frameworks, notably Maslow's (1965) introduction of "peak experiences." Maslow described these as moments of profound happiness and fulfilment, enabling individuals to feel truly "alive." Such experiences are characterized by heightened perception, temporal and spatial disorientation, and a temporary release from fear and inhibition.

The capacity of travel to induce personal change and transformation is well-established in the existing literature (Decrop et al., 2018; Pung et al., 2020; Robledo, Batle, 2017**).** This body of work signifies a shift in research focus from traditional tourism outcomes like satisfaction, behavioural intentions, and positive emotions, towards deeper outcomes related to personal growth (Chhabra, 2021; Teoh et al., 2021; Pung, Del Chiappa, 2020).

According to Kirillova et al. (2017, p.12), who studied transformative tourism through the lens of existential-humanistic philosophy, 'a peak tourism experience can become transformative when the triggering episodes are made sense in a way that is personally meaningful'. Through a deeper analysis of literature, the authors identified seven types of transformation triggers: Introspection, Unity with nature, Unity with others, Spontaneity and Novelty, Aesthetic experience, and Self-development.

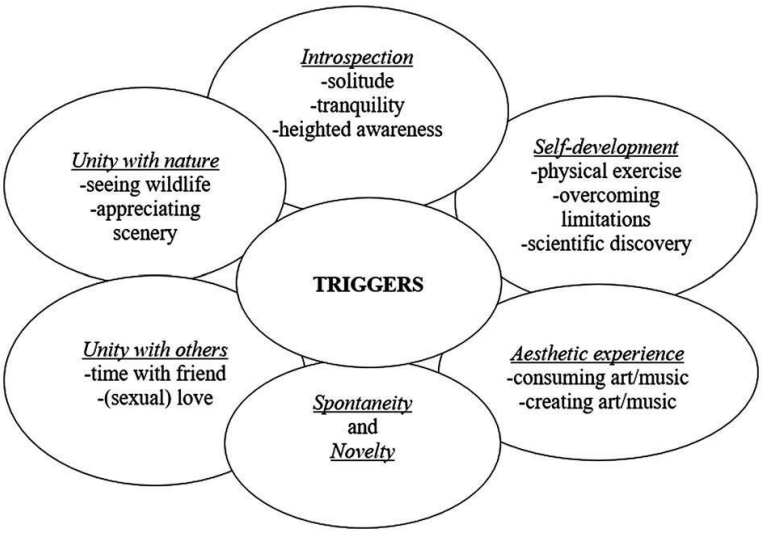



**Figure 1:** Triggers of 'peak' experience (Source: Kirillova et al., 2017)

While various travel categories are recognized for their potential to foster change (Reisinger, 2013; Kirillova et al., 2017; Robledo & Batle, 2017; Soulard et al., 2019; Fu et al., 2022; Pung et al., 2020; Wolf et al., 2017), including independent travel, ecotourism, spiritual tourism, and volunteer tourism, route-based tourism possesses a hybrid nature encompassing elements of these categories.

Indeed, its inherent characteristics makes walking tourism a particularly compelling subject for investigating its transformative potential (Forlani & Splendiani, 2023). This paper analyses tourists' spontaneous comments regarding their walking experiences to identify whether these comments contain the elements highlighted by Kirillova et al. (2017) as triggers of a transformation process. The purpose of this article is therefore to answer the following research question: does route-based tourism provide potentially transformative episodes?

## 2. Methodology

Methodologically, experience-design research must be grounded in tourists' perceptions. Tussyadiah (2014) acknowledges the value of naturalistic inquiries, employing researcher-led or tourist self-observation across social, environmental and temporal contexts (Stienmetz et al., 2021). Whilst most of these methodologies depend on primary data, the advent of digital platforms has paved the way for netnography, which involves the analysis of blogs, social media posts and online reviews, to provide a robust, non-intrusive, efficient and cost-effective means of studying experiences (Heinonen & Medberg, 2018; Costello et al., 2017; Whalen, 2018). Indeed, given the proliferation of user-generated content (USG), netnography is a promising approach for tourism studies, given that its passive, asynchronous nature is aligned with research objectives and is optimally supported by qualitative data analysis software (Whalen, 2018). For these reasons, the present research adopts an exploratory approach, utilising a netnographic method (on Facebook, Instagram and Tripadvisor, relating to four Italian routes.

Specifically:

- Via Francigena (368 comments);
- Via degli Dei (229 comments);
- Cammino dei Borghi Silenti (99 comments); -

- Via di Francesco (63 comments).

The so-created Excel database was analysed through T-Lab10 software, an approach that ensures the analysis is objective, verifiable and replicable (McGinley et al., 2021). The first step is text cleaning: the software removes stop words and performs lemmatisation, reducing inflected forms to their dictionary form.

This process standardises the text and identifies basic codes (King et al., 2018), which can be used as the fundamental unit of analysis for subsequent steps.

The software conducted a word frequency analysis to determine the absolute occurrence of each lemma. Subsequently, authors followed Kirillova et al. (2017) framework to codify each lemma, assigning it to a different category of trigger:

- 'Introspection' includes words related to solitude, tranquillity, heightened cognition;
- 'Self-development' includes words related to physical exercise, overcoming limitations and difficulties in general
- 'Aesthetic experience' includes words related to the actions of admiring and listening
- 'Spontaneity and novelty' includes words related to adventure and diversity;
- 'Unity with others' includes words related to socialization;
- 'Unity with nature' includes words related to natural elements such as weather conditions.

## 3. Results

Through the analysis of absolute occurrences and the aforementioned codification, we found that in 759 comments, 4087 words were related to potentially triggering elements.

| Category | Occurency |
|---|---|
| Introspection | 842 |
| Self-development | 1628 |
| Aesthetic experience | 23 |
| Spontaneity and novelty | 357 |
| Unity with others | 977 |
| Unity with nature | 259 |
| Total | 4086 |

**Table 1:** Word analysis (Source: Our elaboration)

Our empirical analysis confirms the presence of transformative process activators identified by Kirillova et al. (2017): introspection, unity with nature, unity with others, spontaneity and novelty, aesthetic experience, and personal development.

Figure 2 provides a visual representation of the results, presenting them in a synthetic and graphical format.

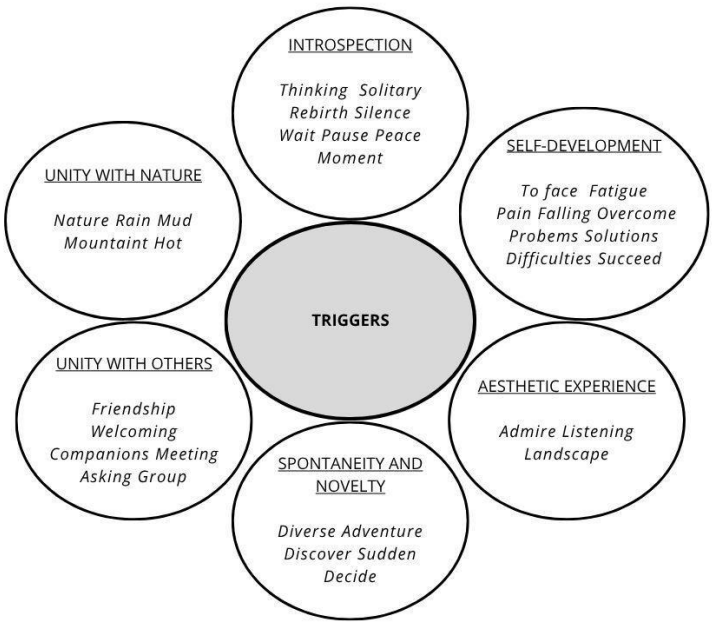



**Figure 2:** Words related to transformation triggers. (Source: Our elaboration)

## 4. Conclusions e implications

Tourists increasingly seek meaningful and fulfilling experiences (Pung et al., 2020; Sheldon, 2020), embracing change during travel as a way to cope with daily challenges and uncertainties (Fu et al., 2015; Soulard et al., 2020).

Despite the recent growth in interest in transformative tourism (Rus et al., 2022), the existing literature is still limited and unanimous in emphasizing the need for further empirical studies (Amaro et al., 2023; Rus et al., 2022; Pung et al., 2020). This study aligns with this trend, analysing the transformative capacity of route-based tourism in Italy through direct testimonials from pilgrims.

Our findings suggest that walking routes may have a transformative effect on participants, therefore it is worthwhile t**o** further study this type of travel, both through qualitative and quantitative studies, to test the actual transformative impact of walking experiences on tourists' values, attitudes, and behaviours.

## References

Bibliographic references are available on request.

# Corporate Museums as Tourist Experiences: A Transformative Theory Perspective

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## Abstract

Corporate museums can play an increasingly relevant role within the contemporary tourism landscape, where tourism experiences are expected to co-create personal and social meanings through cognitive, emotional, and sensory engagement. Corporate museums are hybrid spaces that combine industrial heritage, brand identity, and historical values and narratives, with significant potential to foster visitors' engagement, memories, values, and identity through a mix of educational, emotional, and symbolic stimuli. This paper aims to shed light on the corporate museum visit as a tourist experience by examining its cognitive, emotional, and behavioral dimensions and conceptually framing its impact on tourists. Drawing on explorative insights from the Grand Tour dei Musei d'Impresa, a coordinated itinerary of four corporate museums in Southern Italy, this study proposes conceptualising the corporate museum visit as a transformative tourist experience, acting as a lever for cognitive, emotional, and behavioral change in visitors. The paper outlines four dimensions through which corporate heritage spaces may act as catalysts for transformative experience: restructuring of meanings and understandings related to everyday products and places; activation of reflection on consumption practices and ethical values; stimulation of emotional resonance and self-reflection through sensory and affective engagement; and promotion of social interaction and identification through embodied and relational experiences. Based on these emerging research hypotheses, the paper outlines future research directions aimed at theory-building and empirical validation, calling for a rethinking of corporate museums not merely as communication tools or repositories of memory but as experiential arenas where learning, identity negotiation, and transformation can unfold.

Keyword: Transformative Tourism; Tourism Experience; Corporate Museums; Corporate Heritage

## 1. Introduction

Tourism is a complex phenomenon driven by motivations such as leisure, discovery, and personal or cultural growth. The tourism experience goes beyond place consumption, involving the co-creation of meaning through cognitive, emotional, and sensory engagement (Sugathan & Ranjan, 2019). It is a subjective, relational process shaped by expectations and individual interpretation (Volo, 2013). Corporate museums have gained visibility as spaces where industrial memory, brand identity, and historical narratives converge (Piątkowska, 2014; Riviezzo et al., 2021). Contributing to the global rise of museums as cultural formats and place branding tools (Heidenreich & Plaza, 2015; Pasquinelli, 2017), they function as

cultural actors shaping values and identity (Kirchberg, 2015). They combine educational, emotional, and symbolic dimensions (Negri, 2003), offering immersive experiences that link corporate heritage (Balmer & Burghausen, 2019) to visitors' personal trajectories (Garofano et al., 2022b). Through storytelling and interactive displays, they foster informal learning and collective sensemaking (Riviezzo et al., 2021). Despite growing interest, there is still limited reflection on corporate museums as tourism experiences (Dalle Nogare & Murzyn-Kupisz, 2024). This paper addresses this gap by proposing a conceptualization of the corporate museum visit as a transformative tourism experience and by outlining directions for future research.

## 2. The museum experience

Heritage and cultural consumption are at the core of tourists' lived experiences. Recent studies highlight how memorable experiences in the heritage context significantly influence tourists' behavioral intentions, promoting strong place attachment and loyalty over time (Rasoolimanesh et al., 2021). At the heart of this dynamic is emotional engagement, fostering belonging and meaning beyond mere enjoyment (Smith, 2020). This process is particularly evident in pilgrimage experiences and heritage sites, offering tourists opportunities for deep reflection and identity renewal (Collins-Kreiner, 2010), but is also increasingly significant in museum contexts (Del Chiappa et al., 2014). Museums today are experiential settings that stimulate visitors on an emotional, sensory, and cognitive level and environments that promote active participation and agency. Visitors are not merely recipients of curated content but co-producers of meaning through interactive, hands-on, and reflective engagement (Šveb Dragija et al., 2024; Black, 2012). Activities such as tasting products, manipulating materials, participating in workshops, or co-creating content with other visitors or staff activate deeper forms of learning and engagement that contribute to eudaimonic well-being, a sense of purpose, self-realization, and inner enrichment (Falk, 2021).

The museum experience is increasingly seen as an interaction between space, discourse, and biography, highlighting the visitor's active role. This transformation reflects a broader shift from a learning-centered paradigm to one of meaning-making. The museum becomes a space of relational and transformative encounters, where the emotional and affective dimensions intertwine with the cognitive, and the traces of the past stimulate critical reflection on the self and the world (Packer, 2008).

Museums thus emerge as fertile grounds for co-creative and immersive practices. Tourists can develop personalized and emotionally resonant narratives through meaningful interaction with place, culture, and others. Multisensory engagement helps transform tourism into an experience of personal development, emotional growth, and renewed connection to place and culture (Steriopoulos et al., 2024).

## 3. The value of corporate museums

Within this framework, corporate museums represent an emerging form of thematic museum created by companies that decide to preserve and communicate their cultural-historical and production heritage (Ramshaw, 2016). Unlike traditional museums, which are typically focused on preserving and disseminating cultural heritage from a "neutral" standpoint, corporate museums are deeply rooted in the identity and narrative of a specific company (Nissley & Casey, 2002). Corporate museums are places where corporate heritage can be enhanced and transmitted to stakeholders (Riviezzo et al., 2021). They are often deeply interwoven with the local area's history and community, acting as custodians of shared memory (Riviezzo et al., 2022). Moreover, corporate museums are designed by members of the organization to revisit history in light of the present and to inspire the future (Ravasi et al., 2019). As such, corporate museums take on a dual role: on the one hand, they strengthen

the company's identity and its strategic market positioning by reinforcing brand authenticity and organizational identity (Carù et al., 2017; Riviezzo et al. 2021); on the other hand, they serve as cultural infrastructures that contribute to heritage enhancement and territorial competitiveness (Alberti & Giusti, 2012), often acting as bridges between company and community (Garofano et al., 2022a; Garofano et al., 2022b).

Corporate museums do not limit themselves to narrating the company history but offer a broader narrative framework encompassing places, people, production techniques, and the system of values underpinning the territorial identity (Bonfanti et al., 2015; Garofano et al., 2017). They stage corporate heritage as a performative and experiential construct (Napolitano et al., 2018), often embedded in immersive and sensorially rich displays that combine tradition and innovation (Hudson, 2016). By entering the domain of industrial and cultural tourism (Otgaar, 2012), these museums attract a growing number of visitors seeking meaningful and authentic experiences beyond conventional tourist routes (Garofano et al., 2022a; Mason et al., 2022). As sites of experiential intensity, they enable opportunities for reflection, learning, and emotional engagement (Bertoli et al., 2016), offering what Ossorio (2022) defines as "experiential gateways," especially within sectors like enogastronomy, fashion, and design. Corporate museums have a potential role in the enhancement of the tourist attractiveness of the area (Riviezzo et al, 2021) as they encourage encounters with often forgotten knowledge systems and nurture a deeper understanding of the relationships between individuals, communities, and territories (Garofano et al., 2022b). Even without explicit educational aims, these spaces facilitate processes of personal meaning-making, allowing visitors to engage critically and emotionally with corporate heritage (Garofano et al., 2017).

## 4. Towards a transformative tourism conceptualization: Explorative insights from the Grand Tour dei Musei d'Impresa

In the context of corporate museum experiences, the Grand Tour dei Musei d'Impresa exemplifies how the integration of memory, organizational culture, and territorial identity can engage both communities and visitors. By promoting industrial tourism in Southern Italy, the Grand Tour dei Musei d'Impresa offers diversified sensory experiences that foster education, enjoyment, reflection, and the shared appreciation of local companies and their heritage. The initiative includes four museums rooted in local heritage: Essenza Lucano (Pisticci), Giorgio Amarelli Liquorice (Rossano), Vito Forte Bread (Altamura), and Giovanni Mucci Confetto (Andria). Promoted by Welcome Lucania Tour Operator under the patronage of Museimpresa , the project offers a replicable model of cultural and local development through multisensory and integrated experiences. Table 1 summarizes the main features of the participating museums.

| Museum | Location | Setting | Core Themes | Visitor Experience |
|---|---|---|---|---|
| Essenza Lucano Museum | Pisticci, Basilicata | Historic plant | Lucania region, iconic product Amaro Lucano, family history, Pacchiana figure | A multisensory and narrative journey combining guided storytelling with tasting sessions, olfactory interaction, and live observation of the production process. The visitor is immersed in a narrative blending local identity, herbal knowledge, and product innovation. |
| Giorgio Amarelli Licorice Museum | Rossano, Calabria | 18th-century Concio building | Licorice heritage, family history, production engineering innovation | An emotional and cultural experience centered on memory and family continuity. Visitors engage with the centuries-old company<br><br>history through guided storytelling and authentic settings. |
| Vito Forte Bread Museum | Altamura, Puglia | Medieval community bakery | Bread-making tradition, founder's story, territorial identity | An immersive, five-sense experience exploring bread as both tangible and intangible heritage. The path through the historic bakery reveals artisanal practices, original environments, and biographical testimonies. |
| Giovanni Mucci Confetto Museum | Andria, Puglia | Historic confectionery shop | Confectionery heritage, family history, product innovation | A sensory and affective experience where history, taste, and design intersect. Visitors rediscover confectionery tradition in elegant, memory-rich rooms, connecting palate pleasure with family, aesthetic, and territorial values. |

**Table 1:** Key features of the Grand Tour dei Musei d'Impresa

Drawing on museum and tourism studies, the concept of transformative tourism offers a valuable lens to examine how corporate museum visits may support meaningful personal change. This form of tourism involves experiences that lead to positive shifts in travelers' values, beliefs, behaviors, or self-perception (Sheldon, 2020; Kirillova et al., 2017a), engaging both cognitive and emotional or existential dimensions (Everett & Parakoottathil, 2018). D'Amaro et al. (2025) identify two main research directions: a managerial perspective, focused on designing experiences aligned with the shift from the Experience to the Transformative Economy (Pine & Gilmore, 2013); and a visitor-centered approach, examining how individuals internalize experiences and generate new meanings (Robledo & Batle, 2017). Much of this literature builds on Transformative Learning Theory (Mezirow, 1997), which sees "disorienting dilemmas" as triggers for critical reflection and identity change (Reisinger, 2013; Kirillova et al., 2017b). While research often targets niche contexts, such as couchsurfing, pilgrimage, or study abroad (Decrop et al., 2018; Nikjoo et al., 2020; Cavender et al., 2020), heritage tourism, especially in corporate contexts, remains underexplored. Yet heritage sites can foster introspection and value shifts (Magee & Gilmore, 2015), with museums acting as liminal spaces for affective engagement and identity work (Garner et al., 2016; Hetherington, 2014; Wu et al., 2025). Corporate museums, where

personal and collective narratives converge with material heritage and sensory stimuli, offer fertile ground for investigation.

First, insights from the Grand Tour suggest that corporate museums can reshape understandings of products, production, and place-based histories. Embedding familiar goods like bread, liqueur, licorice, or confectionery in broader cultural and environmental narratives may challenge visitors' perceptions. At the Amarelli Museum, for instance, the wild licorice root is revalorized as a symbol of local heritage. Similarly, the Essenza Lucano Museum presents Amaro Lucano as a product of regional herbalist traditions, prompting a deeper cultural appreciation of everyday goods.

Second, corporate museums may encourage mindful consumption by highlighting values tied to local economies. At the Vito Forte Bread Museum, visitors encounter stories of sustainable supply chains, ethical labor, and artisanal practice. Experiences such as workshops with retired bakers and immersive exhibits in the original bakery foster reflection on food origins and responsible choices. The Amarelli and Mucci museums likewise showcase the transformation of raw materials into iconic products, linking tradition with innovation and environmental awareness.

Third, affective and psychological engagement is central. All four museums incorporate sensory brand stimuli that promote emotional resonance: the scent of licorice at Amarelli, multisensory displays at Lucano, nostalgic interiors at Mucci, and tactile experiences at Forte. These elements evoke memory, emotion, and identification, supporting introspection and identity reorientation.

Fourth, relational and spatial immersion can serve as a lever of transformation. All museums are housed in historically significant buildings, maintaining authentic atmospheres. Visitors walk through former production spaces now repurposed as cultural venues, reinforcing continuity and heritage. Exhibits include tools, documents, and audiovisual narratives that link corporate and territorial histories. Tours often involve narrators with personal ties to the enterprise, e.g., Forte's former bakers, sharing lived values beyond corporate messaging. Group activities, like tastings, further enhance social interaction and co-interpretation, fostering dialogue, identity reflection, and belonging. To fully explore these transformative potentials, future research should adopt multi-method and longitudinal designs. The emotional, cognitive, sensory, and social complexity of corporate museum experiences calls for integrated approaches. Qualitative methods such as ethnography, narrative analysis, in-situ interviews (Carù & Cova, 2007), shadowing, or autoethnography, can capture how visitors process meaning over time. User-generated content (e.g., reviews, social media) also provides rich data on emotions and value attribution (Gretzel & Yoo, 2008; Volo & Irimiás, 2018). These should be paired with quantitative tools adapted from validated scales on transformative travel and cultural tourism (Soulard et al., 2021; Pung et al., 2024; Zheng et al., 2025), measuring emotional activation, value change, or shifts in consumption attitudes. In conclusion, studying transformative processes in corporate museums advances tourism theory and repositions businesses as cultural institutions: not merely spaces of preservation or entertainment, but arenas for learning, meaning-making, and identity negotiation.

## References

Alberti, F. G., & Giusti, J. D. (2012). Cultural heritage, tourism and regional competitiveness: The Motor Valley cluster. City, culture and society, 3(4), 261-273.

Balmer, J. M., & Burghausen, M. (2019). Marketing, the past and corporate heritage. Marketing Theory, 19(2), 217-227.

Bertoli, G., Busacca, B., Ostillio, M. C., & Di Vito, S. (2016). Corporate museums and brand authenticity: Explorative research of the Gucci Museo. Journal of Global Fashion Marketing, 7(3), 181-195.

Black, G. (2012). The engaging museum: Developing museums for visitor involvement. Routledge.

Bonfanti, A., Castellani, P., & Rossato, C. (2015). Developing Territorial Identity: The Experience of Historical Italian Companies. International Journal of Management Cases, 17(4), 45-58.

Burghausen, M. (2023). The presence of the omni-temporal: theoretical foundations of (corporate) brand heritage design. Journal of Brand Management, 30(2), 129-143.

Carù, A. and Cova, B. (Eds) (2007), Consuming Experience, Routledge, London.

Carù, A., Ostillio, M. C., & Leone, G. (2017). Corporate museums to enhance brand authenticity in luxury goods companies: The case of Salvatore Ferragamo. International Journal of Arts Management, 32-45.

Cavender, R., Swanson, J. R., & Wright, K. (2020). Transformative travel: Transformative learning through education abroad in a niche tourism destination. Journal of Hospitality, Leisure, Sport & Tourism Education, 27, 100245.

Collins-Kreiner, N. (2010). Researching pilgrimage: Continuity and transformations. Annals of Tourism Research, 37(2), 440–456. https://doi.org/10.1016/j.annals.2009.12.002

D'Amaro, D., Caldeira, A. M., & Seabra, C. (2025). Transformative experiences in tourism: A conceptual and critical analysis integrating consumer and managerial perspectives. Tourism and Hospitality Research, 25(1), 135-146.

Dalle Nogare, C., & Murzyn-Kupisz, M. (2024). Core functions, visitor friendliness and digitalisation: a comparative analysis of corporate museums' performance. Journal of Cultural Economics, 48(3), 405-437.

Decrop, A., Del Chiappa, G., Mallargé, J., & Zidda, P. (2018). "Couchsurfing has made me a better person and the world a better place": the transformative power of collaborative tourism experiences. Journal of Travel & Tourism Marketing, 35(1), 57–72.

Del Chiappa, G., Andreu, L., & Gallarza, M. G. (2014). Emotions and visitors' satisfaction at a museum. International Journal of Culture, Tourism and Hospitality Research, 8(4), 420-431.

Drotner, K., & Schroder, K. C. (2013). Museum communication and social media. New York: Routledge. Essex, J., & Haxton, K.(2018). Characterising patterns of engagement of different participants in a public STEM-based analysis project. International Journal of Science Education, Part B, 8(2), 178-191.

Everett, S., & Parakoottathil, D. J. (2018). Transformation, meaning-making and identity creation through folklore tourism: The case of the robin hood festival. Journal of Heritage Tourism, 13(1), 30–45.

Falk, J. H., & Dierking, L. D. (2016). The museum experience revisited. Routledge.

Garner, J. K., Kaplan, A., & Pugh, K. (2016). Museums as contexts for transformative experiences and identity development. Journal of museum education, 41(4), 341-352.

Garofano, A., Riviezzo, A., & Napolitano, M. R. (2017). From industrial heritage to living industry tourism. An explorative study in Italy. PROCEEDINGS BOOK, 210.

Garofano, A., Riviezzo, A., & Napolitano, M. R. (2022a). Industrial tourism as a new opportunity for cultural tourism development in the post-pandemic era. In Cultural Leadership in Transition

Tourism: Developing Innovative and Sustainable Models (pp. 107-122). Cham: Springer International Publishing.

Garofano, A., Bonetti, E., Izzo, F., & Masiello, B. (2022b). Storytelling and experiencescape in living industry tourism: An explorative study within long-lived firms. In Proceedings of 21th international marketing trends conference.

Gretzel, U., & Yoo, K. H. (2008). Use and impact of online travel reviews. In Information and communication technologies in tourism 2008 (pp. 35-46). Springer, Vienna.

Heidenreich, M., & Plaza, B. (2015). Renewal through culture? The role of museums in the renewal of industrial regions in Europe. European Planning Studies, 23(8), 1441-1455.

Hetherington, K. (2014). Museums and the 'death of experience': singularity, interiority and the outside. International Journal of Heritage Studies, 20(1), 72-85.

Hudson, B. T. (2016). The role of corporate vehicle museums in consumer brand engagement. In Automobile heritage and tourism (pp. 208-224). Routledge.

Kirchberg, V. (2015). Museum Sociology. In L. Hanquinet, & M., Savage. International Handbook of the Sociology of Art and Culture (pp. 232-246). London: Routledge.

Kirillova, K., Lehto, X., & Cai, L. (2017a). Tourism and existential transformation: An empirical investigation. Journal of Travel Research, 56(5), 638-650.

Magee, R., & Gilmore, A. (2015). Heritage site management: From dark tourism to transformative service experience? The Service Industries Journal, 35(15-16), 898–917.

Mason, M. C., Riviezzo, A., Zamparo, G., & Napolitano, M. R. (2022). It is worth a visit! Website quality and visitors' intentions in the context of corporate museums: a multimethod approach. Current Issues in Tourism, 25(18), 3027-3041.

Napolitano, M. R., Riviezzo, A., & Garofano, A. (2018). Heritage Marketing. Come aprire lo scrigno e trovare un tesoro. Editoriale scientifica.

Negri, M. (2003). Manuale di museologia per i musei aziendali (Vol. 8). Rubbettino Editore.

Nissley, N., & Casey, A. (2002). Viewing corporate museums through the paradigmatic lens of organizational memory: the politics of the exhibition. British Journal of Management, 13(1), 35-45.

Nikjoo, A., Razavizadeh, N. and Giovine, M.A.D. (2020), "What draws Shia Muslims to an insecure pilgrimage? The Iranian journey to Arbaeen, Iraq during the presence of ISIS", Journal of Tourism and Cultural Change, Vol. 19 No. 4, pp. 1-22.

Ossorio, M. (2022). Corporate Museum Experiences in Enogastronomic Tourism. In Planning and Managing the Experience Economy in Tourism (pp. 107-121). IGI Global Scientific Publishing.

Otgaar, A. (2012). Towards a common agenda for the development of industrial tourism. Tourism management perspectives, 4, 86-91.

Packer, J. (2008). Beyond learning: Exploring visitors' perceptions of the value and benefits of museum experiences. Curator: The Museum Journal, 51(1), 33-54.

Pasquinelli, C. (2017). The Cultural Branding Matrix: framing the relation between cultural institutions and city branding. In Handbook on Place Branding and Marketing (pp. 41-55). Edward Elgar Publishing.

Piątkowska, K. (2014). The corporate museum: a new type of museum created as a component of marketing company. International Journal of the Inclusive Museum, 6(2), 29-37.

Pine II, B. J., & Gilmore, J. H. (2015). L'economia delle esperienze. Etas.

Pung, J. M., Khoo, C., Del Chiappa, G., & Lee, C. (2024). Tourist transformation: An empirical analysis of female and male experiences. Tourism Recreation Research, 49(5), 1036-1050.

Ramshaw, G. (2016). Assembling heritage tourism: the BMW museum and factory tour. In Automobile Heritage and Tourism (pp. 65-75). Routledge.

Ravasi, D., Rindova, V., & Stigliani, I. (2019). The stuff of legend: History, memory, and the temporality of organizational identity construction. Academy of Management Journal, 62(5), 1523-1555.

Rasoolimanesh, S. M., Seyfi, S., Hall, C. M., & et al. (2021). Understanding memorable tourism experiences and behavioural intentions of heritage tourists. Journal of Destination Marketing & Management, 21, 100621.

Riviezzo, A., Garofano, A., Mason, M., & Napolitano, M. (2021). Italian corporate museums as industrial tourism destinations: A segmentation study based on strategic orientation. European Journal of Tourism Research, 29, 2906-2906.

Riviezzo, A., Mason, M. C., Garofano, A., & Napolitano, M. R. (2022). Uncovering the worth of the past: the relationship between corporate museums' strategic orientation and dual performance. Management Decision, 60(7), 1852-1874.

Sheldon, P. J. (2020). Designing tourism experiences for inner transformation. Annals of tourism research, 83, 102935.

Smith, L. (2020). Emotional heritage: Visitor engagement at museums and heritage sites. Routledge.

Soulard, J., McGehee, N., & Knollenberg, W. (2021). Developing and testing the transformative travel experience scale (TTES). Journal of Travel Research, 60(5), 923-946.

Steriopoulos, E., Hall, J., Lockstone-Binney, L., Steel, M., & Wong, H. Y. (2024). Transformative brand experiences and consumer-based brand equity in heritage tourism: The role of authenticity and motives. Journal of Vacation Marketing, 13567667241264840.

Sugathan, P., & Ranjan, K. R. (2019). Co-creating the tourism experience. Journal of Business Research, 100, 207-217.

Šveb Dragija, M., van Zomeren, M., & Hansen, N. (2024). Designing museum experiences for eudaimonic or hedonic well-being: insights from interviews with museum visitors. Museum management and curatorship, 1-18.

Volo, S. (2013). Conceptualizing experience: A tourist based approach. Marketing of tourism experiences, 13-28.

Volo, S., & Irimiás, A. (2021). Instagram: Visual methods in tourism research. Annals of tourism research, 91, 10309801-10309804.

Wu, J., Tuo, Y., Bai, C., & Lin, Z. (2025). Curating wellness: Exploring healing experiences in digitally transformed museums. Tourism Management, 111, 105207.

Zheng, Y., Han, X., Wu, J. S., & Xiao, L. (2025). Transformative value in cultural tourism: Scale development and its impact on tourist eudaimonic well-being. Tourism Management Perspectives, 56, 101346.

# Visitors' Representation of Glacier Tourism: Interplay Between Visuals and Text

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## Abstract

Glacier tourism has emerged as a form of nature-based tourism that is particularly vulnerable to the accelerating impacts of climate change. This study aims to explore how visual content of glacier tourism interacts with user engagement in accompanying textual captions on Instagram. Drawing on the multimodal discourse analysis, this study examines the meaning of images and their iconographical aspects, the cognitive, affective, and behavioural dimensions of user engagement in text, and finally assesses the alignment or misalignment of the images and text in the messages they convey. The insights from this research contribute to both sustainability and visual communication studies in tourism.

*Keywords: glacier tourism, visual representation, multimodal discourse analysis, visual-verbal redundancy*

## 1. Introduction

Glacier tourism, as a form of nature-based travel, has gained increasing attention in recent years and become an indicator of climate change. Typically referring to destinations where glaciers serve as key attractions or settings for leisure, educational, or scientific activities, this form of tourism is especially vulnerable due to its dependence on fragile high-altitude environments (Welling et al., 2015). As glaciers retreat, they become powerful symbols of environmental urgency, offering visitors a direct and emotional encounter with climate change.

Social media such as Instagram with both visual and textual elements provide a ground to explore glacier visitors' personal and affective representations of their experiences. While text is often privileged as the primary mode of communication, images have been recognised as a powerful means of shaping perceptions of issues and can significantly influence emotional responses and behavioural intentions. Visuals play a powerful role in shaping perceptions of issues and can significantly influence behavioural intentions. They have the capacity to deliver impactful messages, convey ideas instantly, and evoke strong emotional responses. As for the textual element, customer engagement (CE) theories allow for a comprehensive analysis of user engagement, including its cognitive, affective and behavioural dimensions. However, CE literature addressing the social media context, also including the tourism context, mainly

encompasses quantitative approaches and focused on the "brand" perspective – customer brand engagement - while little attention has been dedicated to the user engagement.

Although text and images occur simultaneously in Instagram post, they do not always align; instead, they can sometimes present multiple or even conflicting narratives. This mismatch is captured by the concept of visual-verbal redundancy, which refers to the extent to which visual and verbal elements in a message overlap in communicating the same idea. Besides, there is a spatial gap in academic research on glacier tourism within the European Alps – an area that continues to host some of the most important and popular glacier tourism destinations. Therefore, this study explores how visual representations of glacier tourism on Instagram interact with user engagement in accompanying textual captions.

## 2. Literature Review

Glacier tourism refers to destinations where glaciers serve as the major attraction or as settings for a range of leisure, educational, and scientific activities. As glaciers are widely recognised indicators of climate change, glacier tourism—being highly dependent on these fragile environments—is especially vulnerable to its impacts (Welling et al., 2015). Ongoing glacier retreat potentially cuts visitor numbers, alters tourist experiences and generates economic losses for destination communities (Purdie, 2013). Furthermore, glacier degradation introduces new hazards, reduces accessibility, and transforms the scenic and recreational value of glacial landscapes (Welling et al., 2015). Due to the environmental changes in glaciated landscape, research on glacier tourism has mainly focused on tourist adaptation strategies (Salim et al., 2021). A high level of awareness of changes encourages tourists to adopt adaptive and pro-environmental behaviours such as temporal, activity and spatial substitution (Salim et al., 2023). One of the most discussed themes in the literature concerns tourists' perceptions and values related to glacial landscapes (Garavaglia et al., 2012). These include an awareness of glacial change and the aesthetic and emotional responses it provokes—factors that may influence future tourist behaviour (Welling et al., 2015; Salim et al., 2021). Notably, a study by Dannevig and Rusdal (2023) demonstrated the specific relevance of visual elements in building place attachment feelings, nostalgia, and emotional connection in the context of glacier tourism, although referring to the tourism operators' side.

Visual imagery is a promising avenue for raising public awareness and engagement (Chapman et al., 2016). Images have capacity to convey strong messages and communicate ideas in an instant, making them easy to remember. Visualisations are influential in determining people's perceptions of an issue, which have strong bearings on their behavioural choices (Nicholson-Cole, 2005). To assess people's engagement, CE theories have served to identify cognitive, affective and behavioural components towards a certain brand (Hollebeeck et al., 2016). Cognitive engagement refers to the way consumers actively think about and process information related to a brand; affective engagement encompasses emotional responses and attachments; behavioural engagement involves energy, time, and participation devoted to brand-related activities. The level of alignment between text and images is associated with the concept of verbal-visual redundancy (VVR), defined as the degree to which a message contains an informational overlap between the visual and verbal contents with both elements communicating the same key point (Cappella et al., 2007).

## 3. Methodology

Given the limited research on glacier tourism in the European Alps, the Aletsch Glacier in Switzerland was selected as a representative case. Aletsch is the largest glacier in the Alpine region, located in the Bernese Alps in the canton of Valais. Most importantly, it is part of the UNESCO World Heritage Site recognised as Swiss Alps Jungfrau-Aletsch. The glacier has recently gained increased media attention due to the inevitable effects of climate change on the glacier's progressive retreat. The press has defined it as the "vanishing giant of the Alps" and referred to it as an example of "last-chance tourism". To explore how visitors engage with and represent glacier tourism experiences, selected Instagram posts with image and text were collected and analysed in depth. Although limited in number, these posts offer diverse perspectives on how the glacier is represented by visitors on social media.

Based on the interpretative stance, this qualitative study employed multimodal discourse analysis. Multimodal discourse analysis extends this to non-verbal elements like images and music. This study adopts a digital multimodal perspective to explore the interplay between images and text on Instagram. Firstly, images were classified according to the three functions of visual communication by Kress and van Leeuwen (2006): representational, interactional and compositional. Following this, an iconographic analysis of the images was conducted, by identifying symbolic elements and cultural meanings to make sense of the depicted subjects (Panofsky, 1955). This analytical lens was adapted to Instagram posts' visual content, reinterpreting it according to iconic references or symbolic codes (Drainville, 2018). After that, the textual elements (captions and hashtags) were analysed, paying attention to three dimensions of customer engagement (Hollebeek et al., 2016) applied to the social media context and in the users' perspective. Each post was finally analysed for how visual and textual elements represented glacier tourism experiences, with a focus on visual-verbal redundancy.

## 4. Results

In all selected posts, the participant is placed on a rock, with the glacier as the dominant natural feature. The subject in most posts shows back to the viewer and looks out into the glacier. This is a classic "offer" image, inviting viewers to contemplate rather than interact. On the contrary, in another postsza, the participant looks at the viewer, creating direct interaction known as a "demand' image. The distant view of the glacier and the smallness of the person suggest that the pictures were taken from a long distance. In most cases, the angle is from behind and slightly above the person. The image of another post was shot at a high angle with viewers looking down at the human figure. As for the iconographic layer, one recurring reference point in the selected posts is the Romantic iconography of Caspar David Friedrich's Wanderer above the Sea of Fog, a symbol of the Sturm und Drang aesthetic in which nature is represented as sublime and overpowering, and the human figure as contemplative and small. In the context of climate change, this composition is reactivated with new meanings: the glacier becomes not just a sublime landscape, but also a symbol of ecological loss and helplessness.

One post includes a relatively extensive caption, effectively reflecting all three dimensions of customer engagement. It begins with an informative description of the main features of the

Aletsch Glacier, engaging the cognitive dimension by prompting reflection and knowledge acquisition. This is followed by the word "sadly" and the expression "This fact combined with its stunning beauty just breaks my heart," which clearly conveys the user's emotional response and attachment to the glacier, illustrating the affective dimension. Finally, the post concludes with a call to action – "eat less meat, eat local, use less, conserve more, be more mindful of the choices you make in your daily life" - inviting followers to adopt more sustainable behaviours, therefore activating the behavioural component of engagement. Other posts, instead, feature quite brief captions that exclusively engage in the cognitive dimension of customer engagement, as they provide basic information such as remarking Aletsch Glacier to be the largest glacier in Europe.

Finally, some posts exhibit visual-verbal redundancy, as the messages conveyed through both the captions and the images are closely aligned. For instance, it is frequent that the textual descriptions narrate the striking features of the Aletsch Glacier, with the visuals depicting the glacier's landscape, thereby reinforcing each other's meaning. Other posts demonstrate a lack of redundancy, with the text addressing different topics that are not connected to the visual's dimensions. In such cases, the image and caption communicate different discourses, resulting in a non-redundant relationship between visual and verbal modes.

## 5. Discussion

This study analyses the visual and textual elements present in the selected Instagram posts, shared by visitors at the Aletsch Glacier in Switzerland. Overall, the study highlights the potential of social media content, especially when analysed through the multimodal discourse approach, to understand how people perceive, interpret, and emotionally relate to glacial environments under threat. The findings reveal that visual-verbal combinations in user-generated content not only reflect personal experiences but also shape public awareness and emotional responses to glacier retreat. The study has implications for tourism policymakers and destination managers to foster ecological awareness, encourage more sustainable behaviours among glacier tourists and promote narratives that blend personal experience with environmental reflection.

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## References

Cappella, J., Leader, A., Kang, Y., & White, K. (2007, May). A rating scale for visual-verbal redundancy in anti-smoking video ads: reliability and validity. In Annual Meeting of the International Communication Association, San Francisco.

Chapman, D. A., Corner, A., Webster, R., & Markowitz, E. M. (2016). Climate visuals: A mixed methods investigation of public perceptions of climate images in three countries. Global Environmental Change, 41, 172-182.

Drainville, R. (2018). Iconography for the age of social media. Humanities, 7(1), 12.

Garavaglia, V., Diolaiuti, G., Smiraglia, C., Pasquale, V., & Pelfini, M. (2012). Evaluating tourist perception of environmental changes as a contribution to managing natural resources in glacierized areas: A case study of the Forni Glacier (Stelvio National Park, Italian Alps). Environmental Management, 50, 1125-1138.

Hollebeek, L. D., Conduit, J., & Brodie, R. J. (2016). Strategic drivers, anticipated and unanticipated outcomes of customer engagement. Journal of Marketing Management, 32(5-6), 393-398.

Kress, G., & Van Leeuwen, T. (2020). Reading images: The grammar of visual design. Routledge.

Nicholson-Cole, S. A. (2005). Representing climate change futures: a critique on the use of images for visual communication. Computers, environment and urban systems, 29(3), 255-273.

Panofsky, E. (1955). Meaning in the visual arts. University of Chicago Press.

Purdie, H. (2013). Glacier retreat and tourism: Insights from New Zealand. Mountain Research and Development, 33(4), 463-472.

Qian, J., Wei, J., & Law, R. (2018). Review of critical discourse analysis in tourism studies. International Journal of Tourism Research, 20(4), 526-537.

Salim, E., Ravanel, L., & Deline, P. (2023). Does witnessing the effects of climate change on glacial landscapes increase pro-environmental behaviour intentions? An empirical study of a last-chance destination. Current Issues in Tourism, 26(6), 92940.

Salim, E., Ravanel, L., Deline, P., & Gauchon, C. (2021). A review of melting ice adaptation strategies in the glacier tourism context. Scandinavian Journal of Hospitality and Tourism, 21(2), 229-246.

Welling, J. T., Árnason, Þ., & Ólafsdottír, R. (2015). Glacier tourism: A scoping review. Tourism Geographies, 17(5), 635-662.

# "Summer in the Mountains": Insights on the Design of Coherent Agritourism Narratives

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## Abstract

Tourism narratives play an increasingly significant role in shaping destination image. However, there is limited understanding of how stakeholders coordinate to create coherent narratives, an issue that is especially challenging in a sector characterized by a diverse and fragmented landscape of SMEs, like agritourism. This research aims to fill this gap through a qualitative content analysis of selected agritourism Instagram accounts to examine how agritourism narratives in South-Tyrol (Italy) are constructed. Preliminary findings suggest that agritourism narratives prominently feature rural and unique elements, including farm work, nature, animals, and heritage. These are often framed within the seasonal rhythms that are central to agricultural life. This research contributes to the literature on agritourism narratives, destination image, and the role of narratives in tourism by highlighting how narrative coherence is negotiated in a fragmented sector.

*Keywords: narratives, destination image, agritourism, rural tourism*

## 1. Introduction

Destination narratives have become essential to shape tourists' perceptions and guide their choices, as they influence tourists' emotions, expectations, and satisfaction, playing a key role in building destination image (Youssef et al., 2019), and fostering emotional connections with potential visitors (Ferdinand et al., 2024). Thus, narratives have been increasingly adopted as a strategic approach in destination marketing to reinforce unique identities through compelling content (Grillini & Volo, 2024; Hartman et al., 2019). Beyond promotion, narratives also strengthen collaboration among tourism stakeholders by providing a shared framework for identity and coordination (Hartman et al., 2019). However, there is still a limited understanding of how coherent narratives that reflect multiple actors' voices while maintaining a unified destination image are constructed.

This gap is particularly evident in rural and nature-based tourism. Agritourism, in particular, is characterized by micro-SMEs and family-run enterprises, with uneven digital and communication skills (Eller et al., 2025), thus exemplifying a fragmented landscape where narrative coherence is difficult to achieve (Joyner et al., 2018). Given these dynamics, rural and agritourism contexts offer a fertile ground for investigating how destination narratives are shaped. This paper focuses on what and how selected agritourism structures narrate through a qualitative content analysis (Camprubi & Coromina, 2016).

## 2. Literature background

### 2.1 Narratives in tourism

Narratives have become a central concept in tourism research (Grillini & Volo, 2024) and they serve several functions: they help individuals make sense of experiences, shape memory and identity, and support communication and social belonging (Pearce & Moscardo, 2020). In tourism, these functions are reflected both in consumer narratives and in organizational storytelling, where destination managers and stakeholders craft messages to promote places and experiences (Pachucki et al., 2022). Narratives actively shape destination image, rejuvenate place identity, reinforce consumer-brand relationships (Pachucki et al., 2022), and influence tourists' behavioral intentions (Moin et al., 2020). Research has also highlighted the significant impact of how narratives are delivered. For example, first-person narration increases engagement, enhances brand perception, and reduces psychological distance between the tourist and the destination (Pachucki et al., 2022). Additionally, visual narratives play a crucial role; techniques like low-angle shots or positioning subjects in the foreground amplify the narrative impact of the story (Michelini et al., 2020).

However, narrative design is a complex process involving multiple actors. DMOs, tourism businesses, residents, and tourists all contribute to narrating a destination's story (Pachucki et al., 2022). This multiplicity of voices makes it challenging to construct coherent and consistent narratives, particularly in fragmented contexts with diverse stakeholders and uneven communication capacities. Thus, aligning these narratives into a cohesive destination image remains a key challenge in tourism marketing (Hartman et al., 2019).

### 2.2 Agritourism experiences

Agritourism is commonly understood as tourism activities occurring on working farms, closely tied to agricultural production and rural life. Agritourism diversifies farmers income while preserving the agricultural character of land and farm experiences (Barbieri, 2016). Philipp (2010) emphasizes the importance of the agricultural setting and farmer involvement, distinguishing agritourism from other forms of rural tourism. In Italy, Law no. 96/2006 reinforces this definition by mandating that agriculture must remain the primary activity of the farm in terms of labor input.

The destination image of agritourism is shaped by a tension between its traditional rural character and increasing associations with luxury and comfort (Streifeneder et al., 2023; Dubois, 2017). While some visitors are drawn to high-end amenities, many seek typical agricultural landscapes (Dat et al., 2024) and authentic agricultural experiences, including farm animals, cultural heritage and locally sourced products (Joyner et al., 2018). Indeed, country-of-origin narratives influence agritourism experiences (Andéhn et al., 2021; Martinus et al., 2024) with consequences on future food purchasing patterns (Kim et al., 2019). Finally, agricultural experiences are particularly valued when they are both enjoyable and educational, often involving hands-on activities like interacting with animals, or picking fruits and vegetables (Rong-Da Liang, 2017; RongDa Liang et al., 2020).

## 3. Methodology

### 3.1 Context of the research

South Tyrol is an autonomous province in northern Italy, located in the Alps and sharing borders with Austria and Switzerland. In 2024, agritourism in the province were 3.061, with the majority being members of the local agritourism association *Gallo Rosso* ("Red Rooster"). These figures reflect a landscape characterized by a high density of micro and SMEs. Arrivals in agritourism structures in 2024 were 638.797 and the total number of presences was

3.722.130. Most agritourism farms (84%) provide accommodation, with an average of 9,4 beds per farm. Restaurant services are available at 605 farms (20%). In addition, 1.039 farms (30%) offer other activities, such as hiking, guided tours, and product tastings (Agritourism census, ISTAT, 2024).

This research will adopt a qualitative content analysis (CA) to examine the Instagram narratives of agritourism businesses. CA is recognized as "an observational research method that is used to systematically evaluate the symbolic content of all forms of recorded communications" (Kolbe & Burnett, 1991). CA involves a careful, detailed, and systematic interpretation of a specific body of content with the aim of uncovering patterns, themes, meanings, and potential biases (Berg, 2009). Within tourism research, it is frequently adopted as a qualitative approach to explore the symbolic and narrative dimensions of tourism phenomena (Camprubí & Coromina, 2016).

The data set consists of Instagram posts published in 2024 by *Gallo Rosso*-affiliated agritourism businesses operating in the Dolomites—a region selected for its strong visual identity and relevance in place branding. Instagram was chosen as the primary platform due to its central role in visual tourism communication (Volo & Irimias, 2021). Selection criteria for accounts included: affiliation with Gallo Rosso, an Instagram account and at least 24 posts published in 2024 to ensure active participation in narrative construction. For a preliminary analysis, 5 accounts were selected, resulting in 79 posts and 114 images that were examined with the software MaxQDA.

## 4. Preliminary findings

### 4.1 What is narrated

Previous results show that agritourism narratives in South-Tyrol primarily emphasize agricultural and farm-related activities. These narratives often highlight farm animals, nature, farm activities, and Alpine heritage and traditions. Many posts showcase the mountains and forests in the surroundings, and frequently share stories centered on farm work and harvest. For example, one post featuring a young calf reads: "*Once again, there's a new arrival in the pasture. Welcome small Kawasaki*". Stories about heritage include narratives of both tangible and intangible heritage, with for instance references to local food, festivals, and traditional architecture. For instance, one post shows a picture of the traditional barn and says in the caption: "*The barn, built in 1928, stands proudly next to the residential house. The dark wood, refined architecture, and imposing size give it a very special charm."*

In addition to farm life, some posts also promote mountain and outdoor sports such as skiing, hiking, or cycling. One example is the following post that reads: "*Cycling South Tyrol – enjoy those warm days in the mountains, the long and sunny days – exploring the #dolomites region during your stay*".

Furthermore, a reference to the place where the agritourism is located was also frequently noticed, especially with reference to South-Tyrol and the Dolomites. These place-based mentions often appeared in hashtags, intended to increase the visibility of the posts and accounts, as in the following post: *"Golden autumn in the #dolomites"*. Interestingly, references to luxury amenities—such as pools, saunas, or massages— were relatively rare, suggesting that agritourism narratives in South Tyrol prioritize rustic and authentic experiences over upscale comfort.

### 4.2 How it is narrated

A second part of the preliminary analysis was dedicated to examining how agritourism structures narrate the previously identified elements. Both the visual and textual design of

Instagram posts reflect varying levels of confidence in using the platform, with accounts sharing professionally shot images and long captions, while others post casual phone pictures accompanied by a simple list of hashtags.

A notable finding was the frequent emphasis on the cyclical nature of time, with repeated references to seasons and times of day—such as morning, evening, sunset, or sunrise. Common examples include brief captions like: "*Summer in the mountain*", "*Spring vibes*", "*Evenings in the mountains*", "*autumn hike*". Particularly striking is the redundancy between visual and textual elements: for instance, posts depicting snowcovered landscapes often include verbal texts in the captions explicitly referring to winter. One post, captioned "*Winter is back*", shows blossoms covered in snow, illustrating the unexpected overlap of spring and winter.

Moreover, the seasonal and temporal references are frequently integrated into the elements mentioned in the previous paragraph. Indeed, posts about sports in winter often feature images of people skiing or snowshoeing, while those centered on agricultural and farm activities—such as the apple harvest—are accompanied by captions like "*Autumn activities*," reinforcing the seasonal context through both the visual and textual elements.

## 5. Discussion and conclusions

Preliminary findings reveal a narrative coherence between different agritourism structures, with differences in how the platform is used. Findings show a strong presence of key elements that define and differentiate agritourism landscapes, including a strong sense of place (Dat et al., 2024), and agritourism experiences, such as nature, farm animals, Alpine heritage and agricultural work activities (Rong-Da Liang et al., 2020). This contrasts with previous research that emphasized a growing association between agritourism and luxury (Streifeneder et al., 2023).

A particularly novel finding concerns the prominent role of seasonality and the cyclical nature of time—historically central to agricultural life—which is clearly reflected in agritourism narratives. These temporal markers, such as references to specific seasons or times of day, are often embedded in both visual and textual narratives.

This research contributes to the literature on rural and agritourism by identifying the most frequently shared content on the Instagram accounts of selected agritourism businesses in South-Tyrol. Moreover, it will also contribute to literature on tourism narratives and destination image, by examining how coherent narratives in a fragmented sector are constructed.

This research is not without limitations. The analysis of a selected area with a high concentration of agritourism structures could have influenced the results. Future research should focus on areas with different characteristics to capture a more diverse range of agritourism communication strategies. Moreover, this study does not include the tourists' perspective on how they interpret and evaluate the coherence of agritourism narratives. Future research should incorporate tourists' viewpoint to better understand how these narratives are received.

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## References

Andéhn, M., & L'Espoir Decosta, J. N. P. (2021). Authenticity and Product Geography in the Making of the Agritourism Destination. Journal of Travel Research, 60(6), 1282–1300.

Grillini, G. & Volo, S. "The power of narratives in shaping tourism", 17-18 October, XXI Annual Conference of Società Italiana Marketing (SIM) "Brands and Purpose in a changing era", Milan

Joyner, L., Kline, C., Oliver, J., & Kariko, D. (2018). Exploring emotional response to images used in agritourism destination marketing. Journal of Destination Marketing & Management, 9, 44-55.

Michelini, C., King, B., & Tung, V. W. S. (2022). Tracking destination visual narratives: photographic compositions from longer stay tourists. Tourism Recreation Research, 47(4), 400–413.

Pachucki, C., Grohs, R. and Scholl-Grissemann, U. (2022) 'No Story Without a Storyteller: The Impact of the Storyteller as a Narrative Element in Online Destination Marketing', Journal of Travel Research, 61(8), pp. 1703–1718.

Streifeneder, T., Hoffmann, C., & Corradini, P. (2023). The future of agritourism? A review of current trends of touristic commercialisation in rural areas. Annals of Regional Science, 71(1), 93–119.

Volo, S., & Irimias, A. (2020). Instagram: Visual methods in tourism research. Annals of Tourism Research. 91.

*(Further references are available upon request)*

# City Branding vs Place Branding: A Critical Review of the Literature and Emerging Gaps

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## Abstract

The growing body of literature on city branding and place marketing reveals a complex field in which cities function both as subjects and objects of branding. They are framed through logos, slogans, campaigns, and policy narratives—yet at the same time, they are lived spaces influenced by multiple stakeholders and layered identities (Lucarelli & Berg, 2011; Zenker & Braun, 2017).
Branding is not only about goods and services; organizations and cities can be promoted similarly (De Chernatony and McDonald, 1992:3) . This review of the city branding literature aims to assist tourism researchers and those conducting studies in this area.

City branding is a centuries-old practice (Goodwin, 1993; Papadopoulos, 2004; Kavaratzis and Ashworth, 2005; Ashworth, 2009, p. 10) and today has global relevance in promoting the theory and practice of urban branding for multiple purposes, including tourism, economic development, and international relations (Dinnie, 2011b; Lucarelli & Berg, 2011; Oguztimur & Akturan, 2015; Kavaratzis et al., 2015b).

The analysis of the phenomenon is based on the literature available regarding city brand strategies and techniques, and on the evolution of the concept of city as a competitive actor in the global panorama.

Significantly in recent years, it remains theoretically fragmented. In particular, the conceptual boundaries between these two fields are often blurred or used interchangeably, leading to inconsistencies in both analytical frameworks and empirical applications. This paper aims to define and critically examine the gap between city branding and place branding, especially in light of their respective roles in sustainable marketing strategies.

The present study is intended as a preliminary investigation, laying the theoretical groundwork for a subsequent case study. By identifying the key divergences and overlaps in the literature, this review provides the conceptual necessary for conducting grounded research on city branding practices.

*Keywords: branding, place branding, city branding, review*

## 1. Introduction

The evaluation is based on the city's brand and the availability of literature on strategies and techniques. Since 2000, the 'branding' of the city has become increasingly studied throughout the Western world (Dinnie, 2011b; De Eugenio Vela, 2013; Giovanardi et al, 2013; Brown and Campelo, 2014). It is also important to focus on a literature review and a theoretical approach in the destination branding context. The focus is also on the synthesis of studies published on 'city branding' and "place branding", thus providing a valuable contribution to the public interested in the theme of the target brand, and more specifically, its urban sub-area. In light of the review, it was found that the research field of city branding is still in its infancy, suggesting that there is still room for further research in this field. Since 1998, the first articles on destination branding have begun to flourish, and the interest of scholars in the concept of destination branding has grown (Pilke, 2008). The best-known and cited definition proposed by the American Marketing Association (1960) is "A name, term, sign, symbol, or design, or a combination of them, intended to identify the goods or services of one seller or group of sellers and to differentiate them from those of competitors" (Wood, 2000).

The important contribution of various studies (Morgan and Pritchard, 1998; Hankinson, 2004; Trueman et al., 2004; Merrilees et al., 2005; Balakrishnan, 2009; Pike, 2008) on the themes of 'destination branding' or 'place branding' and their position in marketing literature, is not very clear. About this, scholars argue that a 'destination brand' represents the tourist dimension of a place, the 'place brand' umbrella (Hanna and Rowley, 2012, p. 104).

## 2. Literature review

City branding is growing, but can strategic branding models be useful for studying cities? Many studies have examined branded products (Aaker, 1996; Keller, 2001, 2003; Kotler et al., 1993; Matson, 1994). City Branding is driven by diversification of tourism attractions and inward investment. The strategic branding of cities is characterised by complexity and constrained by the political dimension (Parkerson et Saunders, 2014).

This paper is based on a literature review ( Fink, 1998; Thorpe et al., 2005; Tranfield et al., 2003) and evaluates the extent to which the process can be applied to the sustainability field to produce a reliable knowledge stock and enhanced practice by developing context-sensitive research.

Branding includes a variety of interrelated issues. City Branding has become a pillar of the tourism strategy.

There is an important correlation between city branding and place branding.

The term city branding refers to the set of strategies and activities aimed at building, managing, and communicating the identity and image of a city, to make it attractive to various audiences, including tourists, investors, residents, and talent (Anholt, 2007).

City branding increasingly includes marketing techniques and methods in the administration practice and the governing philosophy, and a way to describe and implement city marketing( Kavaratzis, 2004).

For this reason, it is important to try to define the various aspects of city branding in different years.

## 2. Metodology

Methodology. This paper is based on a systematic literature review (Fink, 1998; Thorpe et al., 2005) a methodology which differs from conventional reviews in that it aims at "synthesizing research in a systematic, transparent, and reproducible manner" (Tranfield et al.,2003: 207) and kept the first algorithm in the analysis.

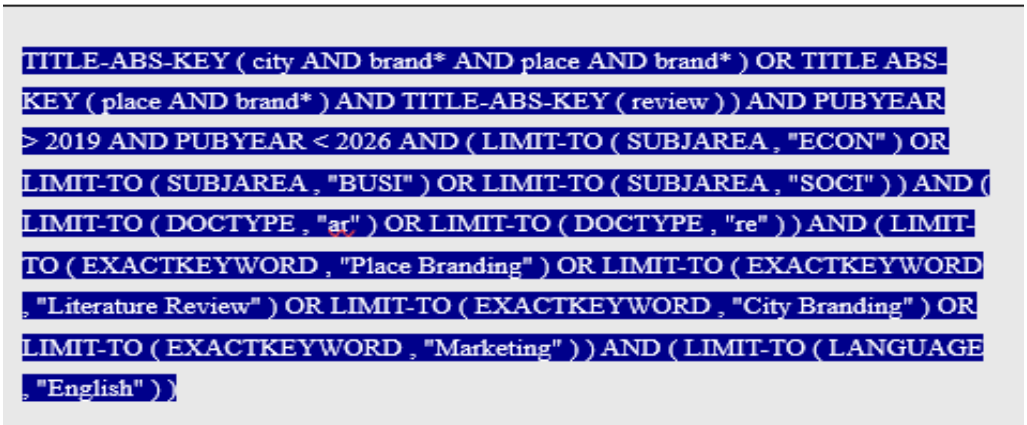



**Figure 1:** Literature Analysis

This study is based on data collected from 2020 to 2025, and it includes a comprehensive review of academic articles, policy documents, and case studies related to city and place branding. The selected sources were analyzed using a systematic literature review methodology, focusing on peer-reviewed publications indexed in major databases such as ScopusAfter emerging, the results carried out the first screening by analyzing the title, journal, and abstract of the articles and considered relevant papers with the classification about ABDC Journal Quality Guide Australian Business Deans Council, which increased rapidly over recent years (Azar and Brock 2008). ABDC was compiled using elements of the methods used in institutional lists, peer surveys, and citation studies (Morris et.al, 2009).

Journal quality was operationalised based on the classification ABDC ranks journals based upon an A*, A, B, and C classification scheme; A* in the ranking is considered "highest quality". This research focused on the approach using Management and Marketing journals. The quality assessment of journals is carried out by panels of experts and there are internationally recognized and externally validated journal classification lists on appropriate metrics selected for citation.

Journal quality has been an important component of performance and the evaluation of results.

After merging the results, the first screening selected all the documents reviewed, presented in Fig. 1, adapted from the PRISMA flow diagram template (Page et al., 2021).

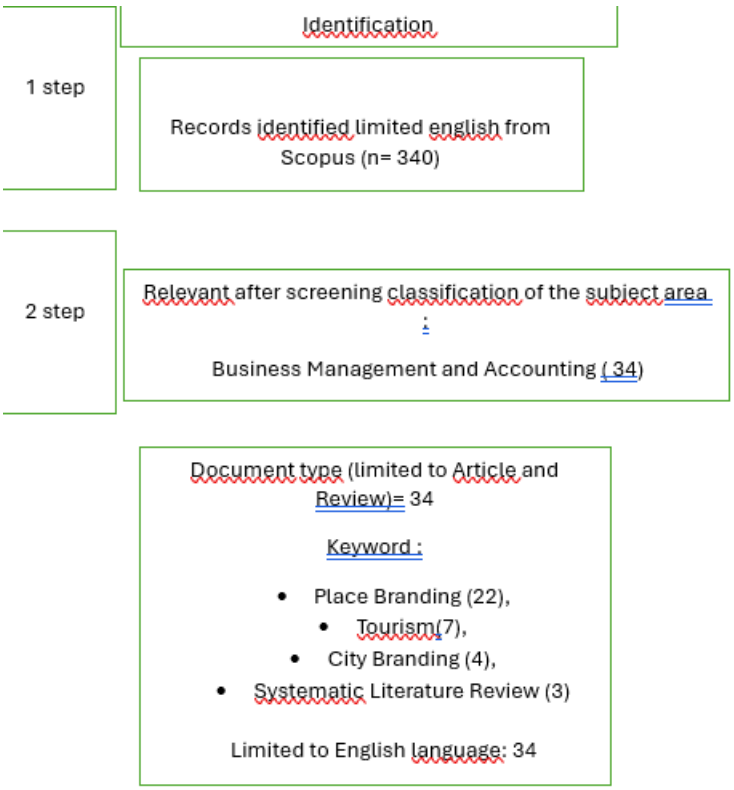



**Figure 2:** Authors Elaboration

| Authors | Title | Year | Source title | Theory |
|---|---|---|---|---|
| Richards G. | The curatorial turn in tourism and hospitality | 2024 | International Journal of Contemporary Hospitality | Reviews of literature; Tourism and Hospitality; Service Dominat Logic |
| NO | The de-influencing effect: Understanding and adapting to evolving consumer attitudes | 2025 | Strategic Direction | NO |
| Lind J.; Lindström J. | Towards a framework for exploring indirect value of tourist attractions in place branding: the case | 2024 | Scandinavian Journal of Hospitality and Tourism | Place Branding ; Tourist Attraction; Qualitative Case Study; Bottom Up Approach; Stakeholders Value Drivers |
| NO | How to make everyone fall in love with a city: Designing an architecture of sub-brands to revitalize | 2020 | Strategic Direction | Place Branding ; Case Study City; Stakeholders Strategy |
| Robson P. | Public relations and place branding: Friend, foe or just ignored? A | 2021 | Public Relations Review | Place Branding; Public Relations; Stakeholders Value; |
| Vlahovic-Mlakar T.S.; Ozretic-Dosen D. | Brand Experience Research in Hospitality and Tourism – Review and Future | 2022 | Tourism | Brand Experience; Systemathic Literature Review; SEM, FA; Study of hotel, place, destination, restaurant, coffeehouse, |
| Cassinger C.; Gyimóthy S.; Lucarelli A. | 20 years of Nordic place branding research: a review and future research | 2021 | Scandinavian Journal of Hospitality and Tourism | Place Branding; Branding Research |
| Ineson E.M.; Smith R.H.; Barsby A.T. | FOOD AND BEER MATCHING TO PROMOTE DESTINATIONS: A CENTRAL AND EASTERN EUROPEAN | 2022 | DETUROPE | Destination Branding; Food and Beer Stakeholders; Promote Local Destination ( Central and Eastern European (CEE) consumers' food and beer matching preferences ) |
| Aguilera-Cora E.; Fernández-Cavia J.; Codina L. | Place branding and sustainable development: a scoping review | 2025 | Place Branding and Public Diplomacy | Place Branding; Sustainable Development Literature and the Sustainable Development Goals (SDGs). A scoping review of research published from 2013 to 2023 indexed in Scopus and Web of Science is undertaken, involving the |

| | | | | |
|---|---|---|---|---|
| Bevolo M.; Di Polito S. | Placecinemaking or cinema for placemaking: a | 2024 | Place Branding and Public Diplomacy | Placecinemaking |
| Golestaneh H.; Guerreiro M.; Pinto P.; Mosaddad S.H. | On the role of internal stakeholders in place branding | 2022 | Journal of Place Management and Development | Place Branding ; Systematic Literature Review;In-depth perspective on relevant internal stakeholders and their roles in Place Branding |
| Swain S.; Jebarajakirthy C.; Sharma B.K.; Maseeh H.I.; Agrawal A.; Shah J.; Saha R. | Place Branding: A Systematic Literature Review and Future | 2024 | Journal of Travel Research | Place Branding Literature; Theory of development, context, characteristics and methodology. |
| dos Santos N.A.S.F. | Crossroads between city diplomacy and city branding towards the future: case study on the film cities at | 2021 | Place Branding and Public Diplomacy | Public Diplomacy ; Place Branding ; Case Study of Galway, Bradford, Busan, and Sydney; "CBCD crossroads matrix" |
| Ji G.; Manan M.S.A. | An Overview of "All-For-One Tourism" Development and Possible Future Research Directions | 2023 | e-Review of Tourism Research | Visual Urban Perception (VUP) ; Place Branding; Literature Review descriptive Analysis Method; |
| Pohjola T.; Aalto J.; Lemmetyinen A.; Nieminen L. | A scene-setter, matchmaker, or co-creator? The role of the HEI in the CCI ecosystem engagement when | 2023 | Industry and Higher Education | Place branding; Qualitative Data; Stakeholder Engagement; Creative and Cultural Industries (CCIs) |
| de Campos R.P.; Galina S.V.R.; de Moura Engracia Giraldi J. | FUTURE RESEARCH GUIDELINES ON SOFT POWER: AN OBLIQUE APPROACH OF THE LITERATURE ON | 2022 | Revista Brasileira de Marketing | Cross-disciplinary future research guidelines on Poft Power; Systematic Literature Review; Content Analysis; Urban Planning; Place Branding |
| Małecka A.; Pfajfar G. | Conceptualizing consumer resistance in global consumer culture: framework and | 2025 | International Marketing Review | Global Consumer Culture (GCC); Systematic Analysis o 110 articles spanning diverse fields like sociology, psychology, marketing; |
| | A destination worth visiting: Using a destination branding strategy to boost | 2022 | Strategic Direction | Review; Tourist Destination; |
| Lourenção M.; de Moura Engracia Giraldi J.; Dinnie K. | Sectoral brand management: a social constructionist approach in the | 2024 | Journal of Business and Industrial Marketing | Umbrella Brands ; Systematic Qualitative Literature Review Brand Management (SCSBM) Model; Brazil Fashion System brand |
| Rojas-Méndez J.I.; Khoshnevis M. | Conceptualizing nation branding: the systematic literature review | 2023 | Journal of Product and Brand Management | and cultural, economic and labor, international and environmental factors;Country Branding (1996 and mid-2021 were extracted from six selected databases, including Elsevier's Science Direct, Emerald, Sage, Wiley, Springer and Jstor) |
| Hanna S.; Rowley J.; Keegan B. | Place and Destination Branding: A Review and Conceptual Mapping of the Domain | 2021 | European Management Review | Place Branding; Destination Branding; Systematic Review; Key themes : general, brand identity, image and personality, politics, heritage, communication/media, country-of-origin, and designscape and infrastructure. |
| Mbinza Z.E. | Connecting place branding to social and governance constructs in Johannesburg, South Africa | 2024 | Place Branding and Public Diplomacy | Place Branding; "mentrification", (descriptions of placeholder disengagement and to add to the emerging lexicon of place branding) |
| Wu Y.; Zhang B.; Wang D. | language barrier: a Chinese place | 2021 | Place Branding and Public Diplomacy | Place Branding ;Literature Review |
| Ghanem S.; El-Fiki S.; Khalifa M.; Afifi S. | District branding: content analysis toward identifying | 2025 | Place Branding and Public Diplomacy | Place Branding ; District Branding |
| Garcia Sousa R.; Vasconcelos Ribeiro Galina S.; Lourenção M. | of place branding and smart cities in attracting foreign direct investment: theoretical perspectives and future research | 2025 | Journal of Place Management and Development | Systematic Literature Review (Scopus and Web of Science to explore how place branding, smart cities and FD attraction have been studied together= A final sample of 20) ; Place Branding; Smart |
| Galeeva D. | map: The place branding versus soft | 2021 | Place Branding and Public Diplomacy | Place Branding; |
| Zhanibek A.; Abazov R.; Khazbulatov A. | TRANSFORMATION OF A COUNTRY'S IMAGE: THE CASE OF THE ASTANA INTERNATIONAL FINANCE CENTRE IN KAZAKHSTAN | 2022 | Virtual Economics | Simon Anholt's Approach; Brand Image"following six dimensions: Exports, Governance, Culture and Heritage, People, Tourism, and Investment and Immigration. |
| Gulisova B. | Rural place branding processes: a meta-synthesis | 2021 | Place Branding and Public Diplomacy | Place Branding Processes (PBP) PBP are identified: (1) type of place distinguishing between places with or without administrative power, (2) initiative referring to the difference between political/administrative, community, mixed, (3) support base for the branding distinguishing between strong political/organizational, strong community, strong identity, (4) brand purpose. |

**Table 1:** Classification 34 articles

## 3. Risultati

The practical gap is that divergence in scale, stakeholders, goals, and methods leads to fragmented branding efforts and sometimes contradictory messages. It is particularly compelling to observe how *place branding* and *city branding,* although grounded in distinct conceptual traditions, reveal numerous points of convergence, especially in the analysis of urban case studies. Branding practices implemented by cities often operate along a continuum that encompasses both the symbolic and experiential dimensions of place and the administrative or institutional identity of the city.

This overlap positions urban contexts as ideal empirical grounds to explore the integration of branding models, also about sustainability, territorial identity, and stakeholder engagement. In previous literature (Kavaratzis and Ashworth, 2010), the debate on blurred boundaries between place and *city branding* was opened, recognizing that *'city branding* has been practiced ... until cities competed'. They choose a geographic scale of the case studies that is primarily urban or regional, focusing on branding and their effectiveness in cities such as Berlin, Madrid, and Aalborg, or regions such as Tuscany and Catalonia.

The elaboration of it is in Table 2. It would be important to understand which authors and scholars make up this definition, and it is certainly the approach to work in the next phase.

| Dimension | Place Branding | City Branding | Gap/Issue |
|---|---|---|---|
| **Scale & Scope** | National or regional scale | Urban/local scale | Strategies often **mismatch** in scale, governance, and stakeholders |
| **Stakeholders** | Governments, national agencies | City councils, local businesses, citizens | Misalignment between national and local priorities |
| **Identity Complexity** | Broader, more abstract identities | More concrete, shaped by urban life and services | City branding can be **overlooked** in national place brand strategies |
| **Audience** | Often international (tourists, investors) | Mixed: citizens, regional users, visitors | City branding requires more **community involvement** |
| **Policy Integration** | Linked to national economic or cultural policy | Tied to urban planning, sustainability, smart cities | Lack of integration with **urban development policy** |
| **Measurement** | Macroeconomic indicators, global indices | Quality of life, citizen satisfaction, livability rankings | Few **shared metrics** across levels |

**Table 2:** Elab. Auth. Rif. Anholt (*Place branding* pioneer), Kavaratzis (*City branding* frameworks), Dinnie (*Place branding* theory), Florek (Branding small and medium-sized cities).

Outlining the philosophies and hypotheses that determine the evolution and advancement of research puts divergences in the traditional paths of research on the brand of the city and the place brand. The paper intends to help bridge the gap between theory and practice, with an increase in the number of scholars on city brand management and smart city, and sustainability policies. The analysis of the data reveals an evident mismatch between the two categories listed in the table, indicating a conceptual or application discontinuity between the dynamics of place branding and *city branding*. This misalignment makes it necessary to deepen

further, which will be developed through a comparative analysis of the country image and the case study cities, in order to explore the intersections and the perceived divergences.

## 4. Conclusion

The analysis of the literature on place branding and *city branding* reveals a dual gap that continues to affect both theoretical understanding and practical application: the conceptual gap and the practical gap.

The conceptual gap lies in the differing foundational assumptions between the two approaches. *City branding* tends to focus on the city as a lived space, shaped by culture, identity, community, and social interaction. It emphasizes authenticity, heritage, and the lived experiences of residents. In contrast, place branding often conceptualizes the location more abstractly—as a marketable image—emphasizing design, messaging, and strategic positioning to attract tourists, investors, or talent. This divergence in focus leads to different frameworks and priorities in academic and policy discussions.

The practical gap, on the other hand, emerges from the fragmented and sometimes conflicting objectives among the various stakeholders involved in branding efforts. *City branding* involves actors such as local governments, businesses, residents, and cultural institutions. The lack of alignment in goals—be it economic growth, tourism, social cohesion, or environmental sustainability—often results in inconsistent or even contradictory messages. Furthermore, the scale and scope of implementation strategies vary greatly, which complicates the development of cohesive and measurable branding approaches.

Bridging these gaps requires an integrated perspective that reconciles symbolic representation with lived realities and aligns diverse stakeholder interests under shared branding goals. Future research should explore cross-disciplinary models and comparative case studies to establish a more coherent and actionable framework for both city and place branding.

## Reference


Aaker, D. (1996) 'Building Strong Brands', Free Press/Simon & Schuster, New York, NY.

Anholt, S., (2007), " Competitive Identity. The New Brand Management for Nations, Cities and Regions" , https://doi.org/10.1057/9780230627727

Ashworth, G.J. (2009). The instruments of place branding: How is it done? European Spatial Research and Policy 16(1): 9–22.

Balakrishnan, M. S. (2009). Strategic Branding of destinations: a framework, European Journal of Marketing, Vol. 43, No. 5/6, pp.611-629.

Brownlie,D., Saren, M., Wensley, R. and Whittington, R. (1999) 'Rethinking Marketing: Towards Critical Marketing Accountings', Sage Publications, London, UK.

Brown, S. and Campelo, A. (2014). Do cities have broad shoulders? Does Motown need a haircut? On urban branding and the personification of place. Journal of Macromarketing 34(4): 421–434.

De Chernatony, L. & McDonald, M. (1992). Creating powerful brands. Oxford, Butterworth-Heinemann.

De Chernatony, L., and M. McDonald. (2001). Creating Powerful Brands in Consumer, Service and Industrial Markets. Oxford: Butterworth-Heinemann

de San Eugenio Vela, J. (2013). The relationship between place branding and environmental communication: The symbolic management of places through the use of brands. Place Branding and Public Diplomacy 9(4): 254–263.

Dinnie, K. (ed.) (2011b) Introduction to the theory of city branding. In: City Branding: Theory and Cases. Basingstoke, Hampshire: Palgrave Macmillan, pp. 35–39.

Firat, A. F. and Venkatesh, A. (1993) 'Postmodernity: The age of marketing', International Journal of Research in Marketing, Vol. 10, No. 3, pp. 227–249.

Giovanardi, M., Lucarelli, A. and Pasquinelli, C. (2013) Towards brand ecology: An analytical semiotic framework for interpreting the emergence of place brands. Marketing Theory 13(3): 365–383.

Goodwin, M. (1993). The city as commodity: The contested spaces of urban development. In: G. Kearns and C. Philo (eds.) Selling Places: The City as Cultural Capital, Past and Present. Oxford, UK: Pergamon, pp. 145–162

Hankinson, G. (2004). Relational Network Brands: Towards a Conceptual Model of Place Brands, Journal of Vacation Marketing, 10 (2): 109–21.

Hanna, S. and Rowley, J. (2012). Practitioners' views on the essence of place brand management, Place Branding and Public Diplomacy, Vol. 8. doi:10.1057/pb.. 2012.5.

Kavaratzis, M. and Ashworth, G. (2008) Place marketing: How did we get here and where are we going? Journal of Place Management and Development 1(2): 150–165.

Kavaratzis, M., and Ashworth, G., (2010), Towards Effective Place Brand Management – Branding European Cities and Regions, Cheltenham, U.K. and Northampton, Massachusetts: Edward Elgar. 279 + xiv. ISBN 978–1-84844–242-9,

Kavaratzis, M. (2004), "From city marketing to city branding: Towards a theoretical framework for developing city brands" , Place Branding, Vol. 1, 1, 58–73, Henry Stewart Publications 1744–070X (2004)

Kavaratzis, M., Warnaby, G. and Ashworth, G.J. (eds.) (2015b) Sketching futures for place branding. In: Rethinking Place Branding. the Netherlands: Springer, pp. 241–248.

Keller, K. L. (2000) 'The Brand Report Card', Harvard Business Review, January–February, pp. 3–10.

Keller, K. L. (2001) 'Building consumer-based brand equity', Marketing Management,Vol. 10,No. 2, pp. 14–19.

Keller, K. L. (2003) 'Strategic Brand Management:Building, Measuring, and Managing Brand Equity', Prentice Hall, Upper Saddle River, NJ

Kotler, P., Haider, D. H. and Rein, I. R. (1993) 'Marketing Places: Attracting Investment, Industry and Tourism to Cities, States and Nations',Free Press/Macmillan, New York, NY

Lucarelli, A. and Berg, P.O. (2011) City branding: A state-of-the-art review of the research domain. Journal of Place Management and Development 4(1): 9–27.

Matson, E. W. (1994) 'Can cities market themselves like Coke and Pepsi do?', International Journal of Public Sector Management,Vol. 7,No. 2, pp. 35–41.

Merrilees, B., Getz, B. and O' Brien, D., (2005). Marketing stakeholder analysis: Branding the Brisbane Goodwill games, European Journal of Marketing, Vol. 39, No. 9 – 10, pp. 1066 – 1077.

Oguztimur, S. and Akturan, U. (2015) Synthesis of city branding literature (1988–2014) as a research domain. International Journal of Tourism Research. advance online publication 14 July, doi:10.1002/jtr.2054.

Pakerson, B. and Saunders, J. ( 2004) City branding: Can goods and services branding models be used to brand cities? ,Place Branding , Vol.1 ,3, 242-264

Papadopoulos, N. (2004). Place branding: Evolution, meaning and implications. Place Branding 1(1): 36–49

Pike, S. (2008). Destination Marketing An Integrated Marketing Communication Approach, Butterworth Heinemann: Elsevier Science.

Pritchard, A. and Morgan, N. (1998), "Mood marketing – the new destination branding strategy: a case of Wales the brand", Journal of Vacation Marketing, Vol. 4 No. 3, pp. 215-29.

Trueman, M., Klemm, M. and Giroud, A., (2004). Can a city communicate? Bradford as a corporate brand, Corporate Communications: An International Journal, Vol. 9, No. 4, pp.317 – 330.

Zenker, S., Braun, E., ( 2010), "Branding a City: A Conceptual Approach for Place Branding and Place Brand Management", The 39th Annual Conference of the European Marketing Academy. EMAC 2010: The Six Senses: The Essentials of Marketing - Copenhagen Business School, Frederiksberg, Denmark

# Bridging Culture and Innovation: Profiling Motivations for Virtual Reality Adoption in Cultural

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## Abstract

This research examines the possible motivations underlying the use of virtual reality (VR) in cultural tourism experiences using a mixed-method approach. In the first stage, 10 in-depth interviews led to the identification of nine core motivational factors, which were subsequently operationalized into multi-item scales for a survey administered to 351 participants. Through a two-step cluster analysis, four distinct tourist segments were identified: Immersive Innovators, Informed Explorers, Tech-Oriented Samplers, and Digital Skeptics. These clusters differed significantly in their motivational profiles. Keywords: virtual reality, tourism, cultural tourism, motivation, tourist segmentation.

### 1. Introduction, research aim, and background

In recent years, virtual reality (VR) has rapidly evolved from niche technology to a transformative tool across sectors, including cultural tourism. A report by PwC (2020) forecasted that the global VR and AR markets will deliver a $1.5 trillion boost to the global economy by 2030, with education and cultural applications playing a substantial role in this growth trend (Technavio, 2024). However, while technological potential is apparent, further research is required to shed light on who is actually motivated to use VR in cultural settings and why. To answer this call, we adopted a mixed-method approach – 10 semi-structured interviews and a survey (N=351) – to map motivations and segment prospective users of cultural VR experiences.

Prior literature in the tourism domain has investigated possible motivational factors related to the use of alternative realities in the cultural context. For example, prior work highlighted enjoyment, perceived usefulness, immersion, and novelty as core drivers of cultural VR adoption (e.g. Han et al., 2019; Jiang et al., 2025b; Mavrin et al., 2024). Because VR can shape visit/revisit intentions and word-of-mouth, clarifying why people adopt VR is strategically relevant. However, few studies so far (e.g., Liker et al., 2025; Ren, 2023), segmented prospective cultural-tourism users by underlying motivations rather than usage or behavioral patterns.

### 2. Method and results

To identify the key motivational factors for consumer adoption of VR in cultural tourism, 10 semi-structured interviews were conducted. A thematic template analysis (Brooks et al., 2015) was conducted and responses were grouped into categories reflecting recurring motivations. This process led to the identification of nine main motivational themes

(enjoyment, social interaction, money saving, information, media novelty, customization, interactivity, authenticity, and novelty seeking), which informed the design of the multi-item scales used in the subsequent quantitative phase.

An online survey (N=351) measured the nine motivations on 7-point Likert scales, using pre-validated scales; we also captured VR expertise, cultural-site visit frequency, and sociodemographics.

Composite scores for the nine motivations fed a hierarchical-plus-K-means procedure supporting a four-cluster solution:

• Immersive Innovators (36.8%): highly motivated across all dimensions, particularly information, interactivity, customization, and enjoyment; • Informed Explorers (36.5%): moderately high levels of motivation, especially regarding informational content and novelty seeking;

• Tech-Oriented Samplers (17.9%): low overall motivation except for elevated interest in technological novelty and exploration (novelty seeking); • Digital Skeptics (8.8%): very low motivation across all dimensions, suggesting resistance or disinterest toward VR in cultural contexts.

Clusters were primarily differentiated by age and self-reported VR expertise: Digital Skeptics tended to be older, while Immersive Innovators reported higher expertise. Gender and education did not differentiate clusters.

## 3. Discussion, implications, and conclusions

The two-step analysis revealed four distinct motivational profiles based on users' underlying drivers for engaging with cultural VR experiences – Immersive Innovators, Informed Explorers, Tech-Oriented Samplers, and Digital Skeptics. While these clusters were differentiated in terms of motivational patterns, the analysis of external variables provided a more nuanced picture. Specifically, statistically significant differences emerged only for age and self-reported VR expertise: Digital Skeptics were significantly older than the other groups, and Immersive Innovators reported higher levels of expertise in VR technologies. Conversely, no significant differences were found across clusters with regard to gender, education level, personal income, frequency of cultural site visits, or prior use of VR for cultural purposes. While at first glance this may appear as a limitation (especially for segmentation strategies that rely on demographic markers), the results add to recent segmentation approaches on VR user segmentation (e.g., Liu et al., 2024) underscoring a key insight: motivational orientations toward cultural VR are not strongly bound to gender, cultural site visits, or prior usage patterns. Rather, they represent psychographic dimensions, such as curiosity, the quest for interactivity, or expected enjoyment, that cut across socio demographic boundaries. Hence, institutions should tailor content and messaging to the four profiles and consider basic onboarding to raise VR literacy among less experienced segments.

Limitations include a young-skewed, single-country sample. Overall, the study contributes to a motivation-based segmentation of cultural-VR users and invites cross cultural replication.

**[References available upon request]**

# Data Lake a Servizio delle Destinazioni Turistiche: Casi e Applicazioni

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## Abstract

I Big Data nel turismo hanno numerose applicazioni e potenzialità e, a livello nazionale, sono promosse azioni per lo sviluppo di innovazioni tecnologiche al fine di diffonderne il loro utilizzo in piattaforme integrate, quali i Data Lake. Tuttavia, mentre il dibattito scientifico ha contribuito alla definizione di concetti e contenuti legati alla raccolta e all'uso dei Big Data in ambito turistico, ancora poco si rinviene per quanto riguarda lo sviluppo di Data Lake per le destinazioni turistiche. Inoltre, anche nella pratica non sono ancora molto diffusi esempi applicati di destinazioni turistiche che adottano tali piattaforme integrate in modo innovativo. L'articolo riporta i risultati di uno studio pilota volto a raccogliere casi di applicazioni di analisi dei Big Data in alcune destinazioni turistiche. I risultati emersi sono stati utili nella realizzazione di una Action Research dedicata alla creazione di un innovativo Data Lake applicato in una città italiana. Lo studio offre così un contributo innovativo, sia a livello teorico sia operativo, per l'evoluzione della gestione data-driven delle destinazioni turistiche.

*Keywords: Data Lake, Big Data, destinazione turistica, case studies, modello 6V+*

## 1. Introduzione

Il turismo è stato inserito come obiettivo strategico nell'ambito della Missione 1 del Piano Nazionale di Ripresa e Resilienza - PNRR (2022), per contribuire con nuovi impulsi al rilancio della competitività e della produttività nazionale. Nello specifico, la Missione 1, componente 3 "Turismo e cultura" aveva l'obiettivo di rilanciare i settori economici della cultura e del turismo, che all'interno del sistema produttivo giocano un ruolo fondamentale, sia in quanto espressione dell'immagine e brand del Paese, sia per il peso che hanno nell'economia nazionale. Secondo i dati forniti dall'Enit (Agenzia Nazionale del Turismo) e diffusi alla BIT 2025 (Borsa Internazionale del Turismo), il comparto del turismo nel 2024 ha contribuito al 10,8% del Pil italiano ed inciso sull'occupazione nazionale per il 13%. Le stime relative ai prossimi anni sono in ulteriore crescita (ENIT, 2025). Per la Missione 1, componente 3 "Turismo e cultura" del PNRR sono stati assegnati nel complesso 2,4 miliardi di euro, che hanno l'obiettivo di incrementare la capacità competitiva delle imprese e promuovere un'offerta turistica basata su sostenibilità ambientale, innovazione e digitalizzazione dei servizi (Ministero del Turismo, 2022). Tra le principali linee di intervento è prevista l'implementazione di un Hub Digitale del Turismo o Tourism Digital Hub (TDH) per la promozione integrata dell'offerta turistica nazionale; fondi per la competitività delle imprese turistiche. Il TDH consiste in una piattaforma condivisa tra gli stakeholder del settore, che si pone l'obiettivo di creare un ecosistema turistico arricchito e migliorato, in grado di fungere da punto d'arrivo per la pianificazione di un viaggio in Italia. L'iniziativa è, quindi, rivolta ad esercizi alberghieri e strutture assimilabili, attività di ristorazione, agenzie di

viaggi e tour operator, coltivazioni agricole, produzioni di prodotti animali e servizi connessi, silvicoltura, pesca e acquacoltura. Per le imprese che vi partecipano, il portale (denominato Italia.it) rappresenterebbe una vetrina internazionale attraverso cui poter condividere, ad un pubblico potenzialmente anche molto ampio, la propria offerta turistica (Camera di Commercio di Genova). All'interno dell'investimento per 114 milioni di euro nel TDH (M1C3 Investimento 4.1) sono definite tre direttrici strategiche che riguardano: la realizzazione di una nuova infrastruttura digitale, che ottimizzi il portale Italia.it per migliorarne l'interfaccia con gli utenti, ampliando al contempo i servizi disponibili; l'adozione di modelli di intelligenza artificiale per analizzare i dati relativi a flussi e comportamenti dei turisti attraverso strumenti quali i Data Lake; e lo sviluppo di un Kit per i servizi digitali di base a supporto degli stessi operatori (Ministero del Turismo, 2022). Questa spinta a livello nazionale è protesa alla riqualificazione e al rinnovamento dell'offerta turistica verso la sostenibilità e l'innovazione con l'impiego delle tecnologie digitali, in particolare introducendo l'approccio del Data Lake. Tuttavia, nonostante i grandi piani nazionali e i relativi investimenti, l'adozione dei Data Lake nel turismo non è ancora diffusa in Italia.

Un Data Lake (Ho et al,, 2023) si può definire come un repository centralizzato e progettato per archiviare, elaborare e proteggere notevoli quantità di dati strutturati, semi-strutturati e non strutturati. Si tratta di uno strumento in grado di archiviare i dati nel loro formato nativo e di elaborare dati di vario tipo per struttura e natura, ignorando i limiti di dimensione. Sebbene siano presenti sul mercato alcune soluzioni tecnologiche definite come Data Lake, non esiste ancora una definizione standard, né un'architettura universalmente riconosciuta anche dal punto di vista gestionale, e soprattutto applicata e utilizzata dalle destinazioni turistiche. Inoltre, vi è da constatare l'estremamente ridotta letteratura scientifica in ambito di Data Lake nel settore turistico. Nondimeno, un Data Lake nazionale completo e disponibile, utile alle diverse necessità delle destinazioni turistiche, non è ancora stato realizzato; pertanto, alcuni destination manager e policy-maker stanno investendo a livello locale. Nasce dunque l'obiettivo del progetto di ricerca di cui fa parte questo studio pilota, che ha cercato di delineare applicazioni e realizzazioni di Data Lake in destinazioni turistiche, e i cui risultati servano quali basi di progettazione per un'amministrazione pubblica locale. L'intero "Progetto SMART Verona" è stato finanziato dal Ministero del Turismo al fine di valorizzare i comuni con siti UNESCO tramite la realizzazione di strumenti di promozione turistica e digitale. Tale progetto ha previsto lo sviluppo di un Data Lake, ovvero una piattaforma di dati aggregati e anonimizzati per monitorare i comportamenti e le esperienze di turisti e visitatori di Verona città UNESCO. L'auspicio è che il Data Lake generato con questo progetto possa essere mantenuto nel tempo come fonte strategica delle decisioni data-driven del turismo locale, condivisa tra i vari stakeholder del territorio, e divenire una best practice diffusa anche in altri Comuni italiani. Questo articolo presenta i risultati dello studio pilota e alcune considerazioni che hanno portato alla sua realizzazione.

## 2. Dalle "V" dei Big Data al Data Lake

Diversi studi (Li et al., 2018; Fan et al., 2015; Oliver et al., 2014) dimostrano come i Big Data permettano una conoscenza più approfondita delle aspettative e delle opinioni del consumatore, utili a migliorare sensibilmente l'offerta turistica. Questa comprensione ha portato un crescente numero di destinazioni turistiche, o singole realtà aziendali del settore, ad investire nella creazione di Data Warehouse sempre più efficienti ed efficaci (Abdulaziz et al,, 2016; Ramos et al,, 2017). I dati disponibili per la creazione di tali Data Warehouse si possono classificare in tre principali tipologie di dati a seconda della loro natura: strutturati, semi-strutturati e non strutturati. Se in passato la maggior parte dei dati si presentava in modo strutturato, tipicamente inserito in tabelle o database relazionali, ora circa l'80% dei dati ha natura non strutturata. Alcune stime riferiscono come già nel 2017 la percentuale dei dati non strutturati rispetto al totale arrivava al 90% (Elia e Solazzo, 2018).

Le fonti dei Big Data sono molto ampie e si possono suddividere in sei principali categorie: search queries; web analytics data; dati georeferenziati (come mobile positions, smart cards, bluetooth tracking); customer reviews e UGC (User Generated Content); transaction data (dati provenienti dalle transazioni economiche); e app logs (dati provenienti dai registri delle applicazioni mobili) (Pan and Yang, 2017). La crescita e la diffusione delle tecnologie digitali hanno favorito la nascita di nuovi modelli di business online e una conseguente proliferazione di dati anche nel turismo (Stefanizzi et al., 2018). I dati vengono raccolti ed elaborati attraverso differenti modalità (Singh, Dayalbagh, 2022; Fauzi et al, 2023), e finalizzati anche alla realizzazione di nuovi servizi e strumenti per la fruizione di servizi turistici (Allheeib, 2022). Si pensi, nello specifico, alle diverse piattaforme sviluppatesi sul web e identificabili come Online Travel Agent (OTA), Metasearch, Multi-sided platforms (MSPs) o UG review system. Si tratta però di classificazioni dai confini piuttosto labili (Kotler et al., 2018) considerata l'estrema dinamicità del settore.

I Big Data sono generalmente intesi come patrimonio informativo, connotato da rilevanti Volumi di dati, elevata Velocità e Varietà, che richiede modalità efficienti ed innovative di elaborazione per migliorare: decision making (Laney, 2001), insight discovery e ottimizzazione di processo (Gärtner e Hiebl, 2017). Gli autori che tecnicamente menzionano il concetto di Big Data fanno riferimento alle proprietà delle "3V", relative alle caratteristiche di questo tipo di dati, ovvero Volume, Varietà e Velocità. Per Volume (data at rest) si fa riferimento all'enorme quantità di dati, provenienti da diverse fonti, che grazie allo sviluppo e al diffondersi delle tecnologie informatiche è possibile filtrare, comprimere, archiviare ed elaborare. La Velocità (data in motion) riguarda la rapidità con cui questi flussi di dati, in entrata ed uscita, vengono prodotti ed elaborati. Infine, la Varietà (data in many forms) riguarda la notevole eterogeneità delle fonti da cui provengono queste informazioni e del modo in cui i dati possono presentarsi, sia dal punto di vista della forma che dei contenuti e del significato. Questa grande quantità di dati si presenta solitamente in una forma non ordinata e senza una struttura fissa. Per descrivere i Big Data gli studi originariamente più citati si focalizzano principalmente sull'attributo della Varietà (Johnson, 2012; Davenport et al., 2012).

Il modello delle "3V" si è successivamente ampliato ad altre due proprietà, relative al Valore e alla Veridicità (Elia and Solazzo, 2018). Riguardo al Valore (data in evidence) si fa riferimento all'obiettivo per cui i Big Data sono utilizzati. I dati vengono, infatti, impiegati per poter creare ed estrarre Valore: informazioni in grado di supportare il processo decisionale, fornire input utili per progettare nuovi prodotti o servizi, creare nuovi modelli e opportunità di business. La Veridicità (data in doubt), riguarda, invece, i concetti di accuratezza, certezza e precisione del dato. Nell'analisi dei Big Data è frequente riscontrare incongruenze, approssimazioni, ambiguità, duplicazioni, incompletezze, spam e latenza. Seppur difficilmente in grado di compromettere i risultati dell'analisi vista la notevole mole di dati solitamente elaborati, eventuali criticità nei dati vanno comunque tenute in considerazione.

Altri esperti hanno attribuito nuove proprietà al concetto di Big Data, tra cui quelle di Variabilità, Volatilità, Visualizzazione e Complessità (Lee, 2017). Allo stesso tempo, nel dibattito sui Big Data sono emerse ulteriori complessità che pongono al centro il rischio di compromettere, rendere più complicate o comunque meno performanti le fasi di creazione, analisi ed eliminazione dei dati. La raccolta di informazioni demografiche e psicografiche relative agli utenti può portare, infatti, a delle problematiche in merito alla disponibilità dei dati e alla privacy (Elia and Solazzo, 2018).

L'analisi presentata in questo studio si basa su un adattamento del modello delle "5V", il quale viene ampliato con l'inclusione di una sesta dimensione utile ai Data Lake (modello

delle "6V+"), ovvero la Visualizzazione. Quest'ultima si riferisce alla capacità di rappresentare i dati in forma simbolica e visiva, con l'obiettivo di individuare pattern e supportare così i processi decisionali (Giulia and Chahal, 2020). Sebbene, come visto, in letteratura vengano proposte molteplici dimensioni integrative (Lee, 2017), la scelta di includere esclusivamente la dimensione della Visualizzazione risponde ad una precisa esigenza metodologica per rendere i Data Lake operativi. L'obiettivo di questo studio, infatti, è di indagare come i Big Data e/o i Data Lake sono creati e utilizzati per i processi decisionali nelle destinazioni turistiche. In tale contesto, la Visualizzazione del dato costituisce un elemento chiave. Si tratta infatti di un elemento abilitante per trasformare i dati grezzi del Data Lake in insights operativi, rendendo il modello più utile e fruibile dai diversi stakeholder coinvolti. Inoltre, nel modello qui presentato (6V+), la Veridicità include il concetto di Validità (Validity), intesa come correttezza del dato (Rahman et al., 2016).

Alla luce di queste conoscenze è possibile qualificare i Data Lake come soluzioni per l'analisi dei Big Data che consentono l'acquisizione di dati grezzi eterogenei, provenienti da diverse fonti, sia interne sia esterne all'organizzazione, in modo da permettere la conservazione di dati aggregati e anonimizzati nel rispetto dei necessari requisiti per la protezione della privacy. Tale architettura consente l'elaborazione dei dati secondo filtri personalizzabili, in modo da rendere accessibili le informazioni a diversi profili di utenti per attività di analisi statistica, Business Intelligence (BI), Machine Learning (ML) e simili. Inoltre, il Data Lake implementa meccanismi di governance dei dati al fine di garantire la qualità, la sicurezza e la corretta gestione del ciclo di vita dei dati stessi (Nambiar and Mundra, 2022). Una prima intuizione rispetto a questo tipo di approccio viene attribuita a Dixon (2010), che semplificava il concetto nei seguenti termini: "Se un Data Warehouse può essere paragonato a un negozio di bottiglie d'acqua – depurata, confezionata e strutturata per un facile consumo – il Data Lake è un grande bacino d'acqua in uno stato più naturale".

Il Data Lake è, dunque, in grado di contribuire in maniera ancora più influente all'analisi dei Big Data in una prospettiva strategica, garantendo la possibilità di tradurre i dati e le elaborazioni più complesse in rappresentazioni grafiche di immediata comprensione (Chessa et al, 2022). Ho et al. (2023) rilevano nello specifico in ambito turistico come i Data Lake, a differenza dei Data Warehouse, permettano l'impiego di tutte le tipologie di dati strutturati, semi-strutturati e non strutturati, i quali costituiscono ormai la quasi totalità delle fonti. Infine, i Data Lake permettono maggiori possibilità di analisi attraverso Machine Learning, Exploratory Analytics, Data Discovery, Streaming, Operational Analytics dei Big Data.

Sebbene in letteratura siano ampiamente riconosciuti il ruolo cruciale dei Data Lake e le potenzialità del loro impiego per il management delle destinazioni turistiche, dal presente studio emergono tre importanti gap:

- limitata letteratura scientifica sulle proprietà chiave di un Data Lake applicato al marketing delle destinazioni turistiche;

- scarsa disponibilità di modelli applicati alla raccolta e all'analisi di Big Data per le destinazioni turistiche;

- assenza significativa di comparazione di casi documentati di applicazioni di Data Lake al servizio delle destinazioni turistiche.

Chiarita la rilevanza dello strumento del Data Lake e delle sue potenzialità, ed evidenziati i gap della letteratura scientifica, le Research Questions (RQ) emerse da questo studio possono essere così declinate:

- "Quali proprietà chiave dei Big Data (e dunque dei Data Lake), sono applicate nel marketing turistico?" (RQ1)

- "Come e a che scopo vengono realizzati i Data Lake a servizio delle destinazioni turistiche?" (RQ2)

## 3. Metodologia

Questa ricerca ha origine dall'esigenza reale di un'amministrazione pubblica di un Comune italiano che intendeva dotarsi di soluzioni tecnologiche innovative, sfruttando al meglio i Big Data, al fine di comprendere in modo approfondito e migliorare le esperienze di visitatori e turisti intorno a siti di particolare interesse storico e culturale.

È nato così un lungo percorso di collaborazione tra amministrazione comunale, Università, partner tecnologici e altri stakeholder del turismo, finalizzato alla progettazione e all'implementazione di un vero e proprio Data Lake a servizio della destinazione turistica. Per attivare tutti gli stakeholder coinvolti si è scelta la metodologia dell'Action Research (AR) applicata al turismo (O'Leary e Coghlan, 2022), con l'obiettivo condiviso di migliorare l'offerta turistica sostenibile del territorio, riorientando il lavoro scientifico dall'identificazione del problema alla sua risoluzione (Dolnicar e Green, 2025). L'AR può contribuire infatti a un duplice scopo, assicurando il rigore teorico e offrendo un contributo manageriale applicato (Erro-Garcés e AlfaroTanco, 2020). Per essere più efficace l'AR richiede uno studio longitudinale pluriennale e implica la collaborazione frequente tra un gruppo di ricercatori e policy-makers, favorendo lo scambio di idee e riflessioni (Näslund et al., 2011), al fine di realizzare e sperimentare nella pratica le soluzioni condivise. Lo scopo principale di questo progetto di ricerca era infatti applicativo, al fine di sviluppare e rendere disponibile al Comune di Verona una piattaforma a supporto di un Data Lake, creata per monitorare e migliorare l'esperienza di turisti e visitatori in alcune aree di interesse turistico, storico e culturale della città. L'iniziativa è parte di un progetto finanziato dal Ministero del Turismo (bando del 4/3/2022) per la valorizzazione dei comuni con siti UNESCO e delle città creative.

Le fasi dell'Action Research sono state quattro: (1) Pre-Step - incontri formali del team misto di ricerca per la definizione degli scopi e dei limiti del progetto; (2) Diagnosis - fase iniziale per la comprensione dei case studies esistenti (Studio Pilota); (3) Proposal – definizione dei dettagli del progetto, condivisi e approvati dagli stakeholder del turismo coinvolti per la realizzazione e l'utilizzo del Data Lake; (4) Implementation and monitoring– per la realizzazione del progetto operativo (realizzazione del Data Lake e della piattaforma per l'analisi dei dati; definizione della strategia di azione data-driven; sperimentazione digitale e monitoraggio continuo).

Questo paper in particolare si limita ad illustrare i risultati dello studio pilota iniziale (fase 2 dell'Action Research), in particolare attraverso l'analisi di 15 case studies, i quali hanno orientato la progettazione e lo sviluppo del Data Lake per il Progetto SMART Verona.

I casi collezionati sono selezionati solo in ambiti di applicazione sviluppati da destinazioni turistiche (vedasi Tabella 1): alcuni sono emersi in fonti accademiche, inclusi gli atti nei convegni, in report istituzionali e in fonti divulgative; altri sono stati suggeriti da esperti intervistati. Ad integrazione, per ogni caso sono state ricercate ulteriori fonti digitali, sia nel web (inclusi i siti di fornitori di soluzioni tecnologiche per l'analisi dei Big Data) che nei social media. I casi sono stati poi classificati in base al tipo di dati utilizzati, agli strumenti/tools applicati, agli ambiti di applicazione, agli scopi, agli stakeholder coinvolti e alle caratteristiche dei Big Data utilizzati (in base al modello delle proprietà "6V+"). Sono stati esclusi i casi non adottati da destinazioni turistiche o dei quali sono state trovate solo superficiali menzioni di

sperimentazioni tecnologiche senza specifiche tecniche o indicazioni di ambiti di applicazione.

## 4. Risultati dello studio pilota

Alcuni autori rilevano come siano stati soprattutto i grandi gruppi multinazionali a utilizzare i Big Data nell'elaborazione delle proprie strategie (Bernabeu et al., 2016). Come anticipato nella descrizione del metodo sono stati esclusi dalla comparazione i casi gestiti e promossi da aziende private, ma essi sono stati comunque studiati. I casi più noti sono: Kayak, Amadeus, MGM Resort, Marriott, Hipmunk, InterContinental Hotels Group e British Airways (Davenport, 2013); Makemytrip, Walt Disney Company, International Hotels Group, NH Hotels, e Airbnb (Presenza et al., 2021). In sostanza, anche altre ricerche sull'hospitality business confermano che tra i fattori digitali abilitanti e più critici vi sono le analisi dei big data e l'applicazione di moderne tecnologie, tra cui anche l'intelligenza artificiale (Del Chiappa e Rashidin, 2024). Restringendo l'analisi, come detto, ad esperienze di destinazioni turistiche, dal nostro studio emergono 15 casi di sperimentazione dei Big Data che sono stati analizzati e classificati in base alle proprietà "6 V+" (vedasi Tabella 1).

Tabella 1 (Fonte: Elaborazione personale)

| Destinazioni | Fonte | Tipo di dati | Ambito diapplicazione - obiettivo | Volume | Velocità | Varietà | Valore | Veridicità | Visualizzazione |
|---|---|---|---|---|---|---|---|---|---|
| Austria | Gajdošík, 2019 | Utilizzo AI e tecniche di media intelligence per realizzare semantic search, estrazione di conoscenza dai testi, visual analytics e analisi dei media sugli UGC. | Identificazione di contenuti di interesse e misurazione della brand reputation della destinazione. | ++ | ++ | + | ++ | n.d. | + |
| Andalusia | Sánchez-Franco et al., 2024 | | Segmentazione dei turisti in otto cluster. | ++ | ++ | + | ++ | n.d. | ++ |
| Åre (Svezia) | Fuchs et al., 2014 | Analisi di UGC utilizzando tecniche di data mining, machine learning e data visualisation, applicando anche un algoritmo di clustering K-Prototype. | Conoscenza in real-rime dei comportamenti degli utenti online. | ++ | +++ | + | + | n.d. | n.d. |
| Città di Heraklion e Chania, a Creta (Grecia) | Vassakis et al., 2019 | | | ++ | ++ | ++ | ++ | n.d. | + |
| Barcellona (Spagna) | Marine-Roig & Clavé, 2015 | Raccolta, gestione ed elaborazione dei Big Data in un Data Warehouse. | Analisi del comportamento e delle preferenze dei turisti. | +++ | ++ | + | + | n.d. | n.d. |
| Benidorm (Spagna) | | | | ++ | ++ | + | ++ | n.d. | ++ |
| | | Raccolta di informazioni su | Individuazione di trends, esperienze percepite, fattori di | | | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Femenia-Serra & Ivars-Baidal, 2021 | testi, immagini, reazioni (like, commenti, condivisioni), geolocalizzazioni, date e profili utente sugli UGC dei cosiddetti Location-Based Social Networks (LBSN).<br><br>Analisi su contenuti creati direttamente dagli utenti (UGC). | attrazione della città in generale e di specifici punti di interesse<br><br>Accrescimento della comprensione delle aspettative e dei comportamenti dei visitatori | | | | | | |
| | | | 19 | | | | | | |
| | | Implementazione di una strategia Smart Tourism Destination (STD), guidata da innovazioni tecnologiche e dall'utilizzo dei dati. | | | | | | | |
| Venezia (Italia) e Salisburgo (Austria) | Buonincontri & Micera, 2016 | Implementazione di sistemi di cloud computing, end-user internet services e IoT. | Sviluppo di tools tecnologici in grado di incrementare l'esperienza di co-creazione nei visitatori in una prospettiva di STD. | ++ | ++ | ++ | +++ | n.d. | ++ |
| Tre cime di Lavaredo (Italia) | Bertocchi et al., 2021 | Utilizzo dei dati Telco (numero totale di utenti presenti in una determinata fascia oraria, tempo complessivo trascorso nel luogo, comportamenti e modelli di mobilità dei turisti). | Monitoraggio accurato e granulare dei flussi turistici nella zona per evitare fenomeni di overtourism e comprendere il comportamento dei turisti. | +++ | + | ++ | ++ | n.d. | ++ |
| Amsterdam (Paesi Bassi), Helsinki (Finlandia, Singapore | Gajdošík, 2019 | Utilizzo di soluzioni Internet of Things (IoT). | Ottimizzazione dell'esperienza degli utenti e raccolta di dati relativi ai loro comportamenti. | ++ | ++ | ++ | ++ | n.d. | + |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Anversa (Belgio), Cracovia (Polonia), Bolzano (Italia) | Van der Zee et al., 2017 | Utilizzo degli UGC. Identificazione del grado di maturità di una destinazione secondo il Tourist Area Life Cycle (TALC) di Butler | ++ | + | + | ++ | n.d. | + |

*Legenda delle "6V" analizzate:- Volume= +, ++, +++ in relazione al volume dei dati menzionato nel caso;*
*- Velocità= + volatilità; ++ dati online; +++ dati in real time;*

- *Varietà= + unico tipo di dati, generalmente UGC; ++ diverse tipologie di dati strutturati; +++ dati eterogenei, strutturati e non strutturati;*
- *Valore= + analisi e comprensione di un fenomeno; ++ obiettivi strategici, fini decisionali; +++ co-creazione di valore per diversi stakeholder;*
- *Veridicità= +, ++, +++ in relazione a livelli menzionati di accuratezza, certezza e precisione del dato, nel rispetto dei principi della privacy; n.d, ove informazione non disponibile nella documentazione;*
- *Visualizzazione= +, ++, +++ in relazione all'applicazione di specifici tools o attenzione connessa alla data visualization*

Nel primo caso, l'ente turismo austriaco tramite la piattaforma Weblyzard® ha potuto identificare contenuti di interesse e misurare la propria brand reputation, basandosi direttamente sui contenuti condivisi online dagli utenti (Gajdošík, 2019). La piattaforma, nello specifico, utilizza intelligenza artificiale e tecniche di web intelligence per realizzare semantic search, estrazione di conoscenza dai testi, visual analytics e analisi dei media.
Il secondo caso è stato analizzato anche da Sánchez-Franco e Rey-Tienda (2024) sul territorio dell'Andalusia. Gli autori sottolineano come, utilizzando le informazioni condivise online dagli utenti e tramite tecniche di data mining, machine learning e data visualisation, sia stato possibile identificare sia le tematiche di maggior impatto per gli ospiti delle strutture alberghiere (come "presentazione dello staff e della struttura", "problematiche legate al rumore e al comfort", "preoccupazioni degli ospiti e relative soluzioni") sia altre meno rilevanti. Inoltre, tramite un algoritmo di clustering KPrototype, è stato possibile suddividere i turisti in otto segmenti, per ognuno dei quali emergono delle specifiche esigenze (Sánchez-Franco e Rey-Tienda, 2024). La raccolta, l'elaborazione e l'analisi dei Big Data, in questo caso provenienti dagli UGC, possono consentire alle strutture di personalizzare l'offerta turistica in base a diversi segmenti di mercato.

Un terzo caso è rappresentato da Åre, rinomato centro turistico per gli sport invernali in Svezia, dove i Big Data hanno permesso, attraverso uno strumento di Business Intelligence, una conoscenza in real-time dei comportamenti degli utenti online. In tal modo, è stato possibile individuare in maniera più approfondita le aspettative e le esigenze dei clienti, permettendo ai policy makers di soddisfarle al meglio (Fuchs et al., 2014).

Il quarto caso è stato sviluppato in Grecia: attraverso le informazioni raccolte su testi, immagini, reazioni (like, commenti, condivisioni), geolocalizzazioni, date e profili utente sugli UGC dei cosiddetti Location-Based Social Networks (LBSN) – come Instagram, Twitter, Flickr e Foursquare –Vassakis et al. (2019) hanno potuto analizzare i comportamenti dei turisti di Heraklion e Chania, a Creta. Dal loro studio emergono alcuni insight interessanti. Tra questi si delinea il fatto che, se da un lato cibo tradizionale e bellezza dei paesaggi vengono valutati positivamente, dall'altro, aspetti rilevanti come la qualità dei servizi ricevono riscontri meno favorevoli. Avere a disposizione queste informazioni è stato utile per la destinazione turistica nel determinare le più appropriate azioni in grado di soddisfare le esigenze dei visitatori, e nell'implementare le più corrette strategie di branding territoriale.

Il quinto caso (Marine-Roig e Anton Clavé, 2015) è riferito alla destinazione Barcellona, attraverso l'analisi massiva, di contenuti direttamente creati dagli utenti (oltre 100.000 blog di viaggio e recensioni di viaggio online OTR scritti in inglese da turisti che hanno visitato la città negli ultimi 10 anni). Grazie alle informazioni ricavate da questi dati è stato possibile individuare trend, esperienze percepite, fattori di attrazione, sia della città nel suo complesso, che degli specifici punti di interesse della destinazione.

Il sesto caso di destinazione turistica nella quale i Big Data sono stati impiegati con particolare enfasi sulla sostenibilità, è quello di una località della Costa Blanca, la città di Benidorm. Quest'ultima ha ottenuto nel 2025 il riconoscimento di "European Green Pioneer of Smart Tourism" da parte della Commissione Europea, quale migliore esempio a livello continentale di capacità di coniugare conservazione dell'ambiente, stabilità economica e benessere sociale all'interno della propria strategia turistica (European Capital and Green Pioneer of Smart Tourism, 2025). La destinazione aveva vissuto nel corso dei decenni precedenti un lento ma costante decadimento dal punto di vista della percezione della qualità da parte dei consumatori (Femenia-Serra e IvarsBiadal, 2021). Per rivitalizzare la destinazione, i policy maker locali hanno deciso di orientare i propri sforzi per convertire la cittadina da tradizionale località balneare a Smart Tourism Destination (STD). Tra i principi guida dell'implementazione di soluzioni tecnologiche per la trasformazione in STD, l'amministrazione pubblica ha sottolineato l'importanza della capacità della singola applicazione di ottenere dati. Grazie all'integrazione di queste innovazioni tecnologiche si è riscontrato un notevole incremento nella comprensione delle aspettative e dei comportamenti dei visitatori, permettendo ai policy maker di adottare le scelte più corrette per incontrare le loro esigenze e implementare le strategie di marketing più idonee (Femenia-Serra e IvarsBiadal, 2021).

Venezia e Salisburgo (destinazioni posizionate rispettivamente al primo e secondo posto del ranking delle smart cities in base all'attrattiva turistica secondo l'European Smart City Index nel 2014, Buonincontri e Micera, 2016) rappresentano altri due interessanti casi di implementazione di tecnologie, tra cui cloud computing, end-user internet services e IoT, con l'obiettivo di sviluppare soluzioni in grado di incrementare l'esperienza di co-creazione di valore per le due località. Il concetto di co-creazione di valore può essere definito come il processo congiunto, collaborativo, simultaneo e "peer-like" di produzione di nuovo valore, sia materiale che simbolico (Galvagno e Dalli, 2014). Più nel dettaglio, Buonincontri e Micera (2016) rilevano come la DMO di Salisburgo, attraverso lo sviluppo di una strategia smart a 360 gradi, sia riuscita maggiormente nell'intento di coinvolgere i visitatori nella co-creazione di valore dell'esperienza turistica. I vari strumenti utilizzati hanno favorito il contatto diretto del turista con il territorio, stimolando la partecipazione e incoraggiando la condivisione dell'esperienza. L'implicazione pratica suggerita ai policy maker della DMO di Venezia riguarda l'attivazione di maggiori opportunità di condivisione dell'esperienza post travel dei turisti, sia attraverso testi che immagini. In questo modo, si potrebbe acquisire maggiore conoscenza e consapevolezza sui visitatori della città. Attraverso l'analisi dei dati l'organizzazione avrebbe infatti l'opportunità di comprendere in modo più approfondito caratteristiche, aspettative e comportamenti dei turisti, migliorando la propria offerta e la propria comunicazione, anche rispetto ad eventuali aspetti critici.

Nel successivo caso, evidenziato dalla ricerca di Bertocchi et al. (2021), sono stati utilizzati i dati relativi alle telecomunicazioni mobili (telco data) per misurare eventuali fenomeni di overtourism nel territorio delle Dolomiti. La ricerca si è focalizzata, in particolare, sul percorso sito UNESCO delle Tre cime di Lavaredo, in un periodo di 122 giorni da giugno a settembre 2018. Grazie ai dati forniti agli analisti, in formato aggregato e anonimizzato da uno dei maggiori operatori di telecomunicazione in Italia, è stato possibile monitorare in maniera più accurata e granulare i flussi turistici nella zona. In particolare, i dati hanno

consentito di rilevare il numero totale di utenti presenti in una determinata fascia oraria, il tempo complessivo trascorso nel luogo, i comportamenti e i modelli di mobilità dei turisti. Tali informazioni hanno permesso ai ricercatori di classificare i visitatori in "day visitors" o "tourists", oltre che rilevarne cittadinanza e luogo di provenienza. Si tratta di informazioni difficilmente tracciabili attraverso le statistiche ufficiali dei movimenti turistici. Lo studio ha rilevato come anche in queste località, in particolari periodi dell'anno, emergano dei fenomeni di overtourism, con flussi di visitatori molto elevati rispetto ai servizi esistenti. Inoltre, si è messo in luce come solo una parte minoritaria dei turisti (il 13,5%) scelga una modalità di trasporto sostenibile per raggiungere la località. Negli anni seguenti gli amministratori del sito UNESCO hanno provveduto ad implementare provvedimenti orientati ad un approccio più sostenibile in relazione alla visita della destinazione.

Fenomeni di overtourism sono riscontrabili non solo nelle città d'arte (Van der Zeee et al., 2017), ma anche nelle destinazioni turistiche costiere (Femenia-Serra and IvarsBaidal, 2021) e montane (Bertocchi et al. 2021). Secondo Butler (1980) anche le destinazioni turistiche, come succede per qualsiasi altro prodotto, manifestano un ciclo di vita, definito dall'autore Tourist Area Life Cycle (TALC). Le 7 fasi del livello di maturità di una destinazione sono rispettivamente: Esplorazione; Coinvolgimento; Sviluppo; Consolidamento; Stagnazione; Declino; Rinnovamento. I casi di Anversa (Belgio), Cracovia (Polonia), Bolzano (Italia) sono stati analizzati proprio attraverso il modello TALC di Butler (1980).

Tra le principali fonti di raccolta dei Big Data è utile citare anche quelle relative alle tecnologie e ai sensori inseriti nell'ambiente concernenti la sfera del cosiddetto Internet of Things (IoT). Ci si riferisce, in questo caso, a tutti quei contesti in cui la connettività di rete e le capacità computazionali vengono estese a oggetti, sensori e altre tecnologie tradizionalmente non considerate dispositivi informatici, consentendo a tali elementi di generare, scambiare e utilizzare dati (Rose et al., 2015). Grazie alla connessione con il web, oggetti fisici di uso quotidiano vengono collegati fra loro, consentendo agli utenti di svolgere le proprie attività in modo smart (Kotler et al., 2024). L'utilizzo di queste tecnologie non permette solo un'ottimizzazione dell'esperienza degli utenti, ma consente una raccolta massiva di dati e informazioni relativamente ai loro comportamenti. La tecnologia, facilitando la comunicazione e la fruibilità, aiuta ad accrescere e migliorare l'esperienza lato utente. Il management acquisisce informazioni di basilare importanza per la comprensione delle abitudini e dei comportamenti degli utenti. In ambito turistico possiamo rilevare diversi esempi di applicazione di questi strumenti: dall'utilizzo di sensori, QR codes e totem informativi dislocati sul territorio, fino a tutte le possibili soluzioni legate al concetto di realtà aumentata (AR). Gajdošík (2019) riporta una serie di best practices in merito a questa specifica tipologia di Big Data. Ad esempio, a Barcellona si fa ricorso a sensori per il monitoraggio del traffico, per l'illuminazione stradale e per il monitoraggio della qualità dell'aria, ad Amsterdam queste tecnologie vengono utilizzate per la rilevazione della densità dei flussi pedonali e per l'identificazione basata su tecnologia Bluetooth Low Energy (BLE), ad Helsinki per il monitoraggio dei consumi energetici, a Singapore per verificare il grado di pulizia degli ambienti urbani, la densità di persone in determinate aree ed il traffico dei veicoli in generale.

## 5. Discussione

Emerge in molti casi analizzati la rilevanza a livello strategico dell'analisi dei Big Data a servizio delle DMO, come fonte di informazione diretta rispetto alle esigenze e alle aspettative dei visitatori, in vista della realizzazione di una Smart Tourism Destination (STD) (Ardito et al, 2019). La STD è una destinazione in grado di mettere in connessione in modo efficace le diverse comunità di stakeholder attraverso piattaforme tecnologiche, condivisione di conoscenza e sistemi di decision-support evoluti (Buhalis a Amaranggana, 2014). Si tratta,

quindi, di una destinazione innovativa, basata su infrastrutture tecnologiche in grado di garantire lo sviluppo sostenibile del territorio, facilitando l'interazione e l'integrazione dei visitatori nel territorio. Questo approccio tecnologico agevola indirettamente un rafforzamento dell'esperienza turistica a cui si abbina un miglioramento del livello di qualità della vita dei residenti (Del Vecchio et al., 2018). In tale modello i Big Data rivestono un ruolo di fondamentale importanza per le destinazioni turistiche (Bernabeu et al., 2016).

I dati sono dunque indispensabili, in abbinamento alle tecnologie ICT, per la realizzazione di quelle che altri autori definiscono Knowledge-Based Destinations, o KBD (Racherla et al., 2008). Le KBD sono destinazioni dove il requisito strategico fondamentale da cui partire è appunto quella della conoscenza. Utilizzare tutte le diverse forme di Big Data a disposizione, potendo confrontarle, contribuisce a fornire una overview più completa rispetto alle esigenze e ai desideri dei visitatori. I casi analizzati appaiono invece dedicati a specifici problemi e con fonti di dati limitate. Inoltre, in nessun caso si è potuto osservare la realizzazione di un Data Lake completo, al massimo sono stati rinvenuti, più o meno esplicitamente, casi di realizzazione di Data Warehouse. Nel caso della destinazione di Åre, gli studiosi (Höpken et al., 2015) hanno constatato come, fra i fattori determinanti nello sfruttare al meglio i Big Data, vi sia da rilevare in particolare il fondamentale contributo apportato dall'impiego di un Data Warehouse centrale in grado di archiviare informazioni complete ed omogenee. Un Data Warehouse condiviso tra i vari stakeholder ha quindi contribuito a far raggiungere significativi risultati per l'organizzazione, dal punto di vista strategico.

Dalla Tabella 1, che riepiloga le proprietà "6V+" dei progetti analizzati, si nota che i tipi di dati utilizzati sono prevalentemente UGC (User Generated Content) con pochi casi di integrazione con altri tipi di dati, quindi con limitata Varietà. Purtroppo, nella documentazione raccolta, non è stato possibile riscontrare elementi di garanzia rispetto alla Veridicità del dato, forse tale proprietà non era in passato così critica ma rimane comunque preoccupante l'assenza di informazioni in tal senso. Inoltre, dal nostro studio emerge come le DMO tipicamente impieghino in modo separato i dati a disposizione. Ad esempio, relativamente a Benidorm, pur essendo segnalato come uno dei casi più innovativi, sono stati utilizzati separatamente tools di diverso tipo per le analytics, la gestione degli influencers e per le attività di intelligence (Femenia-Serra e Ivars-Biadal,

2021). Impiegare un'unica piattaforma per la raccolta, la gestione e l'elaborazione dei dati, e quindi per agevolare l'implementazione pratica di un Data Lake, potrebbe condurre a importanti miglioramenti verso una comprensione più accurata del problema. Inoltre, pur non riscontrando alcuna menzione nei casi esaminati, sarebbe auspicabile includere anche la conoscenza di aspettative e richieste dei cittadiniresidenti, che spesso convivono con difficoltà nelle zone affollate dai turisti (Biendicho et al., 2022), e le cui istanze talvolta rimangono in secondo piano nei progetti dedicati al target turista.

Come indicato in numerosi contributi scientifici, i responsabili delle DMO dovrebbero cooperare con i diversi stakeholder coinvolti nell'esperienza turistica per trovare in modo sinergico soluzioni ai fenomeni di overtourism, che nel tempo contribuiscono al decadimento della percezione nei consumatori del valore della stessa località (Femenia-Serra and Ivars-Baidal, 2021). A tal fine le DMO dovrebbero, quindi, essere consapevoli del grado di maturità turistico raggiunto dalla destinazione.

## 6. Conclusioni

Oltre alle modalità applicative e gestionali rilevate nei diversi casi, da questo studio pilota emerge quanto i Big Data siano in grado di fornire utili indicazioni ad una DMO. I casi indicano come, sia per quanto riguarda le singole strutture (Sánchez-Franco and Rey-Tienda, 2024) che per le destinazioni (Vassakis et al., 2019) l'analisi dei Big Data può rivelarsi efficace

in una pluralità di applicazioni e per obiettivi molto diversi (Belias et al., 2021; Chareyron et al., 2014). Le risposte alle domande di ricerca sono in parte inaspettate. Per rispondere alla prima domanda di ricerca (RQ1) si può affermare che le proprietà dei Big Data attualmente impiegati per diverse finalità dalle destinazioni turistiche non sono tutte ritenute strategiche, e gli ambiti e i confini applicativi sono abbastanza diversi fra loro. Nei casi esaminati non emergono chiare informazioni sulla proprietà della Veridicità, aprendo una potenziale preoccupazione su accuratezza, certezza, correttezza e precisione del dato. Gli studi analizzati, infatti, si concentrano prevalentemente sulla descrizione dei Big Data e delle loro caratteristiche, oppure, sulle strategie di individuazione, selezione e gestione dei dati finalizzate al decision making. In altre parole, la comunicazione di tali esperienze si focalizza sul contenuto e sull'utilizzo dei dati, piuttosto che sulla loro architettura o infrastruttura. Da questo studio, quindi, emergono una varietà di proprietà, ma anche l'assenza di case study di realizzazione di un Data Lake completo nell'ambito delle destinazioni turistiche. Inoltre, quel che chiaramente si è potuto osservare è che in tutti i casi si tratta di realizzazione di Data Warehouse e non di Data Lake. Il Data Lake invece, come è stato discusso in letteratura, può essere di supporto ad una DMO nel comprendere meglio i propri visitatori partendo da una pluralità di fonti, e quindi implementare strategie in grado di soddisfare al meglio le loro esigenze, aspettative e desideri. Si tratta di uno strumento necessario ai policy maker per orientare le proprie scelte in una maniera datadriven, più analitica e oggettiva. La soluzione permette, inoltre, di personalizzare la piattaforma in modo flessibile per le proprie esigenze conoscitive. Poca attenzione è stata riscontrata anche alle tecniche di Visualizzazione, ritenute fondamentali per semplificare l'analisi dei dati inseriti nei Data Lake. Il Data Lake diviene un prezioso repository di dati da cui estrarre informazioni diverse da poter visualizzare facilmente in base alle esigenze dei destination managers e di tutti gli stakeholder coinvolti. I risultati relativi alla seconda domanda di ricerca (RQ2), fanno emergere l'assenza di case study riguardanti Data Lake completi e applicati a servizio delle destinazioni turistiche.

Questa analisi comparativa risulta assai utile per impostare un progetto innovativo nel suo genere. Inoltre, stando a quanto riscontrato negli scopi e negli ambiti di applicazione dei Big Data per le destinazioni turistiche, tante sono le criticità nascoste e segnalate in letteratura. Infatti, a differenza di tutti gli aspetti positivi nell'uso dei Big Data discussi fino ad ora, nella pratica emergono alcune limitazioni nell'analisi degli stessi Big Data, tali da comportare possibili bias. Si tratta in particolare di distorsioni relative alla proprietà della Veridicità che potrebbero influenzare la capacità dei dati di fornire informazioni attendibili, come i "purchasing bias", "under-reporting bias", "consumer bias" (Hu et al., 2006) o l'estrema polarizzazione delle opinioni espresse online (Schoenmuller et al., 2020). Inoltre, molti contenuti online, grazie allo loro anonimia, possono essere soggetti al fenomeno delle false recensioni (per ragioni di varia natura, in primis competitiva) oppure a quello dei cosiddetti "haters" che a loro volta possono dimostrare la loro ostilità (in questo caso solitamente non di natura economica) verso un singolo brand o struttura oppure essere indirizzate ad una destinazione nel suo complesso. La comprensione delle potenzialità e dei limiti dell'analisi dei Big Data, prima di tutto culturali, è un passaggio importante in fase di progettazione di un nuovo Data Lake. In tal senso, l'attenzione alla proprietà della Veridicità risulta fondamentale.

L'implicazione manageriale più importante di questo studio pilota è l'ambito di applicazione immediata. Seppur molto eterogenei tra loro, l'analisi di questi quindici case studies ha permesso di definire con maggiore precisione i confini dell'Action Research relativa al progetto del Comune di Verona. Con particolare riferimento alla fase 2 dell'AR (diagnosis), questo approccio ha condotto alla definizione e creazione del Data Lake, con la raccolta, la gestione e l'elaborazione di Big Data ad hoc (dati da fonti selezionate e certificate, testuali ed enhance data di social media, recensioni Google, web anaytics, account analytics) integrati con i dati sulla mobilità (aggregati e anonimizzati) di selezionati Points of Interest (POI) della

città, al fine di analizzare i comportamenti dei visitatori e decongestionare le aree più critiche. Nel progetto SMART Verona la Varietà delle fonti dei dati è ampia, così come il relativo Volume (che comprende due anni di tracciamento). Con lo scopo di acquisire una visione d'insieme quanto più rilevante ai fini analitici e decisionali del progetto, è stata creata una piattaforma che analizza i dati integrati nel Data Lake, ove coesistono due macroset di dati: un set relativo ai dati di mobilità, e un altro set relativo ai dati sul parlato digitale. L'utilizzo congiunto dei due set restituisce un quadro integrato e multidimensionale dell'esperienza di visita nelle aree individuate. La piattaforma, inoltre, è stata progettata seguendo un approccio user-friendly, al fine di garantirne un'ottimale Visualizzazione dei dati, con fruizione fluida, intuitiva ed accessibile, anche in assenza di competenze tecniche specifiche. La piattaforma SocialMeter, brevettata dal partner tecnologico Maxfone srl, è stata poi funzionale alla fase di sperimentazione digitale del "Progetto SMART Verona". L'ambito di analisi si è focalizzato su un'area di particolare interesse storico e culturale della città con lo scopo di ridurne i nodi di congestione e promuovere un'esperienza di visita autentica e integrata anche con altri punti di interesse. Per la sperimentazione, quindi, sono state incluse altre aree, chiamate POI (Points Of Interest), fondamentali per comprendere e confrontare i flussi e le visite in arrivo e in partenza del territorio, nonché il parlato digitale relativo a tali punti. Inoltre, la piattaforma viene utilizzata anche come strumento per il monitoraggio dei risultati conseguiti attraverso le azioni di sperimentazione digitale. Questa sperimentazione testa il Valore del Data Lake per ottimizzare le decisioni strategiche dei diversi stakeholder coinvolti nel progetto. Infine, grazie all'aggiornamento in near real-time dei dati (potenziando la Velocità del sistema), è possibile effettuare un'analisi tempestiva e continua degli effetti della sperimentazione, permettendo di valutare l'efficacia degli interventi e di individuare prontamente eventuali criticità. Il real-time perfetto non è praticabile in un Data Lake come questo, in cui il dato deve essere filtrato, accuratamente selezionato, anonimizzato secondo i criteri della privacy, garantendo il requisito della Veridicità. Per limitare i rischi collegati alla privacy, i dati di mobilità raccolti per la specifica finalità sono stati resi anonimi e aggregati (processati secondo le linee guida dell'European Data Protection Board) e non possono essere ricondotti con processi inversi ai diretti interessati (persone fisiche). Tutti i dati sono confluiti in un'unica piattaforma user friendly grazie a tattiche di data visualization, accessibile da diversi stakeholder per l'analisi semplificata dei dati e dei risultati in tempo reale.

La complessità del progetto, la multidisciplinarietà e l'ambizione degli obiettivi hanno reso necessaria l'azione congiunta di più attori. Il progetto SMART Verona è stato realizzato grazie alla fitta rete collaborativa che ha coinvolto enti pubblici, partner privati e stakeholder del territorio, in particolare: il Ministero del Turismo, finanziatore del progetto e il Comune di Verona (Assessorato alla cultura al turismo e ai rapporti con l'UNESCO) promotore dell'iniziativa. Hanno contribuito alla fase di operativa: Maxfone s.r.l, Società Benefit in qualità di partner tecnologico per aver realizzato il Data Lake e la piattaforma SocialMeter; Wind Tre Business in qualità di mobility data provider; il Dipartimento di Management dell'Università di Verona per il supporto al coordinamento scientifico; la Destination Verona & Garda Foundation in qualità di DMO, e i Musei Civici di Verona quali partner della sperimentazione; AMT3 per il supporto di visibilità sui ledwall; e alcuni content creators, tra cui Stefano Cantiero e Matteo Guidotto per la realizzazione della campagna di comunicazione digitale. [Per maggiori informazioni sul progetto si rimanda al sito https://maxfone.it/smart-verona/]

In conclusione, questo articolo riporta i risultati di uno studio pilota volto a raccogliere casi di applicazioni di analisi dei Big Data in alcune destinazioni turistiche, le cui informazioni applicative non sono ancora molto diffuse in letteratura. I risultati emersi sono stati utili per la realizzazione di una Action Research dedicata alla creazione di un innovativo Data Lake applicato in una città italiana. Lo studio offre così un contributo innovativo sia a livello teorico sia operativo, per l'evoluzione della gestione data-driven delle destinazioni turistiche.

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## Bibliografia

Abdulaziz T.A., Moawad I.F., Abu-Alam W.M. (2016). Building data warehouse system for the tourism sector. IEEE 7th International Conference on Intelligent Computing and Information Systems, ICICIS 2015, art. no. 7397253, pp. 410 - 417

Allheeib N., Alraqdi M., Almukaynizi M. (2022). Data Warehouse and Interactive Map for Promoting Cultural Heritage in Saudi Arabia Using GIS. International Journal of Data Warehousing and Mining, 18 (1)

Ardito, L., Cerchione, R., Del Vecchio, P., & Raguseo, E. (2019). Big data in smart tourism: challenges, issues and opportunities. Current Issues in Tourism, 22(15), 1805-1809.

Belias, D., Malik, S., Rossidis, I., & Mantas, C. (2021). The use of big data in tourism: Current trends and directions for future research. Academic Journal of Interdisciplinary Studies, 10(5), 357-364.

Bernabeu, C., Mazón, J. N., Giner, D., & Baidal, J. (2016). Big Data and Smart Tourism Destinations: Challenges and opportunities from an industry perspective. In Proceedings of School of Hospitality and Tourism Management Conference (pp. 1-17).

Bertocchi, D., Van der Borg, J., & Camatti, N. (2021). Tourism Peaks on the Three Peaks: Using big data to monitor where, when and how many visitors impact the Dolomites UNESCO World Heritage Site. Rivista geografica italiana: CXXVIII, 3, 2021, 59-81.

Biendicho, M., Papaoikonomou, E., & Setó-Pamies, D. (2022). Tourists go home! Examining antitourism in Barcelona from an emotions perspective. Tourism Culture & Communication, 22(3), 275-295.

Buhalis, D., & Amaranggana, A. (2014, December). Smart tourism destinations enhancing tourism experience through personalisation of services. In Information and communication technologies in tourism 2015: Proceedings of the international conference in Lugano, Switzerland, February 3-6, 2015 (pp. 377-389). Cham: Springer International Publishing.

Buonincontri, P., & Micera, R. (2016). The experience co-creation in smart tourism destinations: a multiple case analysis of European destinations. Information Technology & Tourism, 16(3), 285-315.

Butler, R. W. (1980). The concept of a tourist area cycle of evolution: Implications for management of resources. Canadian geographer, 24(1), 5-12.

Camera di Commercio di Genova. (n.d.). Hub Digitale del Turismo TDH. https://www.ge.camcom.gov.it/it/promuovi/turismo/hub-digitale-del-turismotdh/hub-digitale-del-turismo-tdh

Chareyron, G., Da-Rugna, J., & Raimbault, T. (2014, October). Big data: A new challenge for tourism. In 2014 IEEE International conference on big data (big data) (pp. 5-7). IEEE.

Chessa, A., Fenu, G., Motta, E., Osborne, F., Recupero, D.R., Salatino, A., Secchi, L. (2022). Enriching Data Lakes with Knowledge Graphs. CEUR Workshop Proceedings, 3184, pp. 123 – 131.

Davenport, T. H. (2013). At the Big Data Crossroads: turning towards a smarter travel experience [White paper]. Amadeus IT Group SA.

https://www.hospitalitynet.org/file/152005125.pdf

Davenport, T. H., Barth, P., & Bean, R. (2012). How 'big data' is Different. MIT Sloan Management Review, 54(1), 22-25.

Del Chiappa, G., & Rashidin, S. (2024). Digital-based critical success factors in the Italian hospitality business. Piccola Impresa/Small Business, (1).

Del Vecchio, P., Ndou, V., & Passiante, G. (Eds.). (2018). Turismo digitale e smart destination: tecnologie, modelli e strategie per la crescita di un sistema turistico integrato. FrancoAngeli.

Dixon, J.: Pentaho, Hadoop, and data lakes, October 2010. https://jamesdixon. wordpress.com/2010/10/14/pentaho-hadoop-and-data-lakes/

Dolnicar, S., & Greene, D. (2025). Research for environmentally sustainable tourism–All talk, no action?. Journal of Hospitality and Tourism Management, 62, 28-33.

Elia, G., & Solazzo, G. (2018). Il paradigma tecnologico dei Big Data per lo Smart Tourism. In P. Del Vecchio, V. Ndou, & G. Passiante (Eds.), Turismo digitale e smart destination: tecnologie, modelli e strategie per la crescita di un sistema turistico integrato (pp. 93-122). FrancoAngeli.

ENIT SpA. (2025, 4 marzo). Enit all'ITB di Berlino presentati i dati sui trend del turismo italiano [Press release]. ENIT SpA. https://www.enit.it/it/enit-allitb-diberlino-presentati-i-dati-sui-trend-del-turismo-italiano

Erro-Garcés, A., & Alfaro-Tanco, J. A. (2020). Action Research as a MetaMethodology in the Management Field. International Journal of Qualitative Methods, 19, 1-11.

European Capital and Green Pioneer of Smart Tourism. (n.d.). Benidorm – 2025 European Green Pioneer of Smart Tourism. European Commission. Consultato il 20 giugno 2025 da https://smart-tourism-capital.ec.europa.eu/benidorm-2025european-green-pioneer-smart-tourism_en

Fader, P.S., & Winer, R.S. (2012). Introduction to the special issue on the emergence and impact of user-generated content. Marketing Science, 31(3), 369-371.

Fan, S., Lau, R. Y., & Zhao, J. L. (2015). Demystifying big data analytics for business intelligence through the lens of marketing mix. Big Data Research, 2(1), 28-32.

Fauzi, C., Pribadi, D.S., Alifi, M.R. (2023). Spatial data warehouse: an analysis in tourism sector of west java province. International Journal of Basic and Applied Science, 11 (4), pp. 161 - 171

Femenia-Serra, F., & Ivars-Baidal, J. A. (2021). Do smart tourism destinations really work? The case of Benidorm. Asia Pacific journal of tourism research, 26(4), 365-384.

Fuchs, M., Höpken, W., & Lexhagen, M. (2014). Big data analytics for knowledge generation in tourism destinations – A case from Sweden. Journal of destination marketing & management, 3(4), 198-209.

Gajdošík, T. (2019, January). Big Data Analytics in Smart Tourism. In Smart Tourism as a Driver for Culture and Sustainability: Fifth International Conference IACuDiT, Athens 2018 (p. 15). Springer.

Galvagno, M., & Dalli, D. (2014). Theory of value co-creation: a systematic literature review. Managing service quality, 24(6), 643-683.

Gärtner, B., & Hiebl, M. R. (2017). Issues with big data. In The Routledge companion to accounting information systems (pp. 161-172). Routledge.

Gulia, P., & Chahal, A. (2020). Big data analytics for iot. International Journal of Advanced Research in Engineering and Technology (IJARET), 11(6).

Ho, T., Nguyen, V. H., Le, T., Le, H. S., Nguyen, D. T., Mai, T., ... & Truong, H. P. (2023). A new model for collecting, storing, and analyzing big data on customer feedback in the tourism industry. Interdisciplinary Journal of Information, Knowledge, and Management, 18, 225-249.

Höpken, W., Fuchs, M., Keil, D., & Lexhagen, M. (2015). Business intelligence for cross-process knowledge extraction at tourism destinations. Information Technology & Tourism, 15(2), 101-130.

Hu, N., Pavlou, P. A., & Zhang, J. (2006, June). Can online reviews reveal a product's true quality? Empirical findings and analytical modeling of online word-of-mouth communication. In Proceedings of the 7th ACM conference on Electronic commerce (pp. 324-330).

Johnson, J. E. (2012). Big Data+ Big Analytics= Big Opportunity. Financial Executive, 28(6).

Kotler, P., Bowen, J. T., Makens J. C., & Baloglu, S. (2018). Marketing del turismo. Pearson Italia, edizione italiana a cura di Mauri A. G. (7th ed.).

Kotler, P., Kartajaya, H., Den Huan, H., & Mussry, J. (2024). Il nuovo marketing imprenditoriale. Creatività, innovazione, sostenibilità. Ulrico Hoepli.

Laney, D. (2001). 3D data management: Controlling data volume, velocity and variety. META group research note, 6(70), 1.

Lee, I. (2017). Big data: Dimensions, evolution, impacts, and challenges. Business horizons, 60(3), 293-303.

Li, J., Xu, L., Tang, L., Wang, S., & Li, L. (2018). Big data in tourism research: A literature review. Tourism management, 68, 301-323.

Marine-Roig, E., & Clavé, S. A. (2015). Tourism analytics with massive usergenerated content: A case study of Barcelona, Journal of destination marketing & management, 4(3), 162-172.

Ministero del Turismo. (2022, marzo). PNRR – Turismo 4.0. https://www.ministeroturismo.gov.it/wp-content/uploads/2022/03/PNRR-

MITUR.pdf

Ministero del Turismo. (n.d.). Attuazione Misure PNRR. Ministero del Turismo. htpps://ministeroturismo.gov.it/pnrr/

Nambiar, A., & Mundra, D. (2022). An overview of data warehouse and data lake in modern enterprise data management. Big data and cognitive computing, 6(4), 132.

Näslund, D., Kale, R., & Paulraj, A. (2011). Action research in supply chain management—a framework for relevant and rigorous research. Journal of Business Logistics, 31(2), 331-355.

O'Leary, D., & Coghlan, D. (2022). Action research in hospitality and tourism research. In Contemporary research methods in hospitality and tourism (pp. 237-251). Emerald Publishing Limited.

Oliver, V., Garcia, E., Solana, A., González, R., Pelaez, M. V., & Tome, M. J.

(2014). Big Data and Tourism: New indicators for tourism management. RocaSavatella & Telefónica Report.

Pan, B., Yang, Y. (2017). Monitoring and forecasting tourist activities with big data. In M. Uysal, Z. Schwartz, & E. Sirakaya-Turk (Eds.), Management science in hospitality and tourism: Theory, Practice, and Applications (pp. 43-62), Apple Academic Press.

Presenza, A., Panniello, U., & Messeni Petruzzelli, A. (2021). Tourism multi-sided platforms and the social innovation trajectory: The case of Airbnb. Creativity and Innovation Management, 30(1), 47-62.

Racherla, P., Hu, C., & Hyun, M. Y. (2008). Exploring the role of innovative technologies in building a knowledge-based destination. Current issues in tourism, 11(5), 407-428.

Rahman, H., Begum, S., & Ahmed, M. U. (2016, October). Ins and outs of big data: A review. In International Conference on IoT Technologies for HealthCare (pp. 44-51). Cham: Springer International Publishing.

Ramos C.M.Q., Martins D.J., Serra F., Lam R., Cardoso P.J.S., Correia M.B., Rodrigues J.M.F. (2017). Framework for a hospitality big data warehouse: The implementation of an efficient hospitality business intelligence system. International Journal of Information Systems in the Service Sector, 9 (2), pp. 27 – 45.

Rose, K., Eldridge, S., & Chapin, L. (2015). The internet of things: An overview. The internet society (ISOC), 80(15), 1-53.

Sánchez-Franco, M. J., & Rey-Tienda, S. (2024). The role of user-generated content in tourism decision-making: an exemplary study on Andalusia, Spain. Management Decision, 62(7), 2292-2328.

Schoenmueller, V., Netzer, O., & Stahl, F. (2020). The polarity of online reviews: Prevalence, drivers and implications. Journal of Marketing Research, 57(5), 853-877.

Singh P., Dayalbagh V.D. (2022). Data Warehouse With OLAP Technology for the

Tourism Industry. Encyclopedia of Data Science and Machine Learning, pp. 191 – 211.

Stefanizzi, P., Ndou, V., & Mele, G. (2018). Trend e dinamiche del turismo nella digital economy. In Turismo digitale e smart destination: Tecnologie, modelli e strategie per la crescita di un sistema turistico integrato. Franco Angeli.

Van der Zee, E. L., Bertocchi, D. & Janusz, K. (2017). Using Big Data to discover how the maturity of a heritage destination influences the use and attractiveness of urban cultural landscape. A case study of Antwerp, Bolzano and Kraków. In Proceedings of TLC2016 Conference-Tourism and cultural landscape: Towards a sustainable approach (pp. 614-628). Foundation for Information Society (INFOTA).

Vassakis, K., Petrakis, E., Kopanakis, I., Makridis, J., & Mastorakis, G. (2019). Location-based social network data for tourism destinations. Big data and innovation in tourism, travel, and hospitality: managerial approaches, techniques, and applications, 105-114.

# Reimagining Science Communication through Experiential Marketing: Immersion, Emotion, and Co-Creation

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## Abstract

Science communication today faces a profound paradox: while scientific knowledge is expanding in complexity and relevance, public engagement often remains superficial, fragmented, or absent. This short paper proposes a conceptual reflection on how experiential marketing can inform a renewed approach to science communication—one that prioritizes immersion, emotional resonance, and co-created meaning. Borrowing tools and principles from experiential marketing—originally developed in consumer and cultural branding—we argue that science communication can be reimagined as an emotionally credible and sensorially rich encounter. Through immersive environments, affective design, and identity-based storytelling, public engagement with science can move beyond information transmission and become a participatory, memorable experience. This vision opens up new possibilities for museums, installations, and festivals, offering an alternative to the linear, deficit-driven communication models still prevalent in institutional contexts.

*Keywords: Science Communication – Experiential Marketing – Immersion – Emotional Engagement – Co-creation – Authenticity*

## 1. Background and Conceptual Positioning

Science communication has long been shaped by a diversity of models—ranging from the deficit model, focused on correcting knowledge gaps, to dialogue and participation-based models that emphasize interaction, reflexivity, and co-production. While the deficit model is often critiqued for assuming passive publics and linear knowledge transfer, it continues to serve useful purposes in certain institutional and educational settings—particularly when clarity, authority, and scientific literacy are required.

Rather than opposing these models in a rigid hierarchy, current scholarship increasingly recognizes their coexistence and contextual validity. Depending on institutional goals, public expectations, and the nature of the scientific topic, different modes of engagement may be more or less appropriate. However, what remains consistent across this spectrum is a growing awareness of the limits of purely cognitive engagement, especially in a media landscape saturated with fragmented information, affective polarization, and declining public trust.

In this evolving scenario, experiential approaches—which incorporate sensory immersion, emotional resonance, and participatory dynamics—are emerging as powerful complements to traditional forms of science communication. Experiential marketing, in particular, offers

conceptual and practical resources to design science engagement formats that are not only informative, but also felt, remembered, and personally meaningful.

## 2. Experiential Marketing as a Lever For Science Communication

Experiential marketing (EM) provides a valuable conceptual and methodological toolkit for rethinking science communication as an immersive and affective encounter. At its core, EM shifts the focus from the transmission of information to the design of memorable, multisensory, and emotionally resonant experiences—intended not merely to inform, but to engage, involve, and transform.

In experiential formats such as science museums, festivals, exhibitions, and installations, audiences are no longer passive recipients of content, but active participants in meaning-making. They connect with scientific knowledge through embodied engagement, emotional resonance, and narrative identification. The objective is not simplification or dramatization, but the activation of cognitive, emotional, and sensory dimensions within a coherent and authentic experience.

This experiential logic is already visible in many science communication contexts, where techniques such as multisensory environments, symbolic storytelling, and scenographic staging are used to translate abstract or technical content into situated, emotionally rich experiences. These are what we refer to as "experience events"—formats that structurally align the goals of science communication with spatial, symbolic, and affective design.

Crucially, we argue that the value of EM in science communication lies not simply in its capacity to capture attention, but in its potential to foster what we define as emotional coherence: a structural alignment between the emotional tone of the experience and the epistemic nature of the content. When this coherence is achieved, it enhances credibility, memorability, and public trust in scientific institutions.

However, this potential must be approached critically. Experiential strategies risk turning science into spectacle or reducing engagement to fleeting emotional reactions if applied without epistemic grounding. To avoid this, EM must be reinterpreted—not as a marketing tactic, but as a design orientation that supports both affective connection and scientific integrity.

This contribution proposes a conceptual reorientation: from a commercially inspired logic of attraction to an epistemically grounded experiential design. We do not call for a general expansion of EM in science communication, but for its careful, situated application in formats where immersion, co-creation, and emotional resonance can meaningfully enhance public engagement. Future research may explore how diverse publics interact with these experiential events, and how such encounters shape trust, learning, and identity in relation to science.

## References upon request

# Mapping the Memorable Guest Experience in Luxury Hospitality: An Exploratory Study Combining CADS and AI

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## Abstract

In luxury hospitality, guest satisfaction increasingly depends on personalized, emotionally resonant, and contextually rich experiences. Informed by this trend, the present study examines the Memorable Guest Experience (MGE) at a resort of the Mangia's group—an Italian luxury hospitality brand—by combining Corpus-Assisted Discourse Studies (CADS) and artificial intelligence (AI). Through the analysis of English- and Italian-language online reviews, the study explores the discursive construction of satisfaction and memorability while identifying key experiential themes. The CADS analysis reveals that both English- and Italian-speaking guests focus on core service elements—such as lodging, staff, and dining—but use different evaluative tones: the former tend to express satisfaction and memorability in more moderate and measured terms, while the latter rely on overtly positive appraisals, suggesting different standards of luxury. Furthermore, the AI-assisted classification of the English reviews, based on a seven-dimension MGE framework, indicates that contextual elements, social interaction, and emotional engagement are the most frequently referenced experiential dimensions. The findings confirm the importance of aesthetic environments, meaningful human encounters, and affective responses in luxury hospitality. By drawing on marketing and linguistic perspectives, the study offers insights for both academics and practitioners into how user-generated content (UGC) reflects evolving luxury expectations. This, in turn, underscores the value of UGC as a resource for strategic experience design, brand differentiation, and emotionally intelligent service delivery in the hospitality industry.

*Keywords: Hospitality Marketing, Digital Discourse, UGC, Online Reviews, Tripadvisor*

## 1. Introduction

In luxury consumption, traditional markers of status and exclusivity are increasingly replaced by personalized, meaningful, and accessible experiences. Psychological motivations, such as the pursuit of self-fulfillment and social recognition, remain central to consumer behavior (Dubois et al., 2021), but these are now influenced by broader socio-economic transformations, including those accelerated by the COVID-19 pandemic. Soni & Kumar (2024) describe the emergence of a "new luxury," which prioritizes wellness, authenticity, and sustainable values over material excess. This shift is further reinforced by the rise of the sharing economy, where access-based models of consumption are gaining prominence (Christodoulides et al., 2021; Eckhardt & Bardhi, 2019).

Cultural and religious norms also play a significant role in shaping luxury consumption. For instance, Abalkhail (2020) highlights how in certain societies, aspirations for luxury may conflict with values that emphasize modesty and restraint. Zakaria et al. (2020) further emphasize that emotional and environmental considerations are becoming critical to how luxury is defined and experienced across different markets. At the brand level, it is the emotional resonance of luxury offerings— rather than purely their price or exclusivity—that increasingly drives both initial and repeated consumption (Atkinson & Kang, 2021; Roy et al., 2018).

In the context of luxury hospitality, these evolving expectations manifest in demand for highly personalized services (Panchapakesan et al., 2021), consistent and meaningful staff-guest interactions (Loo & Leung, 2016), and robust employee training programs that support quality delivery and emotional intelligence (Todorović & Ivanović, 2018). Shin & Jeong (2022) demonstrate that while technology can enhance efficiency and convenience, it must be seamlessly integrated with human service to preserve the intimacy and emotional warmth expected in luxury settings. Additionally, digital reputation and green practices have become vital to guest satisfaction, as online reviews and perceived sustainability efforts influence consumer trust and loyalty (Dang et al., 2022; Herstein et al., 2018; Xiang et al., 2015). The sensory richness and aesthetic qualities of luxury properties also contribute to overall guest impressions, reinforcing the need for well-designed physical environments (Giglio et al., 2020).

In light of these shifting expectations, the concept of *Memorable Tourism Experience* (MTE; Tung & Ritchie, 2011) offers a valuable lens for understanding how emotionally resonant and personally meaningful encounters have become central to the perceived value of luxury hospitality. Building on this framework, and drawing from more recent literature on luxury hospitality consumption and experiential branding, this study delves into the case study of Mangia's to explore the *Memorable Guest Experience* (MGE) as reflected in the discourse of online consumer reviews (Vásquez, 2014).

Mangia's is a luxury hospitality brand offering a portfolio of upscale resorts, clubs, and restaurants in the Italian islands of Sicily and Sardinia. The brand positions itself at the intersection of Mediterranean heritage, sustainable luxury, and personalized service. It caters primarily to international and domestic clients seeking immersive experiences that blend natural beauty, authentic regional cuisine, and high-quality amenities. This strategic positioning makes Mangia's a valuable case study for exploring the evolving expectations of luxury guests—particularly in the context of Sicily and Sardinia, which serve as iconic yet underexamined destinations within the global luxury hospitality industry (Lo Mascolo et al., 2024).

The present study is part of a broader research exploring guest experiences across multiple Mangia's resorts in Sicily and Sardinia. As a preliminary investigation, this paper focuses exclusively on the Sardinian resort Mangia's Santa Teresa Sardinia, Curio Collection by Hilton and analyzes how the MGE is reflected in online reviews. The analysis combines Corpus-Assisted Discourse Studies (CADS; Baker, 2023; Gillings et al., 2023) and artificial intelligence (AI) to capture both linguistic insights and experiential themes. By integrating macro-level corpus techniques with micro-level experiential mapping, the study identifies both recurring discursive patterns and key dimensions that shape guest satisfaction and memorability.

Although exploratory in nature, this contribution offers valuable insights for both scholars and industry professionals. From the standpoint of academic inquiry, it advances hospitality and tourism research by drawing on marketing and linguistic perspectives to examine digital discourse within the MGE framework, with particular attention to outcomes such as guest

satisfaction, brand loyalty, and positive guest advocacy. For industry practitioners, the findings offer a practical foundation for designing experiences that align with the expectations and values of today's discerning guests. By connecting theoretical insights with real-world applications, the study supports ongoing efforts to enhance the quality and emotional resonance of hospitality services—deepening understanding of guest satisfaction and aligning with current trends in service innovation.

## 2. The MGE in the Luxury Hospitality Industry

In the realm of luxury hospitality, delivering an unforgettable guest experience is crucial to achieving high levels of satisfaction and cultivating brand loyalty. While Tung & Ritchie (2011) identified four core dimensions of the MTE—i.e., affection, expectations, consequentiality, and recollection—recent literature on luxury consumption in hospitality settings suggests a broader and more nuanced set of experiential factors. These are shaped by evolving consumer values, particularly those related to personalization, emotional connection, wellness, and authenticity.

As highlighted by D'Acunto & Volo (2021), guests interpret the notion of luxury in diverse ways, associating it with different values and expectations, which in turn influence their service perceptions and behaviors. This reinforces the necessity for personalization—a theme further explored by Lin & Choe (2022), who argue that tailoring luxury services to individual preferences significantly increases engagement and enhances perceived value. Such personalization deepens the emotional and cognitive resonance of the guest experience, making it more memorable.

Another indispensable factor is service quality. According to Alex (2024), luxury hotel clientele place strong emphasis on customized attention and meticulous service. Meeting these expectations not only fosters guest satisfaction but also strengthens long-term brand commitment. Closely related is the idea of co-creation, whereby meaningful staff–guest interactions contribute to more emotionally rich and personally relevant experiences. Harkison (2017) emphasizes how collaborative encounters foster stronger emotional connections, while Panchapakesan et al. (2021) highlight the role of exceptional service in triggering guest delight—an emotional response that encourages advocacy and repeat patronage.

The physical and sensory environment also plays a pivotal role in shaping guest experiences. Harkison et al. (2018) note a sector-wide shift from product-based offerings to immersive, guest-centric experiences that appeal to the senses. This is echoed by Park et al. (2020), who emphasize the importance of wellness-oriented features and spatial design in enhancing satisfaction and differentiation in the luxury segment.

In parallel, digital technologies have become integral to modern luxury experiences. Shin & Jeong (2022) stress that technological enhancements must be harmonized with the emotional warmth of traditional service to avoid undermining guest expectations. Finally, online reputation has emerged as a critical aspect of the guest journey. Cenni et al. (2020) and Chang et al. (2020) note that online reviews are now a key indicator of service credibility, shaping both pre-visit expectations and postvisit evaluations.

Drawing from these interconnected themes in the literature, the present study adopts an expanded MGE framework comprising seven key dimensions that reflect the emotional, cognitive, sensory, social, and contextual components of memorable luxury experiences, as supported by prior research:

i. *Emotional engagement* is foundational, as feelings of joy, awe, or excitement deepen guests' emotional connection with their experience and enhance positive word-of-mouth (Bai et al., 2023; Ezeh and Dube, 2024).

ii. *Cognitive involvement*, including reflection, learning, and curiosity, is another key factor, with storytelling and interpretation being instrumental in enhancing mental engagement (Kim, 2010).

iii. *Sensory stimulation*, through rich visual, auditory, tactile, olfactory, or gustatory cues, plays a critical role in reinforcing memories. Unique culinary experiences or visually striking settings, for instance, often result in vivid and enduring recollections (Vukoičić et al., 2024).

iv. *Social interaction*, including meaningful exchanges with locals, fellow guests, or staff, enhances memorability by adding relational depth to the experience (Wang et al., 2021).

v. *Novelty* provides a sense of adventure and distinctiveness, helping experiences stand out in a saturated market (Lee & Li, 2019).

vi. *Personal relevance*, or how well an experience aligns with individual preferences, values, or life narratives, significantly influences how guests encode and recall their experiences. Tailored encounters that resonate with the guest's identity are more likely to be remembered and shared.

vii. *Contextual elements* such as ambiance, accessibility, and the broader cultural and physical environment further contribute to the overall memorability of the experience.

Together, the growing body of research on luxury consumption and experiences points to a paradigm shift in how value is created and perceived in hospitality. Offerings that are emotionally rich, cognitively engaging, sensorially immersive, and personally meaningful lie at the heart of both guest memorability and modern luxury. For hospitality providers, this underscores the importance of designing experiences that are not only exceptional in quality but also aligned with evolving consumer values—particularly those related to authenticity, sustainability, and emotional connection.

## 3. Methodology

This study employs a hybrid methodological framework that combines CADS with AI. The data consist of user-generated content (UGC) in the form of online reviews published on the resort's Tripadvisor page between June 2024 and May 2025. Tripadvisor was selected as the data source because it is one of the most widely used digital platforms in hospitality and tourism, offering a vast repository of guest reviews. As of 2018, the platform had collected nearly 730 million reviews and opinions across more than eight million listings, including hotels, restaurants, and attractions (Antonio et al., 2020). It attracts hundreds of millions of users worldwide and encourages contributors to share honest, experience-based feedback, making it a rich and credible source of experiential data.

### 3.1 CADS Analysis

CADS is a methodological approach that combines techniques from corpus linguistics with the interpretive orientation of discourse analysis. It enables the identification of recurring lexical patterns in large electronic corpora while also interpreting their contextual and

ideological significance (Baker, 2023; Gillings et al., 2023). In this study, CADS was used to examine how guests narrate and evaluate their resort experiences in online reviews.

At the time of data collection (i.e., June 2025), the resort's Tripadvisor page featured 95 reviews written in a range of languages, including English (41), Italian (40), Portuguese (5), French (4), Dutch (2), Danish (1), German (1), and Polish (1). For analytical depth and cross-linguistic comparison, the study focused exclusively on English- and Italian-language reviews—the two most substantial groups—assumed to reflect the experiences of international and domestic guests, respectively. Each selected review was manually extracted as a separate text file, maintaining a one-to-one Corresponding author between files and reviews. The files were then imported into #LancsBox X (Brezina & Platt, 2025) to build two distinct corpora: *MangiasEN* (English reviews) and *MangiasIT* (Italian reviews).

Both corpora underwent lemmatization and part-of-speech (POS) tagging[15] to reduce morphological variation and distinguish grammatical categories. This preprocessing procedure enabled more accurate identification of content words (i.e., nouns, verbs, adverbs, and adjectives) and facilitated the retrieval of consistent lexical patterns across texts.

A frequency analysis was conducted to identify the 15 most frequent contentword lemmas in each corpus. This enabled the detection of prominent experiential themes discussed by guests and highlighted commonly referenced aspects of the resort. Additionally, to assess lexical diversity—i.e., the variety of vocabulary used in each corpus—the type/token[16] ratio (TTR) was calculated. TTR is computed by dividing the number of unique word types by the total number of tokens and multiplying the result by 100 (Brezina, 2018).

To further explore how guests articulate evaluation and satisfaction, concordance analysis was employed. This technique examines how a specific word— referred to as the *node*—functions in context by displaying its surrounding co-text in a table format. In this study, concordance analysis focused on three highly frequent evaluative adjectives: *good* in the MangiasEN corpus, and *ottimo* (great) and *perfetto* (perfect) in the MangiasIT corpus. By examining their concordance lines, the analysis identified the referents of these adjectives, thereby illuminating how satisfaction and memorability were linguistically constructed.

### 3.2 AI-Assisted Analysis

In addition to CADS, the study employed an AI-supported classification of reviews based on the MGE framework. At this preliminary stage, the AI-assisted analysis was conducted exclusively on the English reviews. The classification was performed using ChatGPT-4, a large language model developed by OpenAI, which enabled the identification of the MGE dimensions present in each review and how they were linguistically expressed.

The classification procedure followed a structured protocol to ensure replicability and consistency. English reviews were submitted to ChatGPT-4 along with a carefully designed prompt that guided the classification process. The prompt instructed the model to identify which of the seven MGE dimensions were present, justify each classification based on linguistic evidence, and extract a representative quote from the reviews. The dimensions were defined directly within the prompt to ensure interpretative clarity and transparency. The full prompt used for the analysis is reported below:

[15] *Lemmatization* is the process of reducing a word to its base form (i.e., lemma)—for instance, *stayed*, *staying*, and *stays* are reduced to *stay*. *Part-of-speech (POS) tagging* involves assigning each word a grammatical category, such as noun, verb, adjective, or adverb, which enables more precise linguistic analysis.

[16] A *token* refers to any individual word occurrence in a corpus, regardless of repetition. A *type* refers to each unique word form. For instance, in the sentence *dinner was excellent and the service was excellent too,* there are nine tokens but only seven types, as the words *was* and *excellent* appear twice but are each counted once as type

*Read the following online reviews and identify which of the seven dimensions of the Memorable Guest Experience (MGE) are present. For each dimension you detect, provide:*

a. *The name of the dimension*

b. *A brief justification for your choice (based on the language used)*

c. *A representative quote from the review that illustrates it*

*The seven MGE dimensions are defined as follows:*

i. *Emotional engagement: expressions of joy, awe, excitement, or emotional connection*

ii. *Cognitive involvement: signs of learning, reflection, or curiosity; appreciation of storytelling or cultural interpretation*

iii. *Sensory stimulation: references to visual, auditory, tactile, olfactory, or gustatory impressions*

iv. *Social interaction: mentions of meaningful exchanges with staff, fellow guests, or locals*

v. *Novelty: descriptions of new, unique, or adventurous experiences*

vi. *Personal relevance: alignment between the experience and the reviewer's personal values, identity, or preferences*

vii. *Contextual elements: mentions of ambiance, accessibility, architectural design, or the broader physical/cultural environment*

The model's output included a list of present dimensions, short justifications, and direct quotes extracted from the reviews. These results were subsequently aggregated to produce frequency counts of each MGE dimension. All AI-generated results were manually reviewed to verify accuracy, correct potential misclassifications, and ensure contextual alignment with the intended framework.

This AI-assisted procedure enabled a scalable and systematic mapping of experiential content, enhancing consistency and efficiency in the preliminary analysis. Importantly, all outputs underwent human validation to ensure interpretive rigor. The combination of AI-supported categorization and CADS analysis allowed for a duallayered examination of guest experience, revealing both the key experiential dimensions reflected in online reviews and the discursive patterns through which satisfaction and memorability were constructed.

## 4. Findings and Discussion

### 4.1 MGE Narratives in the MangiasEN and MangiasIT Corpora

As shown in Table 1, the MangiasEN corpus consists of 41 English reviews, comprising 10,396 tokens, 1,925 types, and 1,791 lemmas. The MangiasIT corpus, slightly smaller, includes 40 Italian reviews, with a total of 2,783 tokens, 924 types, and 980 lemmas. While the lower token count in the MangiasIT corpus suggests that Italian reviews are shorter in length, both corpora are sufficiently robust to support meaningful comparative analysis. To assess lexical diversity, the TTR was calculated for each corpus. The resulting ratios provide an indication of how diverse the vocabulary is within each set of texts: the MangiasEN corpus

yielded a TTR of 18.52%, while the MangiasIT corpus showed a higher TTR of 33.21% (Table 1).

| | **MangiasEN** | **MangiasIT** |
|---|---|---|
| **Files** | 41 | 40 |
| **Tokens** | 10,396 | 2,783 |
| **Types** | 1,925 | 924 |
| **Lemmas** | 1,791 | 980 |
| **TTR** | 18.5% | 33.2% |

**Table 1:** Corpus Statistics for the MangiasEN and MangiasIT Corpora

This difference suggests that the Italian reviews, although shorter, contain a greater proportion of unique word forms. However, this contrast must be interpreted in light of the known sensitivity of TTR to corpus size (Brezina, 2018). Smaller corpora tend to yield higher TTR values due to reduced lexical repetition, whereas bigger corpora naturally include more recurring vocabulary, which lowers the TTR. Therefore, while the Italian reviews appear more lexically diverse, this may partly result from their brevity. At the same time, these TTR values may also reflect different reviewing conventions between domestic and international guests—Italian-speaking reviewers may use more varied or expressive vocabulary in shorter texts, whereas English reviews may rely more heavily on formulaic or descriptive phrasing typical of travel narratives. To explore these patterns more deeply, a fine-grained qualitative analysis of larger discourse segments will be necessary to contextualize vocabulary choices and their implications for guest experience.

A frequency analysis of content-word lemmas was conducted on both corpora to identify the most prominent experiential references. The top 15 most frequent lemmas—categorized by POS—are presented in Table 2.

| | **MangiasEN** | | **MangiasIT** | |
|---|---|---|---|---|
| **Rank** | **Lemma_POS** | **Relative Frequency** | **Lemma_POS** | **Relative Frequency** |
| 1 | hotel_n | 130.82% | struttura_n | 82.64% |
| 2 | room_n | 70.22% | personale_n | 75.46% |
| 3 | staff_n | 62.52% | camera_n | 71.86% |
| 4 | food_n | 43.29% | colazione_n | 50.31% |
| 5 | service_n | 40.40% | buffet_n | 50.31% |
| 6 | bar_n | 36.55% | ristorante_n | 50.31% |
| 7 | day_n | 36.55% | ottimo_adj | 50.31% |
| 8 | drink_n | 34.63% | esperienza_n | 46.71% |
| 9 | good_adj | 32.70% | servizio_n | 43.12% |
| 10 | restaurant_n | 30.78% | cibo_n | 43.12% |
| 11 | pool_n | 30.78% | pulizia_n | 39.53% |
| 12 | time_n | 28.86% | vista_n | 35.93% |
| 13 | stay_n | 28.86% | relax_n | 35.93% |

| | | | | |
|---|---|---|---|---|
| 14 | beach_n | 27.90% | perfetto_adj | 35.93% |
| 15 | star_n | 27.90% | qualità_n | 35.93% |

**Table 2:** Top 15 Most Frequent POS-Tagged Lemmas in the MangiasEn and MangiasIT Corpora

The English reviews show a consistent focus on core hospitality elements. Among the most frequent lemmas are *hotel*, *room*, *staff*, *food*, *service*, and *restaurant*, indicating that guests frequently comment on lodging, staff, and dining. These terms point to the foundational aspects of the luxury resort experience, with *room* and *staff* particularly central to perceptions of comfort and service quality. Additionally, several lemmas refer to amenities and leisure activities—such as *bar*, *drink*, *pool*, and *beach*— which highlight the importance of recreational features in the international guests' experience. Temporal structuring is evident through words like *day*, *stay*, and *time*, which often serve to narrate the sequence or duration of the visit rather than contribute evaluative content. The lemma *star* likely refers to the resort's rating, serving as a shorthand for institutional quality markers or summary judgments. Notably, *good* is the only explicitly positive evaluative adjective among the top 15 lemmas. While it signals general satisfaction, its tone is relatively moderate and lacks the emphatic intensity found in the Italian reviews. Overall, the English corpus reflects a narrative style that is descriptive, experience-focused, and shaped by references to both tangible amenities and standardized quality indicators.

The Italian corpus reveals a comparable experiential core, with frequent lemmas such as *struttura* (establishment), *personale* (staff), *camera* (room), *colazione* (breakfast), *buffet*, *ristorante* (restaurant), and *cibo* (food). These terms confirm the importance of the physical setting and dining in shaping the guest experience. In contrast to the English corpus, however, Italian reviews feature more explicit evaluative and affective language. The adjectives *ottimo* (great) and *perfetto* (perfect) are both among the most frequent lemmas, suggesting that domestic guests tend to express satisfaction in more emphatic terms. The presence of *qualità* (quality), *servizio* (service), and *pulizia* (cleanliness) points to an emphasis on evaluative criteria and operational standards, while *vista* (view) and *relax* (relaxation) suggest attention to scenic elements and leisure-oriented aspects of the stay. In addition, the lemma *esperienza* (experience) appears frequently, pointing to an overarching concern with the memorability and meaningfulness of the visit.

The frequency analysis shows that both language groups focus on similar core aspects of the resort experience—particularly lodging, staff, and dining—as indicated by high-frequency lemmas such as *room*, *staff*, *food*, and *service* in English, and *camera*, *personale*, *cibo*, and *servizio* in Italian. English reviews also include frequent references to leisure facilities (*bar*, *drink*, *pool*, *beach*), while Italian reviews include lemmas such as *qualità*, *relax*, and *esperienza*, pointing to concerns with the perceived quality and overall experiential value of the stay. Additionally, the use of the adjective *good* in English, compared to *ottimo* and *perfetto* in Italian, suggests a difference in the intensity of evaluative language, which in turn may reflect different standards of luxury. These patterns indicate shared experiential themes but also hint at different emphases in how satisfaction is expressed. While frequency alone cannot reveal the full discursive construction of guest experiences, these findings offer a foundation for deeper qualitative analysis.

These frequency patterns are further contextualized by the distribution of satisfaction ratings explicitly stated in the reviews. On Tripadvisor, users are prompted to assign a numerical rating to their experience at the time of submitting their review, selecting from one to five stars—where five indicates the highest level of satisfaction and one the lowest. As shown in Table 3, the English reviews present a broader spread of satisfaction ratings. Of the 40 English reviews analyzed, 15 assigned the maximum five-star rating, while the remaining reviews include a significant number of moderate and low scores—specifically, seven one-star and five two-star ratings. This variation mirrors the more moderate tone and less emphatic evaluative language observed in the English corpus. By contrast, the Italian reviews exhibit markedly higher levels of guest satisfaction: 36 out of 40 assigned the maximum five-star rating, with only four Italian reviews falling below this level. This trend aligns with the frequent use of strongly positive adjectives such as *ottimo* and *perfetto*, reflecting a more emphatic and overtly positive mode of evaluation.

| **English-Language Ratings** | | **Italian-Language Ratings** | |
|---|---|---|---|
| ***** | 15 | ***** | 36 |
| **** | 5 | **** | 2 |
| *** | 9 | *** | 2 |
| ** | 5 | ** | 0 |
| * | 7 | * | 0 |

**Table 3:** Guest Satisfaction Ratings in English and Italian Tripadvisor Reviews

Taken together, the lexical and rating data suggest that English-speaking reviewers tend to be more measured in their appraisals, both linguistically and numerically. They use less intense evaluative language and assign a broader range of satisfaction scores, including a notable number of low and moderate ratings. By contrast, Italian-speaking reviewers tend to frame their experiences in unequivocally positive terms. Their reviews frequently include strongly positive adjectives and are overwhelmingly accompanied by the highest possible star rating. This Corresponding author between linguistic expression and satisfaction score reinforces the idea that guest experience is not only shaped by the resort's offerings but also mediated through different reviewing conventions and cultural communication styles.

### 4.2 MGE Dimensions in the MangiasEN Corpus

The AI-assisted analysis of the English reviews reveals that all seven dimensions of the MGE framework are represented, though with different levels of frequency and emphasis. Table 4 shows that the most frequently occurring dimension is contextual elements (35 occurrences), followed by social interaction (26), emotional engagement (21), sensory stimulation (4), cognitive involvement (4), personal relevance (3), and novelty (1).

| **MGE Dimensions** | **Occurrences** |
|---|---|
| Contextual elements | 35 |
| Social interaction | 26 |
| Emotional engagement | 21 |

| | |
|---|---|
| Sensory stimulation | 4 |
| Cognitive involvement | 4 |
| Personal relevance | 3 |
| Novelty | 1 |

**Table 4:** Occurrences of the MGE Dimensions in the English Tripadvisor Reviews

Among these, contextual elements appear prominently in descriptions of the resort's natural setting, architectural design, spatial layout, and accessibility. Guests often refer to scenic sea views, well-maintained public areas, and the quality of the built environment as key components of their experience. One reviewer describes "lovely, contemporary and spotless public areas," while another highlights a "nice stay amidst a gorgeous landscape... immaculate room, lovely surroundings." These details underscore the importance of physical surroundings in shaping memorability.

Social interaction also emerges as a central dimension, with numerous reviews highlighting encounters with staff—both positive and negative. Personalized service, friendly and attentive behavior, and the naming of individual employees are frequently associated with positive evaluations. For instance, one guest gives "a big shout out to Vincenzo and Klejvi, exceptional service and always a smile," whereas others report frustration, such as being told "'there are no tables for you here'" or experiencing "unhelpful and quite rude" interactions. These interpersonal dynamics significantly influence the tone of the reviews and appear to be key drivers of overall guest satisfaction or disappointment.

Emotional engagement is likewise prevalent, with guests expressing affective responses ranging from joy and gratitude to disappointment and regret. One guest reflects on a "fabulous holiday," recalling how they "sat with a cocktail watching the sun go down over the beach and sea." In contrast, another guest recounts a negative emotional impact tied to payment issues: "we have now wrongfully paid tens of thousands of euros... ruins our impression." These emotional reactions often serve as narrative anchors, reinforcing how feelings—especially when intense—amplify the memorability of a stay.

Sensory stimulation is less consistently referenced but remains significant, particularly in mentions of views, smells, and tactile comfort. One reviewer notes that "everywhere smells so fresh," while also praising the "comfortable beds and especially the pillows." These sensory descriptions are often linked to relaxation and comfort, and further support the affective dimension of guest experience.

Cognitive involvement, personal relevance, and novelty occur less frequently but add depth when they appear. Cognitive involvement is evident in reflective comments on cultural or design features, such as observing "rock formations which appear in shape of animals" and spending time "studying these remarkable features." Personal relevance is marked by emotionally significant moments, such as a honeymoon: "this was our honeymoon after getting married in May," suggesting a strong alignment between the guest experience and life milestones or personal values. Novelty is associated with distinctive activities, including one guest's description of "playing tennis with a spectacular sea view... one of the best things I've ever done!"

Overall, the findings from the English reviews suggest that while all MGE dimensions can be observed, contextual elements**,** social interaction**,** and emotional engagement play the most prominent role in how international guests construct and recall their stay. These results

offer valuable insights into which experiential aspects contribute most to guest satisfaction and long-term brand memorability in luxury hospitality, particularly in contexts where emotional, environmental, and interpersonal factors intersect.

## 5. Conclusion

This study explored how the MGE is discursively constructed in online reviews written by English- and Italian-speaking guests of Mangia's Santa Teresa Sardinia, a luxury resort in the Mediterranean. By combining CADS and AI-assisted analysis within a multidimensional MGE framework, the research contributes to a more nuanced understanding of how guests evaluate, recall, and narrate luxury hospitality experiences. The findings offer theoretical and practical insights into the evolving expectations of luxury guests, particularly in culturally rich yet underexamined destinations such as Sardinia.

The CADS analysis showed that while Italian- and English-speaking guests share a focus on core experiential domains—such as lodging, staff, and dining—they differ in the tone and structure of their appraisals. Italian reviews were shorter and consistently more emphatic, frequently using strongly positive evaluative language and assigning five-star ratings. English reviews were more varied in tone and numerical evaluation, suggesting more measured reviewing style that may reflect different standards of luxury. These patterns underscore how guest satisfaction is not only shaped by the resort's offerings but also mediated through cultural norms of digital expression.

The AI-assisted analysis of English reviews further identified which aspects of the experience were most salient in generating memorability. Contextual elements, social interaction, and emotional engagement were the most frequently referenced dimensions, confirming the importance of environmental immersion, empathetic service, and affective resonance in luxury hospitality. Less frequent but still meaningful dimensions such as sensory stimulation, cognitive involvement, personal relevance, and novelty added further complexity, revealing the layered nature of guest experience.

Together, these findings reinforce current conceptualizations of "new luxury," which emphasize emotional connection, personalization, and sustainability over material exclusivity (Atkinson & Kang, 2021; Soni & Kumar, 2024). They also align with recent studies stressing the centrality of relational, affective, and contextual factors in shaping satisfaction and brand loyalty (Harkison et al., 2017; Shin & Jeong, 2022).

Furthermore, the linguistic and evaluative contrasts observed between English and Italian reviews demonstrate the value of including cross-cultural perspectives in the analysis of UGC. Unlike questionnaires, which often yield low response rates and can discourage detailed or emotionally nuanced answers, UGC consists of spontaneous, self-initiated reflections shared in the guest's own voice. This unsolicited feedback tends to be richer in narrative and affective content, offering more authentic insights into how individuals across cultural backgrounds perceive, interpret, and recall their stay.

From a methodological perspective, the combined use of CADS and AIassisted analysis offers a scalable, replicable, and interpretively robust approach for examining experience-based digital discourse. Although this preliminary phase focused exclusively on English reviews, the protocol developed here can be extended to multilingual corpora and comparative cross-property analyses (e.g., a comparative study of Curio Collection by Hilton hotels) in future research. This methodological direction reflects broader shifts in digital discourse research, as artificial intelligence begins to play a more prominent role (Chovanec & Vásquez (2025). By integrating AI into the analytical process while preserving human

interpretive oversight, this study contributes to the advancement of a hybrid model of digital discourse analysis—one that balances computational efficiency with contextual sensitivity.

The study also provides actionable insights for hospitality practitioners seeking to enhance brand reputation, service design, and guest engagement. The prominence of contextual aesthetics, interpersonal dynamics, and emotional narratives suggests that luxury providers should focus on curating immersive environments, investing in emotionally intelligent staff training, and fostering personalized, valuesbased experiences.

Future research could expand this analysis by incorporating more diverse language groups, longitudinal data, or multimodal elements such as visual content and ratings metadata. Further work might also explore how AI-generated responses or AImediated guest interactions affect perception and memorability—thus extending the inquiry into AI's role not just in analysis, but in experience delivery itself.

In sum, this study reaffirms the central role of digital discourse in shaping perceptions of luxury and memorability. By investigating how digital narratives reflect and construct the guest experience, it contributes to both the scholarship and practice of marketing and communication in hospitality—advancing a discourse approach to understand what makes luxury truly memorable.

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## References

Abalkhail, T. S. (2020). The impact of religiosity on luxury brand consumption: The case of Saudi consumers. Journal of Islamic Marketing, 12(4), 763–775. https://doi.org/10.1108/JIMA-11-2016-0091

Alex, C. (2024). Influence of service quality on customer loyalty in luxury hotel chains in Tanzania. Journal of Hospitality and Tourism, 4(2), 12–22. https://doi.org/10.47672/jht.1981

Antonio, N., Correia, M. B., & Ribeiro, F. P. (2020). Exploring user- generated content for improving destination knowledge: The case of two world heritage cities. Sustainability, 12(22), 9654. https://doi.org/10.3390/su12229654

Atkinson, S., & Kang, J. (2021). New luxury: Defining and evaluating emerging luxury trends through the lenses of consumption and personal values. Journal of Product & Brand Management, 31(3), 377–393. https://doi.org/10.1108/jpbm-09-2020-3121

Bai, W., Lai, I., & Wong, J. (2023). Memorable tourism experience research: A systematic citation review (2009–2021). SAGE Open, 13(4). https://doi.org/10.1177/21582440231218902

Baker, P. (2023). Using corpora in discourse analysis (2nd ed.). Bloomsbury.

Brezina, V. (2018). Statistics in corpus linguistics: A practical guide. Cambridge University Press.

Brezina, V., & Platt, W. (2025). #LancsBox X [Computer software]. Lancaster University. https://lancsbox.lancs.ac.uk/

Cenni, I., Goethals, P., & Vásquez, C. (2020). A cross-linguistic study of metacommunication in online hotel reviews. Intercultural Pragmatics, 17(4), 445–470. https://doi.org/10.1515/ip-2020-4003

Chang, V., Liu, L., Xu, Q., Li, T., & Hsu, C. (2020). An improved model for sentiment analysis on luxury hotel review. Expert Systems, 40(2). https://doi.org/10.1111/exsy.12580

Chovanec, J., & Vásquez, C. (2025). Experiencing digital discourses: From engagement and multimodality to social action. In C. Vásquez & J. Chovanec (Eds.), Experiencing digital discourses: Multimodality, engagement, activism (pp. 1–21). Palgrave Macmillan.

Christodoulides, G., Athwal, N, Boukis, A., & Semaan, R. W. (2021). New forms of luxury consumption in the sharing economy. Journal of Business Research, 137, 89–99. https://doi.org/10.1016/j.jbusres.2021.08.022

D'Acunto, D., & Volo, S. (2021). Cultural traits in the consumption of luxury hotel services. In W. Worndl, C. Koo, & J. L. Stienmetz (Eds.), Information and communication technologies in tourism 2021: Proceedings of the ENTER 2021 etourism conference, January 19–22, 2021 (pp. 269–279). Springer. https://doi.org/10.1007/978-3-030-65785-7_24

Dang, V., Wang, J., Vo-Thanh, T., Jiang, X., & Nguyen, N. (2022). Green practices as an effective business strategy to influence the behavior of hotel guests in the luxury hotel sector: Evidence from an emerging market. Business Strategy and the Environment, 32(6), 3612–3627. https://doi.org/10.1002/bse.3318

Dubois, D., Jung, S., & Ordabayeva, N. (2021). The psychology of luxury consumption. Current Opinion in Psychology, 39, 82–87. https://doi.org/10.1016/j.copsyc.2020.07.011

Eckhardt, G. M., & Bardhi, F. (2019). New dynamics of social status and distinction. Marketing Theory, 20(1), 85–102. https://doi.org/10.1177/1470593119856650

Ezeh, P., & Dube, K. (2024). Willingness to pay in tourism and its influence on sustainability. Sustainability, 16(23), 10630. https://doi.org/10.3390/su162310630

Giglio, S., Pantano, E., Bilotta, E., & Melewar, T. (2020). Branding luxury hotels: Evidence from the analysis of consumers' "big" visual data on Tripadvisor. Journal of Business Research, 119, 495–501. https://doi.org/10.1016/j.jbusres.2019.10.053

Gillings, M., Mautner, G., & Baker, P. (2023). Corpus-assisted discourse studies. Cambridge University Press.

Harkison, T. (2017). Acccommodating co-creation in a hotel experience. Hospitality Insights, 1(1), 3–4. https://doi.org/10.24135/hi.v1i1.5

Harkison, T., Hemmington, N., & Hyde, K. (2018). Creating the luxury accommodation experience: Case studies from New Zealand. International Journal of Contemporary Hospitality Management, 30(3), 1724–1740. https://doi.org/10.1108/ijchm-05-2017-0247

Herstein, R., Gilboa, S., Gamliel, E., Bergera, R., & Ali, A. (2018). The role of private label brands in enhancing service satisfaction in the hotel industry: Comparing luxury and boutique hotels. Services Marketing Quarterly, 39(2), 140–155. https://doi.org/10.1080/15332969.2018.1437250

Kim, J. (2010). Determining the factors affecting the memorable nature of travel experiences. Journal of Travel & Tourism Marketing, 27(8), 780–796. https://doi.org/10.1080/10548408.2010.526897

Lee, C., & Li, C. (2019). The process of constructing a health tourism destination index. International Journal of Environmental Research and Public Health, 16(22), 4579. https://doi.org/10.3390/ijerph16224579

Lin, Y., & Choe, Y. (2022). Impact of luxury hotel customer experience on brand love and customer citizenship behavior. Sustainability, 14(21), 13899. https://doi.org/10.3390/su142113899

Lo Mascolo, G., Spezzano, W., Levanti, G., Chiodi, M., & Mocciaro Li Destri, A. (2024). Delving into digital destination branding: The case study of Sicily and Le Soste di Ulisse. Proceedings of the 21st SIM conference: Brand and purpose in a changing era.

Loo, P. T., & Leung, R. (2016). A service failure framework of hotels in Taiwan: Adaptation of 7Ps marketing mix elements. Journal of Vacation Marketing, 24, 79–100. https://doi.org/10.1177/1356766716682555

Panchapakesan, P., Amin, M., & Herjanto, H. (2021). How luxury restaurants will enhance the concept of guest delight. Journal of Hospitality and Tourism Insights, 5(2), 311–330. https://doi.org/10.1108/jhti-10-2020-0198

Park, H., Lee, M., & Back, K. (2020). Exploring the roles of hotel wellness attributes in customer satisfaction and dissatisfaction: Application of kano model through mixed methods. International Journal of Contemporary Hospitality Management, 33(1), 263–285. https://doi.org/10.1108/ijchm-05-2020-0442

Roy, S., Jain, V., & Matta, N. (2018). An integrated model of luxury fashion consumption: Perspective from a developing nation. Journal of Fashion Marketing and Management, 22(1), 49–66. https://doi.org/10.1108/jfmm-042017-0037

Shin, H., & Jeong, M. (2022). Redefining luxury service with technology implementation: The impact of technology on guest satisfaction and loyalty in a luxury hotel. International Journal of Contemporary Hospitality Management, 34(4), 1491–1514. https://doi.org/10.1108/ijchm-06-20210798

Soni, N., & Kumar, S. (2024). What drives new luxury consumption? Application of schema congruity theory and heuristic systematic framework. Asia Pacific Journal of Marketing and Logistics, 36(9), 2213–2233. https://doi.org/10.1108/apjml-04-2023-0319

Todorović, M., Belgrade, H., & Ivanović, T. (2018). Employee training in international luxury hotel chains: Evidence from Serbia. In V. Bevanda & S. Štetić (Eds.), 3rd International Thematic Monograph – Modern Management Tools and Economy of Tourism Sector in Present Era (pp. 667–685). UdEkoM Balkan. https://doi.org/10.31410/tmt.2018.667

Tung, V. W. S., & Ritchie, J. R. B. (2011). Exploring the essence of memorable tourism experiences. Annals of Tourism Research, 38(4), 1367–1386. https://doi.org/10.1016/j.annals.2011.03.009

Vásquez, C. (2014). The discourse of online consumer reviews. Bloomsbury.

Vukoičić, D., Petrović, D., Milinčić, M., & Mrkaić-Ateljević, A. (2024). Tourism as a driver of economic and social development in underdeveloped areas: The case of Kuršumlija municipality. In V. Šećerov (Ed.), Planska i normativna zaštita prostora i životne sredine (pp. 239–248). University of Belgrade. https://doi.org/10.5937/lspupn24239v

Wang, Z., Yang, P., & Li, D. (2021). The influence of heritage tourism destination reputation on tourist consumption behavior: A case study of world cultural heritage shaolin temple. SAGE Open, 11(3). https://doi.org/10.1177/21582440211030275

Xiang, Z., Schwartz, Z., Gerdes, J., & Uysal, M. (2015). What can big data and text analytics tell us about hotel guest experience and satisfaction? International Journal of Hospitality Management, 44, 120–130. https://doi.org/10.1016/j.ijhm.2014.10.013

Zakaria, N., Wan-Ismail, W., & Abdul-Talib, A. (2020). Seriously, conspicuous consumption? The impact of culture, materialism and religiosity on Malaysian Generation Y consumers' purchasing of foreign brands. Asia Pacific Journal of Marketing and Logistics, 33(2), 526–560. https://doi.org/10.1108/apjml-07-2018-0283

# Collaborazione Multistakeholder e condivisione del Purpose: Action-Research per la sostenibilità di un'Area Rurale

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## Abstract

Questa ricerca ha avuto origine da un bisogno esplicito: cinque sindaci di un'area rurale miravano a unificare i loro Comuni con l'ambizione di trasformare il territorio in una destinazione turistica sostenibile e coerente. Attraverso una Ricerca-Azione, diverse categorie di stakeholder locali sono state coinvolte attivamente in sette fasi di lavoro, distribuite su tre anni.

Un primo risultato è emerso precocemente dall'indagine qualitativa effettuata tramite diciotto interviste con policy-maker, imprenditori e opinion leaders del territorio: il termine sostenibilità presentava interpretazioni marcatamente divergenti, evidenziando cinque significati distinti e spesso incompatibili. L'assenza di un significato condiviso, in grado di guidare la collaborazione multistakeholder, è emersa dunque come ostacolo principale.

Durante il processo partecipativo di ricerca-azione, i livelli di collaborazione si sono poi evoluti e gli stakeholder hanno iniziato a negoziare e prioritizzare interpretazioni condivise della sostenibilità. Il principale contributo teorico di questa ricerca è lo sviluppo della "Shared Meanings of Sustainability Matrix", che cattura la relazione dinamica tra shared purpose e collaborazione in quattro configurazioni: Messy Meanings, Multiple Meanings Prioritization, Blend of Meanings, Unified Meaning. Questo studio si basa sullo sviluppo di un approccio grounded theory in un contesto empirico e reale, e la sua originalità suggerisce come i significati della sostenibilità possano essere co-costruiti attraverso una collaborazione iterativa, contestualizzata e orientata al purpose. Grazie al metodo di Ricerca-Azione, quindi al processo di ricerca partecipata, e ai risultati proposti con la matrice, si possono trarre indicazioni pratiche per altre aree rurali che intendano avviare una collaborazione multistakeholder inclusiva verso un turismo sostenibile.

*Keywords: Sustainability Shared Meaning, Shared Purpose, Multistakeholder Collaboration, Rural Area, Sustainable Tourism.*

## 1. Variabilità dei Significati della Sostenibilità nel Turismo

Raggiungere gli obiettivi dell'Agenda 2030 delle Nazioni Unite per lo Sviluppo Sostenibile richiede azioni coordinate tra un ampio spettro di stakeholder. Tuttavia, il processo di articolazione e allineamento di un purpose condiviso attorno agli obiettivi di sostenibilità rimane complesso, specialmente in contesti articolati come le aree rurali (Cawley e Gillmor,

2008), dove la frammentazione sociale, economica e istituzionale rappresenta un ostacolo significativo alla collaborazione (Lane e Kastenholz, 2015) e l'assenza di un purpose condiviso diventa un impedimento critico per la collaborazione orientata alla sostenibilità (Waligo et al., 2015; Bramwell e Sharman, 1999). Al centro di questo sforzo vi è la costruzione di significati condivisi della sostenibilità, che non siano semplicemente dichiarati ma co-creati, negoziati e radicati in valori comuni (Cloutier e Langley, 2017; Cannas et al., 2018). In un'area rurale, la sostenibilità viene spesso interpretata in modi molteplici e conflittuali (Albrecht et al., 2021; Vespestad et al., 2025), dove l'allineamento deve avvenire attraverso processi di negoziazione del significato tra attori diversi con interessi e livelli di potere differenti (Cloutier e Langley, 2017). Alcuni stakeholder possono percepire la sostenibilità come risultati a breve termine, come la redditività, mentre altri sono più interessati agli impatti a lungo termine sulla comunità; altri ancora considerano le pratiche sostenibili come un percorso verso la crescita economica, ad esempio attraverso il turismo (Murphy e Price, 2012).

Nonostante l'aumento dell'attenzione politica alla sostenibilità, in particolare in linea con l'SDG 12.8 delle Nazioni Unite, che promuove l'accesso alla conoscenza e stili di vita sostenibili, poco si conosce su come la sostenibilità venga interpretata, tradotta e messa in pratica dagli stakeholder locali nelle aree rurali (Albrecht et al., 2021; Vespestad et al., 2025). In assenza di un linguaggio comune o di una comprensione condivisa, gli sforzi multistakeholder per promuovere la sostenibilità rischiano di risultare frammentati, simbolici o inefficaci (Cannas et al., 2018; Lane e Kastenholz, 2015). Poiché gli abitanti delle aree rurali spesso mostrano resistenze sociali al cambiamento (Cawley e Gillmor, 2008), essi potrebbero anche opporsi ad accettare significati di sostenibilità imposti dall'esterno.

Questo studio esplora come i significati condivisi della sostenibilità possano (o non possano) emergere tra i vari attori chiave operanti in aree rurali (Cawley e Gillmor, 2008) caratterizzate da potere frammentato, infrastrutture limitate (Karali et al., 2021) e deboli tradizioni di collaborazione (Lane e Kastenholz, 2018). Le aree turistiche rurali dipendono in modo particolare dalla fiducia interpersonale, dalla governance informale e dalle istituzioni radicate localmente (Choudhary et al., 2025; Zou et al., 2014). In tali contesti, perseguire lo sviluppo del turismo sostenibile comporta sfide sociali e ambientali, tra cui l'adattamento ai cambiamenti climatici, la conservazione del patrimonio culturale e la rivitalizzazione economica (Carneiro et al., 2015).

Il presente studio offre un contributo distintivo e significativo posizionando il processo di costruzione del significato come partecipativo e collaborativo. Piuttosto che imporre concetti definiti esternamente, gli stakeholder locali hanno potuto articolare i propri significati di sostenibilità, radicandoli nei loro valori, bisogni e realtà vissute. Attraverso un rigoroso processo qualitativo multistakeholder, lo studio ha sviluppato la "Shared Meanings of Sustainability Matrix": una matrice derivata in modo induttivo che cattura come i significati condivisi possano evolvere attraverso interazioni, negoziazioni e collaborazione attorno ad uno scopo comune e condiviso, un vero e

proprio shared purpose. Questo approccio approfondisce la comprensione teorica del turismo sostenibile e della collaborazione multistakeholder e fornisce indicazioni pratiche per progettare strategie più inclusive e sensibili al contesto nello sviluppo del turismo rurale.

Il paper è strutturato come segue: dopo aver delineato il quadro teorico e i gap della letteratura, vengono descritti la metodologia e i risultati in due fasi: la prima fase per delineare i cinque ambiti dei significati della sostenibilità; la seconda fase per definire i confini dei nuovi concetti di significati condivisi, proposti tramite la "Shared Meanings of Sustainability Matrix" quale risultato dei diversi livelli di collaborazione multistakeholder e di shared

purpose. Successivamente vengono discusse le implicazioni di questi risultati, concludendo con suggerimenti per future direzioni di ricerca.

## 2. Overview della Letteratura

### 2.1 Purpose come un costrutto collettivo

La nozione di purpose si è evoluta da una direttiva strategica imposta dalla leadership a un costrutto socialmente negoziato, che emerge attraverso il dialogo tra molteplici stakeholder (Almandoz, 2023; Tafuro e Piccaluga, 2025). Particolarmente nei sistemi di governance multistakeholder, come quelli presenti nelle destinazioni turistiche (Bramwell e Sharman, 1999; Cannas et al., 2018), il purpose non è predeterminato: esso si plasma e si riplasma attraverso negoziazioni continue, situate in contesti istituzionali e culturali specifici.

Cloutier e Langley (2017) sottolineano che negoziare il purpose è sia un'impresa strategica sia un processo morale, specialmente in contesti collaborativi dove è necessario conciliare logiche, norme e sistemi di valori diversi. Il loro lavoro mostra come la tensione morale e la contesa possano diventare forze produttive, permettendo agli stakeholder di costruire significati condivisi che siano sia moralmente rilevanti sia strategicamente attuabili.

Nella governance turistica, in particolare nei contesti rurali, questo processo è amplificato dall'assenza di autorità centralizzata e dalla molteplicità di stakeholder coinvolti (Waligo et al., 2015). In tale contesto, il purpose opera meno come direttiva stabile e più come narrazione mobilitante, capace di favorire l'allineamento nonostante la frammentazione organizzativa (Hollensbe et al., 2014).

In contesti di governance frammentata, la sfida non consiste solo nell'allineare interessi, ma anche nel costruire significati condivisi (Albrecht et al., 2021), un processo strettamente intrecciato con l'identità e le emozioni condivise (Cannas et al., 2018).

Albrecht et al. (2021), concentrandosi sui manager delle destinazioni, mostrano come, anche all'interno dello stesso ruolo istituzionale, i significati attribuiti a "sostenibilità" possano variare considerevolmente, spaziando dalla conservazione ambientale alla competitività economica o all'equità sociale. Questa variabilità semantica complica la co-creazione di valore, poiché diventa difficile elaborare strategie coerenti senza chiarire i significati e i valori sottostanti (Cannas et al., 2018).

Questa tensione è particolarmente evidente nelle aree rurali, dove gli stakeholder locali affrontano spesso vincoli strutturali, priorità in competizione e una mancanza di infrastrutture discorsive condivise (Karali et al., 2021). Come sostengono Lane e Kastenholz (2015), il turismo rurale si è evoluto in un ambito multifacetico e frammentato, dove l'innovazione è frequentemente guidata da pratiche bottom-up, informali e culturalmente situate, piuttosto che da una pianificazione strategica unificata. In tali contesti, costruire un Shared Meanings of Sustainability richiede non solo l'allineamento del discorso, ma anche l'istituzione di processi legittimi di partecipazione e leadership capaci di conciliare aspettative diverse (Choudhary et al., 2025).

Tuttavia, l'assenza di un discorso sulla sostenibilità coerente e moralmente impegnato può condurre a quella che gli autori definiscono 'moral muteness', una condizione in cui le organizzazioni di destinazione evitano di affrontare le implicazioni etiche delle proprie narrazioni sulla sostenibilità (Vespestad et al., 2025).

## 2.2 Collaborazione Multistakeholder per la Sostenibilità nel turismo

Per costruire una strategia di turismo sostenibile, questa ricerca si fonda sui punti di vista degli stakeholder utilizzando la stakeholder theory. Questa teoria è nata per comprendere le responsabilità delle organizzazioni in un contesto sociale (Freeman, 1984). Secondo Donohoe, Reyes e Becerra (2015), i manager devono considerare molteplici stakeholder e hanno l'obbligo di rispondere alle loro esigenze. La teoria è stata applicata alle organizzazioni turistiche (Getz e Timur, 2005), al turismo culinario sostenibile (Stone et al., 2022) e al turismo rurale sostenibile (Choudhary et al., 2025; Karali et al., 2021) come strumento per bilanciare gli interessi degli stakeholder. La sostenibilità del turismo dipende da processi di governance ampi, inclusivi e significativamente partecipativi (Bramwell e Sharman, 1999; Getz e Timur, 2005). Tuttavia, la collaborazione multistakeholder resta difficile da implementare, soprattutto nelle aree rurali, dove gli stakeholder differiscono in termini di capacità istituzionale, visione del mondo e accesso alle strutture decisionali (Scheyvens, 1999; Liu e Shu, 2020). Inoltre, l'assunto secondo cui la collaborazione conduca automaticamente alla sostenibilità è stato messo in discussione da studi empirici che mostrano come gli stakeholder operino spesso con comprensioni divergenti o poco articolate di cosa significhi sostenibilità (Albrecht et al., 2021; Vespestad et al., 2025). L'ambiguità semantica che circonda la sostenibilità ostacola quindi la costruzione di strategie coerenti e limita il potenziale di vera co-creazione di valore e collaborazione (Cannas et al., 2018). Questa sfida è particolarmente acuta nelle aree rurali, dove lo sviluppo turistico è strettamente intrecciato con le identità locali, le dinamiche comunitarie e i vincoli territoriali (Lane e Kastenholz, 2015).

Nonostante l'importanza dichiarata di implementare iniziative di sostenibilità, vi sono ancora scarsi approfondimenti empirici su come molteplici stakeholder costruiscano o non riescano a costruire significati condivisi della sostenibilità nei contesti del turismo rurale. Emergono tre principali lacune nella letteratura. Primo, sebbene Vespestad et al. (2025) abbiano evidenziato come gli stakeholder possano tacere o distorcere i messaggi di sostenibilità, sappiamo ancora poco su come possano resistere, riformulare o cocreare significati condivisi più radicati e ricchi di valore. Secondo, vi è una carenza di ricerche su come le pratiche discorsive e il dialogo collaborativo influenzino l'emergere di un shared purpose nella governance della sostenibilità, soprattutto in contesti caratterizzati da strutture di governance deboli e dove la fiducia deve essere costruita relazionalmente (Lane e Kastenholz, 2015). Terzo, sebbene la divergenza dei significati sia riconosciuta (Albrecht et al., 2021), i processi di negoziazione, prioritizzazione o allineamento attorno a un significato unificato restano poco esplorati.

Sulla base di queste lacune, emergono le seguenti domande di ricerca:

**(RQ1)** Quali significati associamo alla sostenibilità da parte dei diversi stakeholder che operano nella stessa area rurale? **(RQ2)** Come può essere sviluppato un significato condiviso di sostenibilità attraverso la collaborazione multistakeholder?

## 3. Il bisogno di una Ricerca-Azione

Questa ricerca ha avuto origine da un problema reale riguardante la possibilità di sviluppare il turismo in maniera sostenibile in un'area rurale, in cui un gruppo di decisori politici desiderava sottoporre a rigorosa indagine e azione congiunta con ricercatori accademici. In quanto tale, lo studio adotta la metodologia della RicercaAzione (Action Research, AR) (O'Leary e Coghlan, 2022), con l'obiettivo di contribuire a una migliore offerta turistica ambientalmente sostenibile, orientando il lavoro scientifico non solo all'identificazione dei problemi ma anche alla loro risoluzione (Dolnicar e Green, 2025). L'AR può perseguire un duplice scopo: garantire il rigore teorico e fornire un contributo rilevante per la gestione

(Erro-Garcés e AlfaroTanco, 2020). L'AR richiede uno studio longitudinale e comporta la collaborazione tra un team di ricercatori e attori organizzativi, favorendo lo scambio di idee e riflessioni (Näslund et al., 2011).

La Ricerca-Azione è particolarmente adatta al turismo rurale. In primo luogo, è appropriata per gli studi sul turismo (Martins et al., 2024) poiché il sistema turistico comprende non solo imprese e produttori di servizi legati al consumo turistico tipico, ma si estende a tutti gli stakeholder della destinazione turistica, inclusi i cittadini e la comunità locale (Choudhary et al., 2021; Perkins et al., 2021).

In particolare, l'AR si presta bene alle destinazioni rurali (Paül et al., 2016) perché coinvolge diversi tipi di stakeholder nei processi decisionali come motore per il turismo sostenibile (Goebel et al., 2020), creando un clima collaborativo mediante la pianificazione di azioni con gli stakeholder locali (Capriello, 2012). Questo approccio di ricerca consente di rispettare i principi della ricerca responsabile, affrontando in modo più efficace le sfide sociali e sottolineando l'importanza di considerare l'ecosistema della ricerca (Pereira-Moliner e Molina-Azorín, 2024).

### 3.1 Applicazione in un'area rurale

Questa Ricerca-Azione si fonda sul dialogo collaborativo con policymaker, decisori e altri stakeholder chiave nelle destinazioni rurali, al fine di identificare le condizioni di sviluppo per un turismo sostenibile. Superando le definizioni olistiche, le aree rurali sono circondate dalla natura, e nelle scelte di sviluppo turistico locale ci si aspetta un elevato grado di armonia con l'ambiente naturale (Diamond, 2023). Tuttavia, le piccole aree rurali continuano spesso a sperimentare marginalizzazione economica (Briedenhann et al., 2004), e l'orientamento alla sostenibilità dei decisori è emerso come questione centrale negli studi scientifici (Khizar et al., 2023).

Il contesto di questo studio longitudinale è un'area rurale nota come "Colli Berici", situata nella provincia di Vicenza nel Nord-Est d'Italia, che si estende per circa 64 miglia quadrate. Questa peculiare collocazione geografica pone l'accento sulla preservazione delle radici culturali e del patrimonio naturale, ma deve affrontare sfide legate alla natura frammentata delle decisioni politiche, economiche e sociali, definite da Nelson et al. (2023) come peculiarità delle destinazioni rurali. In questo contesto, i decisori sono distribuiti in 24 piccoli Comuni, dove gli imprenditori locali, principalmente produttori e agricoltori, mirano a valorizzare i punti di forza del territorio, quali natura, prodotti tipici e autenticità.

Il numero totale di policymaker nell'area comprende 24 sindaci dei 24 piccoli villaggi, tra cui cinque hanno promosso questa ricerca e vi hanno partecipato attivamente sin dalle fasi preliminari, coinvolgendo tutti gli altri nelle fasi avanzate. L'obiettivo finale era sviluppare proposte e azioni di turismo sostenibile nella specifica area territoriale. In quest'area, tali sindaci sono considerati pionieri nel promuovere motivazione e collaborazione verso la sostenibilità.

Dal punto di vista turistico, l'area rappresenta una destinazione minore, ricca di natura, tradizioni culturali e prodotti enogastronomici tipici, mentre le principali attività economiche sono industria e agricoltura, con pochi servizi turistici. Gli esercizi ricettivi (agriturismi, bed and breakfast, strutture ricettive a conduzione imprenditoriale e hotel) rappresentano una quota molto ridotta del totale provinciale. È grazie ai cinque sindaci pionieri che molti stakeholder locali hanno accettato di collaborare per riposizionare la loro area rurale come destinazione rurale sostenibile. Tuttavia, il discorso sulla sostenibilità in questa area non era ben articolato e vi erano numerose divergenze su come procedere. Per avanzare nel progetto, i cinque sindaci hanno promosso una collaborazione con il polo scientifico di area economica

della sede vicentina dell'Università di Verona. In tal modo, questo studio è stato realizzato in collaborazione con cinque Comuni dell'area dei Colli Berici, la Camera di Commercio di Vicenza e la Fondazione Studi Universitari di Vicenza, con l'obiettivo di esplorare le condizioni per promuovere lo sviluppo di una destinazione rurale sostenibile nell'area, rappresentando l'inizio di un percorso pionieristico ancora in corso.

### 3.2 Design della Ricerca-Azione

Il team di ricerca principale comprende cinque policymaker (sindaci), quattro ricercatori accademici (due ricercatori senior e due junior research scholars) e un esperto, ciascuno con un background diversificato in management, marketing, turismo e/o sostenibilità. Durante l'intero processo di ricerca numerosi stakeholder sono stati coinvolti attivamente. Questo approccio basato sul lavoro di squadra mira a mitigare i bias individuali, seguendo i principi delineati da Eisenhardt (1989) e Oppermann (2000). L'uso della triangolazione rafforza ulteriormente la validità dell'analisi. Il team ha cercato di includere la comunità imprenditoriale e i cittadini locali nelle diverse fasi della ricerca (Jones e Walmsley, 2022).

Considerata la natura ciclica dei progetti di Ricerca-Azione (Ballantyne, 2004), lo studio si è sviluppato in sette fasi, articolandosi in 77 incontri distribuiti su un periodo di tre anni: le prime cinque fasi si sono svolte in 14 mesi, mentre le fasi sei e sette sono state completate in un arco di due settimane, due anni più tardi.

La fase preliminare di scoperta (prima fase) ha permesso di comprendere meglio il problema e di definire gli obiettivi della ricerca, le attività da svolgere, i ruoli e i tempi correlati. Ogni incontro ha avuto una durata di circa due ore. È stato firmato un accordo formale tra i cinque sindaci, un consulente professionale con il ruolo di project leader e il centro di ricerca universitario, con il supporto finanziario della Camera di Commercio locale. Questo accordo costituisce una prova dell'impegno dei partecipanti verso questa Ricerca-Azione e i suoi obiettivi.

La seconda fase, focalizzata sulla diagnosi preliminare del contesto, comprende due round di raccolta dati:

- una ricerca su più fonti secondarie(Demo.istat.it; Daticensimentipermanenti.istat.it; Turismobigdata.isnart.it; Osservatorioturismoveneto.istat.it; InBalance e Stock View, di proprietà dell'Ufficio Statistico della Camera di Commercio di Vicenza);
- uno studio qualitativo multistakeholder. Contestualmente, per la selezione del campione, è stato chiesto ai cinque sindaci e ad altri professionisti locali di nominare i principali decision-maker locali e i cittadini maggiormente coinvolti in iniziative orientate alla sostenibilità.

I partecipanti sono stati invitati a suggerire ulteriori contatti disponibili a partecipare, seguendo la tecnica delllo 'snowball sampling' (Parker et al., 2019). Diciotto partecipanti qualificati hanno collaborato attivamente durante questa fase qualitativa, tra cui sette policymaker, due decisori e otto imprenditori (ulteriori dettagli sul campione saranno forniti durante la presentazione alla conferenza). Le interviste semistrutturate individuali sono durate circa 60-90 minuti ciascuna. Con il progredire della raccolta dati sono emerse sempre meno idee e problematiche nuove, raggiungendo così una saturazione teorica (Glaser e Strauss, 2017). Tutte le interviste e gli incontri sono stati videoregistrati e audio-registrati con il consenso informato dei partecipanti. L'obiettivo principale delle registrazioni video era catturare risposte, commenti liberi e significati del silenzio. La raccolta dati includeva trascrizioni e note sul campo. Parole, espressioni facciali, linguaggio del corpo e tono di voce sono stati analizzati in maniera integrata per cogliere significati ed emozioni correlati. La codifica tematica e la categorizzazione (Gibbs, 2007) delle trascrizioni e delle note

osservazionali hanno consentito di ottenere insight attraverso la discussione aperta e l'interpretazione semantica collaborativa del team di ricerca. Una teorizzazione iterativa ha richiesto una revisione della letteratura su diversi temi. Sono stati redatti due rapporti intermedi e un rapporto finale, tutti discussi con la comunità target in workshop ad hoc. Poiché la fase di diagnosi ha rivelato divergenze di opinione e molteplici significati legati alla sostenibilità in questa area rurale, i risultati sono stati discussi con esperti per perfezionare la codifica e riflettere sulle ragioni di tali divergenze semantiche.

Il team ha quindi pianificato una serie di azioni (terza fase), come workshop partecipativi per sensibilizzare sul significato della sostenibilità e condividere un obiettivo comune come base per un piano d'azione per lo sviluppo del turismo sostenibile (come suggerito da Basile et al., 2021). I partecipanti sono stati contattati tramite canali istituzionali (WhatsApp e Facebook), e sono stati distribuiti manifesti informativi negli spazi pubblici dei comuni coinvolti come invito aperto agli incontri. Questi workshop hanno costituito momenti di dialogo collaborativo (quarta fase), durante i quali sono state discusse numerose proposte, coinvolgendo i cittadini più attivi nell'offerta turistica dell'area rurale, tra cui ristoratori, titolari di agriturismi, agenzie turistiche, gestori di musei e guide turistiche. Per facilitare una collaborazione aperta, sono state stimolate attività di teamwork formali e networking informale.

La quinta fase ha affrontato la rilevanza scientifica e discusso i principali risultati con la comunità accademica internazionale.

Successivamente, due anni più tardi, sono stati aggiunti follow-up in presenza (sesta fase) presso le sedi dei partecipanti, come visite aziendali, per raccogliere dati sugli effetti delle azioni intraprese. L'ultimo follow-up ha permesso di cogliere le dinamiche longitudinali e discutere alcune delle implicazioni manageriali e sociali dello studio, come testimoniate direttamente dai partecipanti.

La settima fase ha consentito una riflessione critica, supportando la teorizzazione iterativa e conducendo infine allo sviluppo della Shared Meanings of Sustainability Matrix.

## 4. Risultati

Dalla diagnosi preliminare basata sulla ricerca desk su fonti secondarie sono emerse alcune condizioni urgenti per lo sviluppo del turismo sostenibile in un'area rurale: maggiore attenzione al tempo libero e ai consumi educati; stimolo di pratiche sostenibili insieme a politici e imprenditori; crescita del trend del turismo lento; agevolazioni fiscali e fondi per investire in sostenibilità.

Nell'iniziale fase di analisi preparatoria di contesto, il team ha verificato la presenza di eventuali contenuti nella comunicazione digitale degli stakeholder locali, esplorando news, pagine dei siti web e dei profili social ufficiali dei comuni locali, delle principali imprese e delle associazioni rilevanti. Questa esplorazione ha evidenziato una significativa scarsità di informazioni pubblicamente disponibili sia sul processo di condivisione dello scopo comune, sia sulle varie iniziative legate alla sostenibilità nel contesto rurale oggetto della ricerca. Tale iniziale mancanza di informazioni accessibili e complete ha sottolineato la necessità di interagire direttamente con gli stakeholder locali tramite interviste approfondite. I risultati sono presentati nelle sezioni seguenti.

### 4.1 I significati della sostenibilità

Per esplorare la prima domanda di ricerca ("Quali significati associano alla sostenibilità i diversi stakeholder che operano nella stessa area rurale?"), sono state analizzati i contenuti e le note di 18 interviste approfondite condotte con stakeholder di cinque Comuni di un'area

rurale. Attraverso un processo di codifica tematica (Gibbs, 2007), sono stati identificati diversi pattern interpretativi che riflettono le modalità con cui la sostenibilità viene definita.

Le risposte dei partecipanti alla domanda "Cosa intende per sostenibilità?" hanno rivelato un'ampia gamma di interpretazioni, riflettendo la natura polisemica e contestuale del concetto. Piuttosto che emergere una definizione unitaria, la sostenibilità si è mostrata come un costrutto frammentato e multidimensionale, con significati modellati dai valori personali, dai ruoli settoriali e dal contesto territoriale.

Questa eterogeneità semantica è stata organizzata in cinque temi principali, ciascuno dei quali evidenzia una diversa dimensione dell'interpretazione e dell'attuazione della sostenibilità nelle aree rurali.

**Tema 1: Tutela ambientale ed efficienza delle risorse**

Molti partecipanti hanno articolato la sostenibilità in termini di preservazione ambientale e uso responsabile delle risorse, sottolineando concetti come "non inquinare", "energie alternative", "riduzione degli sprechi energetici e dei prodotti" e "uso corretto dell'energia". Altre espressioni come "consumo del suolo", "economia circolare" e "valorizzazione dei rifiuti" rivelano un orientamento pragmatico all'efficienza ecologica. Questo tema riflette un inquadramento tecnico-ambientale della sostenibilità, in cui il concetto si concretizza in azioni volte a minimizzare l'impatto ecologico.

Un manager partecipante ha affermato: "*La parola sostenibilità può significare tutto e niente. Sostenibilità di cosa? Dell'ambiente? Sì, credo che dobbiamo perseguire la sostenibilità ambientale. Ma per quanto mi riguarda, finora non ci siamo riusciti: basta guardare lo stato della natura. In ogni caso, dobbiamo mirare a un modello di lavoro sostenibile: non dobbiamo inquinare*". Un altro imprenditore ha inquadrato la sostenibilità attraverso l'efficienza delle risorse: "*Nel mio settore, sostenibilità significa ridurre al minimo gli sprechi di energia e di prodotti. L'infrastruttura dell'azienda deve essere progettata di conseguenza, il che richiede investimenti per garantire un approvvigionamento energetico diretto. Significa anche produrre e vendere beni in maniera efficiente, con il minor spreco possibile. Questo è essenzialmente tutto*".

**Tema 2: Inquadramento economico e leve istituzionali**

Alcuni partecipanti hanno associato la sostenibilità alla crescita economica e ai meccanismi di supporto istituzionale, evidenziando termini come "sviluppo economico", "vantaggio competitivo", "incentivi fiscali", "transizione di mercato" e "pressione istituzionale". Queste espressioni riflettono una visione della sostenibilità basata su performance, redditività e posizionamento strategico all'interno di contesti normativi in evoluzione.

Un amministratore locale ha osservato: "*Per me, sostenibilità significa abilitare la transizione. Come amministratore locale, ho sostenuto economicamente diversi progetti di sostenibilità [...]. Le aziende hanno contribuito con finanziamenti (con incentivi fiscali). Questo è ciò che significa sostenibilità: azione e responsabilità*". Un altro stakeholder ha evidenziato il collegamento tra mentalità e pianificazione economica: "*Quando usiamo il termine sostenibilità, la dimensione finanziaria è fondamentale nella pianificazione. Ma oltre a questo, è necessaria una trasformazione della mentalità locale (istituzionale). Questa visione potrebbe gettare le basi per una nuova forma di sviluppo economico radicata nel territorio*".

**Tema 3: Identità territoriale e turismo basato sul luogo**

Un terzo gruppo di risposte ha mostrato un forte attaccamento al territorio, al patrimonio e all'identità culturale, con termini come "autenticità territoriale", "valorizzare la nostra

agricoltura tradizionale", "turismo enogastronomico", "recupero dei materiali locali", "relazioni culturali", "prodotti tipici" e "progettazione nella nostra area naturale".

Questi partecipanti interpretano la sostenibilità come profondamente radicata nella cultura locale e nella cura del territorio, in linea con ricerche che considerano il turismo come veicolo di valorizzazione territoriale. Ad esempio, un intervistato ha sottolineato l'unicità del territorio locale: "*Nel nostro comune, la sostenibilità riguarda la composizione unica del territorio: parte collinare, parte agricola, parte centro urbano. Questi diversi paesaggi offrono valore ambientale e risorse differenti. Questa diversità potrebbe essere una forza in termini di sostenibilità. Tuttavia, per un piccolo comune come [nome del comune], non è facile misurare o mostrare la sostenibilità senza una visione più ampia e sistemica. Alcune pratiche auto-sostenibili radicate localmente esistono, ma una valutazione adeguata richiede probabilmente una prospettiva su scala più ampia*". Un sindaco ha poi sottolineato la conservazione della natura come risorsa turistica: "*Sostenibilità significa creare sistemi produttivi che utilizzino al meglio le componenti naturali senza danneggiare significativamente l'ambiente. C'è una forte consapevolezza locale di protezione del territorio, che attira visitatori tutto l'anno. La sostenibilità qui significa anche bilanciare questo patrimonio ambientale con sviluppo economico, industriale e artigianale radicato nella nostra identità agricola*".

**Tema 4: Etica, emozione e benessere**

Alcuni partecipanti hanno enfatizzato gli aspetti normativi ed emotivi della sostenibilità, usando parole come "amore", "cura", "benessere di animali e persone", "equità di genere" e "solidarietà".

Queste risposte riflettono una costruzione morale della sostenibilità, in cui preoccupazioni etiche e relazioni umane con natura e comunità sono centrali. Uno dei sindaci ha affermato: "*Per me, sostenibilità significa che la mia generazione non può consumare tutte le risorse del pianeta perché molti altri arriveranno dopo di noi. È un principio di solidarietà intergenerazionale. Significa anche rispettare l'ambiente e sostenere modelli economici che aiutino i più vulnerabili. La sostenibilità dovrebbe promuovere maggiore equità, contrariamente agli eccessi del capitalismo sfrenato. Questo, secondo me, è il vero significato della sostenibilità*". Un imprenditore locale ha collegato la cura dell'ambiente all'impegno personale e comunitario: "*Sono un grande sostenitore della sostenibilità [...] Come cittadino e imprenditore, sono sempre stato impegnato nella comunità. Credo che dobbiamo imparare ad amare la nostra terra, proprio come i nostri antenati ci hanno insegnato a prenderci cura di ciò che abbiamo [...]. Dobbiamo sempre ricordare le nostre radici*".

**Tema 5: Obiettivo aspirazionale e vago**

Infine, alcune risposte utilizzavano riferimenti vaghi o circolari, come "sviluppo sostenibile", "cambiamento trasformativo", "condizione necessaria per sopravvivere" o "percorso futuro". Questo tema riflette un inquadramento visionario ma vago della sostenibilità, dove il concetto funge più da orizzonte retorico o ideale normativo che da principio concreto e contestualizzato. Pur esprimendo preoccupazione e ambizione a lungo termine, l'ambiguità di queste narrazioni può ostacolare la prioritizzazione collettiva e l'azione. Uno dei sindaci ha spiegato: "*Per me, sostenibilità significa sviluppo sostenibile. Nel mio campo, tutto ciò che si costruisce deve essere strutturalmente supportato, così come la sostenibilità deve essere supportata da elementi concreti. Vale per ogni settore (commerciale, finanziario, ecologico). Tutto ciò che facciamo deve essere economicamente e ambientalmente sostenibile. Credo che questo mindset dovrebbe diventare parte del pensiero di tutti perché siamo davvero arrivati a un punto critico. La sostenibilità, secondo me, dovrebbe essere la nostra linea guida*".

Nelle aree rurali, la sostenibilità può rappresentare una forma di ambiguità strategica più che un orientamento olistico. Vi è una tendenza a considerare solo gli investimenti sostenibili concretamente realizzabili, come protezione ambientale o riduzione delle emissioni, economicamente fattibili e capaci di garantire il sostentamento di chi li attua. Sebbene i

cinque temi abbiano offerto una panoramica strutturata dei significati attribuiti alla sostenibilità dagli stakeholder, essi non catturano completamente fino a che punto tali significati fossero radicati in un 'shared purpose' né come si traducessero in forme di azione collettiva. Per esplorare queste dimensioni, sono stati condotti incontri partecipativi approfonditi con l'intero team, finalizzati a perfezionare la codifica tematica ed esaminare come diversi livelli di collaborazione e di condivisione del purpose emergessero nei discorsi.

Successivamente, sono stati organizzati workshop e seminari educativi per approfondire ulteriormente il concetto di 'shared purpose' verso la sostenibilità. Questi workshop hanno permesso di promuovere una comprensione più olistica della sostenibilità e di introdurre l'importanza della costruzione collettiva del significato. I partecipanti hanno iniziato a riconoscere la necessità di agire insieme e di impegnarsi in un dialogo collaborativo duraturo.

I cinque sindaci pionieri hanno implementato ulteriori azioni e incontrato numerosi stakeholder, coinvolgendo tutti i 24 sindaci dell'area rurale. Successivamente, è stato firmato un accordo formale (IPA, Intesa Programmatica d'Area) per l'area berica, creando un organismo di coordinamento regionale composto da più comuni dell'area, volto a promuovere lo sviluppo territoriale sostenibile attraverso pianificazione collaborativa, implementazione di progetti e cooperazione inter-istituzionale. Questa evoluzione ha consentito di delineare una visione longitudinale, costruendo in maniera induttiva una matrice interpretativa, la Shared Meanings of Sustainability Matrix.

### 4.2 Una matrice interpretativa per la condivisione dei significati della sostenibilità

In base alle esperienze emerse nella fase di rilevamento dei risultati (fase 6 della Ricerca-Azione), è stata ideata una matrice bidimensionale per rispondere alla seconda domanda di ricerca ("Come può essere sviluppato un shared meaning attraverso la collaborazione multistakeholder?"). La 'Shared Meanings of Sustainability Matrix' (Figura 1) rappresenta le dinamiche evolutive della costruzione dei significati della sostenibilità e della collaborazione all'interno dell'area rurale, dalla posizione iniziale "A", osservata nella fase preliminare dello studio, alla posizione "B" emersa durante il follow-up. La matrice è stata sviluppata in modo induttivo, non sulla base di teorie preesistenti, ma grazie all'analisi interpretativa e al raffronto ragionato dei discorsi degli stakeholder emersi da interviste, durante i workshop e in vari scambi di opinioni durante i follow-up.

Un'evoluzione del grado di 'shared purpose' è emersa nel tempo. Inizialmente articolato e condiviso dal project leader, la visione comune successivamente si è rafforzata attraverso i workshop collettivi, riflettendosi nelle modalità con cui i partecipanti descrivevano l'allineamento (o la mancanza di allineamento) tra i propri obiettivi e quelli degli altri stakeholder, nonché nella coerenza del linguaggio utilizzato per articolare una visione comune delle azioni da intraprendere.

Analizzando le interviste, e come confermato dagli esperti, i partecipanti hanno variamente menzionato differenti livelli di collaborazione con altri, indicati dall'uso di pronomi personali o collettivi (ad esempio, "io" oppure "noi") o ricordando azioni sviluppate individualmente o in collaborazione con altri stakeholder, rivelando così una nuova variabile analitica: il livello di collaborazione.

La matrice cattura dunque le configurazioni empiriche dei significati della sostenibilità lungo due assi analitici:

− asse orizzontale - grado di 'shared purpose', ossia la misura in cui i significati della sostenibilità convergono o restano frammentati tra gli stakeholder;

– asse verticale - livello di collaborazione, ossia la misura in cui gli sforzi di sostenibilità sono coordinati tra diversi stakeholder locali.

L'area occupata nella configurazione in basso a sinistra della matrice è stata denominata *"Messy Meanings"*. Il concetto di sostenibilità nel caso in esame era ambiguo, e gli stakeholder operavano con definizioni incoerenti e talvolta contrastanti, con poco dialogo o integrazione. Il purpose era diffuso e la collaborazione minima. Si può dedurre che inizialmente il caso fosse nella posizione A in Figura 1, e che quindi non esistesse né una definizione condivisa di sostenibilità né obiettivi di sostenibilità condivisi. Gli obiettivi di sostenibilità (se presenti) erano individuali e non coordinati, poiché ciascuno stakeholder operava in maniera indipendente senza un shared purpose. Nel corso delle attività della Ricerca-Azione (incontri partecipativi, workshop, seminari, ecc.), il sistema ha iniziato a cambiare.

Gli attori locali hanno cominciato a riformulare la sostenibilità in termini più concreti e collettivi. Come dichiarato dal sindaco leader del progetto: "*Quando abbiamo iniziato, ci siamo conosciuti tramite un'iniziativa lanciata da cinque comuni sotto il nome di sostenibilità — questo era il principio guida dell'associazione. Abbiamo formalmente costituito un'associazione di comuni con personalità giuridica, riunendo infine 24 comuni e coprendo un territorio di circa 110.000 abitanti. Quest'area include quasi interamente i Colli Berici, rappresentando un riferimento territoriale chiave per il nostro lavoro. Oltre ai 24 comuni, abbiamo coinvolto 13 altri stakeholder, tra cui Camera di Commercio, sindacati, associazioni di categoria, organizzazioni del terzo settore, cooperative sociali e consorzi turistici locali e Università. Abbiamo creato un gruppo di lavoro collaborativo composto da attori pubblici e privati. Il tema centrale è rimasto la sostenibilità — inquadrata nella visione '(nome omesso prima della revisione) Area 2030', approvando un piano strategico focalizzato sulla sostenibilità sociale, ambientale ed economica*".

Sebbene non sia emerso un significato pienamente unificato, alcune interpretazioni dominanti hanno guadagnato rilevanza (ad esempio qualità ambientale e valorizzazione territoriale). Queste non sono state imposte dai ricercatori, ma negoziate attraverso la pratica e il dialogo. Ciò ha portato a un nuovo posizionamento nella matrice, in posizione B di Figura 1: la configurazione *"Multiple Meanings Prioritization"*. In questo stato, gli attori hanno riconosciuto la coesistenza di punti di vista diversi e la presenza di molteplici obiettivi di sostenibilità convergendo, in modo negoziale, verso la scelta delle priorità dei vari significati emersi. Come dichiarato dal leader del progetto: "*Abbiamo creato gruppi di lavoro interdisciplinari che hanno riunito competenze e prospettive diverse — amministratori pubblici, artigiani, agricoltori e rappresentanti sindacali. Questi gruppi erano organizzati intorno a cinque temi chiave. … Abbiamo poi tenuto diverse sessioni di brainstorming, chiedendo: 'Come immaginate il turismo sostenibile nell'area?' Ho guidato il gruppo per aiutare a sintetizzare le discussioni, perché nel lavoro di gruppo è essenziale avere qualcuno che possa distillare le idee e filtrare i temi chiave"*.

Gli stakeholder hanno dunque iniziato a dare priorità in modo intenzionale ai temi di sostenibilità condivisi, rilevanti nel contesto e politicamente fattibili. La collaborazione è ancora disomogenea, ma maggiormente ancorata a narrazioni condivise.

### 4.3 Una configurazione in evoluzione

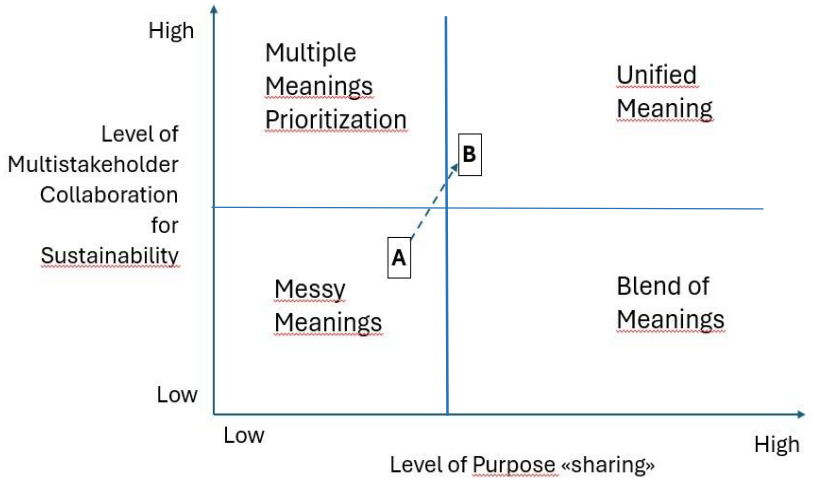
È importante sottolineare che questa evoluzione non suggerisce un movimento lineare verso la convergenza. Piuttosto, riflette una configurazione evolutiva dipendente dal contesto, dalla capacità istituzionale e dalla fiducia relazionale. Due ulteriori configurazioni presenti nella matrice risultano particolarmente rilevanti per la teoria della collaborazione multistakeholder:

- *"Blend of Meanings"* - coesistono molteplici interpretazioni della sostenibilità, ma esse sono integrate in modo significativo attraverso una narrazione condivisa. Il consenso sul mix di significati ha uno scopo primario di identità e comunicazione esterna, ma è pur sempre un processo partecipativo e ciò consente un pluralismo produttivo, permettendo la collaborazione nonostante prospettive differenti;

- *"Unified Meaning"*- la sostenibilità è definita collettivamente e ampiamente

condivisa tra gli stakeholder, supportata da elevati livelli di collaborazione. Lo scopo comune è unico ma integrato in ogni membro dell'ecosistema, a cui tutti gli attori convergono nelle loro azioni individuali senza bisogno di ulteriori negoziazioni. Questo scenario si osserva tipicamente all'interno di sistemi di governance istituzionalizzati o ben coordinati, in cui un purpose comune guida l'azione condivisa.

Sebbene queste due configurazioni non siano emerse nel caso esaminato in questo studio, questi due percorsi rappresentano stati aspirazionali o logicamente possibili a cui gli stakeholder facevano implicitamente riferimento e fungono da punti concettuali di riferimento per comprendere le potenziali direzioni nell'evoluzione della collaborazione multistakeholder.




Fonte: Elaborazione delle

**Figura 1:** Shared Meanings of Sustainability Matrix

Il caso di studio si colloca tra frammentazione e prioritizzazione negoziata. Tuttavia, segnali iniziali di movimento, tra cui l'interesse degli stakeholder nella coprogettazione di iniziative educative e l'adozione del framework nel discorso locale, suggeriscono che la matrice stessa stia diventando uno strumento di riflessione, coordinamento e orientamento strategico. Questa matrice è utile sia come dispositivo diagnostico sia come mappa orientativa, aiutando gli stakeholder a individuare la propria posizione, comprendere le tensioni esistenti e identificare possibili percorsi evolutivi.

## 5. Discussione dei Risultati

Questa Ricerca-Azione ha evidenziato l'assenza di un 'shared meaning' della sostenibilità tra i diversi stakeholder coinvolti nell'area rurale di riferimento. Dallo studio sono emersi cinque grandi temi relativi ai significati della sostenibilità, supportati da differenti attori che vivono e/o operano nella stessa piccola area rurale. Alcuni stakeholder hanno interpretato la sostenibilità in termini di efficienza ambientale e mitigazione degli impatti (Tema 1): in un contesto rurale, questa sensibilità ambientale può essere profondamente radicata nella natura, richiamando il concetto di 'connectedness to nature' evidenziato da Diamond (2021). Altri stakeholder hanno ancorato il significato principale della sostenibilità alla fattibilità economica, agli incentivi o alle strutture di compliance (Tema 2); questo risultato è coerente con studi precedenti in contesti in cui la sostenibilità è considerata uno strumento per risolvere trade-off (Murphy e Price, 2012; Moeller et al., 2011). Tuttavia, la presente ricerca propone una lettura originale della sostenibilità come processo generativo, in cui considerazioni economiche interagiscono con collaborazione e 'shared purpose' per coprodurre significati condivisi.

Altri significati emersi si riferiscono all'identità locale, alla continuità culturale o ai legami affettivi con il territorio e la comunità (Temi 3 e 4): tali argomentazioni sono state riscontrate anche in altri contesti, con riferimento a legami personali e generazionali e alla radicata autenticità locale (Diamond, 2021). A differenza di ricerche precedenti, questo studio rivela una connessione originale tra questi significati e il concetto di sostenibilità in relazione diretta allo sviluppo delle destinazioni turistiche. Il quinto tema utilizza un linguaggio aspirazionale senza un piano d'azione concreto, evidenziando come la sostenibilità possa essere fluida e soggetta a continui spostamenti concettuali, ampliando o restringendo i propri confini semantici, come osservato in studi precedenti (Baush et al., 2024).

Questo studio ha inoltre introdotto la '*Shared Meanings of Sustainability Matrix',* che offre indicazioni su come possano emergere 'shared meanings' attraverso l'intersezione tra purpose-sharing e collaborazione. La matrice illustra come gli stakeholder possano progressivamente passare da interpretazioni frammentate e individualizzate a significati della sostenibilità più integrati e collettivamente detenuti.

Nella configurazione *"Messy Meanings"*, i significati restano vaghi o contraddittori. Gli stakeholder operano con minima coordinazione e la sostenibilità è evocata come obbligo o ideale, ma non come principio azionabile. Ciò riflette osservazioni precedenti sulla tendenza delle istituzioni nelle aree rurali ad adottare un linguaggio della sostenibilità senza allineamento sul contenuto o sulle implicazioni (Vespestad et al., 2025). In questa configurazione, la sostenibilità manca di ancoraggio nel shared purpose o nel riconoscimento reciproco, e il potenziale per un'azione congiunta rimane inespresso.

Uno spostamento si osserva nella configurazione **"***Blend of Meanings"*, in cui gli stakeholder integrano logiche differenti (economiche, ambientali, territoriali, ecc.) pur senza una risoluzione definitiva. Queste posizioni riflettono un'ambiguità produttiva e aprono spazi per sperimentazioni collaborative. Come mostrato in studi su aree protette e partnership tra stakeholder, il progresso non richiede necessariamente la convergenza dei valori (Signori e Flint, 2020), ma può emergere da accordi flessibili che permettono negoziazioni situate (Jamal e Stronza, 2009). Nel nostro caso, i blended meanings consentirebbero un certo grado di shared purpose anche in presenza di bassi livelli di collaborazione. Questi bassi livelli di collaborazione sono stati spiegati in altri contesti rurali come forme di 'self-reliance collaboration' (Diamond, 2021), dove l'individualismo deriva dalla scarsa fiducia nelle autorità pubbliche.

Nella configurazione *"Multiple Meanings Prioritization"*, alcuni valori vengono deliberatamente elevati, come l'equità intergenerazionale, la cura del paesaggio o la decarbonizzazione della mobilità. Questi significati risultano non solo più integrati, ma anche più riflessivi, richiamando la necessità di superare la mera coordinazione manageriale e investire in spazi discorsivi dove i significati vengono co-costruiti (Liburd et al., 2022).

Infine, la configurazione *"Unified Meaning"* riflette una trasformazione più profonda: la sostenibilità diventa una narrazione condivisa, ancorata a un'identità comune. Questi risultati confermano evidenze secondo cui le comunità rurali possono mobilitarsi attorno a forme di azione collettiva radicate territorialmente (Luo et al., 2025). In questa configurazione, la collaborazione non è semplicemente strategica, ma costituisce essa stessa il significato della sostenibilità.

## 6. Implicazioni

### 6.1 Implicazioni teoriche

Nel complesso, i risultati supportano un contributo teorico più ampio. La matrice proposta posiziona i significati condivisi non come un compromesso statico tra collaborazione e purpose sharing, ma come una proprietà emergente della loro interazione. Essa amplia i lavori esistenti suggerendo che il processo di costruzione del significato della sostenibilità non è una condizione preliminare per la governance, ma costituisce una forma di governance stessa, incorporata nel linguaggio, nel dialogo e nel shared purpose (Liburd et al., 2022). In questo senso, uno 'shared meaning' diventa la proprietà analitica e pratica che connette la teoria multistakeholder con il dibattito in evoluzione sul purpose organizzativo (Hollensbe et al., 2014; Tafuro e Piccaluga, 2025). Questa ricerca contribuisce inoltre al dibattito sulla stakeholder theory nello sviluppo del turismo rurale. Studi precedenti (es. Albrecht et al., 2021; Vespestad et al., 2025) hanno mostrato come il contributo degli stakeholder sia essenziale nello sviluppo di piani per un turismo rurale sostenibile. Tuttavia, la novità del presente lavoro consiste nel fatto che—prima ancora che il processo turistico venga considerato—sono importanti le definizioni condivise di sostenibilità. Vi è infatti ancora scarsa evidenza che gli stakeholder di un'area condividano una definizione di sostenibilità. Il contesto studiato non aveva una storia di sviluppo turistico e ha rivelato che la sostenibilità era un termine conteso. Senza stabilire un punto di riferimento, è probabile che in molte realtà emergano resistenze al cambiamento (Karali et al., 2021) o una mancanza di coordinamento nell'attuazione dei piani d'azione (Lane e Kastenholz, 2015). Per questo, l'Action Research come quella condotta risulta particolarmente importante in destinazioni appena sviluppate. Lo sviluppo turistico dovrebbe essere localmente focalizzato (Bramwell e Sharman, 1999; Snyman e Bricker, 2019), e appare che responsabilizzare gli stakeholder locali attraverso termini condivisi possa aiutare a creare fiducia e a stabilire una base comune per la definizione degli obiettivi. Sebbene consulenti turistici e ricercatori accademici possano essere esperti nello sviluppo del turismo sostenibile, questa ricerca evidenzia l'importanza di un approccio locale e pratico per avviare lo sviluppo turistico.

### 6.2 Implicazioni pratiche

Dal punto di vista operativo, amministratori locali e stakeholder del turismo dovrebbero investire non solo in meccanismi di collaborazione strategica, ma anche in spazi di allineamento discorsivo, come forum deliberativi, workshop partecipativi o laboratori di co-design. Questi formati possono servire da piattaforme per tradurre obiettivi di sostenibilità vaghi o divergenti in iniziative più concrete e collettivamente supportate. Piuttosto che forzare un consenso prematuro, i manager locali dovrebbero coltivare processi interpretativi che aiutino gli stakeholder ad articolare, confrontare e negoziare i propri significati della sostenibilità.

All'interno del turismo sostenibile, un obiettivo chiave è garantire che i benefici siano condivisi (Liu e Shu, 2020). Allo stesso tempo, diversi stakeholder possono avere obiettivi differenti o talvolta conflittuali. Questo studio segue l'enfasi di Snyman e Bricker (2019) secondo cui "comprendere i desideri dei residenti e degli stakeholder è una considerazione essenziale nella concettualizzazione della sostenibilità del turismo e della condivisione dei benefici in contesti locali vari e diversificati" (p. 713). I benefici derivanti dai valori condivisi degli stakeholder includono elementi di empowerment sociale (valori condivisi) ed economico (risultati economici condivisi) tra stakeholder e residenti (Scheyvens, 1999). In questo studio, i valori condivisi equivalgono a una definizione condivisa di principi sostenibili, su cui è possibile costruire una strategia per garantire benefici economici e sociali duraturi nel turismo rurale. In questi contesti le iniziative top-down rischiano l'insuccesso se le definizioni sono imposte da un'autorità centrale senza accordo sui significati e le priorità locali. A livello sociale, lo studio evidenzia l'importanza del collective meaning-making come fonte di legittimità democratica nelle aree rurali. Nelle comunità dove l'autorità formale è debole e la collaborazione spesso informale, la sostenibilità può diventare una narrazione socialmente condivisa che lega interessi diversi. Quando il significato viene co-prodotto piuttosto che imposto, si favorisce un maggiore attaccamento emotivo, partecipazione civica e senso di responsabilità condivisa. In questo senso, la comunicazione sulla sostenibilità dovrebbe andare oltre informazioni tecniche o branding simbolico e radicarsi in narrazioni partecipative ancorate all'identità locale e al shared purpose.

## 7. Conclusioni

Questo studio ha esplorato come significati condivisi della sostenibilità possano emergere tra stakeholder diversi operanti in un'area rurale caratterizzata da infrastrutture di coordinamento deboli, potere frammentato e tradizioni di collaborazione limitate. Coinvolgendo gli stakeholder in un processo partecipativo e iterativo di Action Research, la ricerca evidenzia che i significati condivisi della sostenibilità non preesistono, ma si sviluppano nel tempo attraverso dialogo strutturato, costruzione di fiducia e condivisione del purpose.

I risultati mostrano che inizialmente la sostenibilità è interpretata attraverso cinque temi eterogenei di significato (*Protezione ambientale ed efficienza delle risorse; Quadro economico e leva istituzionale; Identità territoriale e turismo place-based; Etica, emozione e benessere; Obiettivi aspirazionali e vaghi*). Tuttavia, man mano che le interazioni evolvono dalle interviste individuali a focus group collaborativi e workshop, gli stakeholder iniziano ad allinearsi su obiettivi, linguaggio e visioni condivisi. Questo processo culmina nello sviluppo della "*Shared Meanings of Sustainability Matrix*", che concettualizza come i significati condivisi evolvano attraverso collaborazione e

purpose sharing. La matrice funge sia da contributo teorico sia da strumento pratico per guidare l'allineamento degli stakeholder in contesti di governance complessi, evidenziando quattro configurazioni: *Messy Meanings, Multiple Meanings Prioritization, Blend of Meanings e Unified Meaning*.

Dal punto di vista teorico, lo studio contribuisce alla letteratura emergente sul purpose come costrutto negoziato, relazionale ed emergente. Evidenzia che il processo di costruzione del significato della sostenibilità non è un prerequisito per la governance, ma costituisce una forma di governance stessa, fondata su dialogo, riconoscimento e riflessività collettiva. Posizionando il significato condiviso come risultato dinamico dell'impegno multistakeholder, la ricerca connette la stakeholder theory con il turismo sostenibile.

Dal punto di vista pratico, lo studio fornisce indicazioni per amministratori rurali e facilitatori: investire in processi di meaning-making è cruciale per attivare azioni sostenibili.

Facilitatori e leader locali possono utilizzare la matrice come strumento diagnostico e di sviluppo per valutare la posizione di un territorio in termini di comprensione condivisa e collaborazione e per progettare interventi mirati a supportare l'allineamento.

A livello sociale, i risultati sottolineano l'importanza di responsabilizzare gli attori locali affinché articolino i propri valori e aspirazioni, resistendo all'imposizione di definizioni top-down della sostenibilità. Questo approccio inclusivo può rafforzare la coesione sociale, accrescere la legittimità e favorire coalizioni più durature per il cambiamento, in particolare nelle aree rurali dove fiducia e identità sono centrali per gli sforzi di sviluppo.

In conclusione, lo studio suggerisce che un 'shared purpose' costituito da uno 'shared meaning' della sostenibilità non si realizza necessariamente standardizzando l'eterogeneità dei temi in un unico significato semantico, ma può essere raggiunto anche valorizzando la varietà di esperienze e visioni dei diversi stakeholder.

## Riconoscimenti

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## Bibliografia

Albrecht, J. N., Haid, M., Finkler, W., & Heimerl, P. (2021). What's in a name? The meaning of sustainability to destination managers. *Journal of Sustainable Tourism*, *30*(1), 32–51.

Almandoz, J. (2023). Inside-out and outside-in perspectives on corporate purpose. *Strategy Science*, *8*(2), 139-148.

Ballantyne D. (2004). Action research reviewed: A market-oriented approach. *European Journal of Marketing, 38*(3/4), 321–337

Basile, G., Tani, M., Sciarelli, M., & Ferri, M. A. (2021). Community participation as a driver of sustainable tourism. The case of an Italian village: Marettimo Island. *Sinergie Italian Journal of Management*, *39*(1), 81-102.

Bausch, T., Schröder, T., & Tauber, V. (2024). What is to be sustained? The polysemy of sustainability and sustainable tourism across languages and cultures. *Journal of Sustainable Tourism*, 32(1), 108-131.

Bramwell, B., & Sharman, A. (1999). Collaboration in local tourism policymaking. *Annals of Tourism Research*, *26*(2), 392-415.

Briedenhann, J., & Wickens, E. (2004). Rural tourism—meeting the challenges of the new South Africa. *International Journal of Tourism Research*, *6*(3), 189-203.

Cannas, R., Argiolas, G., & Cabiddu, F. (2018). Fostering corporate sustainability in tourism management through social values within collective value co-creation processes. *Journal of Sustainable Tourism*, *27*(1), 139-155.

Capriello, A. (2012). Participatory action research for stakeholder collaboration: lessons from a rural area in Piedmont, Italy. In *Field guide to case study research in tourism, hospitality and leisure* (Vol. 6, pp. 323-343). Emerald Group Publishing Limited.

Carneiro, M. J., Lima, J., & Silva, A. (2015). The relevance of landscape in the rural tourism experience: Identifying important elements of the rural landscape. *Journal of Sustainable Tourism, 23*(8-9), 1217-1235.

Cawley, M., & Gillmor, D. A. (2008). Integrated rural tourism: Concepts and Practice. *Annals of Tourism Research, 35*(2), 316-337.

Choudhary, V., Datta, B., & Mukherjee, S. (2025). Rural Tourism: A Hybrid Review and Future Research Agenda. *International Journal of Consumer Studies*, 49(1), e70006.

Cloutier, C., & Langley, A. (2017). Negotiating the moral aspects of purpose in single and cross-sectoral collaborations. *Journal of Business Ethics*, *141*, 103-131.

Diamond, E. P. (2023). Understanding rural identities and environmental policy attitudes in America. *Perspectives on Politics*, *21*(2), 502-518.

Di Clemente, E., Hernández-Mogollón, J. M., De Salvo, P., & Campón-Cerro, A. M. (2015). Slow tourism: An alternative model for local and tourist development. *Sustainable performance and tourism: A collection of tools and best practices*, 23-37.

Dolnicar, S., & Greene, D. (2025). Research for environmentally sustainable tourism–All talk, no action?. *Journal of Hospitality and Tourism Management*, *62*, 28-33.

Donohoe, H., Reyes, B., & Becerra, L. (2015). Theoretical perspectives on stakeholders in tourism management. In *Demystifying Theories in Tourism Research* (pp. 18-30). Wallingford UK: CABI.

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of Management Review*, *14*(4), 532-550.

Erro-Garcés, A., & Alfaro-Tanco, J. A. (2020). Action Research as a MetaMethodology in the Management Field. *International Journal of Qualitative Methods*, 19, 1-11.

Freeman, E. (1984). *Strategic management: A stakeholder approach.* Boston: Pitman Press.

Getz, D., & Timur, S. (2005). Stakeholder involvement in sustainable tourism: Balancing the voices. In W.F. Theobald (Ed.), *Global tourism: Third edition* (pp. 230-247). Elsevier.

Gibbs, G. R. (2007). Thematic coding and categorizing. *Analyzing qualitative data*, *703*(38-56).

Glaser, B. G., & Strauss, A. L. (2017). Theoretical sampling. In *Sociological methods* (pp. 105-114). Routledge.

Goebel, K., Camargo-Borges, C., & Eelderink, M. (2020). Exploring participatory action research as a driver for sustainable tourism. *International Journal of Tourism Research*, *22*(4), 425-437.

Hollensbe, E., Wookey, C., Hickey, L., George, G., & Nichols, C. V. (2014).

Organizations with purpose. *Academy of Management Journal, 57*(5), 1227-1234.

Jamal T., & Stronza, A. (2009) Collaboration theory and tourism practice in protected areas: stakeholders, structuring and sustainability, *Journal of Sustainable Tourism, 17*(2), 169-189.

Jones, C. R., & Walmsley, A. (2022). A change would do you good: Advances in research impact in sustainable tourism and some 'home truths' for the sector. *Journal of Sustainable Tourism, 30*(9), 2073-2088.

Karali, A., Das, S., & Roy, H. (2021). Forty years of the rural tourism research: reviewing the trend, pattern and future agenda. *Tourism Recreation Research*, *49*(1), 173-200.

Khizar, H. M. U., Younas, A., Kumar, S., Akbar, A., & Poulova, P. (2023). The progression of sustainable development goals in tourism: A systematic literature review of past achievements and future promises. *Journal of Innovation & Knowledge, 8*(4), 100442.

Lane, B., & Kastenholz, E. (2015). Rural tourism: the evolution of practice and research approaches – towards a new generation concept? *Journal of Sustainable Tourism, 23*(8–9), 1133–1156.

Liburd, J., Duedahl E. & Heape C. (2022) Co-designing tourism for sustainable development, *Journal of Sustainable Tourism*, *30*(10), 2298-2317.

Liu, S. & Shu, H. (2020). Sustainable Cultural Tourism and Heritage Conservation in China: Case Studies of the Ancient Waterfront Towns in the South of Yangtze River. *Sustainable Development and Planning*, 15-26.

Luo X., Xu H. & Wall G. (2025). Collective actions and crisis adaptation of a rural tourism community. *Journal of Sustainable Touri*sm, 1-20.

Martins, R., Mascarenhas, M., & Pereira, E. (2024). Exploring strategic multileveraging of sport tourism events: An action-research study. *Journal of Destination Marketing & Management*, *32*, 100902.

Moeller, T., Dolnicar, S., & Leisch, F. (2011). The sustainability–profitability tradeoff in tourism: can it be overcome?. *Journal of Sustainable Tourism*, 19(2), 155169.

Murphy, P. E., & Price, G. G. (2012). Tourism and sustainable development. In *Global Tourism* (pp. 167-193). Routledge.

Näslund, D., Kale, R., & Paulraj, A. (2011). Action research in supply chain management—a framework for relevant and rigorous research. *Journal of Business Logistics, 31*(2), 331-355.

Nelson, K. S., Nguyen, T. D., Francois, J. R., & Ojha, S. (2023). Rural sustainability methods, drivers, and outcomes: A systematic review. *Sustainable Development, 31*(3), 1226–1249.

O'Leary, D., & Coghlan, D. (2022). Action research in hospitality and tourism research. In *Contemporary research methods in hospitality and tourism* (pp. 237251). Emerald Publishing Limited.

Oppermann, M. (2000). Triangulation—a methodological discussion. *International Journal of Tourism Research*, 2(2), 141-145.

Parker, C., Scott, S., & Geddes, A. (2019). *Snowball sampling*. SAGE Publications Ltd.

Paül, V., Trillo-Santamaría, J. M., & Pérez-Costas, P. (2016). Action research for tourism planning in rural areas? Examining an experience from the Couto Mixto (Galicia, Spain). *Geographical Research*, *54*(2), 153-164.

Pereira-Moliner, J., & Molina-Azorín, J. F. (2024). Conducting responsible research in hospitality management with greater societal impact. *International Journal of Contemporary Hospitality Management*, 36(3), 893-905.

Perkins, R., Khoo-Lattimore, C., & Arcodia, C. (2021). Collaboration in marketing regional tourism destinations: Constructing a business cluster formation framework through participatory action research. *Journal of Hospitality and Tourism Management*, *46*, 347-359.

Scheyvens, R. (1999). Ecotourism and the empowerment of local communities. *Tourism Management*, *20*(2), 245-249.

Signori, P., & Flint, D. J. (2020). Revealing the unique blend of meanings in corporate identity: An application of the semiotic square. *Journal of Marketing Theory and Practice*, 28(1), 26-42.

Snyman, S., & Bricker, K. S. (2019). Living on the edge: Benefit-sharing from protected area tourism. *Journal of Sustainable Tourism*, 27(6), 705-719.

Stone, M. J., Migacz, S., & Wolf, E. (2022). Learning through culinary tourism and developing a culinary tourism education strategy. *Journal of Tourism and Cultural Change*, *20*(1-2), 177-195.

Tafuro, M., & Piccaluga, A. (2025). Bridging the understanding of corporate purpose with its effectiveness: A systematic literature review and research directions. *Journal of Management & Organization*, 1-34.

Vespestad, M. K., Hehir, C., & Koivunen, K. (2025). How moral disengagement links to destination marketing organisations' moral muteness in their sustainability communications. *Journal of Sustainable Tourism, 33*(1), 9-27.

Waligo, V., Clarke, J., & Hawkins, R. (2015). Embedding stakeholders in sustainable tourism strategies. *Annals of Tourism Research, 55*, 90-93.

Zou, T., Huang, S., & Ding, P. (2014). Toward a community-driven development model of rural tourism: the Chinese Experience. International Journal of Tourism Research, 16(3), 261-271.

# Branding the Eternal City: Strategic Narratives and Identity Construction in Rome's Urban Image

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## Abstract

City branding has emerged as an essential strategy for urban governance, enabling cities to move beyond simple promotional campaigns and articulate distinctive identities that balance global competitiveness with cultural preservation. This study analyzes the evolution of Rome's city branding approach as a strategic instrument for urban planning and governance, examining how the urban brand transcends its traditional role as a communication tool to actively shape governance and decision-making processes. Adopting a qualitative single-case study design, it examines policy documents, branding campaigns, media materials, and field observations collected from 2015 to 2025, with particular attention to developments after 2020. The analysis uses thematic and discourse methods to identify patterns in Rome's use of historical narratives, stakeholder engagement practices, and sustainability objectives. Findings indicate that Rome strategically mobilizes its historical and cultural assets while developing innovative narratives of urban renewal and inclusive governance, demonstrating how branding operates as both a cultural and strategic asset that integrates heritage preservation, innovation, and sustainable urban development through participatory approaches. This research contributes to the theoretical understanding of city branding as a governance tool in heritage-rich contexts and offers practical guidance for developing integrated, participatory branding strategies that balance cultural integrity with contemporary urban challenges, specifically addressing the gap in empirical analysis of how branding integrates into strategic planning and participatory governance in historic cities.

*Keywords: City Branding, Destination Branding, Urban Governance, Heritage Management, Sustainable Development, Rome*

## 1. Introduction

Territorial branding has become a central element of urban and regional policies due to increasing global competition for tourists, investments, talent, and resources (Papadopoulos & Heslop, 2002). Consequently, cities have emerged as key actors in sustainable economic development, cultural preservation, and international strategic positioning (Kavaratzis & Kalandides, 2015), transforming how they define their identity, communicate values, and plan for the future.

Place branding encompasses strategies for constructing and managing a place's identity to attract external resources and enhance reputation (Moilanen & Rainisto, 2009; Fetscherin, 2010). While destination branding targets tourism (Buhalis et al., 2022), city branding specifically addresses cities as complex, multifunctional systems. It has evolved into a strategic urban policy instrument, moving beyond mere promotion to support governance

and guide sustainable development through the integration of tangible and intangible assets, forming the unique "DNA of the city" (Prilenska, 2012; Hammouda, 2019).

Despite growing theoretical interest in city branding as a governance and participation tool, the literature often applies traditional marketing models without fully accounting for cities' socio-cultural and economic complexities (Kavaratzis & Kalandides, 2015). Many studies prioritize promotional aspects and tourist perception, neglecting empirical analysis of how branding integrates into strategic planning and participatory governance. Specifically, the challenge for historic cities that balance their heritage with innovation and sustainability remains underexplored. This study aims to address this gap by examining Rome's case to understand how its urban brand functions as a strategic and participatory lever for coherent, shared urban development.

The central research question guiding this study is: To what extent does the urban brand transcend its role as a communication tool to actively shape governance and decision-making processes?

This question aims to uncover whether city branding in a heritage-intensive context like Rome goes beyond top-down promotional narratives to serve as a strategic framework that integrates governance, urban planning, and stakeholder interaction. By examining how Rome's urban brand operates as both a cultural and strategic asset, the study seeks to contribute to the broader understanding of branding as a dynamic tool for negotiating and balancing heritage preservation, innovation, and sustainable urban development.

## 2. Theoretical Background

The literature on place branding highlights how global competition necessitates differentiation and strategic positioning to attract resources through a distinctive identity (Fetscherin, 2010). Destination branding, traditionally focused on tourism and creating an appealing image (Buhalis et al., 2022; Merrilees et al., 2009; Ramadania et al., 2025), is primarily a marketing tool for promotion and competitive differentiation (Moilanen & Rainisto, 2009). However, this approach is limited for cities, which are complex, multifunctional spaces with diverse stakeholders. More recent literature emphasizes city branding as a multidimensional process that builds an attractive image but also guides a shared vision of urban development, integrating innovation, sustainability, and local identity (Pedeliento & Kavaratzis, 2019; Chan, 2022). City branding is thus a strategic tool influencing policy choices and development trajectories (Eshuis & Edwards, 2012), aiming for long-term competitive advantages by coordinating symbolic and functional attributes (Casais & Poco, 2023). Cities leverage unique resources to build brands that resonate locally and globally, differentiating through functional aspects (infrastructure, economic opportunities) and symbolic dimensions (cultural identity, heritage, emotional resonance) (Cruz-Ruiz et al., 2022).

Cultural heritage is a significant asset for city branding, especially for historic cities, contributing to urban identity through coherent signals, positioning, and emotional narratives (Pedeliento & Kavaratzis, 2019; Górska-Warsewicz, 2020). Effective branding requires aligning institutional communication, urban behavior, infrastructure design, and residents' practices (Kavaratzis & Kalandides, 2015) and activating place-based values related to the cities (e.g. Hammouda, 2019; Chi et al., 2018; Warren & Dinnie, 2018). However, tensions arise in balancing heritage valorization with innovation and regeneration, harmonizing accessibility, preservation, global competitiveness, local integrity, modernization, and authenticity (Veasna et al., 2013; Nagaynay & Lee, 2020). Integrative approaches combine heritage conservation, urban innovation, and participatory governance, reflecting residents' values and ensuring consistency between communication and

development (Hakala et al., 2020). Despite theoretical advancements, empirical literature lacks analysis of branding's incorporation into planning and institutional strategies, specifically whether it's a communication tool or a strategic lever for governance and development (Żemła, 2024).

## 3. Methodology

This study adopts a qualitative, single-case study approach, focusing on the city of Rome as its unit of analysis. It was chosen as the case study for its status as a UNESCO World Heritage Site and also because of its unique urban configuration, in which heritage assets are dispersed across the city. This diffuse urban heritage forms the basis for rich historical narratives with strong global relevance, presenting an ideal context for understanding the integration of heritage and branding within urban planning. The study relied on a triangulated data collection strategy, combining institutional materials and social media analysis to ensure a comprehensive dataset. Primary data were sourced from 12 institutional documents obtained online from official platforms, including "Roma si Trasforma," during a systematic desk review conducted between March and May 2025. Documents were selected based on their formal status, thematic alignment with governance and sustainability, and their representation of Rome's institutional vision for integrating branding and urban development.

To complement institutional data, social media content analysis was conducted to understand public perceptions of Rome's urban branding. A dataset of user-generated content from TripAdvisor spanning 2023–2025 was compiled, analyzing popular reviews and hashtags. The analysis was conducted in two stages. First, the institutional documents were classified using Nagaynay and Lee's (2020) triadic framework of identity construction, heritage preservation, and infrastructure development. Second, a qualitative coding process followed Saldana's (2013) methodology.

To ensure reliability and validity, all data were manually coded by two independent researchers. The codes were iteratively refined and organized around the analytical pillars of identity, heritage, and infrastructure. This cross-validation process allowed for a nuanced and layered interpretation of how branding functions as both a governance tool and a strategic negotiation mechanism involving various stakeholders.

## 4. Preliminary results and conclusions

As shown in Table 1, the model distinguishes theoretical dimensions from their operational translation, each assessed through qualitative indicators applied to planning documents, promotional content, and field observations.

| **Identity Creation and Promotion** | | |
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| **imensions** | **Qualitative indicators** | **Sources** |
| **Definition of Urban Identity and Strategic Vision** | **City Mission and Vision**: Rome as an open, inclusive, and sustainable metropolis, based on innovation, inclusion, and sustainability.<br><br>**Core Values and Guiding Principles:** Culture, sustainability, innovation, inclusion; administrative transparency, social justice, responsibility toward common goods, people-centered approach, social and technological innovation, territorial cohesion, environmental sustainability, participation.<br><br>**Medium-to-Long-Term Strategic Objectives**: Widespread urban regeneration, enhancement of cultural heritage, strengthening sustainable mobility, digitalization and modernization of public administration, ecological transition, strengthening Rome's brand internationally, revitalization of the city's international reputation; improvement of quality of life; attraction of qualified investments and talents.<br><br>**Desired Positioning:** An international metropolis attractive to citizens, businesses, investors, and students, based on cooperation and global reputation. A capital of culture and beauty, inclusive and resilient city, urban innovation lab, major international tourism hub. | *Comune di Roma Capitale. (2024). Integrated Plan of Activities and Organization (PIAO) 2025–2027, Strategic Section and Public Value (pp. 9–17).*<br><br>*Roma Capitale. (2022). Metropolitan Strategic Plan of Roma Capitale 2022–2024.*<br><br>*Roma si Trasforma. (2025). Official Homepage.*<br><br>*Comune di Roma. (2025). Mobility Control Center – Roma Mobilità. Retrieved from https://romamobilita.it/it/tecnologie/centrale-mobilita* |

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| **Stakeholder Involvement and Participation** | **Engagement Mechanisms:** Public-private networks (e.g. Roma&Partners), thematic tables, co-participated projects with local bodies, universities, and businesses. Citizen involvement in vision building (e.g. "Rome Transforms").<br><br>**Participatory Processes:** Neighborhood workshops, online consultations, civic forums on regeneration and mobility. Online portal for participatory monitoring of construction sites.<br><br>**Communication Actions Toward Stakeholders:** Newsletters, social media, WhatsApp channel, meetings with associations and local stakeholders (e.g. Forum PA, Rome Innovation Hub). | *Comune di Roma Capitale. (2024). Integrated Plan of Activities and Organization (PIAO) 2025–2027, Section 3.1 (pp. 30–34).*<br><br>*Roma si Trasforma. (2025). Official Portal – "The Project" Section. Retrieved* |
| **Urban Communication and Promotion Strategies** | **Key Messages and Storytelling:** Narratives on regeneration, beauty, urban rebirth, Rome as inclusive, sustainable, eternal but future-oriented capital ("The Eternal City changes forever").<br><br>**Communication Channels:** "Rome Transforms" site, institutional portal, social networks, events, official videos, physical and digital materials.<br><br>**Specific Targets:** Roman citizens, national/international tourists, public/private stakeholders, investors, cultural operators.<br><br>**Visual and Narrative Elements:** Strong slogans, visuals of sites | *Comune di Roma Capitale. (2024). Integrated Plan of Activities and Organization (PIAO) 2025–2027, Section 3.1.3 (pp. 32–34).*<br><br>*Roma Capitale. (2025). City Branding Strategy (pp. 5–8).*<br><br>*Roma si Trasforma. (2025). Official Portal – Homepage, News Section, and Visual Claims.* |

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| | and heritage, emotional language, iconic references.<br><br>**Promotion Actions:** Media campaigns, storytelling videos, local influencers, neighborhood events, site walkabouts.<br><br>**Tone of Voice:** "Authentic, direct, understandable", with focus on empathetic narrative and multifaceted identity.<br><br>**Channels and Tools:** Coordinated visual/verbal language, campaigns, portals, social media, posters, events.<br><br>**Visual Identity Elements:** Restyled logo, new coordinated image, identity palette, visual storytelling on culture/innovation/inclusion. | |
| **Preservation of Cultural and Historical Assets** | | |
| **Enhancement of Heritage and Local Identity** | **Cultural Heritage References:** Emphasis on archaeological and monumental heritage; Rome as an open-air museum and global cultural capital.<br><br>**Conservation and Promotion Actions:** Redevelopment of central/peripheral areas; PNRR investments for restoration and enhancement.<br><br>**Brand Integration:** Enhancing Roman identity as both ancient capital and modern metropolis.<br><br>**Blending traditional and contemporary values:** classical culture + | *Roma Capitale. (2025). City Branding Strategy (pp. 10–17).*<br><br>*Roma si Trasforma. (2025). Official Portal – Project Map Section. Retrieved from https://www.romasitrasforma.it*<br><br>*Comune di Roma Capitale. (2024). Integrated Plan of Activities and Organization (PIAO) 2025–2027, Section 2.1.3 (pp. 24–26).* |

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| | sustainability, innovation, inclusion. | |
| **Development of Consistent Urban Products and Experiences** | **Tourist and Cultural Products:** International events (Jubilee 2025, Expo 2030, Ryder Cup 2023 bid), themed itineraries, enhanced civic museums and free entry Sundays.<br><br>**Integrated Offers:** Public-private synergies, integrated packages with museums, transport, cultural/commercial services. Goal: added value and longer stays.<br><br>**Positioning Consistency:** Dual identity of Rome – historic and modern. Experiences mixing heritage and innovation, slow tourism, participatory events. Alignment with "Rome Transforms" vision. | *Roma Capitale. (2025). City Branding Strategy, sections "Key Attractions" and "Integrated Mobility & Culture Offer".*<br><br>*Comune di Roma Capitale. (2024). Integrated Plan of Activities and Organization (PIAO) 2025–2027, Mission 1 – Culture (pp. 20–32).*<br><br>*Roma Capitale. Urban Sustainable Mobility Plan (PUMS) – Annex 2: Strategic Objectives.*<br><br>*Roma si Trasforma. (2025). Official Portal – Culture Section* |
| **Supportive Infrastructure Development** | | |
| **Specific and Measurable Branding Objectives** | **Presence of SMART Goals:** Increase in international attractiveness, growth in sustainable and cultural tourism, enhanced reputation, improved ability to attract investments and talents.<br><br>**Performance Indicators (KPIs):** Metrics related to tourist satisfaction, number of events and participants, media visibility, access to tourist portals, activated private investments, number of PNRR projects initiated, improved sustainability rankings. | *Comune di Roma Capitale. (2024). Integrated Plan of Activities and Organization (PIAO) 2025–2027, Sections 2.2.1 and 2.3.1 (pp. 17–23).*<br><br>*Roma Capitale. (2025). City Branding Strategy (pp. 5–6).* |

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| | **Specific Targets:** Leisure and cultural tourists, citizens, local businesses and investors, young professionals and students, institutional stakeholders, international companies, local communities, and territorial actors. | |
| **Measurement and Monitoring of Branding Impact** | **Impact Measures:** Project counts (e.g. PNRR), improved urban services, tourism and cultural attractiveness, environmental and social indicators. Intermediate and final evaluation.<br><br>**Success Metrics:** Tourist performance, digital engagement, economic return, service performance, civic participation, visitors to regenerated sites, reduced inequalities, perceived urban quality.<br><br>**Monitoring Mechanisms:** Integrated Activity and Organization Plan (PIAO), dashboards.<br><br>**Specific Indicators:** Visitor numbers, flows, average stay, regeneration impact, cultural accessibility, economic/social returns.<br><br>**Review and Adaptability:** Continuous updates, three-year reviews, response to new challenges (e.g. pandemics, crises, trends). | *Roma Capitale. (2025). City Branding Strategy, section "Performance Assessment".*<br><br>*Comune di Roma Capitale. (2024). Integrated Plan of Activities and Organization (PIAO) 2025–2027, Performance System (pp. 85–92).*<br><br>*Roma si Trasforma. (2025). Official platform – Interactive map of construction sites.* |
| **Governance and Responsibility of Urban Branding** | **Actors:** Rome Municipality, Metropolitan City, 121 municipalities, universities, research centers, cultural foundations, public/private operators. | *Metropolitan City of Rome Capital. (2022). Metropolitan Strategic Plan 2022–2024, chapters 3, 5, 6, 7, 8.*<br><br>*City of Rome. (2025). Governance details – Rome Capital [https://www.comune.roma.it/web/it/dettaglio.page?contentId=PAG1354213].*<br><br>*Roma si Trasforma. (2025). Official platform – Participatory governance section.* |

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| | **Coordination:** Inter-institutional boards, cooperation among local entities and third parties. Platforms for co-programming/co-design.<br><br>**Budget and Resources:** PNRR, POR FESR/FSE, national/regional/municipal funds, sponsorships, partnerships.<br><br>**Governance Mechanisms:** Integrated, multi-level model inspired by Europe; emphasis on social participation, transparency, accountability; protocols, permanent tables, digital monitoring tools. | |

**Table 1:** Expanded Analytical Framework for Strategic Dimensions in Rome's City Branding

The preliminary findings of this study shed light on the multifaceted nature of city branding in heritage-intensive contexts, using the case of Rome as an emblematic example of the strategic tensions and opportunities that emerge when tradition and innovation converge. The analysis reveals how Rome's branding initiatives seek to harmonize its symbolic weight as a global cultural icon with contemporary governance imperatives, such as sustainability, urban renewal, and inclusive participation. The contribution of this research is threefold. From a theoretical perspective, it advances the understanding of city branding dynamics in contexts where historical legacy represents both a strategic asset and a constraint for contemporary identity formation. Methodologically, it introduces a multidimensional framework that enables a nuanced analysis of how branding strategies integrate heritage preservation with innovation and urban governance. On a practical level, the study offers actionable insights for policymakers, planners, and branding professionals in heritage-rich cities, supporting the development of coherent, inclusive, and culturally grounded branding strategies that respond to both resident needs and global visibility demands.

## References

Buhalis, D., O'Connor, P., & Leung, R. (2022). Smart hospitality: from smart cities and smart tourism towards agile business ecosystems in networked destinations. International Journal of Contemporary Hospitality Management, 35(1), 369-393.

Casais, B., & Poço, T. (2023). Emotional branding of a city for inciting resident and visitor place attachment. Place Branding and Public Diplomacy, 19(1), 93–102.

Chan, A. (2022). Brand element: exploring the effect on city branding. International Journal of Professional Business Review: Int. J. Prof. Bus. Rev., 7(4), 26.

Chi, Christina Geng-Qing., Li. Pan, and Giacomo Del Chiappa. 2018. Examining destination personality: Its antecedents and outcomes. Journal of Destination Marketing & Management, 149–159.

Merrilees, B., Miller, D., & Herington, C. (2009). Antecedents of residents' city brand attitudes. Journal of Business Research, 62(3), 362-367.

Cruz-Ruiz, E., Ruiz-Romero de la Cruz, E., & Caballero-Galeote, L. (2022). Recovery measures for the tourism industry in Andalusia: residents as tourist consumers. Economies, 10(6), 133.

Eshuis, J., & Edwards, A. (2013). Branding the city: The democratic legitimacy of a new mode of governance. Urban studies, 50(5), 1066-1082.

Fetscherin, M. (2010). The determinants and measurement of a country brand: the country brand strength index. International marketing review, 27(4), 466-479.

Górska-Warsewicz, H. (2020). Factors determining city brand equity—A systematic literature review. Sustainability, 12(19), 7858.

Hakala, U., Lemmetyinen, A., & Nieminen, L. (2020). Rebranding a "rather strange, definitely unique" city via co-creation with its residents. Place Branding and Public Diplomacy, 16, 316-325.

Hammouda, K. N. (2019). Heritage as a Key Element of Cities and Destinations Branding. ARCHive-SR, 3(4), 32-38.

Papadopoulos, N., & Heslop, L. (2002). Country equity and country branding: Problems and prospects. Journal of brand management, 9(4), 294-314.

Kavaratzis, M., & Kalandides, A. (2015). Rethinking the place brand: the interactive formation of place brands and the role of participatory place branding. Environment and Planning A, 47(6), 1368-1382.

Moilanen, T., & Rainisto, S. K. (2009). How to brand nations, cities and destinations. London: Palgrave Macmillan UK.

Nagaynay, C., & Lee, J. (2020). Place branding and urban regeneration as dialectical processes in local development planning: A case study on the Western Visayas, Philippines. Sustainability, 12(1), 369.

Pedeliento, G., & Kavaratzis, M. (2019). Bridging the gap between culture, identity and image: a structurationist conceptualization of place brands and place branding. Journal of Product & Brand Management, 28(3), 348-363.

Prilenska, V. (2012). City branding as a tool for urban regeneration: Towards a theoretical framework. Architecture and urban planning, 6, 12-16.

Ramadania, R., Reswari, R. A., Rahmawati, R., Rosyadi, R., Purmono, B. B., & Afifi, M. Z. (2025). City identity in tourist intention: Mediating role of city branding and tourism city value resonance. Cogent Business & Management, 12(1), 2474270.

Saldaña, J. (2016). The coding manual for qualitative researchers (3rd ed.). SAGE.

Veasna, S., Wu, W. Y., & Huang, C. H. (2013). The impact of destination source credibility on destination satisfaction: The mediating effects of destination attachment and destination image. Tourism Management, 36, 511–526.

Warren, G., & Dinnie K. (2018). Cultural intermediaries in place branding: Who are they and how do they construct legitimacy for their work and for themselves? Tourism Management 66: 302–314.

Żemła, M. (2024). European historic cities and overtourism–conflicts and development paths in the light of systematic literature review. International Journal of Tourism Cities, 10(1), 353-372.

# Conceptualising virtual reality museum experiences affecting destination brand equity

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## Abstract

Although immersive technologies have become mainstream in tourism and cultural domains, how the combination in a heritage museum of the physical experience and the VR experience, of museum and destination, can shape the destination brand equity remains an unexplored research area. This research aims to conceptualise how and to what extent the *quality of VR information systems* and the *familiarity (with the destination, museum and technology)* affect *immersive experiences* in a physical museum and then influence *destination brand equity* (DBE), with a focus on its relational components. The research proposes a positive relationship between the quality of the VR system and the on-site VR experience (at the museum) of both the museum and the destination, and its significant positive effects on destination brand equity. As a novelty of this study, VR fosters an immersive experience that bridges the museum and the destination and introduces the key role of familiarity with technology, destination and museum. These findings suggest that the VR immersive experience linking the museum, and the destination is an immediate contextual experience and introduces the role of cognitive relationships mediated by memory, cultural and knowledge background.

*Keywords: virtual reality, immersive experiences, VR quality system, familiarity, destination brand identity, destination marketing.*

## 1. Introduction

Digital experiences are becoming relevant and pervasive aspects of ordinary life, reshaping boundaries between physical and virtual worlds and impacting human-technology interaction. Virtual and augmented reality technology advances have become mainstream in tourism and cultural domains (Loureiro et al., 2020). Blurring the boundaries between the physical and digital realms, immersive technologies propose unforeseen experiences and new marketing opportunities for cultural organisations and tourism destinations.

The role of immersive experiences in cultural heritage and museum domains has been widely detected**,** covering several aspects, such as characteristics and quality of the information systems; technology acceptance, adoption and use; users' immersion, interaction and sense of presence; visitors' experiences; visitors' satisfaction and post-experience behaviour. In destination marketing, VR immersive technology has been addressed mainly as a pre-experience that shapes destination image and preference and affects the intention to visit the destination (Yung et al., 2021; Flaviàn et al., 2022).

Although immersive technologies have become mainstream in tourism and cultural domains, how the combination in a heritage museum of the physical experience and the VR experience, of museum and destination, can shape destination brand equity remains an unexplored research area.

This research aims to measure how and to what extent the *quality of VR information systems* affects *immersive experiences* in a physical museum and then influences *destination brand equity* (DBE), with a focus on its relational components (Fang et al., 2024; Ekinci et al., 2023). *Familiarity with the destination, museum and technology*, an under-investigated topic, has been introduced to frame cognitive processes that, based on memory, cultural and knowledge background, may influence the immersive experience and its impacts on destination brand equity. A conceptual framework has been proposed, bridging the museum with the destination. It considers the causal relationships between the four constructs: *quality of VR information systems, immersive experiences, familiarity* and *destination brand equity* (DBE).

## 2. Conceptual framework

Immersive technologies innovate the museum business model, allowing reliving the past, overcoming physical and temporal distances or recreating in a virtual space an imaginative world. They combine the valorisation of museum-preserved knowledge (e.g. physical historical collection) with creative immersive experiences, enhancing education, learning, entertainment and escape (Lee et al., 2020; Trunfio et al., 2022).

This research proposes a conceptual framework that considers the causal relationships between the four constructs: *quality of VR information systems, immersive experiences, familiarity* and *destination brand equity* (DBE). It proposes 9 hypotheses to be validated (Figure 1).

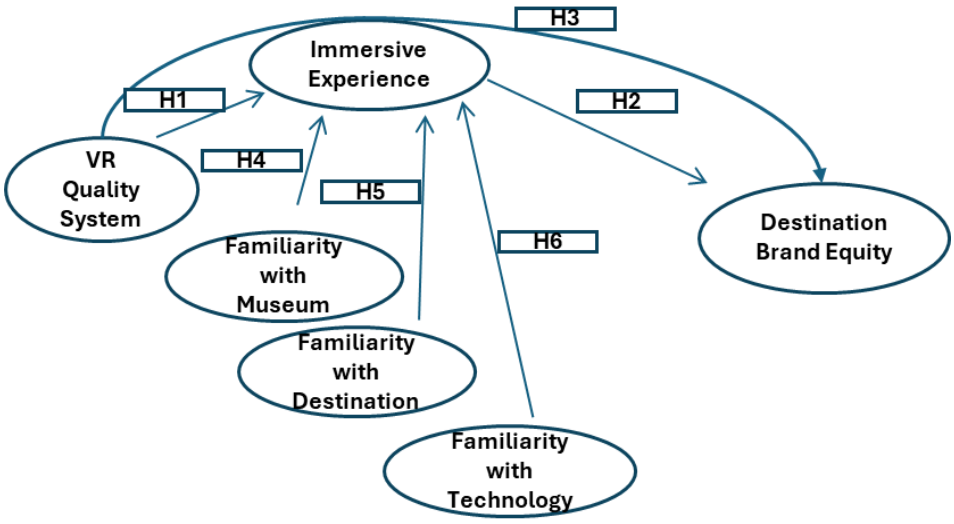



**Figure 1:** Conceptual framework

The quality of VR information systems (e.g. comfort, usability, vividness, multimedia information systems, etc.) has been investigated as affecting technology acceptance, adoption and use and then enhancing immersive experiences and driving and post-experience behaviours (Flavián et al., 2019; Jung et al., 2018; Nam et al., 2024; Trunfio et al., 2022). Immersive experiences in museums and cultural organisations represent a consolidated area

of investigation which has reframed Pine and Gilmore's experience economy into the context of immersive technologies. Entertainment, education, aesthetic and escape, but also enjoyment and socialisation have been largely measured, including their effects on post-experience behaviour (Bec et al., 2019; tom Dieck and Jung, 2018; Trunfio et al., 2022).

Previous research investigated familiarity as knowledge or prior experience of the destination before the VR immersive experience and as a moderator of enjoyment, flow state and satisfaction (Kim and Hall, 2019; Nam et al, 2024).

Destination brand equity (DBE) is a well-established concept in destination marketing, derived from Consumer-Based Brand Equity (Aaker, 1996; Keller, 1993) with various applications to destination brands (e.g., Bianchi et al., 2014; Chi et al., 2020). DBE is "the set of value-driven assets (or liabilities) added to visitors' perceptions of destination brand image" (Ekinci et al., 2023, p. 1257). The relational dimension of destination brand equity, which is the end of sequential building blocks that are vital to the "overall destination brand equity" (Fang et al., 2024), is proposed in this study to measure the impact of VR experiences in museums on the relationship building between museum visitors and the hosting destination.

The Destination Brand Relationship Block adopted in Fang et al.'s study (2024) frames the emotional/conative component in brand equity formation. It includes destination brand relevance, intimacy and loyalty. Destination brand relevance frames how visitors perceive the destination as relevant for themselves or the collectivity (e.g., family, friends, local community), opening a deep emotional connection. Intimacy frames the emotional closeness and attachment to the destination brand. These nuanced views of the visitor-destination emotional relationship impact brand trust and loyalty and, therefore, visitors' confidence in the destination's capacity to meet expectations, positive word-of-mouth and willingness to visit the destination again (Fang et al., 2024; Ekinci et al., 2023).

## 3. Methodology

This research investigates cutting-edge museums in which VR technologies have been applied to create a virtual journey of the destination. The study applies Partial Least Squares Structural Equation Modelling (PLS-SEM) (Goldberger, 1991). PLS-SEM integrates the structural model, which estimates hypothesised causal relationships among latent constructs and allows for the evaluation of both direct and indirect effects (Hair et al., 2016), and the measurement model, which assesses the reliability and validity of the manifest indicators used to define the constructs (Schumacker and Lomax, 2012). Given the exploratory nature of the research, all constructs were modelled as reflective, assuming that each unidimensional latent construct gives rise to its corresponding manifest indicators.

## 4. Findings

The research conceptualises how *VR system quality* significantly affects the *museum's immersive experience* (impacting *learning, enjoyment and escape)* and reshapes *destination brand equity*.

The structural model tests that *VR system quality* exerts an influence on the *museum immersive experience*, that is, the technological quality of the VR application is crucial in shaping users' sense of immersion ($H_1$). In turn, the *museum's immersive experience* can contribute to *destination brand equity*, supporting the idea that emotional and perceptual engagement in VR positively affects users' relationship with the destination brand ($H_2$). An indirect effect of *VR system quality* on *destination brand equity* through the *museum immersive experience* can be tested ($H_3$). Conversely, *familiarity with the museum* ($H_4$), *the destination* ($H_5$), and *the technology* ($H_6$) can show effects on *museum immersive experience*, or indirectly on *destination brand equity* ($H_7$, $H_8$, $H_9$).

## 5. Discussion, implications and future research

The research aims to demonstrate relationships between the quality of the VR system and the on-site VR experience (at the museum) of both the museum and the destination, and its effects on destination brand equity. It means that a high level of the VR system quality can enhance users' immersion and the realism of the virtual journey, allowing immersive experiences (e.g. entertainment, education, escape, etc.) and shaping relevance, intimacy and loyalty with the destination. As a novelty of this study, VR experience bridges the museum and the destination as an immediate contextual experience, with no significant effects of familiarity with technology, destination and museum, suggesting a marginal role of cognitive mediation processes by memory, cultural and knowledge background.

Future research will advance this preliminary conceptual framework, including a qualitative study deepening knowledge of visitors' experience and further validating the link between the relational components of DBE and VR immersive experience in the museum.

## References


Aaker, D. A. (Spring 1996). Measuring brand equity across products and markets, California Management Review, 38, 102-120.

Bec, A., Moyle, B., Timms, K., Schaffer, V., Skavronskaya, L., & Little, C. (2019). Management of immersive heritage tourism experiences: A conceptual model. *Tourism Management, 72*, 117-120.

Bianchi, C., Pike, S., Lings, I. (2014). Investigating attitudes towards three South American destinations in an emerging long haul market using a model of consumer-based brand equity (CBBE). Tourism Management 42, 215-223.

Chi, H-K., Hunag, K-C, Nguyen, H-M (2020). Elements of destination brand equity and destination familiarity regarding travel intention. Journal of Retailing and Consumer Services, 52, 101728.

Ekinci, Y., Japutra, A., Molinillo, S., Uysal, M. (2023). Extension and Validation of a novel Destination Brand Equity Model. Journal of Travel Research, 62(6), 1257-1276.

Fang, X., Chatzipanagiotou, Velotsou, C. (2024). Untangling the Complex and Idiosyncratic Nature of Tourist Destination Brand Equity. Journal of Travel Research, DOI: 10.1177/00472875241268404.

Flavián, C., Ibáñez-Sánchez, S., Orús, C. (2019). The impact of virtual, augmented and mixed reality technologies on the customer experience, Journal of Business Research, 100, 547-560.

Goldberger, A.S. (1991). *A Course in Econometrics*. Harvard University Press, Cambridge. Habermas.

Keller, K. L. (1993). Conceptualizing, measuring and managing customer-based brand equity. Journal of Marketing, 57(1), 1-22.

Hair, J.F., Hult, G.T.M., Ringle, C., Sarstedt, M. (2016). *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, 2nd ed. Sage publications.

Jung, T. H., Lee, H., Chung, N., & tom Dieck, M. C. (2018). Cross-cultural differences in adopting mobile augmented reality at cultural heritage tourism sites. International Journal of Contemporary Hospitality Management, 30(3), 1621-1645.

Jung, T., Trunfio, M., Sohn, K., Kwon, O. (2025), Close to digital heritage? Proximity moderator effects in virtual reality heritage experience, Current Issues in Tourism, pp. 1-22.

Kock, F., Josiassen, A., & Assaf, A. G. (2016), Advancing destination image: The destination content model, *Annals of Tourism Research*, 61, 28–44.

Lee, M., Lee, S. A., Jeong, M., & Oh, H. (2020). Quality of virtual reality and its impacts on behavioural intention. *International Journal of Hospitality Management, 90*, 1-9.

Loureiro, S.M.C., Guerreiro, J. and Ali, F. (2020), "20 years of research on virtual reality and augmented reality in tourism context: A text-mining approach", *Tourism Management*, Vol. 77, p. 104028.

Nam K., Baker J., Dutt C.S. (2024), Does familiarity with the attraction matter? Antecedents of satisfaction with virtual reality for heritage tourism, *Information Technology & Tourism*, 26, pp. 25–57.

Schumacker, R.E., Lomax, R.G. (2012). *A Beginner's Guide to Structural Equation Modeling*. Routledge, New York.

tom Dieck, M. C., & Jung, T. (2018). A theoretical model of mobile augmented reality acceptance in urban heritage tourism. *Current Issues in Tourism, 21*(2), 154-174.

Trunfio M., Jung, T., & Campana, S. (2022). Mixed reality experiences in museums: Exploring the impact of functional elements of the devices on visitors' immersive experiences and post-experience behaviours, *Information & Management*, pp. 1-16.

Yung R., Khoo-Lattimore C., Prayag G., Ekaterina Surovaya E. (2021). Around the world in less than a day: virtual reality, destination image and perceived destination choice risk in family tourism, *Tourism Recreation Research*, 46 (1), 3-18.

# The destination image and its impact on tourist civic behaviour: a theoretical framework for the Italian context

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## Abstract

With overtourism on the rise, Italian tourist places need to rethink how they promote themselves to make sure visitors are not just attracted but also actively and responsibly involved. This study analyses how the perceived image of Italian tourist destinations — characterised by a rich cultural, artistic, landscape and food and wine heritage — can influence tourist citizenship behaviour (TCB) and willingness to sacrifice (WTS) among tourists. The aim is to understand how cognitive (services, accessibility, heritage) and affective (emotions, experiences) components contribute to forming an overall image capable of stimulating prosocial behaviours such as respect for the environment, active promotion of the destination and the ability to adapt in critical situations. Through a theoretical adaptation of the model at the national level, it is hypothesised that a positive image of the destination encourages greater civic engagement and a willingness to make sacrifices on the part of visitors, thus supporting the competitiveness and sustainability of Italian destinations. The study proposes a useful framework for Italian DMOs that intend to enhance not only tourist attraction but also the responsible participation of visitors.

*Keywords: destination image, tourist citizenship behaviour, willingness to sacrifice, sustainable tourism, place marketing*

## 1. Theoretical Background

The concept of destination image (DI) has been a focus of tourism marketing studies for decades, as it is a crucial element in travel choice, perceived satisfaction and destination loyalty (Gallarza et al., 2002; Stylidis et al., 2020a). DI is commonly defined as the set of perceptions, beliefs, knowledge and feelings that a person associates with a particular place (Tasci & Gartner, 2007). It consists of three dimensions: cognitive, affective and conative (Baloglu & McCleary, 1999).

The cognitive component reflects the objective and tangible attributes of the place (accommodation facilities, cultural attractions, quality of services, safety, accessibility) and is often influenced by external sources of information such as the media, social networks or the experiences of others (Beerli & Martín, 2004). The affective dimension, on the other hand, relates to the emotional responses generated by the place, i.e. how relaxing, stimulating, pleasant, welcoming or boring it is perceived to be (Stepchenkova & Zhan, 2013). The interaction between these two components generates the overall image of the place, which guides the tourist's behavioural intentions (Qu et al., 2011; Stylos et al., 2017). The image of

a tourist destination is therefore not limited to a static interpretation but becomes a dynamic and strategic lever for shaping visitor behaviour, especially in terms of relationships. DI not only influences the decision to travel, but also guides actions after the visit, such as recommending the place, the desire to return and tourist citizenship behaviour (TCB). TCB is based on the paradigm of customer citizenship behaviour (Bove et al., 2009), borrowed from the corporate world and adapted to the context of tourism, where the tourist is no longer a passive subject but an active player who can contribute to the success and sustainability of the destination. According to Torres-Moraga et al. (2021), TCB includes actions such as: recommending the destination to others (advocacy behaviour), helping other tourists, offering suggestions or feedback to facility managers, and taking care of the place visited. Such actions, being voluntary and prosocial, improve not only the individual's experience, but also the collective experience and the overall perceived value of the territory.

Literature suggests that TCB is favoured by a positive overall image of the destination. When a tourist develops a strong cognitive-emotional connection with a place, they tend to act in a more responsible, respectful and collaborative manner (Hosany, 2012; Liu & Tsaur, 2014). A study by Limonta et al. (2024), conducted in Manta (Ecuador), confirmed the existence of a direct and significant link between overall destination image and TCB (H4). In particular, the cognitive and affective components of DI appear to have direct and indirect effects on tourist citizenship behaviour. Another crucial behavioural dimension that has emerged in the most recent literature is Willingness to Sacrifice (WTS), i.e. the willingness of tourists to make voluntary sacrifices to support the destination. The concept of WTS includes financial sacrifices (choosing more expensive but environmentally friendly facilities), time sacrifices (accepting longer waiting times for sustainable services), emotional sacrifices (moving away from habitual comforts), or practical sacrifices (adopting behaviours that respect the local environment) (Verma et al., 2019; Aro et al., 2018). Limonta et al. (2024) demonstrate that TCB has a positive impact on WTS (H5), emphasising that an engaged and "citizen" tourist is also more likely to support the destination, even in the face of minor inconveniences.

In the Italian context, and in small cities of art, the proposed theoretical model finds particularly fertile ground. These destinations are characterised by a strong identity and symbolic value, connoted by relevant cognitive elements such as historical and artistic heritage, accessibility, and the quality of cultural and food and wine offerings. At the same time, deep emotional elements emerge, such as a sense of authenticity, hospitality and the warmth typical of local communities. This balance between cognitive and emotional dimensions contributes to building an overall positive image, capable of influencing tourists' behaviour in a collaborative and responsible manner. It is hypothesised that tourists, especially seasonal ones who live in the city for an extended period and perceive these destinations favourably, are not only likely to recommend them but also exhibit tourist citizenship behaviour (TCB) such as litter collection, support for local events, participation in cultural or environmental initiatives, and sharing advice with other visitors. Such behaviours, when integrated into a coherent and participatory narrative of the destination, can encourage greater willingness to tolerate occasional inefficiencies or to choose sustainable tourism solutions, even if they are less economically advantageous.

## 2. Methodology

This study proposes a theoretical model for Italian DMOs, aimed at enhancing not only the attractiveness of destinations but also the responsible participation of tourists. The framework links the image of the destination, in its cognitive and affective components, to tourist citizenship behaviour (TCB) and willingness to sacrifice (WTS), suggesting new strategies for sustainable and collaborative governance. Based on a critical review of international literature, the model conceptually adapts the empirical work of Limonta et al.

(2024), originally tested in Ecuador, to the cultural, social and territorial specificities of Italy. The exploratory and deductive qualitative approach integrates theoretical analysis and formalisation of causal relationships, without resorting to empirical investigation, consistent with the strategic objective of the work. The framework, accompanied by a visual diagram, is presented as a conceptual tool to guide place management and promote tourist engagement towards civic and sustainable behaviour.

## 3. Results

The main result of this study is the development of an integrated theoretical framework that links destination image (in its cognitive and affective components), tourist citizenship behaviour (TCB) and willingness to sacrifice (WTS), with the aim of providing Italian DMOs with a tool to promote participatory and sustainable tourism. Unlike the original model proposed by Limonta et al., this framework has been specifically adapted to the Italian context, considering the peculiarities of small and medium-sized Italian art destinations, characterised by a strong sense of identity, a rich cultural offering and unique social and environmental dynamics.

In the proposed model, the cognitive image – relating to the perceived tangible attributes of the destination (e.g. quality of services, attractions, accessibility) – and the affective image – based on emotions and sensations experienced (such as authenticity, human warmth, pleasantness) – together contribute to forming an overall image that directly influences tourist citizenship behaviour. The latter manifests itself in voluntary actions such as respect for the environment, support for the local community, positive word of mouth and active participation in cultural and social initiatives. TCB, in turn, is positively associated with willingness to sacrifice (WTS), understood as the tourist's propensity to tolerate inconvenience or sacrifices (of time, economic resources or comfort) in order to support the quality and sustainability of the destination. Furthermore, the framework highlights the mediating role of overall image in the relationship between cognitive and affective components and TCB, as well as the mediating role of TCB in the relationship between image and WTS.

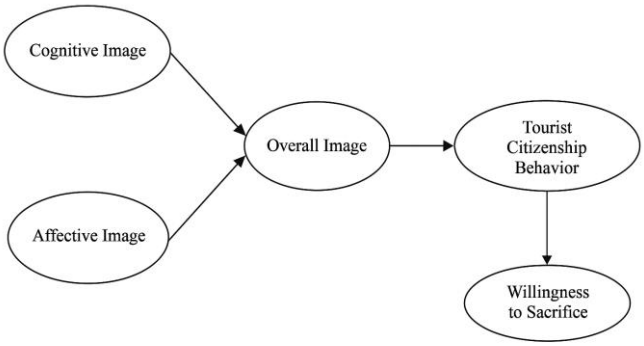



**Figure 1:** The theoretical Framework (Source: Author' elaboration)

## 4. Conclusions

The proposed theoretical framework represents a first step towards new tourism marketing strategies that focus not only on the attractiveness of destinations, but also on the civic and responsible involvement of tourists. The model systematically links the cognitive and

affective components of destination image to the formation of an overall image, which positively influences tourist citizenship behaviour (TCB) and willingness to sacrifice (WTS). This approach aims to support Italian DMOs in rethinking the relationship between tourists and the territory in a participatory way, especially in a context characterised by growing overtourism phenomena where sustainability, reputation and resilience are crucial for competitiveness. Although theoretical and propositional, the model opens up interesting prospects for future empirical applications. It can be validated through a quantitative survey of tourists visiting small and medium-sized Italian art destinations, characterised by a strong historical and cultural identity and a focus on sustainability. The suggested methodology involves a structured questionnaire with validated scales to measure perceptions of cognitive and affective image, level of TCB and propensity for WTS. The analysis could use PLS-SEM, which is suitable for predictive models with latent constructs. An empirical application would allow the robustness of the model to be verified and tourist segments prone to prosocial behaviour to be identified, offering DMOs concrete tools for communication campaigns and engagement actions consistent with tourist citizenship. The framework aims to provide an operational basis for innovating the management of Italian destinations towards sustainability and co-creation, providing ideas for designing offers, communication and promotion of responsible behaviour.

## References


Aro K, Suomi K and Saraniemi S (2018) Antecedents and consequences of destination brand love—a case study from Finnish Lapland. Tourism Management 67: 71–81.

Baloglu, S., & McCleary, K. W. (1999). A model of destination image formation. *Annals of Tourism Research*, 26(4), 868–897.

Beerli, A., & Martín, J. D. (2004). Tourists' characteristics and the perceived image of tourist destinations: A quantitative analysis.

Bove LL, Pervan SJ, Beatty SE, et al. (2009) Service worker role in encouraging customer organizational citizenship behaviors. Journal of Business Research 62(7): 698–705.

Gallarza MG, Saura IG and Garcı´a HC (2002), Destination image. Annals of Tourism Research29(1):56–78.
Limonta, R. J., Ruiz-Moreno, F., Ali, A. A., & Zingone, L. (2024). The Manta Mystique: Destination image and its effect on tourist citizenship behavior and willingness to sacrifice.

Liu JS and Tsaur SH (2014) We are in the same boat: tourist citizenship behaviors. Tourism Management 42: 88–100.

Hosany S (2012) Appraisal determinants of tourist emotional responses. Journal of Travel Research 51(3): 303–314.

Qu H, Kim LH and Im HH (2011) A model of destination branding: integrating the concepts of the branding and destination image. Tourism Management 32(3): 465–476.

Stepchenkova S and Zhan F (2013) Visual destination images of Peru: comparative content analysis of DMO and user-generated photography. Tourism Management 36: 590–601.

Stylidis D, Woosnam KM and Ivkov M (2020a) Tourists' emotional solidarity with residents: a segmentation analysis and its links to destination image and loyalty. Journal of Destination Marketing & Management 17: 100458.

Stylos N, Bellou V, Andronikidis A, et al. (2017) Linking the dots among destination images, place attachment, and revisit intentions: a study among British and Russian tourists. Tourism Management 60: 15–29.

Tasci, A. D. A., & Gartner, W. C. (2007). Destination image and its functional relationships. Torres-Moraga, E., Vásquez-Parraga, A. Z., & Zamora-González, J. (2021). Tourist citizenship behavior and destination sustainability.

Verma VK, Chandra B and Kumar S (2019) Values and ascribed responsibility to predict consumers' attitude and concern towards green hotel visit intention. Journal of Business Research 96: 206–216.

# Perceived Benefits of Urban Regeneration in Coastal Tourism Destinations

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## Abstract

Promoting well-being for both residents and tourists has become a central issue in the tourism industry, with a shift from hedonistic to eudaimonic approaches in destination marketing. In this context, the present study examines the role of a newly regenerated urban area in altering tourist behavior and shaping the perceived image of a coastal destination. The study area refers to an urban green infrastructure, the Sea Park of Rimini, which a result of the seafront conversion from a previously grey infrastructure.

Survey data collected from tourists who recently visited the destination aims to assess the effects of this public intervention. The results indicate the propensity among tourists to engage in physical activities within this newly developed area, highlighting its perceived sustainable benefits and its contribution to the formation of a new destination image. Tourists reported greater social than environmental benefits arising from the requalification of the area, and they confirmed the changing image of the destination. The relationship between the type of usage and the perceived image provides valuable insights and allow to derive managerial implications for city planning, destination and hospitality marketing.

*Keywords: urban requalification, tourist behaviour, wellness, green infrastructure*

## 1. Introduction

Urban green infrastructure (UGI) can be defined as urban parks, gardens, woodlands, green streets, and designed (semi-)natural areas (Parker & Zingoni de Baro, 2019). Visiting these areas offers several benefits for residents, including improved well-being, reduced stress, enhanced physical health, and the provision of educational opportunities (Vujcic et al., 2019). In addition to their social benefits, green areas provide significant environmental advantages, such as mitigating greenhouse gas emissions and supporting adaptation to the diverse effects of climate change. As a result, the expansion of UGI's has become a critical component of strategic urban planning, particularly in Europe. In the context of tourism, UGI's can develop as key attractions and essential elements of the destination experience (Terkenli et al., 2020). However, their role in shaping tourist behavior and influencing the perceived image of a destination remains underexplored. The current study seeks to address this gap by examining the effects of an extensive urban regeneration project in the mature seaside destination of Rimini. The newly developed Sea Park (Parco del Mare) replaces a 16 km stretch of grey infrastructure—comprising a coastal road with parking spaces—and transforms the area into green spaces, sports facilities, and lanes designed for soft mobility. This study focuses on two

main aspects: first, the propensity of tourists to engage in physical activities within these newly created spaces, and second, the perceived shift in the destination's image, specifically in terms of social versus environmental benefits. By investigating these elements, the study aims to provide insights into how urban green infrastructure can influence tourist behavior and contribute to the evolving image of coastal destinations.

## 2. Literature review

The literature on destination image is primarily based on the concept of brand image. Keller (1993) defines brand image through the associations it evokes and among others, the benefits it offers. Accordingly, the benefits perceived by tourists can shape their overall impression of a destination. Destination image is, in fact, a dynamic concept, often divided into pre-visit and post-visit images, with potential changes throughout the visitation process. In the case of revisiting a destination, familiarity with past experiences plays a significant role in image formation. Consistent with Gunn's (1988) theory, destination image is strongly influenced by the attractions available. Therefore, the introduction of a new attraction can contribute to changes in the destination's image.

This study focuses on a new urban green infrastructure, and considers two types of benefits: environmental and social. The expansion of green spaces and improvements in walkability at a destination are likely to suggest a more sustainable, "green" image. To be classified as a "green" destination, a brand should be associated with environmental conservation and sustainable practices, while avoiding shortcomings that could lead to criticism of greenwashing (Inch, 2011; Katrandjiev, 2016).). The complexity of destinations presents challenges in projecting an overall green image. As noted by Inch (2011), stakeholder involvement is crucial in establishing a credible green destination image.

In addition to environmental benefits, urban green infrastructures can also provide social benefits that are perceived by tourists through the concept of wellness. Following the body-mind-spirit approach (Smith & Kelly, 2006), wellness activities have gained significant popularity in tourism (Myers, Sweeney, & Witmer, 2000). Wellness destinations are defined and conceptualized across various studies in the literature (Smith & Diekmann, 2017). In general, such destinations are expected to have a strong connection with natural areas and offer numerous facilities for tourists seeking wellness experiences (Thal & Hudson, 2019). Tourists engage in wellness and fitness activities with the aim of maintaining and improving their health and well-being (Voigt & Pforr, 2014). A distinction can be made between primary and secondary wellness travelers. For primary wellness travelers, wellness is the main motivation of the trip, and the availability of specific facilities and services at the destination influences their travel planning. In contrast, secondary wellness travelers engage in wellness activities occasionally while on holiday, with the primary purpose of their visit being different from wellness-related activities. Furthermore, when wellness and fitness activities are part of a regular routine, similar to that in the home environment, they are more likely to be considered trip behavior rather than a purpose (Weed, 2009).

Finally, as wellness is often associated with well-being, some reflections can be made on its representation in destination marketing. The type of tourism activity consumed can moderate how tourist well-being is affected during a holiday. Su, Tang, and Nawijn (2020) distinguish between two dimensions of well-being: hedonia, which is linked to relaxation and enjoyment, and eudaimonia, which is related to activities that require more effort. In destination marketing, there has been a shift from focusing on hedonistic consumption toward a more eudaimonic approach, with an emphasis on self-realization and quality of life (Hartwell et al., 2012).

## 3. Methodology

A survey research design was employed to address the research question concerning the impact of urban regeneration on tourist behaviour and destination perception. The target population for the survey consisted of tourists visiting or having recently visited Rimini. Data collection was carried out in two phases: face-to-face interviews at the study location and an online survey administered with the assistance of the local destination marketing organization. The questionnaire comprised several sections, gathering information on trip characteristics, activity participation, motivation, perceived image of the destination in relation to the Sea Park, and demographic variables. The data were analysed using multivariate statistical methods.

## 4. Results

The survey results indicate that the public intervention under analysis successfully stimulated fitness-based tourism. Nearly half of the respondents reported engaging in physical activities within the Sea Park. When comparing practising and non-practising tourists, the tests revealed significant differences in their profiles and behavioural characteristics. The variable capturing pre-visit awareness of the new infrastructure was found to be positively correlated with the actual use of the area for exercise. The impact of the intervention on tourists' perceptions of the destination was further confirmed through regressions. Strong agreement was recorded regarding the perceived change in the destination's image, especially among tourists on a repeated visit. The destination's guest profile appears to be relatively loyal, with over 75% of respondents having prior experience visiting the area. Additionally, changes in perception related to the destination's "green" or "wellness" image were examined. The former was found to be associated with tourist behaviour, while the latter was correlated with international travel.

## 5. Implications and conclusion

The study aimed to explore the role of a newly developed urban green infrastructure in shaping tourist behavior and the destination's image. Overall, a change in the destination's image is evident, but the specific nature of the perceived image remains ambiguous. Regarding the benefits of the Sea Park in relation to the three pillars of sustainability, the results highlight that the social and environmental benefits are most prominently recognized. While the majority of tourists agree that the Sea Park represents a new tourist attraction, this perception is notably stronger among those who have used the park for physical activities. Prior awareness of the infrastructure was found to play a crucial role in influencing tourist behavior, particularly in terms of increased engagement in physical activities. An interesting finding relates to the international divide concerning the perceived "green" aspects of the park. Domestic tourists tend to perceive fewer environmental benefits and, as a result, show a weaker connection to the green image. This may be attributed to the assumption that domestic tourists perceive other locations within Italy as similarly committed to green initiatives, thereby rendering the greening element less salient. Alternatively, international tourists may have a greater awareness of the environmental benefits or may have a lower benchmark for green spaces in their home countries.

The use of the Sea Park for physical activities further reinforced the destination's image as a wellness destination. Given that many tourists were already aware of the park before their arrival, it is possible that their image of the destination was shaped prior to their participation in physical activities. Although the mass tourism image of the past that was characterized by entertainment and hedonistic consumption, is somewhat challenged, the implementation of this new infrastructure is not enough on its own to reposition the destination. Besides marketing efforts, stakeholder engagement is crucial to build a green destination brand

(Insch, 2011). For example, the hospitality offers and other attractions at the destination should similarly demonstrate green efforts. Given the positive evaluation of the Sea Park, it should unquestionably play a central role in the destination's branding and marketing strategies. Tourists view the park as an additional attraction that enhances the city's offerings. Tourists with active lifestyles could plan their physical activities in advance as part of their trip, and the park could further enhance the destination's attractiveness from a sustainability perspective. Targeting for example the LOHAS (Lifestyles of Health and Sustainability) segment, that are more health-conscious and physically active tourists, could be central towards the repositioning of Rimini as a wellness destination. As tourists often carry their home habits with them on vacation, customized campaigns targeting a sporty audience could be placed in high-visibility areas. Moreover, hotels could capitalize on the opportunity by promoting the park as an attractive setting for physical activities. They could include information on exercise opportunities in their marketing materials and offer services such as sport kits at the concierge, running itineraries with fixed distances, rentable smartwatches, or selling earphones designed for running. These initiatives could help further integrate the park into the overall destination experience and attract more tourists with an active lifestyle.

## References


Gunn, C. A. (1988). Vacationscape: Designing tourist regions.

Hartwell, H., Fyall, A., Willis, C., Page, S., Ladkin, A., & Hemingway, A. (2018). Progress in tourism and destination wellbeing research. Current issues in Tourism, 21(16), 1830-1892.

Insch, A. (2011). Conceptualization and anatomy of green destination brands. International journal of culture, tourism and hospitality research, 5(3), 282-290.

Katrandjiev, H. (2016). Ecological marketing, green marketing, sustainable marketing: Synonyms or an evolution of ideas. Economic Alternatives, 1(7), 71-82.

Keller, K. (1993). Conceptualizing, measuring, and managing customer-based brand equity. Journal of Marketing, 57(1), 1-22.

Myers, J. E., Sweeney, T. J., & Witmer, J. M. (2000). The wheel of wellness counseling for wellness: A holistic model for treatment planning. Journal of counseling & development, 78(3), 251-266.

Parker, J., & Zingoni de Baro, M. E. (2019). Green infrastructure in the urban environment: A systematic quantitative review. Sustainability, 11(11), 3182.

Smith, M. K., & Diekmann, A. (2017). Tourism and wellbeing. Annals of tourism research, 66, 1-13.

Smith, M., & Kelly, C. (2006). Wellness tourism. Tourism Recreation Research, 31(1), 1-4.

Su, L., Tang, B., & Nawijn, J. (2020). Eudaimonic and hedonic well-being pattern changes: Intensity and activity. Annals of Tourism Research, 84, 103008.

Thal, K. I., & Hudson, S. (2019). A conceptual model of wellness destination characteristics that contribute to psychological well-being. Journal of Hospitality & Tourism Research, 43(1), 41-57.

Voigt, C., & Pforr, C. (2014). Wellness Tourism A destination perspective. New York: Routledge.

Vujcic, M., Tomicevic-Dubljevic, J., Zivojinovic, I., & Toskovic, O. (2019). Connection between urban green areas and visitors' physical and mental well-being. Urban forestry & urban greening, 40, 299-307.

Weed, M. (2009). Progress in sports tourism research? A meta-review and exploration of futures. tourism Management, 30(5), 615-628.

Terkenli, T. S., Bell, S., Tošković, O., Dubljević-Tomićević, J., Panagopoulos, T., Straupe, I., ... & Živojinović, I. (2020). Tourist perceptions and uses of urban green infrastructure: An exploratory cross-cultural investigation. Urban Forestry & Urban Greening, 49, 126624.

# Track 7
# Technology and Innovation Marketing

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La sezione tematica si propone di stimolare la ricerca e accogliere i contributi di tutti gli studiosi che indagano la relazione multidimensionale che lega tecnologia, innovazione e marketing, assumendo due prospettive di analisi: la prima, più strettamente collegata al marketing dell'impresa high-tech; la seconda, maggiormente orientata ad approfondire l'impatto generato dalla diffusione delle nuove tecnologie dell'informazione e della comunicazione e alle più recenti tecnologie connesse alla quarta rivoluzione industriale sulla funzione marketing. In particolare, fenomeni recenti quali la diffusione tra le imprese del paradigma dell'open innovation (si pensi ad esempio a forme estreme di open innovation quali il crowdsourcing), l'emergere di nuove tecnologie abilitanti (si pensi per citarne alcune al 3D printing, all'Internet of Things, al Cloud Computing, alla robotica e all'intelligenza artificiale) e il nuovo ruolo assunto dal cliente rispetto ai processi di creazione del valore (si pensi ai modelli della Sharing Economy e al movimento dei makers) stanno producendo un radicale ripensamento delle logiche, degli approcci, dei metodi e degli strumenti di marketing.

La sezione vuole pertanto cogliere la sfida lanciata da uno scenario in fortissimo cambiamento e rappresentare un punto di riferimento e un "luogo" di condivisione di conoscenze circa attività di ricerca che da diversi punti di vista e prospettive teoriche analizzano il Technology and Innovation Marketing.

Le domande di ricerca a cui la sezione intende contribuire possono ascriversi a 3 macro-categorie:

- come il marketing sta cambiando in risposta ai cambiamenti della tecnologia;
- come nuovi approcci di marketing stanno cambiando il processo di sviluppo dell'innovazione (in particolare quella di matrice tecnologica) e la sua diffusione sul mercato;
- come le nuove tecnologie e i nuovi modelli di marketing stanno cambiando il ruolo del cliente nei processi di innovazione e di creazione del valore.

This section welcomes research examining the multidimensional relationship between technology, innovation, and marketing, from two perspectives: marketing in high-tech firms and the impact of new information, communication, and Industry 4.0 technologies on the marketing function. Recent developments—such as the spread of open innovation and crowdsourcing, the rise of enabling technologies (3D printing, IoT, cloud computing, robotics, AI), and the customer's evolving role in value creation (e.g., sharing economy, makers) are reshaping marketing logic, methods, and tools.The section aims to be a reference point for sharing knowledge on Technology and Innovation Marketing, encouraging contributions from diverse theoretical viewpoints. It addresses three main research questions: how marketing is changing in response to technological evolution; how new marketing approaches influence innovation development and market diffusion; and how emerging technologies and marketing models transform the customer's role in innovation and value creation.

# Exploring Blockchain Technology for Trust-Based Consumer Relations in the Context of Sustainability: Evidence from the Agri-Food Industry

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## Abstract

The growing focus on sustainability issues, together with the substantial volume of information directed at markets, is prompting consumers to demand greater transparency and authenticity in communication, as well as credibility in the data and information relating to products. In this context, blockchain technology (BC) can play a pivotal role, as its characteristics and functionalities enable it to serve as a strategic communication and marketing tool. The present study seeks to explore, within the agri-food sector, the role that BC can assume in supporting communication and contributing to the establishment of trust-based relationships with loyal customers. To this end, a qualitative approach is adopted, utilising a multiple case study based on secondary data, in order to investigate the motivations and objectives that lead agri-food companies to implement BC. As this research represents an initial exploratory phase, the study offers theoretical implications, underscoring the need for future research based on primary data to further examine the conditions required to foster trust and credibility in BC applications within the agri-food market.

*Keywords: Blockchain Technology, Agri-Food Industry, B2C, Communication, Trust*

## 1. Introduction

Among environmental and social sustainability concerns, critical issues such as food safety, contamination risks, and food counterfeiting are increasingly emerging within the agri-food industry (Duan et al., 2020). Consequently, from the demand side, consumers are becoming more attentive to the quality and authenticity of food products, requiring greater traceability and transparency from agri-food companies regarding the products they purchase (Antonucci et al., 2019; Rana et al., 2021). Indeed, food safety and authenticity are among the principal factors influencing consumers' purchasing decisions (Eurobarometer, 2022).

In this context, Blockchain (BC) technology emerges as a promising tool to address these critical issues, owing to its distinctive characteristics and functionalities. In particular, from a sustainability perspective, BC also has the potential to support sustainable practices by enabling transparent communication of environmental and social data, enhancing supply chain responsibility, and facilitating the verification of sustainability claims (Cao et al., 2023). Furthermore, as a distributed, immutable, and accessible ledger capable of documenting the production, processes, and distribution of agri-food products (Kramer et al., 2021), BC serves, on the one hand, as a supply chain management tool, significantly reducing information asymmetry and fostering collaboration among stakeholders (Kshetri, 2018), thereby improving overall effectiveness and efficiency in terms of traceability; and on the

other hand, as a communication and marketing tool through which agri-food companies can directly and interactively convey and promote the transparency and authenticity of their products to the end consumer (Antoniadis and Kontsas, 2019).

Although academic debate has explored the potential applications of BC in the agri-food industry, few studies have examined the role that BC can play as a management, communication, and marketing tool. In light of this, the present study aims to address this gap by investigating, through empirical evidence, the motivations and objectives driving companies to adopt BC. Accordingly, this paper addresses the following research question:

- Why, and with what objectives, do agri-food companies choose to implement BT?

## 2. Literature Review: Blockchain Technology in Agri-food Industry

BT can be defined as a distributed ledger, structured as a chain of blocks, which stores related transactions in chronological order, with its integrity guaranteed by cryptographic algorithms and a peer-to-peer consensus mechanism (Treiblmaier, 2019). Within this system, each participating node may propose the creation of a new data block, which is added to the chain only after validation by the network, without the need for a central authority, and cannot subsequently be altered. Based on this technical structure, several scholars have identified characteristics in BC such as decentralisation, disintermediation and immutability, which, in practical application, translate into guarantees of security, transparency, traceability and auditability (Christidis and Devetsikiotis, 2016; Zheng et al., 2018).

BC first emerged in the financial domain with the introduction of Bitcoin (Nakamoto, 2008) and later extended its application to various non-financial sectors. Theoretical discussions have extensively explored Blockchain technology from a technical perspective, defining its areas of application according to its core functionalities (Zheng et al., 2018; Casino et al., 2019). In this context, several authors have highlighted the potential of Blockchain technology to be successfully integrated into the agri-food industry, emphasising its positive and beneficial impact on both producers and consumers (Vern et al., 2024).

Building upon this foundation, BC is increasingly recognised as a tool to support sustainability in agri-food supply chains, by enabling more efficient resource management, reducing waste, and facilitating the verification and communication of environmental and social standards (Rana et al., 2021). BC is considered potentially revolutionary for its ability to track, in real time, who performs specific actions, when and where these are carried out, as well as the quality and quantity of the product (Saberi et al., 2018), thus contributing to improved traceability and management efficiency within the agri-food supply chain (Duan et al., 2020; Ji & Xu, 2025). Other scholars have emphasised Blockchain's potential in reducing food fraud and protecting the authenticity of agri-food products (Tian, 2016; Antonucci et al., 2019).

With regard to sustainability, the transparency and immutability guaranteed by BC can facilitate the verification and communication of sustainability-oriented certifications and claims, enabling consumers to access reliable information concerning the environmental and social impact of products and encouraging more responsible consumption choices (e.g., Rana et al., 2021; Cao et al., 2023). Furthermore, the academic debate presents BC as a strategic communication tool capable of revolutionising both communication methods and the marketing strategies adopted by agri-food companies (Cao et al., 2023). Direct access to data, enabled by BC labels, encourages the development of new, more direct and transparent forms of communication, responding to growing demands for authenticity and safety (Martinelli and De Canio, 2023).

The potential to enhance transparency and traceability of processes and products represents a marketing opportunity that can shorten the distance between producer and consumer (Buvaneswari and Swetha, 2019), thereby strengthening brand positioning in the market and overcoming barriers that hinder customer loyalty (Bonetti et al., 2024). In this regard, Sepe (2023) demonstrated that perceived transparency and perceived product trust—a consequence of data accessibility—have a significant influence on guiding consumers in their food purchase choices.

Accordingly, the integration of BC in the agri-food sector is not only aimed at improving supply chain management and communication, but also at supporting the achievement of sustainability objectives, in line with the growing expectations of consumers and stakeholders for more responsible and transparent food systems. In line with this, the present study seeks to explore the role of BC in the agri-food industry, investigating the motivations and objectives that drive companies to adopt this technology.

## 3. Methodology

To achieve this objective, our preliminary research design, grounded in a qualitative approach, adopts a process that incorporates a multiple case study methodology based on secondary data (Eisenhardt, 1989; Miles & Huberman, 1984). This process comprises two stages:

(1) Identification of case studies. The analysis was specifically focused on Italy, with particular emphasis on the agri-food industry in Campania. The research was contextualised in Campania, as it is the Italian region with the highest number of traditional food products (GU Serie Generale no. 61, 2024). Five companies were selected (see Table 1) according to the following criteria: Campania-based enterprises that have pioneered the adoption of Blockchain Technology across different agri-food sectors; and the greatest availability of relevant data. The number of companies included in this research is consistent with previous studies employing a similar empirical approach within the Blockchain field (e.g., Danese and Romano, 2020).

(2) (2) Collection of secondary data. Secondary data were obtained through the consultation of the principal corporate platforms (websites and social media) and third-party sources reporting pertinent information, from which various corporate documents, data relating to Blockchain application, and video materials were extracted. This data collection was conducted during October 2024. The analysis of the data was performed independently by the authors, in order to minimise mutual influence, and subsequently followed by a joint consultation to compile notes on each enterprise.

The research process is intended to proceed, in subsequent phases, with the collection of primary data through a focus group comprising economic and institutional actors with expertise in the sector under investigation.

| | **Azienda agricola San Salvatore** | **BioItalia** | **Pastificio Liguori** | **Solania** | **Spinosa** |
|---|---|---|---|---|---|
| **Sector** | Agri-food | Agri-food | Agri-food | Agri-food | Agri-food |
| **Size** | SME | SME | SME | SME | SME |

| | | | | | |
|---|---|---|---|---|---|
| **Blockchain Application** | Yogurt and creamy buffalo milk products | The entire range of products | The entire range of products | San Marzano Tomato PDO | Mozzarella di Bufala Campana PDO |

**Table 1:** Sample Description - Source: Authors' elaboration

## 4. Findings

This preliminary analysis of secondary data, sourced from official company platforms and pertinent third-party publications, reveals that the principal motivation for companies to implement a Blockchain-based data recording system is to enhance the traceability of individual products or the entire supply chain (see Table 2). Companies identified traceability and transparency as essential features of Blockchain technology, as these enable the verifiable recording of every stage of production and ensure comprehensive traceability throughout a product's lifecycle.

Furthermore, the analysis highlights two main objectives that underpin the behaviour of companies in adopting Blockchain technology: (a) to render communication with consumers more transparent; and (b) to promote product authenticity, thereby combating counterfeiting and facilitating market positioning.

Communicating with consumers in a more direct and transparent manner—by providing clear and detailed information regarding production processes and product characteristics—is considered a priority, particularly in the cases of BioItalia, Pastificio Liguori, and Spinosa. This objective is pursued through the adoption of Blockchain technology, which enables companies to establish direct communication channels with consumers, offering them easy and immediate access to information concerning the processes that have led to the creation of the final product and its attributes. Consequently, companies ensure maximum transparency across the supply chain and demonstrate enhanced corporate responsibility, both of which contribute to strengthening consumer trust—a fundamental element in the effective functioning of markets and B2C relationships.

Similarly, the companies examined reported the adoption of Blockchain technology as a marketing tool to promote the authenticity of their products to end consumers, with the dual aim of combating the counterfeiting of Made in Italy products and enhancing their market positioning.

| | **Azienda agricola San Salvatore** | **BioItalia** | **Pastificio Liguori** | **Solania** | **Spinosa** |
|---|---|---|---|---|---|
| **Blockchain Information** | Product description; origin and processing of raw materials; production process; locations of processing | Product description; origin and processing of raw materials; production process; Locations of processing | Origin of the cultivated field; harvest period; processing dates and locations for semolina; production date and location for the pasta | Sowing process; Harvesting phase; Processing stages; Storage of the finished product | Origin verification; Milk Monitoring; Milk Processing Stages; Packaging and distribution details |

| | | | | | |
|---|---|---|---|---|---|
| | stages; certification | stages; certification | | | |
| **Reason** | Traceability of selected products | Traceability of the entire product range | Traceability of the entire product range | Traceability of selected products | Traceability of selected products |
| **Objective** | Authenticity promotion to combat counterfeiting | More transparent end consumer communication | More transparent end consumer communication and authenticity promotion to combat counterfeiting. | More transparent end consumer communication | Authenticity promotion to combat counterfeiting |

*Table 2: Secondary data results - Authors' elaboration*

## 5. Discussion and Conclusion

The findings of this preliminary analysis indicate that, within the agri-food sector, the adoption of BT is primarily motivated by the need to enhance the traceability of products and the entire supply chain, thereby increasing efficiency and establishing a solid foundation for trust-based relationships with consumers. Moreover, consistent with the aforementioned perspective, the utilisation of Blockchain can support sustainability objectives by enabling the transparent communication of sustainable food practices, certifications, and the environmental and social impacts of production processes, in line with the study by Cao et al. (2023).

Specifically, Blockchain is implemented with the dual objectives of, firstly, rendering communication with consumers more transparent to emphasise product quality and safety, and secondly, promoting product authenticity and combating counterfeiting. The empirical findings are congruent with the existing academic discourse, which identifies Blockchain, owing to its distinctive characteristics and functionalities, as a potential solution to the increasingly evident challenges faced by the agri-food sector, particularly those related to the need for improved traceability and transparency in the management and communication of data and information pertaining to processes and products (Rana et al., 2021).

Furthermore, the results confirm the dual functionality of Blockchain, which assumes different connotations depending on the perspective adopted. In particular, the use of Blockchain as a supply chain management tool (Kshetri, 2018; Saberi et al., 2020) serves as the means by which its role as a communication and strategic marketing tool is realised, with the aim of enhancing transparency (Tian, 2016), promoting authenticity (Antonucci et al., 2019), and strengthening both brand positioning in the market and consumer trust (Bonetti et al., 2024).

Additionally, the findings of this research offer significant theoretical implications for the adoption of Blockchain in the agri-food sector. As this study is based on secondary data and

constitutes an initial exploratory phase, it underscores the necessity for future research employing primary data to investigate in greater depth the conditions required for the development of trust and credibility in Blockchain applications. Subsequent studies could utilise interviews, surveys, or direct observations to better understand how trust and credibility are established and maintained among stakeholders within the agri-food supply chain.

Finally, this preliminary research has enabled us to delineate the need for further investigation into the conditions necessary for Blockchain to be perceived as credible, beginning with the issue of data accuracy and, consequently, the responsibility and ethics of the companies (both upstream and downstream within the supply chain) that input data.

## References


Antoniadis, I., Spinthiropoulos, K., & Kontsas, S. (2020). Blockchain applications in tourism and tourism marketing: A short review. *Strategic Innovative Marketing and Tourism: 8th ICSIMAT, Northern Aegean, Greece, 2019*, 375-384.

Antonucci, F., Figorilli, S., Costa, C., Pallottino, F., Raso, L., & Menesatti, P. (2019). A review on blockchain applications in the agri-food sector. *Journal of the Science of Food and Agriculture*, *99*(14), 6129-6138.

Bonetti, E., Bartoli, C., & Mattiacci, A. (2024). Applying blockchain to quality food products: A marketing perspective. *British Food Journal*, *126*(5), 2004-2026.

Bovenzi, G., Aceto, G., Persico, V., & Pescapé, A., (2023) "Blockchain Performance in Industry 4.0: Drivers, use cases, and future directions", Journal of Industrial Information Integration, 100513.

Buvaneswari, P. S., & Swetha, M. S., (2019) "Blockchain technology in marketing sector–a tows matrix analysis", Int. J. Sci. Res. Rev, 8, 290-8.

Cao, S., Johnson, H., & Tulloch, A. (2023). Exploring blockchain-based traceability for food supply chain sustainability: Towards a better way of sustainability communication with consumers. Procedia Computer Science, 217, 1437-1445.

Casino, F., Dasaklis, T. K., & Patsakis, C., (2019) "A systematic literature review of blockchain-based applications: Current status, classification and open issues", Telematics and informatics, 36, 55-81.

Danese, P., Mocellin, R., & Romano, P. (2021). Designing blockchain systems to prevent counterfeiting in wine supply chains: a multiple-case study. *International Journal of Operations & Production Management*, *41*(13), 1-33.

Duan, J., Zhang, C., Gong, Y., Brown, S., & Li, Z. (2020), "A content-analysis based literature review in blockchain adoption within food supply chain", International journal of environmental research and public health, 17(5), 1784.

Eisenhardt, K. M., (1989) "Building theories from case study research", Academy of management review, 14(4), 532-550.

Eurobarometer 2022: Food Safety in the UE. https://www.efsa.europa.eu/it/interactive-pages/eurobarometer-2022

Galati, A., Tulone, A., Moavero, P., & Crescimanno, M. (2019). Consumer interest in information regarding novel food technologies in Italy: The case of irradiated foods. *Food research international*, *119*, 291-296.

Kramer, M. P., Bitsch, L., & Hanf, J. (2021). Blockchain and its impacts on agri-food supply chain network management. *Sustainability*, *13*(4), 2168.

Kshetri, N., (2018) "Blockchain's roles in meeting key supply chain management objectives", International Journal of information management, 39, 80-89.

Martinelli, E., & De Canio, F. (2023). Are consumers' food purchase intentions impacted by blockchain technology?. In *Rediscovering local roots and interactions in management* (pp. 383-395).

Nakamoto, S., (2008) Bitcoin: A peer-to-peer electronic cash system. Satoshi Nakamoto.

Rana, R. L., Tricase, C., & De Cesare, L. (2021). Blockchain technology for a sustainable agri-food supply chain. *British Food Journal*, *123*(11), 3471-3485.

Saberi, S., Kouhizadeh, M., Sarkis, J., & Shen, L., (2019) "Blockchain technology and its relationships to sustainable supply chain management", International journal of production research, 57(7), 2117-2135.

Sepe, F. (2024). Blockchain technology adoption in food label systems. The impact on consumer purchase intentions. *SINERGIE*, *42*(1), 241-264.

Tian, F. (2018). An information system for food safety monitoring in supply chains based on HACCP, blockchain and internet of things.

Treiblmaier, H., (2019) "Toward more rigorous blockchain research: Recommendations for writing blockchain case studies", Frontiers in Blockchain, 2, 3.

Vern, P., Panghal, A., Mor, R. S., Kumar, V., & Sarwar, D. (2024). Unlocking the potential: leveraging blockchain technology for agri-food supply chain performance and sustainability. *The International Journal of Logistics Management*, *36*(2), 474-500.

Zheng, Z., Xie, S., Dai, H. N., Chen, X., & Wang, H. (2018). Blockchain challenges and opportunities: A survey. *International journal of web and grid services*, *14*(4), 352-375.

# Beyond Neophobia: An Integrative Model of Psychological Factors Influencing 3DPF Acceptance

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## Abstract

Despite rapid advances in food-printing technology, commercial uptake of 3D-printed food is still modest and extant research provides only piecemeal consumer-psychology perspectives. This study aims to develop and test an integrative model that jointly considers psychological barriers (perceived safety, food neophobia, perceived health risk), facilitators (perceived benefits, knowledge of the product, personal innovativeness) and the moderating roles of environmental consciousness and social desirability in shaping consumers' intention to consume 3D-printed food.

Primary data were collected through a structured questionnaire administered to 141 Italian consumers and analyzed with partial least squares structural-equation modelling.

Results show that food neophobia is the unique barrier exerting a significant negative effect on intention, whereas perceived benefits, product knowledge and personal innovativeness all positively influence adoption. Environmental consciousness strengthens the impact of personal innovativeness, while other moderating paths and the direct effects of perceived safety and health risk are nonsignificant.

Theoretically, the study clarifies the relative salience of facilitators over risk-based deterrents and identifies an "eco-innovative" consumer segment in which sustainability values amplify innovativeness effects. Practically, marketers should foreground customizable nutritional and environmental benefits, provide experiential knowledge opportunities, and implement gradual exposure strategies to mitigate neophobia and accelerate mainstream acceptance of 3D-printed food products.

*Keywords: 3D printed food (3DPF), Food Neophobia, Consumption Intention, Consumer Acceptance, Sustainability, Quantitative Research.*

## 1. Introduction

Recent advancements in food technology are transforming the way individuals produce and consume food, with increasing emphasis on personalization, sustainability, and resource efficiency. Among these innovations, three-dimensional food printing has emerged as a promising solution that combines digital manufacturing techniques with culinary creativity. By layering edible materials through additive manufacturing techniques, three-dimensional

food printing allows for the creation of customized shapes, textures, nutritional profiles, and even sustainability-enhanced meals (Varvara et al., 2021; Sun et al., 2015). These capabilities open new possibilities across sectors, from fine dining and healthcare to waste reduction and dietary personalization (Zhu et al., 2023). Despite these advantages, the commercial adoption of 3D-printed food (3DPF) remains limited.

Previous research has highlighted perceived benefits, such as nutritional optimization, environmental sustainability, and aesthetic appeal, as key factors in shaping positive consumer attitudes (Cunningham et al., 2025; Ng et al., 2022). Although enthusiasm for 3DPF is rising, research that explains the phenomenon from a consumer-psychology angle is still fragmented. Existing work has mostly concentrated on improving printing technologies and material attributes, while the psychological forces that drive, or deter, adoption receive far less attention (Zhu et al., 2023). Seo and Shigi (2024), for instance, emphasize positive expectations such as sustainability benefits, yet overlook potential inhibitors like food neophobia or perceived risk. Although Silva et al. (2024) include food neophobia, perceived benefits, and digital affinity when examining attitudes toward 3DPF, they do not attempt to integrate these elements into a single theoretical model.

To address this issue, the present study proposes an extended theoretical model that incorporates both psychological barriers, including perceived food safety, food neophobia, and perceived health risk, alongside major facilitators, such as perceived benefits, knowledge of the product, and personal innovativeness. In addition, the model introduces two moderating variables: environmental consciousness and social desirability, which have received limited attention in this context despite their relevance in sustainability and innovation literature (Kautish et al., 2021; De Jong et al., 2010).

Drawing on a nationally representative sample and validated scales analyzed through structural-equation modelling, the study delivers a more comprehensive, theoretically grounded picture of consumer responses to 3DPF.

This paper offers insights for both marketers and policy makers, including the need to turn knowledge into positive experiences through educational and tasting initiatives, and the importance of communicating clear environmental benefits to enhance consumer acceptance of 3DPF.

The remainder of the paper is structured as follows: Section 2 reviews the relevant literature and develops the research hypotheses. Section 3 presents the research methodology. Section 4 reports the empirical results, followed by Section 5, which discusses the main findings. Section 6, 7 present theoretical and managerial contributions while Section 8 concludes the study by outlining research limitations and future directions.

## 2. Theoretical Background

Three-dimensional food printing utilizes additive manufacturing techniques, digitally controlled processes that build objects layer by layer from a digital file, to create food products by depositing edible materials in successive layers (Varvara et al., 2021).

Currently, extrusion-based systems dominate the field due to their material flexibility and broad applicability, working by pushing paste-like materials such as doughs, purées, or plant proteins through nozzles (Baiano, 2022), while inkjet and binder-jet technologies offer finer structural detail by depositing liquid droplets or selectively binding powdered ingredients, thus providing higher resolution in certain contexts (Shah et al., 2024). Selective laser sintering has also been adapted for materials like sugar and chocolate, using laser energy to fuse powder layers into delicate structures (Zhu et al., 2023).

The development of three-dimensional food printing gained early momentum with the 2005 launch of the open-source Fab@Home platform for multi-material printing, which by 2007 could print edible materials such as cookie dough and chocolate, and culminated in the early 2010s with the emergence of commercial devices like Natural Machines' Foodini printer for food pastes and purées, enabling shaped vegetable purées and pasta bases (Baiano, 2022).

Current applications of 3DPF span a wide range of contexts, from fine dining, where chefs use the technology to create geometric garnishes and bespoke chocolates (Baiano, 2022), to healthcare settings, where it supports personalized nutrition by printing vitamin-fortified bars and texture-modified purees for patients with dysphagia (Zhu et al., 2023). Organizations such as NASA are also investigating the use of three-dimensional food printing to produce on-demand meals in zero-gravity or remote environments, utilizing shelf-stable ingredient cartridges to ensure safety and efficiency (Baiano, 2022). Beyond institutional and professional use, hobbyists and home cooks have adopted consumer-grade printers to craft novelty items such as pancake art and customized cookies (Shah, 2024). One of the key advantages of three-dimensional food printing is its ability to produce customized meals by varying nutrient concentrations, introducing healthy ingredients such as vitamins and fibers, and adapting macronutrient and micronutrient profiles to meet individual dietary needs and preferences (Baiano, 2022). Another major benefit is sustainability: the technology minimizes ingredient waste and allows the repurposing of surplus produce and alternative proteins, thus enhancing supply-chain efficiency (Zhu et al., 2023). Finally, the technology improves accessibility in healthcare settings by enabling the production of nutritionally adequate meals with customized textures and shapes, particularly for patients with dysphagia, who require modified food consistencies for safe consumption (Baiano, 2022).

Perceived benefits, such as nutritional enhancement, convenience, and waste reduction, significantly drive consumer acceptance of 3DPF, notably increasing consumers' willingness to experiment when these clear advantages are evident (Cunningham et al., 2025). Supporting this, Ng et al. (2022) highlight that perceived benefits, particularly those related to health improvements, strongly shape positive consumer attitudes towards this technology. Additionally, emphasizing these nutritional and environmental benefits has proven effective in shifting consumer attitudes favorably towards 3DPF, as demonstrated by survey findings in South Africa and Malaysia (Cunningham et al., 2025; Ng et al., 2022). Furthermore, in emerging markets, emphasizing perceived product value, defined through quality and practical utility, can significantly enhance consumers' willingness to pay premium prices for printed foods (Yang et al., 2024).

## 2.1 Barriers and facilitators to adoption

The adoption of 3DPF faces different challenges. Recent research (Zhu et al., 2023) highlights consumers' lack of trust in 3DPF due to the unfamiliar and unclear process. The lack of standard regulations generates doubts about hygiene, safety, and naturalness (Hwang and Choe, 2020). The literature on the topic is still fragmented. No empirical study has identified a clear set of barriers or facilitators (Zhu et al., 2023). To address this gap, the present study introduces a theoretical model based on literature focusing on three potential psychological barriers and facilitators. Barriers may represent an obstacle to consumer adoption: *Perceived Safety* (SAF), *Food Neophobia* (FN), and *Perceived Health Risk* (PHR). Facilitators can increase consumption by reducing their reluctance: *Perceived Benefits* (PB), *Knowledge of the Product* (KN), and *Personal Innovativeness* (PI).

### 2.1.1 Food neophobia, perceived health risk and safety of 3DPF

SAF can be an obstacle to the adoption of 3DPF. There are no national or international laws that regulate the production process or define standards for food, which increases reluctance

and reduces acceptance (Zhu et al., 2023). This absence of standardized guidelines restricts the potential consumption of 3DPF because no information scares consumers (Zhu et al., 2023). According to the findings of preceding studies, respondents have expressed a notable level of concern regarding the safety of 3DPF. Results found by Mansan and McSweeney (2020) that about half of the participants in their study were worried about the safety of 3DPF. A study by Lupton and Turner (2016), also highlighted that safety was a key concern among participants. Considering these insights, Hypothesis 1 is formulated as follows:

H1: SAF significantly and negatively affects the intention to consume 3DPF.

FN is the aversion to try novel or unfamiliar foods (Gustavsen et al., 2025). It is an adverse emotional reaction to new food, technologies, and sources. FN is a mental protective strategy used to avoid harmful substances or situations, often seen as a rejection of unfamiliar foods (Velasco Vizcaíno and Pohlmann, 2025). Nevertheless, it is influenced by demographic and socio-economic variables such as age, gender, education, and family background (Chang et al., 2024), which may sometimes reduce FN. For example, some studies have confirmed the value of minimizing FN in increasing consumer acceptance of insect consumption (Chang et al., 2024). Frequent exposure to new food reduces its perceived novelty and leads to acceptance among consumers (Gustavsen et al., 2025). Considering these insights, Hypothesis 2 was formulated.

H2: FN significantly and negatively affects the intention to consume 3DPF.

PHR influences consumer acceptance of innovative food products. The PHR is the consumer's belief that food may negatively impact health and rise when a product is novel and the information is limited (Chang et al., 2024). According to the World Health Organization, foodborne illnesses related to food consumption represent one of the most frequent causes of mortality in the world (Chang et al., 2024). Food risk concerns increased during the COVID-19 pandemic due to the fears of indirect transmission through food or packaging (Hwang and Choe, 2020). Recent research on 3DPF highlights consumers' concerns about naturalness, potential harm, freshness, taste, and nutritional value (Chang et al., 2024). Considering these insights, Hypothesis 3 is formulated as follows:

H3: PHR significantly and negatively affects the intention to consume 3DPF.

### 2.1.2 Perceived benefit, knowledge, and personal innovativeness

The perception of benefits influences consumers' intention to consume and the acceptance of innovative foods. It is the subjective evaluation of the advantages of consuming 3DPF. PB are social and quality-related (Seo and Shigi, 2024). PB have a social advantage because they have a crucial role in reinforcing the sustainability of the production process, particularly for consumers who have green awareness. Moreover, taste, healthiness, convenience, and nutritional customization are essential to raising product acceptance (Seo and Shigi, 2024). Evaluating the benefit of adopting innovative food depends on the cost-benefit paradigm, which is often discussed in decision-making research (Kim et al., 2019). A strong perception of the social and health-related benefits of 3DPF positively influences consumers' intention to adopt innovative food (Seo and Shigi, 2024). Considering these insights, Hypothesis 4 is formulated as follows:

H4: PB has a significant positive impact on the intention to consume 3DPF.

Another key factor is PI which is the openness to new experiences or technologies (Agarwal and Prasad, 1998). It is considered a key dimension of consumers' personality, reducing

reluctance and shaping adoption. With high PI, early adopters are consumers less constrained by traditional norms who show a higher propensity to try unfamiliar products (Agarwal and Prasad, 1998). Early adopters have high PI and, for this reason, are opinion leaders and can influence the diffusion of innovative technologies through social influence, particularly in food. Their openness to innovation may reduce psychological reluctance to 3DPF, which plays a decisive role in shaping public perception and normalizing the adoption of emerging food technologies (Wang et al.,2024). Considering these insights, Hypothesis 5 is formulated as follows:

H5: PI has a significant positive impact on the intention to consume 3DPF.

In addition, KN plays a significant role because it shapes consumers' attitudes toward innovative food. Previous research indicates that the level of knowledge impacts consumers' choices and evaluation processes when there is an unfamiliar product (Kelting et al., 2017). For example, for insect-based foods (food with alternative proteins), good knowledge and more information are linked to higher product consumption. Previous experience and familiarity with products influence willingness to consume them (Piha et al., 2018). Better product knowledge reduces the perceived risk and raises trust in the production process. Knowledge leads consumers to a more deliberate decision-making process instead of an instinctive rejection of unfamiliar products (Piha et al., 2018). Considering these insights, Hypothesis 6 is proposed as follows:

H6: KN significantly and positively impacts the intention to consume 3DPF.

### 2.2 Moderating variables: environmental consciousness and social desirability

Based on existing literature, *Environmental Consciousness* (EC) and *Social Desirability* (SD) (Costa et al., 2021; Kautish et al., 2019) can play a fundamental role in shaping consumer intentions toward 3DPF. They can influence the relationship between barriers and facilitators to the intention to consume 3DPF. The acceleration of environmental concerns, sustainability challenges, and consumer awareness about environmental crises has positioned green consumption as socially relevant (Kautish et al., 2019).

According to Zelezny and Schultz (2000), EC is an individual's psychological propensity to engage in pro-environmental behavior. It is conceptualized as a multidimensional mental state that comprises value, emotional response, personality traits, and attitudinal orientations (Kautish et al., 2019; Kautish et al., 2021). EC is often reflected in attitudes and behaviors to minimize ecological harm. It is demonstrated that consumers with higher EC value green product attributes favorably and lead to eco-friendly decisions (Kilbourne et al., 2008). The value system is changing for all consumers toward more sustainable consumption, and incorporating sustainability attributes in products is a principal strategy of the company for raising consumption among eco-conscious individuals (Kautish et al., 2021). Pro-environmental values play a critical role in shaping consumer acceptance and always lead to the choice of a more sustainable product and green consumption (Pickett-Baker et al., 2008). Hypotheses of moderating effects of EC are shown in Table 5.

SD was originally conceptualized as a stable trait by Crowne and Marlowe, (1960), whose 33-item Marlowe-Crowne Social Desirability Scale (MC-SDS) remains the benchmark for assessing individual differences in this motive. Later work distinguished two underlying processes: self-deceptive enhancement and impression management, captured by the Balanced Inventory of Desirable Responding (Paulhus, 1991). From a theoretical standpoint, SD is rooted in social-norms theory, which posits that behavior is guided by injunctive and descriptive expectations (Cialdini and Goldstein, 2004), and in impression-management theory, which treats self-presentation as a strategic effort to claim socially valued identities.

Because the SD motive heightens concern with how one's choices will be judged, it can amplify the influence of factors that signal social approval (e.g., perceived environmental benefit) while muting factors rooted in private affect (e.g., food neophobia). A study by Fisher and Katz, (2000) confirmed that respondents high in SD inflate other-oriented values. Extending this evidence, De Jong et al., (2010) demonstrated that moving from conventional self-reports to indirect questioning eliminates SD-driven inflation of sensitive consumption desires, revealing stronger underlying relationships between genuine motives and intentions. Similar patterns appear in sustainable consumption: structural models of South-Australian organic purchasers indicate that impression-management SD suppresses the effect of personal ecological attitude on stated purchase frequency (Wheeler et al., 2019). Collectively, these studies justify modelling SD not merely as a statistical control but as a theoretically meaningful moderator of intention frameworks.

Within our conceptual framework, SD functions as a moderator overlaying both facilitators and barriers. When SD is high, the positive paths from PB, EC and PI to 3DPF intention should strengthen, because endorsing a cutting-edge, sustainable technology conveys a favorable social image. Conversely, the negative path from FN is expected to weaken: publicly admitting fear of novel foods is socially unattractive, so high-SD consumers may under-report neophobic tendencies, diluting their deterrent effect. By integrating SD, the model recognizes that stated intentions toward 3DFP reflect not only cognitive evaluations but also the social signaling value of embracing a futuristic diet. Hypotheses of moderating effects of SD are shown in Table 5.The entire hypothesized model is visible in Figure 1.

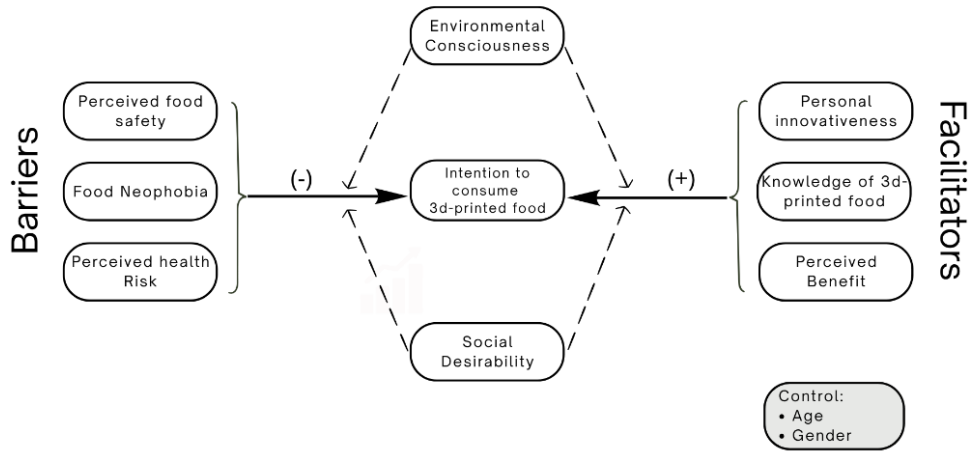



**Figure 3:** Hypothesized conceptual model

## 3. Materials and Method

This study adopts a quantitative research approach. Primary data were collected through a structured questionnaire administered to a convenience sample. The questionnaire consisted of two main sections. The first section began with a screening question assessing whether respondents were already familiar with 3DPF. It then included the measurement items corresponding to the constructs tested in the theoretical model. The second section gathered socio-demographic information (e.g., gender, age, educational attainment, and income level). Table 1 reports the key demographic characteristics of the sample.

| Variable | Category | No. | Percentage (%) |
|---|---|---|---|
| **Gender** | Male | 66 | 46.8% |
| | Female | 75 | 53.2% |
| | Other/Choose not to say | 0 | 0% |
| **Educational level** | Elementary school/Lower secondary school | 4 | 2.8% |
| | Higher Secondary School | 21 | 14.9% |
| | Bachelor's degree (3 years) | 36 | 25.5% |
| | Degree (5 years or more) | 68 | 48.2% |
| | Doctorate | 12 | 8.5% |
| **Monthly income range** | <1,000 € | 42 | 29.8% |
| | 1,000 – 3,000 € | 90 | 63.8% |
| | >3,000€ | 9 | 6.4% |

**Table 1:** Socio-demographic characteristics of the sample
(Note: Sample size = 141 respondents; Source: Authors' elaboration)

The sample's mean age was 29.8 years (SD=8.24; range 19–63) with a balanced gender distribution. The sample was characterized by a high level of educational attainment: cumulatively, nearly three-quarters of participants held a university degree (bachelor's or higher), with 48.2% holding a master's degree. Most participants (over 50%) reported a monthly income in the €1,000 to €3,000 range.

Out of a total of 270 responses, approximately 60% of participants (n = 162) answered "yes" to the initial screening question, indicating they had heard of 3DPF, even if only vaguely. To enhance data quality and reduce potential bias, 21 respondents were excluded due to invalid answers to the attention check question (Abbey and Meloy, 2017), for a total of 141 valid questionnaires.

### 3.1 Measures

The study employed nine latent constructs, which are detailed in Table 2. All constructs were rigorously validated in prior literature and carefully adapted to align with the specific objectives of this research.

The construct measuring *Knowledge of the Product* was adapted from Mitchell et al. (1996) and Kelting et al. (2017). The *Food Neophobia* scale draws from Pliner et al. (1992), Siegrist et al. (2013), Jaeger et al. (2017), and Lee et al. (2021). *Personal Innovativeness* was measured using the scale developed by Agarwal and Prasad (1998), while *Perceived Health Risk* was adapted from Hwang et al. (2020) and Tesikova et al. (2022). The construct *Perceived Benefit* follows Kim et al. (2019), *Social Desirability* is based on Ding et al. (2005), and *Perceived Safety* was derived from Lando and Carlton (2011) and Berry et al. (2015).

*Environmental Consciousness* was adapted from Kilbourne and Pickett (2008), and *Intention to Consume* was measured using items from Gao et al. (2017) and Alam et al. (2020).

The *Perceived Safety* construct was measured using a 7-point semantic differential scale, while all other constructs were assessed using 7-point Likert-type scales ranging from 1 ("strongly disagree") to 7 ("strongly agree").

| Dimension | Items | Factor Loadings | Cronbach's α | CR (ρc) | AVE |
|---|---|---|---|---|---|
| ***Knowledge of the Product*** | How familiar are you with 3D printed food? | 0.878 | 0.900 | 0.929 | 0.766 |
| | How clear is your idea with respect to the characteristics of 3D printed food? | 0.800 | | | |
| | How much do you know about 3D printed food? | 0.935 | | | |
| | How would you rate your knowledge of 3D printed food compared to the rest of the population? I think I am: one of the least informed/one of the most informed people | 0.883 | | | |
| ***Food Neophobia*** | In general. I don't trust innovative foods | 0.829 | 0.895 | 0.922 | 0.703 |
| | In general. I don't try innovative foods | 0.835 | | | |
| | The unusual appearance of 3D printed food prevents me from eating it | 0.843 | | | |
| | I have doubts about the hygiene and safety of 3D printed food | 0.814 | | | |
| | The ingredients of 3D printed food make me suspicious | 0.871 | | | |
| ***Personal Innovativeness*** | I like to explore new things | 0.890 | 0.917 | 0.938 | 0.755 |
| | I am usually the first among my friends to try new foods | 0.887 | | | |
| | I openly accept new ways of thinking | 0.658 | | | |
| | I like to try new things | 0.938 | | | |
| | I am interested in trying new foods | 0.942 | | | |
| ***Perceived Health Risk*** | I fear that 3D printed food is harmful to health | 0.939 | 0.947 | 0.962 | 0.863 |
| | I fear that 3D printed food is unhealthy | 0.952 | | | |
| | I believe there is a risk of chemical contamination (e.g. heavy metals and pesticides) in 3D printed food | 0.929 | | | |

| | | | | | |
|---|---|---|---|---|---|
| | I believe there is a risk of microbiological contamination (e.g. Escherichia coli and botulinum) in 3D printed food | 0.893 | | | |
| ***Perceived Benefit*** | Consuming 3D printed food is beneficial | 0.883 | 0.917 | 0.941 | 0.800 |
| | Consuming 3D printed food has value to me | 0.874 | | | |
| | I believe it is worthwhile to consume 3D printed food | 0.939 | | | |
| | Consuming 3D printed food is worthwhile to me | 0.881 | | | |
| ***Perceived Safety*** | I think consuming 3D printed food is: not at all safe/very safe | 0.947 | 0.879 | 0.943 | 0.892 |
| | I think the food safety level of 3D printed food is: very poor/very good | 0.942 | | | |
| ***Intention to Consume*** | I plan to consume 3D printed food | 0.950 | 0.952 | 0.963 | 0.840 |
| | I will try to consume 3D printed food more often | 0.926 | | | |
| | I plan to consume 3D printed food | 0.891 | | | |
| | I would be willing to consume 3D printed food | 0.909 | | | |
| | I plan to consume 3D printed food in the near future | 0.905 | | | |
| ***Social Desirability*** | I think it is socially desirable to eat 3D printed food | 0.895 | 0.703 | 0.824 | 0.613 |
| | My friends and family would agree that it is socially desirable to consume 3D printed food | 0.784 | | | |
| | There is a widespread perception that consuming 3D printed food is socially desirable | 0.652 | | | |
| ***Environmental Consciousness*** | I am very concerned about environmental issues | 0.780 | 0.737 | 0.830 | 0.621 |
| | Human beings are severely abusing the environment | 0.694 | | | |
| | I would be willing to reduce my consumption to help protect the environment | 0.879 | | | |

**Table 2:** Overview of the measurements for reliability test
(Note: CR=Composite Reliability; AVE=Average Variance Extracted; Source: Authors' elaboration)

### 3.2 Data Analysis

Data analysis was performed using SmartPLS version 4.1.0.6 to examine the relationships among the study constructs. The software implements structural equation modeling (SEM) techniques to explore linear relationships between variables and test the overall theoretical model, employing the Partial Least Squares (PLS) estimation method.

Partial least squares structural equation modeling (PLS-SEM) has gained increasing popularity across various fields, including strategic and international management as well as marketing, for testing theoretical frameworks and assessing hypothesized relationships within structural models (Channa et al., 2020). Furthermore, PLS-SEM focuses on estimating causal predictions in statistical models (Rigdon, 2014). The use of this technique is particularly appropriate given its strong capability to handle complex structural models that include a large number of constructs, indicators, and paths (Hair et al., 2018).

The analysis was conducted in two main stages. First, the measurement model was assessed by examining the convergent validity and unidimensionality of the constructs. Second, the structural model was evaluated using a bootstrapping procedure based on 5,000 resamples, in order to test the statistical significance of the relationships between latent constructs and the individual path coefficients.

## 4. Results

### 4.1 Measurement Model

The measurement model comprises 35 items developed to capture the proposed theoretical framework, along with two control variables (age and gender). A Confirmatory Factor Analysis (CFA) was first conducted to assess the validity and reliability of the latent constructs, in accordance with the guidelines provided by Hair et al. (2022).

Convergent and discriminant validity were evaluated using a range of established metrics: Cronbach's alpha, factor loadings, composite reliability (CR), average variance extracted (AVE), and the Heterotrait-Monotrait Ratio of correlations (HTMT), following the recommendations of Hair et al. (2022) (see Table 2). All factor loadings meet or exceed the commonly accepted threshold of 0.70, indicating satisfactory item-construct relationships. Both Cronbach's alpha and CR values are above the recommended 0.70 cutoff, confirming strong internal consistency. Additionally, AVE values for all constructs exceed the 0.50 benchmark (Fornell and Larcker, 1981), thereby supporting convergent validity.

To assess discriminant validity, the HTMT criterion was applied, as it is considered the most rigorous approach in PLS-SEM analysis (Henseler et al., 2015). As reported in Table 3, all HTMT values fall below the conservative threshold of 0.85, providing robust evidence of discriminant validity among the latent constructs.

Collectively, these findings confirm the soundness of the measurement model in terms of both reliability and validity.

| | AGE | EC | FN | GEN | ICONS | KN | PB | PHR | PI | SAF | SD |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **AGE** | | | | | | | | | | | |
| **EC** | 0.123 | | | | | | | | | | |
| **FN** | 0.056 | 0.264 | | | | | | | | | |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **GEN** | 0.219 | 0.198 | 0.115 | | | | | | | |
| **ICONS** | 0.035 | 0.296 | 0.655 | 0.037 | | | | | | |
| **KN** | 0.054 | 0.182 | 0.155 | 0.210 | 0.384 | | | | | |
| **PB** | 0.034 | 0.243 | 0.432 | 0.043 | 0.755 | 0.277 | | | | |
| **PHR** | 0.043 | 0.151 | 0.748 | 0.039 | 0.506 | 0.187 | 0.458 | | | |
| **PI** | 0.171 | 0.458 | 0.555 | 0.118 | 0.425 | 0.144 | 0.205 | 0.211 | | |
| **SAF** | 0.058 | 0.236 | 0.557 | 0.077 | 0.586 | 0.184 | 0.563 | 0.711 | 0.215 | |
| **SD** | 0.053 | 0.225 | 0.267 | 0.065 | 0.585 | 0.308 | 0.761 | 0.318 | 0.135 | 0.506 |

**Table 3:** Discriminant validity using HTMT
(Note: AGE = respondents' age; EC=Environmental Consciousness; FN=Food Neophobia; GEN=respondents' gender, ICONS=Intention to consume 3DPF; KN=Knowledge of the Product; PB=Perceived Benefit; PHR=Perceived Health Risk; PI=Personal Innovativeness; SAF=Perceived Safety; SD=Social Desirability)

In order to guarantee the accuracy of the model, two indices were calculated: the coefficient of determination ($R^2$) and the standardized root mean square residuals (SRMR). The $R^2$ is a value ranging from 0 to 1, and it is employed to demonstrate the nomological validity and explanatory power of the model. The results of the analysis demonstrate a high explanatory power of the PLS-SEM model (adjusted = 0.707; SRMR = 0.075). The findings suggest that the variables considered as exogenous (the three facilitators and the three barriers) account for more than 70% of the variance of the construct. The SRMR indicates a satisfactory model fit, falling below the threshold recommended by Hu and Bentler (1999).

### 4.2 Structural Model

A two-tailed PLS bootstrapping test with 5,000 subsamples was conducted to estimate standard errors and t-values, which are essential for evaluating regression coefficients and significance of effects (Dijkstra and Henseler, 2015; Hair et al., 2022). The direct effects among the latent variables are presented below in Table 4 and in Figure 2.

| Hypothesis | Path | Standardized effect (β) | T statistics | p-value |
|---|---|---|---|---|
| H1 | SAF→ICONS | 0.112 | 1.550 | 0.121 |
| H2 | FN→ICONS | -0.286** | 3.365 | 0.001 |
| H3 | PHR→ICONS | 0.049 | 0.500 | 0.617 |
| H4 | PB→ICONS | 0.385*** | 4.971 | 0.000 |
| H5 | PI→ICONS | 0.197** | 3.143 | 0.002 |
| H6 | KN→ICONS | 0.208*** | 3.585 | 0.000 |

**Table 4:** Direct effect hypotheses testing

Note: EC=Environmental Consciousness; FN=Food Neophobia; ICONS=Intention to consume 3DPF; KN=Knowledge of the Product; PB=Perceived Benefit; PHR=Perceived Health Risk; PI=Personal Innovativeness; SAF=Perceived Safety; SD=Social Desirability; ** p<0.05; *** p<0.001.

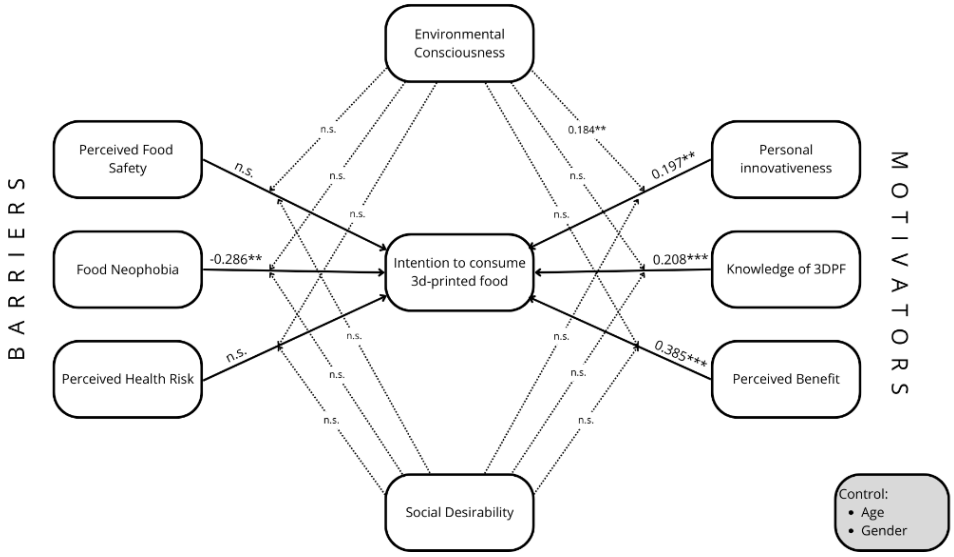



**Figure 4:** Structural model (Note: ** p<0.05; *** p<0.001)

The findings indicate that among the identified barriers, FN exerts a negative and significant influence (β = -0.286, t=3.365, p=0.001) on the intention to consume 3DPF, thereby substantiating hypothesis H2. Conversely, the findings demonstrate a positive and significant impact of all facilitators under investigation on intention to consume 3DPF, thereby supporting the hypothesized relationships (H4, H5, and H6). The findings indicate that PB exert a more substantial influence (β = 0.385, t=4.971, p<0.001) compared to KN (β = 0.208, t=3.585, p<0.001) and PI (β = 0.197, t=3.143, p=0.002). Therefore, the impact of facilitators on Intention to consume 3DPF is greater than that of barriers.

| Hypothesis | Path | Standardized effect (β) | T statistics | $F^2$ | p-value |
|---|---|---|---|---|---|
| H7a | EC*SAF→ICONS | 0.036 | 0.475 | 0.002 | 0.634 |
| H7b | EC* FN →ICONS | 0.078 | 0.698 | 0.006 | 0.485 |
| H7c | EC* PHR → ICONS | -0.062 | 0.635 | 0.004 | 0.526 |
| H7d | EC* PB→ICONS | -0.042 | 0.575 | 0.004 | 0.566 |
| H7e | EC* PI → ICONS | 0.184** | 2.024 | 0.068 | 0.043 |
| H7f | EC* KN → ICONS | -0.009 | 0.152 | 0.000 | 0.880 |
| H8a | SD*SAF → ICONS | 0.028 | 0.241 | 0.038 | 0.810 |

| | | | | | |
|---|---|---|---|---|---|
| H8b | SD* FN → ICONS | 0.022 | 0.229 | 0.001 | 0.819 |
| H8c | SD* PHR → ICONS | -0.168 | 1.667 | 0.001 | 0.095 |
| H8d | SD* PB → ICONS | 0.008 | 0.095 | 0.014 | 0.925 |
| H8e | SD* PI → ICONS | 0.082 | 1.196 | 0.000 | 0.232 |
| H8f | SD* KN → ICONS | -0.006 | 0.103 | 0.000 | 0.918 |

**Table 5:** Moderating effect hypotheses testing

(Note: EC=Environmental Consciousness; FN=Food Neophobia; ICONS=Intention to consume 3DPF; KN=Knowledge of the Product; PB=Perceived Benefit; PHR=Perceived Health Risk; PI=Personal Innovativeness; SAF=Perceived Safety; SD=Social Desirability; ** $p<0.05$; *** $p<0.001$.)

Among the hypotheses involving the moderating role of EC, only H7e showed a statistically significant effect ($\beta = 0.184$, $f^2 = 0.068$, $p = 0.043$), indicating that EC amplifies the positive relationship between PI and the Intention to consume 3DPF. This suggests that environmentally conscious individuals who are also open to innovation are more likely to adopt this type of food. For SD moderator, none of the interactions reached statistical significance at the $p < 0.05$ level. However, H8c showed marginal significance ($\beta = -0.168$, $p = 0.095$), suggesting a possible weakening effect of SD on the relationship between health risk perception and consumption intention. This might imply that when people are influenced by the desire to appear socially acceptable, the negative effect of PHR on intention to consume is weakened. However, these findings suggest that SD has limited influence on shaping consumers' intention to adopt 3DPF. A plausible explanation is that such food is not yet widely recognized or accepted as socially desirable, diminishing the impact of social pressure.

## 5. Discussion

The results of the analysis demonstrate a high explanatory power of the PLS-SEM model. According to extant literature, three variables were identified in the hypothesized model that inhibit the intention to consume 3DPF. In particular, the effect of FN on the Intention to Consume 3DPF was found to be robustly negative. In the hypothesized model, the emotional response of disgust towards unusual foods continues to represent, as evidenced by other contributions in the literature, a barrier that limits their consumption (Velasco Vizcaíno and Pohlmann, 2025). The remaining two hypothesized barriers, SAF ($\beta = 0.112$) and PHR ($\beta = 0.049$), were not found to be significant. The absence of a direct effect indicates that, based on the characteristics of the sample under consideration, the benefits may potentially outweigh the risks, or that the latter variable may exert its influence through hitherto undetected indirect pathways. Consequently, based on the findings of this study, hypothesis H2 is endorsed, while hypotheses H1 and H3 are rejected.

However, three factors were theorized to motivate the Intention to Consume 3DPF. The most significant predictor is PB ($\beta = 0.385$, $p < 0.001$), confirming the assumption that perceived advantages prevail over fears when individuals evaluate emerging food technologies. This is followed by KN ($\beta = 0.208$, $p < 0.001$) and PI ($\beta = 0.197$, $p = 0.002$). Cognitive familiarity has been demonstrated to reduce information deficiency, while openness to innovation has been shown to act as a dispositional lever that brings consumers closer to food-tech solutions, thus confirming the literature to date (Agarwal and Prasad,

1998; Wang et al., 2024). Therefore, all three facilitators included in the model act as enablers of the Intention to Consume 3DPF. In view of the above, hypotheses H4, H5 and H6 are verified and accepted simultaneously.

The model also hypothesized a dual moderating effect of the variables EC and SD on Intention to Consume 3DPF. A positive and significant interaction was identified between EC, PI and Intention to Consume 3DPF ($\beta = 0.184$; $p < 0.043$; $f^2 = 0.068$). This finding underscores the notion that open-mindedness, an inherent characteristic of consumers' psychological traits, is reinforced when individuals possess a pronounced environmental awareness. Consequently, consumers who prioritize environmental sustainability and are receptive to novel food products are more likely to experiment with 3DPF. These consumers appear to ascribe environmental and sustainable values (e.g. waste reduction or nutritional customization) to the consumption of those innovative foods. All other possible interactions of motivators and barriers with the EC variable did not show any significant effect on Intention to Consume. The findings of this study indicate that sensitivity to environmental issues does not exert a significant influence on the impact of SAF, FN, PHR, PB or KN on Intention to Consume 3DPF.

Furthermore, efforts to incorporate the SD variable as a moderator yielded β values ranging from –0.168 to 0.082, with significance levels falling below the critical threshold (p values ranging from 0.095 to 0.93). The only significant value relates to the test of hypothesis H8c. Although it is not strictly supported, the observed coefficient is consistent with the hypothesized direction, and the marginal significance ($p = 0.095$) indicates a potential effect that could emerge with greater statistical power. In summary, it can be expected that SD could moderate by reducing the impact of PHR on the Intention to Consume 3DPF. However, the current sample size ($N = 141$) is inadequate for the reliable detection of an effect of probable small magnitude ($f^2 < 0.02$).

In conclusion, the assumption regarding the potential moderating effects of SD and EC was confirmed only for hypothesis H7e. The remaining statistical interactions did not demonstrate statistical significance and were thus rejected.

## 6. Theoretical contribution

The results reveal a markedly unbalanced picture in favor of facilitators: all the enabling drivers (PB, KN, and PI) exert a positive and significant impact on the Intention to Consume 3DPF. Among the barriers, only FN proves to be a real obstacle to the behavior under analysis. This suggests that, in the domain of 3DPF, when consumers perceive clear and tangible benefits, risk perception takes a back seat, and the only remaining resistance is emotional-dispositional in nature.

The lack of a significant moderating effect of SD adds an interesting insight: consuming 3DPF does not yet appear to be a "socially expected" or reputation-enhancing behavior. As long as the technology does not reach greater public visibility (e.g., through events, mainstream media, or endorsement by influential figures), peer approval will not serve as a relevant incentive, and choices will remain primarily driven by personal curiosity and utility evaluations.

In contrast, EC acts as a "multiplier" for PI. Among consumers already open to experimentation, the appeal of environmental sustainability serves as a value-based lever that further strengthens their Intention to Consume 3DPF. This finding highlights the importance of alignment between personal values (green orientation) and dispositional traits (innovativeness) in shaping the adoption of emerging food-tech innovations.

Overall, the study advances theoretical understanding in three directions: (1) it confirms the predominance of facilitators over barriers in highly innovative contexts; (2) it emphasizes the still-incipient role of social norms in the adoption of 3DPF; and (3) it introduces the "eco-innovation" combination as a key segment, suggesting that traditional innovation diffusion models should be integrated with sustainability-related value variables.

## 7. Managerial Implication

At the managerial level, there is a clear need to transform knowledge into positive experience. In comparison to FN, information on motivating factors (i.e. nutritional personalization, creative design, waste reduction) has been shown to increase the intention to consume 3DPF (Jones et al., 2023). Therefore, it is recommended that companies invest in educational campaigns that combine informative content (e.g. videos, infographics, scientific Q&As) with hands-on tasting opportunities at points of sale and show cooking at culinary fairs, where participants can see and taste the product.

A secondary approach involves the effective communication of the environmental dimension. The use of transparent data to illuminate the diminished utilization of raw materials, the feasibility of employing by-products or alternative ingredients, and the curtailment of waste throughout the supply chain serves to reinforce the perception of value among environmentally conscious consumers. This, in turn, serves to amplify the positive impact on those who already demonstrate a high propensity for innovation.

Finally, given that FN represents the only significant barrier to be addressed, it is recommended that companies adopt gradual exposure strategies, commencing with familiar foodstuffs, shapes, flavors and ingredients (e.g. snacks, biscuits or pasta) and subsequently introducing more daring foods. The reduction of the "psychological distance" between traditional and 3DPF could assist in the normalization of the technology and lead to an increase in actual consumption. To address FN, policymakers and institutions are advised to prioritize the promotion of traceability and food safety through the implementation of regulatory frameworks. Standard labeling for these products could represent an opportunity, a practice that is currently lacking.

## 8. Limitations and future research directions

In conclusion, consumer PB, as well as PI and KN about 3DPF are important facilitators of consumer intention. FN remains a barrier that inhibits individuals in their intention to try 3DPF. The study enriches the literature in the area of alternative foods and provides an inclusive picture of the factors that serve as both drivers and barriers toward the use of these new products. However, the research is not without limitations. First, the sample of respondents has not yet reached the ideal size in relation to the number of dimensions and effects investigated, as data collection is still ongoing. In addition, the study analyzes self-rated measures that are subject to encore and do not detect actual behavior, but only a behavioral intention. Therefore, the next steps of analysis could be to expand the sample to strengthen the findings that emerged and to study the actual behavior through an experimental method.

## References

Abbey, J. D., & Meloy, M. G. (2017). Attention by design: Using attention checks to detect inattentive respondents and improve data quality. *Journal of Operations Management*, 53, 63-70.

Agarwal R, Prasad J (1998) A conceptual and operational definition of personal innovativeness in the domain of information technology. *Information System Resource* 9(2):204–215. https://doi.org/10.1287/isre.9.2.204

Alam MZ, Hu W, Hoque MR, Kaium MA (2020) Adoption intention and usage behavior of mHealth services in Bangladesh and China: a cross-country analysis. *International Journal Pharmaceut Healthcare Market* 14(1):37–60. https://doi.org/10.1108/IJPHM-03-2019-0023

Baiano, A. (2022). 3D Printed Foods: A Comprehensive Review on Technologies, Nutritional Value, Safety, Consumer Attitude, Regulatory Framework, and Economic and Sustainability Issues. In Food Reviews International (Vol. 38, Issue 5, pp. 986–1016). Taylor and Francis Ltd. https://doi.org/10.1080/87559129.2020.1762091

Berry, C., Mukherjee, A., Burton, S., & Howlett, E. (2015). A COOL effect: The direct and indirect impact of country-of-origin disclosures on purchase intentions for retail food products. *Journal of Retailing*, 91(3), 533–542.

Chang, M. Y., Hsia, W. J., & Chen, H. S. (2024). Breaking Conventional Eating Habits: Perception and Acceptance of 3D-Printed Food among Taiwanese University Students. *Nutrients*, 16(8), 1162.

Channa, N., Bhutto, M., Bhutto, M., Bhutto, N., & Tariq, B. (2020). Capturing customer's store loyalty through relationship benefits: Moderating effect of retail innovation. *European Business Review*, 34, 20–40. https://doi.org/10.1108/EBR-09-2019-0179.

Cialdini, R. B., & Goldstein, N. J. (2004). Social Influence: Compliance and Conformity. *Annual Review of Psychology*, 55(1), 591–621. https://doi.org/10.1146/annurev.psych.55.090902.142015.

Costa, T., Ramos, H., Vils, L., & Cunha, J. (2021). Are altruists environmentally responsible and materialists environmentally irresponsible? An analysis on the moderation of social desirability and mediation of environmental awareness. BBR. *Brazilian Business Review*, 18(5), 585-604.

Crowne, D. P., & Marlowe, D. (1960). A new scale of social desirability independent of psychopathology. *Journal of Consulting Psychology*, 24(4), 349–354. https://doi.org/10.1037/h0047358

Cunningham, N., Adeyanju, A. A., & Adebo, O. A. (2025). Consumers' attitudes toward 3D food printing: A South African context. *Journal of Food Science, 90*(4). https://doi.org/10.1111/1750-3841.70198

De Jong, M. G., Pieters, R., & Fox, J.-P. (2010). Reducing Social Desirability Bias through Item Randomized Response: An Application to Measure Underreported Desires. *Journal of Marketing Research*, 47(1), 14–27. https://doi.org/10.1509/jmkr.47.1.14

Dijkstra, T., & Henseler, J. (2015). Consistent Partial Least Squares Path Modeling. *MIS Quarterly*, 39(2), 297-316. https://doi.org/10.25300/MISQ/2015/39.2.02

Ding, M., Grewal, R., & Liechty, J. (2005). Incentive-aligned conjoint analysis. *Journal of Marketing Research*, 42(1), 67–82. https://doi.org/10.1509/jmkr.42.1.67.56987.

Fisher, R. J. (1993). Social Desirability Bias and the Validity of Indirect Questioning. *Journal of Consumer Research*, 20(2), 303. https://doi.org/10.1086/209351

Fisher, R. J., & Katz, J. E. (2000). Social-desirability bias and the validity of self-reported values. *Psychology and Marketing*, 17(2), 105–120.

Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18, 39-50. https://doi.org/10.1177/002224378101800104

Gao L, Wang S, Li J, Li H (2017) Application of the extended theory of planned behavior to understand individual's energy saving behavior in workplaces. *Resources, Conservation and Recycling* 127:107–113. https://doi.org/10.1016/j.resconrec.2017.08.030

Gustavsen, G. W., Wenstøp, Y. Q., & Rodriguez, D. G. P. (2025). Willingness to pay for lettuce produced with fish sludge and human waste: The role of food neophobia. *Cleaner and Circular Bioeconomy*, 10, 100135.

Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2022). A primer on partial least squares structural equation modeling (PLS-SEM) (3rd ed.). SAGE.

Hair, J. F., Sarstedt, M., Ringle, C. M., & Gudergan, S. P. (2018). Advanced issues in partial least squares structural equation modeling (PLS-SEM). *SAGE Publications*.

Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43, 115–135. https://doi.org/10.1007/s11747-014-0403-

Hu, L., & Bentler, P. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. https://doi.org/10.1080/10705519909540118

Hwang, J., & Choe, J. Y. (2020). How to enhance the image of edible insect restaurants: Focusing on perceived risk theory. International *Journal of Hospitality Management,* 87, 102464.

Jaeger, S.R., Lee, S.M., Kim, K.O., Chheang, S.L., Jin, D., Ares, G. (2017). Measurement of product emotions using emoji surveys: Case studies with tasted foods and beverages. *Food Quality and Preference* 2017, 62, 46–59.

Jayaprakash, S., Paasi, J., Pennanen, K., Ituarte, I. F., Lille, M., Partanen, J., & Sozer, N. (2020). Techno-economic prospects and desirability of 3d food printing: Perspectives of industrial experts, researchers and consumers. Foods, 9(12). https://doi.org/10.3390/foods9121725

Kautish, P., & Sharma, R. (2021). Study on relationships among terminal and instrumental values, environmental consciousness and behavioral intentions for green products. *Journal of Indian Business Research,* 13(1), 1-29.

Kautish, P., Paul, J., & Sharma, R. (2019). The moderating influence of environmental consciousness and recycling intentions on green purchase behavior. J*ournal of Cleaner Production*, 228, 1425-1436.

Kelting, K., Duhachek, A., & Whitler, K. (2017). Can copycat private labels improve the consumer's shopping experience? A fluency explanation. *Journal of the Academy of Marketing Science*, 45(4), 569–585. https://doi.org/10.1007/s11747-016-0494-z

Kilbourne, W., & Pickett, G. (2008). How materialism affects environmental beliefs, concern, and environmentally responsible behavior. *Journal of Business Research*, 61(9), 885-893.

Kim SH, Bae JH, Jeon HM (2019) Continuous intention on accommodation apps: Integrated value-based adoption and expectation–confirmation model analysis. *Sustainability* 11(6):1578. https://doi.org/10.3390/su11061578

Lando, A., & Carlton, E. (2011). 2010 Food Safety Survey: Key findings and topline frequency report. Center for Food Safety and Applied Nutrition, FDA.

Lee, K.H.; Hwang, K.H.; Kim, M.; Cho, M. (2021). 3D printed food attributes and their roles within the value-attitude-behavior model: Moderating effects of food neophobia and food technology neophobia. J. Hosp. *Tourisme Management*, 48, 46–54.

Lupton, D, & Turner, B. (2016). 'Both fascinating and disturbing': consumer responses to 3D food printing and implications for food activism. *Digital Food Activism*. https://ssrn.com/abstract=2799191.

Manstan, T., & McSweeney, M. B. (2020). Consumers' attitudes towards and acceptance of 3D printed foods in comparison with conventional food products. *International Journal of Food Science* & Technology, 55(1), 323–331. https://doi.org/10.1111/ijfs.14292

Mitchell, A. A., & Dacin, P. A. (1996). The assessment of alternative measures of consumer expertise. *Journal of Consumer Research*, 23(3), 219–239. https://doi.org/10.1086/209478

Ng, W. E., Pindi, W., Rovina, K., & Mantihal, S. (2022). Awareness and attitude towards 3D food printing technology: the case of consumer responses from Klang Valley, Malaysia. Food Research, 6(4), 364–372. https://doi.org/10.26656/fr.2017.6(4).530

Paulhus, D. L. (1991). Measurement and Control of Response Bias. *In Measures of Personality and Social Psychological Attitudes* (pp. 17–59). Elsevier. https://doi.org/10.1016/B978-0-12-590241-0.50006-X

Peschel, A. O., & Aschemann-Witzel, J. (2020). Sell more for less or less for more? The role of transparency in consumer response to upcycled food products. *Journal of Cleaner Production*, 273, 122884. https://doi.org/10.1016/j.jclepro.2020.122884

Pickett-Baker, J. and Ozaki, R. (2008), "Pro-environmental products: marketing influence on consumer purchase decision", *Journal of Consumer Marketing*, Vol. 25 No. 5, pp. 281-293.

Piha, S., Pohjanheimo, T., Lähteenmäki-Uutela, A., Křečková, Z., & Otterbring, T. (2018). The effects of consumer knowledge on the willingness to buy insect food: An exploratory cross-regional study in Northern and Central Europe. *Food Quality and Preference*, 70, 1-10.

Pliner, P., Hobden, K. (1992). Development of a scale to measure the trait of food neophobia in humans. *Appetite*, 19, 105–120.

Rigdon, E. (2014). Rethinking partial least square path modeling: Breaking chains and forging ahead. *Long Range Planning*, 47, 161–167. https://doi.org/10.1016/j.lrp.2014.02.003

Seo, Y., & Shigi, R. (2024). Understanding consumer acceptance of 3D-printed food in Japan. *Journal of Cleaner Production*, 454, 142225.

Shah, P., Shah, V., Shrestha, S., & Mitra, P. (2024). A Review on 3D Food Printing Technology in Food Processing. Journal of Food Industry, 8(1), 17. https://doi.org/10.5296/jfi.v8i1.22468

Siegrist, M., Hartmann, C., Keller, C. (2013). Antecedents of food neophobia and its association with eating behavior and food choices. *Food Quality and Preference*, 30, 293–298.

Silva, F., Pereira, T., Mendes, S., Gordo, L., & Gil, M. M. (2024). Consumer's perceptions and motivations on the consumption of fortified foods and 3D food printing. *Future Foods,* 10, 100423. https://doi.org/10.1016/j.fufo.2024.100423.

Sun, J., Peng, Z., Zhou, W., Fuh, J. Y. H., Hong, G. S., & Chiu, A. (2015). A Review on 3D Printing for Customized Food Fabrication. Procedia Manufacturing, 1, 308–319. https://doi.org/10.1016/j.promfg.2015.09.057

Tesikova, K., Jurkova, L., Dordevic, S., Buchtova, H., Tremlova, B., & Dordevic, D. (2022). Acceptability Analysis of 3D-Printed Food in the Area of the Czech Republic Based on Survey. *Foods*, 11(20). https://doi.org/10.3390/foods11203154.

Varvara, R.-A., Szabo, K., Vodnar, D.C. (2021). 3D Food Printing: Principles of Obtaining Digitally-Designed Nourishment. *Nutrients, 13*, 3617. https://doi.org/10.3390/nu13103617

Velasco Vizcaíno, F., & Pohlmann, A. (2025). Unpalatable solutions: Consumer resistance towards Insect-Based foods is moderated by uncertainty avoidance. *Psychology & Marketing*, 42(2), 615-633.

Wang, O., Perez-Cueto, F. J., Scarpa, R., & Scrimgeour, F. (2024). The influence of innovation-adoption characteristics on consumers' trust and purchase intentions of innovative alternative proteins: A comparison between plant-based food, cultured food, and insect-based food. *Food Quality and Preference*, 113, 105072.

Wheeler, S. A., Gregg, D., & Singh, M. (2019). Understanding the role of social desirability bias and environmental attitudes and behaviour on South Australians stated purchase of organic foods. *Food Quality and Preference*, 74, 125–134. https://doi.org/10.1016/j.foodqual.2019.01.007

Yang, M., Gao, J., Yang, Q., Al Mamun, A., Masukujjaman, M., & Hoque, M. E. (2024). Modeling the intention to consume and willingness to pay premium price for 3D-printed food in an emerging economy. Humanities and Social Sciences Communications, 11(1). https://doi.org/10.1057/s41599-024-02776-1

Zelezny, L.C. and Schultz, P.W. (2000), "Promoting environmentalism", *Journal of Social Issues*, Vol. 56 No. 3, pp. 365-371.

Zhu, W., Iskandar, M. M., Baeghbali, V., & Kubow, S. (2023). Three-Dimensional Printing of Foods: A Critical Review of the Present State in Healthcare Applications, and Potential Risks and Benefits. In Foods (Vol. 12, Issue 17). Multidisciplinary Digital Publishing Institute (MDPI). https://doi.org/10.3390/foods12173287

# Algorithmic Dynamic Pricing in E-Commerce: A Systematic Review

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## Abstract

Dynamic pricing (DP) is now central to e-commerce, yet research remains fragmented across operations, marketing, IS and economics. This systematic review screens 1,087 Scopus records and synthesises 90 core studies (1999-2024) using bibliographic coupling and thematic analysis. We uncover four research clusters—(yellow) dual-channel optimisation, (green) inventory-driven DP and retail services, (red) consumer perception of fairness and personalisation, and (blue) service-sector applications.

*Keywords: SLR; Bibliometric analysis; Dynamic pricing; AI; E-commerce*

### 1. Introduction and research aim

The rapid diffusion of e-commerce over the past two decades has re-shaped competitive dynamics in retailing. Global online sales grew from US $1.8 trillion in 2016 to US $5.2 trillion in 2021 and are forecast to exceed US $7.5 trillion by 2025. In parallel, advances in cloud computing, big-data analytics and machine learning have equipped firms with the ability to update prices for millions of stock-keeping units (SKUs) in near real time. Dynamic pricing (DP)—the automated adaptation of prices to market conditions, demand signals or customer characteristics—has therefore become a defining capability for digital-first retailers such as Amazon, Booking.com and Alibaba. Despite its managerial salience, academic knowledge on DP in e-commerce appears dispersed across multiple disciplines. Operations management scholars typically focus on optimisation models that maximise revenue under inventory constraints (e.g., Elmaghraby & Keskinocak 2003; Talluri & Van Ryzin 2004). Marketing and informationsystems researchers, on the other hand, examine consumer reactions to personalised or time-based price changes (e.g., Kannan & Kopalle 2001; Grewal et al. 2016). Economics literature further adds game-theoretic perspectives on price competition and market efficiency. Consequently, concepts, terminology and methodological approaches vary widely, making cumulative theorising difficult and leaving practitioners without an overarching view of evidence-based design principles.

In this review, dynamic pricing refers to "the systematic adjustment of prices for identical goods or services over time or across customers, in response to demand fluctuations, competitor behaviour or customer-level data, enabled by algorithmic or rulebased decision systems" (adapted from Chen & Schwartz 2013). The scope is limited to pure or hybrid e-commerce contexts where transactions are concluded online. Offline-only settings (e.g., airline seat pricing) are excluded unless integrated with an online channel.

Guided by the above motivation, the review addresses two overarching research question (RQ): RQ1: How has the academic literature conceptualised, modelled and empirically examined dynamic pricing in e-commerce?

## 2. Methodology

In order to comprehensively explore broad literature themes, especially considering the increasing volume of academic work in business and management, particularly in the e-commerce sector, we utilize a methodological approach that integrates bibliometric analysis with a systematic literature review, drawing upon recent innovative frameworks applied in this area (Behera et al. 2019, Bresciani et al. 2021, Ciampi et al. 2022, Kraus et al. 2020). Bibliometric techniques support the efficient synthesis and interpretation of large volumes of bibliographic information, and enable the identification of research streams within specific domains (van Eck and Waltman 2010), while also reducing the potential bias that may arise from relying solely on systematic literature reviews and their inherently subjective interpretations (Zupic and Čater 2015). The integration of bibliometric techniques alongside the literature review allows for a more insightful and comprehensive systematic result. In particular, we applied the bibliographic coupling approach using the VosViewer 1.6.20 algorithm, which defines two documents as coupled when they share at least three or more common studies in their bibliography (Van Eck et al. 2006, van Eck and Waltman 2014, 2010). This algorithm has demonstrated both effectiveness and reliability in supporting the mapping of research areas and the identification of research streams or emerging trends (Boyack and Klavans 2010, Ciampi et al. 2022). As such, it represents a bibliometric technique particularly appropriate for this research topic, which, despite growing scholarly interest, remains highly fragmented as the data will show in the bibliometric insight section, thereby offering the possibility to conduct a well-informed and comprehensive systematic review.

## 3. Data collection

A rigorous and replicable procedure was adopted to select the set of papers forming the basis of my analysis (Akter et al. 2019, Kraus et al. 2022, Marzi et al. 2020, Pellegrini et al. 2020).

Consistent with prior literature (Ciampi et al. 2022, Tranfield et al. 2003), we conducted the bibliometric analysis and literature review through five distinct phases. Initially, drawing from key definitions related to dynamic pricing strategies (such as flexible pricing, differentiated pricing, etc.) and online selling (such as online commerce, ecommerce, etc.), we formulated the following search query:

*TITLE-ABS-KEY (("dynamic pric*" OR "flexible pric*" OR "variable pric*" OR "adaptive pric*" OR "differentiated pric*" OR "dynamic tariff*" OR "real-time pric*" OR "modulated pric*" OR "personalized pric*" OR "contextual pric*" OR "demandbased pric*"OR "fluctuating rates" OR "algorithmic pric*" ) AND ( "electronic commerce" OR "online commerce" OR "digital commerce" OR "internet commerce" OR "electronic trad*" OR "online retail*" OR "online" OR "digital marketplac*" OR "virtual commerce" OR "electronic business" OR "internet-based commerce" OR "webbased commerce" OR "cyber commerce" OR "online trad*" OR "e-commerce" OR "ecommerce")).*

I conducted the search using the Scopus database, which is widely recognized as a suitable source for systematic literature reviews (Falagas et al. 2008, Kraus et al. 2020). In addition to its strong academic reputation, Scopus offers broader journal coverage compared to its main competitor, Web of Science, encompassing nearly all (99.11%) of the journals indexed by the latter (Singh et al. 2021). Since the research field on this topic is addressed using various

terminologies, we decided to include a broad set of synonyms and related terms in order to make the search as comprehensive as possible and avoid missing relevant literature streams that may not use generic expressions such as "dynamic pricing" or "e-commerce" alone we also employed the "*" as a jolly operator to capture a wide range of lexical variations and maximize the inclusiveness of the search terms (Ciampi et al. 2022).

By executing the search query, which represented the second phase of my analysis, we identified an initial dataset of 1,087 papers. Following established literature (Delgado García et al. 2015, Gupta et al. 2019, Kraus et al. 2020, Voester et al. 2017) and considering the managerial focus of this review, we included only articles published in peer-reviewed journals, written in English, and either already published or accepted for publication by 31 December 2024. Furthermore, we restricted the selection to contributions within the fields of business, management, and accounting, ultimately narrowing the sample down to 220 papers. Moreover, to guarantee the inclusion of only articles with adequate scientific quality (Kraus et al. 2022), we chose to exclude all publications appearing in journals not listed in the Academic Journal Guide 2021 by the Chartered Association of Business Schools (ABS) or with a minimum ranking of 2 and in that case the journal needs to have an evaluation in the Australian Business

Deans Council (ABDC) of at least A. This journal selection process led to a further refinement of the dataset to 165 papers. In the subsequent phase of my analysis, we conducted an independent review of each of the 165 documents to assess their relevance (Akter et al. 2019, Akter and Fosso Wamba 2016, Tranfield et al. 2003). Before starting this step, we established inclusion criteria to guide the selection process: (1) The article must have a managerial focus and include conclusions that are managerial in nature or otherwise applicable at the company level. (2) The article must address dynamic pricing applied exclusively to an e-commerce environment, without extensions to offline commerce contexts. (3) The concept of dynamic pricing must be central to the article, not merely mentioned or treated as a secondary topic. (4) Algorithmic comparison studies on dynamic pricing may be included if they contain significant managerial implications or if they compare substantially different approaches to dynamic pricing with relevant operational consequences. (5) E-commerce is considered according to the previously stated definition, encompassing any online channel that sells physical goods or services. Many papers were excluded because their implications and conclusions were purely algorithmic or theoretical in nature. Others were omitted due to examining dynamic pricing in contexts where e-commerce was merely mentioned, or conversely, where dynamic pricing was only briefly cited while the paper's main focus lay elsewhere. This selection process reduced the dataset to 100 papers, which provide a targeted and indepth analysis of dynamic pricing in e-commerce and its practical managerial implications.

In the fourth phase, several key bibliometric indicators were calculated and interpreted to examine the structure and development of the literature under review (Todeschini and Baccini 2016). Then, using its bibliographic coupling algorithm, VosViewer enabled the creation of a graphical map where each sphere represents a paper, and papers are grouped into clusters based on the similarity of their reference lists (van Eck and Waltman 2014, 2010). This resulting cluster arrangement serves as a valuable tool for understanding the literature within a scientific dataset and identifying the main research streams it comprises (van Eck and Waltman 2014, 2010). Through this similarity analysis, 90 papers were found to be linked by at least one common reference, producing a graphical structure made up of four clusters with clearly distinguishable configurations (see Sect. 4). In the final phase, a systematic review of these 90 papers was conducted (Gaur and Kumar 2018, Tranfield et al. 2003) to examine and link the explored themes, identify the most significant relationships

among the studies and thematic clusters, highlight key areas that remain underexplored, and outline directions for future research.

## 4. Bibliometric insights

Beginning in 2016, the annual number of publications has increased exponentially, reflecting the growing scientific interest in this topic. This rise parallels the sharp global expansion of e-commerce sales, which climbed from 1.8 trillion dollars in 2016 to 5.2 trillion dollars in 2021 (Chevalier 2021) and are projected to reach 7.5 trillion dollars in 2025 (Sikder 2023). The rise of the value of the e-commerce market is logically connected to the fact that e-commerce and dynamic pricing have been closely intertwined since the very emergence of e-commerce, a relationship that has only grown stronger over the years (Hillen 2021).

No single author or group of authors stands out in terms of the number of publications on the topic, which may indicate that there is not yet a consolidated core of scholars specialized in this field. In contrast, there are journals that place considerable focus on the subject, as demonstrated by the fact that the top 10 journals by publication volume account for 55% of the total material examined, despite representing only 22% of all journals included in the final list. Finally, the only constant among both journals and authors is their diversity, in the former case, reflected by the variety of topics covered, and in the latter, by the large number of different scholars engaged with this subject.

As previously noted, the specific scientific areas covered by the journals are diverse, reflecting the various fields of specialization of the journals themselves. Among the most prolific journals are those addressing topics such as business decisions and the theory and practice of management (Journal of Business Research, Management Science). Further down the list of leading journals, the theme of support for enhanced decision making emerges (Decision Support Systems). There is also a clear focus on retailing and services studies, particularly concerning consumer behaviour and policy as well as managerial decisions, alongside the field of operations management (Journal of Retailing and Consumer Services, Manufacturing and Service Operations Management). Additionally, two journals concentrate on topics related to hospitality and tourism economics (International Journal of Hospitality Management, Tourism Economics). Finally, three very niche and specialized areas are represented, namely transportation, e-commerce, and pricing management (Transportation Research Part E:

Logistics and Transportation Review, Electronic Commerce Research and Applications, Journal of Revenue and Pricing Management). The distribution of studies per author shows that only one researcher (Viglia, G.) stands out for having authored three articles on the topic, while the next nine most prolific authors each contributed two studies. This pattern, as previously noted, highlights the fragmentation of the field also at the level of individual scholars, with no clear group of academics consistently focused on this specific area. A distribution that does not align with their respective shares of the global e-commerce market, accounting for 19% and 52% (von Abrams 2021) when considering only the e-commerce dimension. However, if one also takes into account the aspect of research on dynamic pricing, this geographic distribution of articles can be explained by the technological supremacy of the United States in information technology and the use of big data (Kelton 2022). The clustering structure resulting from the similarity analysis performed by using VosViewer 1.6.20 software (Figure 1) reveals the presence of four thematic clusters whose configurations appear to be outlined. The papers belonging to the yellow cluster address dynamic pricing in dual channel contexts, related game theory, and review manipulation. The red cluster, on the other hand, focuses on dynamic pricing strategies in e-commerce retail, on services connected to e-commerce, and more generally on strategies related to inventory and subscriptions. Notably, this cluster also includes part of the literature that explores highly

innovative concepts such as the metaverse and blockchain. The green cluster deals with consumer perceptions of dynamic pricing, particularly regarding price discrimination, and also covers aspects more directly linked to marketing. Finally, the blue cluster represents the body of literature that examines dynamic pricing in the hotel industry, especially in relation to price-quality considerations and consumer behaviour.

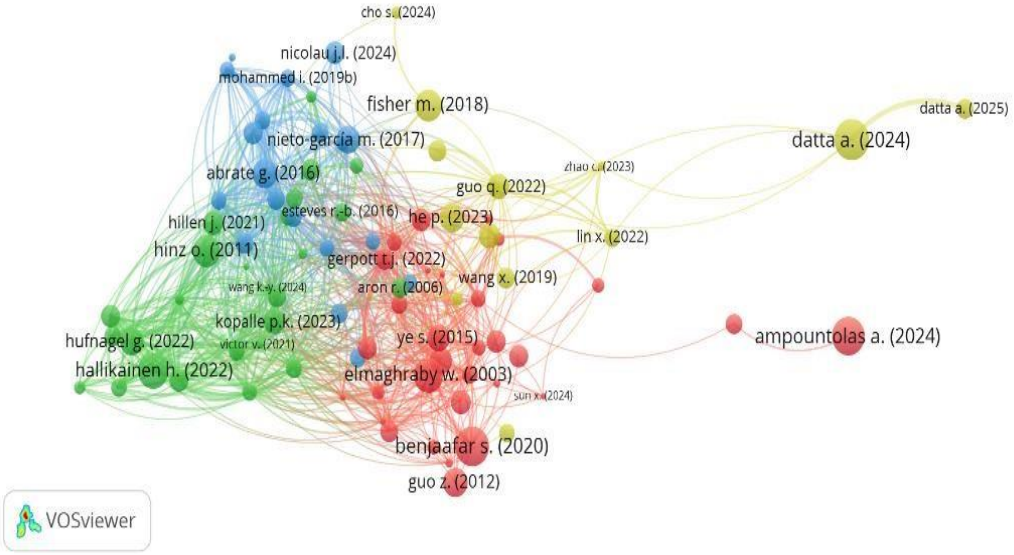



**Figure 1:** VOSviewer bibliographic coupling map.

## References

Full references can be provided upon request.

# Il ruolo delle tecnologie immersive nella proposta di valore delle PMI turistiche: evidenze dall'Umbria

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## Abstract

Questo studio presenta i risultati di un'indagine quasi-sperimentale pre-test/posttest volta a valutare il potenziale impatto delle tecnologie immersive (realtà virtuale e realtà estesa) e del metaverso, come percepito da operatori turistici attivi nella Regione Umbria. In particolare, sono state coinvolte 26 persone suddivise in quattro gruppi aventi differenti punti di vista: operatori della ricettività, intermediari turistici, amministratori locali e turisti. Durante lo studio, i partecipanti sono stati invitati a riflettere sull'applicazione delle tecnologie immersive e del metaverso nel settore turistico attraverso due focus group, uno prima e uno dopo l'esperienza immersiva. Le opinioni raccolte prima dell'esperienza sono risultate prevalentemente positive. Tuttavia, dopo l'esperienza, gli intervistati hanno evidenziato alcuni punti di debolezza delle tecnologie, pur confermando e specificando diversi punti di forza, che sono risultati predominanti rispetto ai limiti emersi.

*Keyword: Metaverso, Tecnologie immersive, PMI turistiche, Esperimento.*

## 1. Introduzione – Presentazione della tesi oggetto di verifica

Negli ultimi anni l'attenzione verso il tema del Metaverso sembra essersi ridotta a causa delle difficoltà economiche segnalate dalle principali imprese che hanno investito nello sviluppo di queste tecnologie, tra tutte Meta. I visori per realtà virtuale non hanno ancora raggiunto una diffusione capillare e il loro utilizzo rimane limitato per vari motivi: il prezzo ancora elevato dei modelli più avanzati, le difficoltà ergonomiche, la mancanza di una *killer application* in grado di giustificare il sacrificio economico per ottenere una esperienza in Realtà Virtuale (VR) o realtà estesa (XR) (Bruni *et al.*, 2025).

Tuttavia, il numero di imprese e startup che investono nella realizzazione di visori più performanti e di occhiali XR sempre più avanzati è in costante aumento. Le grandi aziende tecnologiche continuano a investire in questi sistemi, che inevitabilmente influenzeranno il processo di interazione uomo-computer-internet. Sulla base degli ultimi studi proposti dalla letteratura di riferimento, che integra ricerche di marketing e di management con esperienze in VR e XR, i potenziali utilizzatori, sia utenti (Bruni *et al.*, 2025) che imprese, devono continuare a immaginare e sperimentare possibili applicazioni di queste tecnologie. Da un lato, per esplorare nuove opportunità di business e, dall'altro, per prepararsi a un futuro in cui l'uso di tali tecnologie potrebbe diventare mainstream.

Dal punto di vista definitorio, secondo Flavian *et al.* (2022, p.2), il metaverso o realtà virtuale immersiva può essere definito come "a *persisting and continuous multiuser realm that combines physical reality with digital virtuality, using advanced technologies, such as Virtual Reality (VR) and Augmented Reality (AR), to create multisensory interactions between individuals, digital objects and virtual environments*".

Le pratiche turistiche nel metaverso si riferiscono conseguentemente nel "*exploration and participation in extensive, virtually shared environments that simulate immersive travel experiences through avatars*" (Shin e Kang, 2024, p.175).

La letteratura turistica evidenzia come l'uso delle tecnologie immersive abbia il potenziale per avere un grande impatto sul settore turistico (Gursoy *et al.*, 2022; Buhalis *et al.*, 2023). I viaggiatori possono visitare destinazioni remote o inaccessibili, fare esperienze sportive estreme, partecipare ad eventi dal vivo, ecc. senza lasciare la comodità della propria casa (Go & Kang, 2023; Koo *et al.*, 2023). Attraverso le esperienze immersive virtuali, le aziende e le destinazioni turistiche possono promuovere i loro prodotti "reali" fornendo anteprime virtuali, arricchirli con contenuti XR e, al contempo, creare nuovi prodotti digitali sostitutivi (Ioannidis & Kontis, 2023).

Nonostante questa nuova tecnologia possa potenzialmente rivoluzionare i rapporti tra i vari soggetti dell'industria turistica (Buhalis *et al.*, 2023), gli studi empirici presenti in letteratura risultano ancora relativamente limitati (Bec *et al.*, 2021; Kim *et al*, 2021). In particolare, emergono importanti lacune riguardo alla possibilità di sostituire il viaggio reale con quello virtuale; inoltre, mancano contributi e punti di vista da parte degli operatori turistici (Fan *et al.*, 2022; Chan *et al.*, 2023).

In questo lavoro, si cercherà quindi di effettuare una prima valutazione dell'impatto di questa tecnologia dal punto di vista degli operatori turistici di PMI attive in Regione Umbria attraverso due distinti focus group effettuati prima e dopo aver fatto esperienza dell'uso tecnologie immersive.

## 2. Letteratura e contesto di riferimento

La telepresenza, ovvero la sensazione di essere fisicamente presenti in un ambiente virtuale (da soli e/o in compagnia), è stata ampiamente studiata nel turismo, per la sua presunta capacità di incentivare le visite reali ai luoghi esplorati virtualmente (Fan *et al.*, 2022; Li *et al.*, 2024; Shin e Kang, 2024; Yoon e Nam, 2024). Diversi studi mostrano che la realtà virtuale può stimolare l'interesse per le destinazioni turistiche. In particolare, arricchisce la conoscenza dei luoghi e genera emozioni positive, come l'anticipazione della felicità legata a una futura visita, che possono incentivare il viaggio reale (An *et al.*, 2021; Skard *et al.*, 2022; Zhu *et al.*, 2023). L'anticipazione virtuale riduce al contempo la percezione dei rischi associati ai viaggi (Kang, 2020; Yung *et al.*, 2022; Fan *et al.*, 2022; Yoon e Nam, 2024).

Dall'analisi della letteratura emerge come un alto livello di immersività, che coinvolge sia gli aspetti emotivi che cognitivi, è fondamentale per aumentare l'intenzione di visitare i luoghi fisici (Robaina-Calderın *et al.*, 2023). Inoltre, sono cruciali la facilità d'uso, l'utilità percepita, il valore intrinseco dell'intrattenimento e la qualità dei contenuti per convertire l'intenzione di visita in azione concreta (Fan *et al.*,

2022; Sousa *et al.*, 2024; Lim *et al.*, 2024). Alcuni studi hanno esplorato il potenziale dei viaggi virtuali come alternativa ai viaggi reali, specialmente durante periodi di crisi come la pandemia di COVID-19 quando la mobilità era limitata (Kim *et al.*, 2021;

Schiopu *et al.*, 2021; Chang *et al.*, 2020). La ricerca teorica suggerisce così che le esperienze virtuali possono non solo sostituire, ma anche anticipare ed estendere le esperienze reali,

offrendo un'alternativa (economica e accessibile) al viaggio reale (Forlani *et al.*, 2024; Perri *et al.*, 2024). Dal punto di vista delle imprese e delle destinazioni turistiche, le esperienze virtuali nel metaverso potrebbero offrire una soluzione per gestire meglio le risorse turistiche, riducendo l'impatto dell'*overtourism* e promuovendo la sostenibilità ambientale e sociale (Bec *et al.*, 2021; Go e Kang, 2023). Inoltre, queste esperienze potrebbero rendere il turismo più accessibile economicamente, offrendo nuove opportunità di business per le organizzazioni turistiche. Nonostante il potenziale, la ricerca sperimentale in questo campo è ancora agli inizi (Perri *et al.*, 2024; Tussyadiah *et al.*, 2018). È necessario condurre ulteriori studi empirici per comprendere appieno gli effetti di queste tecnologie sul settore turistico e ridurre l'incertezza attuale, incoraggiando così gli investimenti necessari per sfruttare appieno le potenzialità nei tre aspetti: anticipazione del viaggio reale, estensione del viaggio reale, viaggio virtuale come sostituzione del viaggio reale.

## 3. Design e metodologia della ricerca

In questo studio è stata adottata una metodologia quasi-sperimentale pre-test/posttest, come descritto da Bryman (2016), per esplorare l'impatto delle tecnologie immersive nel settore turistico. La ricerca ha coinvolto 26 partecipanti attivi nella Regione Umbria, selezionati per rappresentare due prospettive distinte: quella degli operatori e quella degli utilizzatori. Gli operatori sono stati selezionati per offrire il punto di vista di tre diversi comparti: ricettività, intermediazione e gestione della destinazione. La metodologia ha previsto l'utilizzo di focus group, condotti sia prima che dopo l'esperienza virtuale, per riflettere sull'applicazione delle tecnologie di metaverso VR e XR nel turismo. Questo approccio ha permesso di raccogliere dati qualitativi sui cambiamenti nelle percezioni e nelle opinioni dei partecipanti.

La ricerca si è articolata in quattro fasi distinte. Nella prima fase, è stata introdotta ai partecipanti una panoramica sulle tecnologie immersive e sul metaverso attraverso presentazioni frontali e video esplicativi della durata di circa 15 minuti. La seconda fase ha previsto un brainstorming di gruppo utilizzando la tecnica 3-12-3 *Brainstorm*, durante il quale i partecipanti sono stati invitati a esprimere le loro idee e impressioni sui concetti di metaverso e turismo. Nella terza fase, i partecipanti hanno sperimentato un'esperienza immersiva in VR, utilizzando visori e applicazioni come "Walk the Plank" e Horizon Worlds. Infine, nella quarta fase, i partecipanti sono tornati in aula per lavorare in gruppi (distinti per tipologia di operatore) e definire i loro punti di vista sui limiti e sulle opportunità dell'applicazione di queste tecnologie al turismo. Gli autori hanno quindi confrontato gli output dei focus group (testi scritti su lavagne, post-it e video) prima e dopo l'esperienza virtuale, al fine di far emergere le differenze più significative nell'approccio dei partecipanti al tema.

La ricerca è stata effettuata all'interno del "MetaMarketingLab" [17]del Corso di Laurea in Economia e Management del Turismo dell'Università di Perugia.

## 4. Risultati pre e post test

Come descritto, in fase di pre-test è stato chiesto ai partecipanti di esprime le loro opinioni sul ruolo del metaverso nel turismo. I risultati emersi, riassunti attraverso un'analisi tematica delle risposte, mostrano una serie di opportunità che l'applicazione del metaverso e delle tecnologie digitali immersive potrebbero offrire nel turismo:

[17] Il Laboratorio Informatico Immersivo è stato costituito dal Dipartimento di Economia dell'Università di Perugia con il contributo del "Comitato Davide Piampiano" di Assisi che ha finanziato l'acquisto del hardware necessario a costruire ambienti virtuali e fruire dell'esperienza della realtà virtuale immersiva.

1. anticipare le esperienze di visita di un luogo o, in alcuni casi, sostituirle, contribuendo a ridurre il fenomeno dell'*overtourism*;

2. aumentare la visibilità e migliorare la capacità di narrazione per luoghi meno conosciuti, ma meritevoli di attenzione, costruendo materiali specifici e dettagliati;

3. presentare le destinazioni turistiche in modo innovativo, spiegando in maniera esperienziale le differenze e le connessioni tra i vari territori;

4. permettere un'esperienza, seppur virtuale, a persone con ridotta mobilità o disabilità e a coloro con limitate risorse economiche.

Nel pre-test, la valutazione dei punti di forza e di debolezza ha evidenziato una percezione del ruolo narrativo-esperienziale della tecnologia digitale, che è risultata essere prevalentemente immaginaria. Molti operatori e fruitori conoscono queste tecnologie principalmente per sentito dire, piuttosto che per un'effettiva sperimentazione diretta. Di conseguenza, aspetti particolari come il potenziale emozionale, la possibilità di sperimentare l'immersività e l'integrazione tra oggetti digitali e mondo reale non sono stati pienamente valutati, a causa della mancanza di esperienza pratica. Nel post-test, dopo la sperimentazione con i visori delle esperienze immersive "Walk the Plank" e "Horizon Worlds", è stato chiesto ai partecipanti di soffermarsi in particolare sui limiti e sulle opportunità della tecnologia. I risultati dettagliati di questa fase sono riportati nella Tabella 1.

| **Punti di forza** | **Debolezze** |
|---|---|
| Possibilità di cross-selling e up-selling | Possibile appiattimento dell'offerta e mancanza di autenticità emozionale |
| Supporto nel processo decisionale del turista e possibilità di creare meta-destinazioni. | Difficoltà nella realizzazione di contenuti di qualità (limite di costo) |
| Modalità complementari di promozione delle destinazioni turistiche con arricchimento della narrazione | Rischio di dipendenza dagli utenti, con possibili conseguenze di isolamento sociale e problemi di privacy |
| Personalizzazione dell'offerta turistica | Sfide per piccoli operatori e agenzie nel creare contenuti di qualità e raggiungere il target di riferimento |
| Promozione della sostenibilità in vari aspetti: ambientale (riduzione dell'*overtourism* e dell'inquinamento), economica (riduzione dei costi per turisti e operatori), sociale (miglioramento dell'accessibilità fisica) | Bassa adozione corrente delle tecnologie immersive tra gli utenti |
| Creazione di nuove opportunità commerciali per operatori del turismo | Forte dipendenza dalle big tech per la gestione dei contenuti e delle informazioni |

**Tabella 1:** Punti di forza e di debolezza delle tecnologie VRI. Risultanti post-test

## 5. Conclusioni e implicazioni di management

La ricerca evidenzia che l'adozione di tecnologie immersive nel settore turistico è ancora in una fase iniziale. Sebbene la letteratura di marketing e management prospetti scenari avanzati e promettenti per l'industria turistica (Fan *et al.,* 2022; Go & Kang,

2023), soprattutto per imprese di medie e grandi dimensioni, la realtà delle piccole imprese familiari italiane, in particolare nell'area oggetto di studio, mostra una percezione limitata delle opportunità offerte. Prima di un test pratico, supportato da tecnici esperti, gli operatori turistici avevano un'idea vaga del valore delle tecnologie immersive per le loro imprese e per la destinazione turistica. Molti imprenditori non avevano mai sperimentato direttamente tali tecnologie e faticavano a immaginare i potenziali impatti sul settore. Alcuni non riuscivano a percepire gli effetti sulla domanda, altri non vedevano la possibilità di fidelizzazione dei clienti o i benefici commerciali derivanti dalla creazione di contenuti immersivi. Anche i turisti, senza la conoscenza diretta della realtà virtuale, tendevano ad essere scettici sul reale utilizzo di queste tecnologie.

Dopo aver proposto un'esperienza immersiva diretta ai partecipanti, le opinioni su queste tecnologie sono cambiate, producendo risposte più articolate, nelle quali le opportunità sono diventate più nitide, ma al contempo gli aspetti di criticità sono emersi con maggiore forza.

Ciò indica che studi empirici sono fondamentali per comprendere a fondo i benefici delle tecnologie immersive, che potranno essere realmente percepiti dagli utenti solo in presenza di contenuti e strumenti utili. Tali benefici potrebbero essere particolarmente rilevanti per aree territoriali minori o meno conosciute, dove il supporto tecnologico e una narrazione spettacolarizzata delle esperienze potrebbero rappresentare un vantaggio competitivo determinante. Con riferimento agli operatori di PMI turistiche le impressioni iniziali degli operatori erano prevalentemente positive e possibiliste, ma dopo il test sono emersi anche limiti e difficoltà. Gli operatori hanno manifestato preoccupazione per il gap tecnologico che potrebbe crearsi con le grandi imprese e hanno riconosciuto la necessità di formazione per gestire la relazione con i fornitori di tecnologie e servizi immersivi. Le debolezze e alcuni punti di forza derivano dalla difficoltà di generare contenuti appropriati o di controllare la loro creazione, spesso affidata a imprese specializzate in software o comunicazione.

In sintesi, l'integrazione delle tecnologie immersive nelle PMI del turismo è un tema che richiede ulteriori studi, utilizzando metodologie in grado di rilevare le percezioni degli operatori e le reali possibilità di integrazione in percorsi specifici. Non tutte le destinazioni o offerte turistiche necessitano di queste tecnologie, ma alcune imprese e territori potrebbero trarne molti benefici. Il contesto umbro, ma anche italiano, caratterizzato da piccole e micro-imprese turistiche dovrà valutare le opportunità e le sfide prodotte da tali tecnologie anche adattando l'attuale offerta, integrandola con servizi avanzati destinati a potenziali utenti che potrebbero fruirne prima, durante e dopo la visita mediante device e piattaforme diverse utilizzate in momenti e luoghi diversi attraverso esperienze sincrone e asincrone. Per rispondere a queste domande aperte, sarà necessario proseguire con la raccolta e l'analisi di esperienze e casi studio di successo, al fine di identificare non solo i benefici, ma anche i fattori abilitanti e le barriere che ne limitano l'adozione.

## Bibliografia

Bec, A., Moyle, B., Schaffer, V., & Timms, K. (2021). Virtual reality and mixed reality for second chance tourism. Tourism Management, 83, 104256.

Bruni, R., & Galvagno, M. (2025). Virtual reality, authentic motivations: a classification of metaverse users based on VR/XR headset experience. Electronic Commerce Research, 1-25. Buhalis, D., Leung, D., Lin, M. (2023). Metaverse as a disruptive technology revolutionising tourism management and marketing. Tourism Management, 97, 104724.

Chan, S. H. M., Qiu, L., & Xie, T. (2023). Understanding experiences in metaverse: how virtual nature impacts affect, pro-environmental attitudes, and intention to engage with physical nature. Computers in Human Behavior, 149, 107926.

Chang, E., Kim, H. T., & Yoo, B. (2020). Virtual reality sickness: a review of causes and measurements. International Journal of Human–Computer Interaction, 36(17), 1658-1682. Fan, X., Jiang, X., & Deng, N. (2022). Immersive technology: A meta-analysis of augmented/virtual reality applications and their impact on tourism experience. Tourism Management, 91, 104534.

Forlani, F., Dini, M., Pencarelli, T. (2022). The importance of food and beverages in wellness experiences: a cross-continental analysis of tourists' perceptions. British Food Journal, 124 (13), 520-540.

Go, H., & Kang, M. (2023). Metaverse tourism for sustainable tourism development: Tourism agenda 2030. Tourism Review, 78(2), 381-394.

Gursoy, D., Malodia, S., Dhir, A. (2022). The metaverse in the hospitality and tourism industry: An overview of current trends and future research directions. Journal of Hospitality Marketing & Management, 31(5), 527-534.

Ioannidis, S., & Kontis, A. P. (2023). Metaverse for tourists and tourism destinations. Information Technology & Tourism, 25(4), 483-506.

Kang, H. (2020). Impact of VR on impulsive desire for a destination. Journal of Hospitality and Tourism Management, 42, 244-255.

Kim, H., So, K. K. F., Mihalik, B. J., & Lopes, A. P. (2021). Millennials' virtual reality experiences pre-and post-COVID-19. Journal of Hospitality and Tourism Management, 48, 200209.

Koo, C., Kwon, J., Chung, N., & Kim, J. (2023). Metaverse tourism: conceptual framework and research propositions. Current Issues in Tourism, 26(20), 3268-3274.

Lim, W. M., Jasim, K. M., & Das, M. (2024). Augmented and virtual reality in hotels: Impact on tourist satisfaction and intention to stay and return. International Journal of Hospitality Management, 116, 103631.

Perri, D., Di Blasi, S. R., Forlani, F., & Gervasi, O. (2024). Exploring the Metaverse: Opportunities for Tourism and Territorial Development. In Gervasi, O., Murgante, B., Garau, C., Taniar, D., C. Rocha, A.M.A., Faginas Lago, M.N. (eds) Computational Science and Its Applications – ICCSA 2024 Workshops. ICCSA 2024. Lecture Notes in Computer Science, vol 14825. Springer, 141-153.

Robaina-Calderín, L., Martín-Santana, J. D., & Muñoz-Leiva, F. (2023). Immersive experiences as a resource for promoting museum tourism in the Z and millennials generations. Journal of Destination Marketing & Management, 29, 100795.

Schiopu, A. F., Hornoiu, R. I., Padurean, M. A., & Nica, A. M. (2021). Virus tinged? Exploring the facets of virtual reality use in tourism as a result of the COVID-19 pandemic. Telematics and Informatics, 60, 101575.

# Digital metacontexts: Reimagining place-making through Extended Reality (XR) and Metaverse

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## Abstract

This paper explores how XR and Metaverse create digital metacontexts that could support place-making processes. We argue that XR technologies possess transformative potential comparable to social networks impact on society over the past two decades. Through their capacity to generate immersive 3D digital interactions, these technologies enable new forms of place meaning-making that extend beyond traditional physical boundaries. This study examines how XR and the Metaverse support place-making by creating layered digital experiences that enhance place attachment, community engagement, and spatial meaning. Our findings suggest that these technologies offer more than promotional tools, they serve as instruments for collaborative place-making, place creation and community development.

*Keywords: Metaverse; Extended Reality (XR); Place-making; Metacontext; Immersive Technologies*

### 1. Introduction

Social context encompasses environmental and situational factors influencing individual behaviors, thoughts, and feelings through the dynamic interplay between society, culture, and physical environments. While places derive their initial character from material elements, their essence emerges through immaterial contextual factors including interpersonal relationships, institutions, and social norms.

The digital revolution has fundamentally altered how we experience place. Social networks and mobile connectivity have expanded contextual boundaries, making it impossible to distinguish between online and offline realities. Most people in developed regions remain continuously connected, integrating digital interactions into daily spatial experiences and transforming how we create and perceive place meaning.

*Extended Reality (XR)* and *Metaverse* represent the next evolutionary step, expanding contextual possibilities through immersive storytelling about society, culture, and physical environments. Place experience operates across fluid boundaries involving multiple stakeholders, manifesting across various urban touchpoints from streets to public spaces (Taecharungroj & Rauhut Kompaniets, 2024). Drawing from brand experience theory (Brakus et al., 2009), it encompasses holistic sensations, feelings, and responses that shape how people perceive, interact with, and remember places.

We propose that XR-augmented contexts and Metaverse environments create

*"metacontexts"* - enhanced digital layers where people explore alternative ways to express their values, culture, and perspectives about places. These systems enable rapid place storytelling, highlight contextually relevant elements for community quality of life, and illuminate temporal changes while facilitating cultural integration. Recent literature has highlighted these technologies' role in smart cities pursuing sustainable objectives (Sharifi et al., 2025).

This study *aims* to conceptualize and analyze how XR and Metaverse create digital metacontexts that support and transform traditional place-making processes, ultimately contributing to more inclusive, engaging, and meaningful place experiences. A *research question* is formulated:

*RQ1*: How do XR and Metaverse technologies create digital metacontexts that support traditional place-making processes?

## 2. Literature background

*XR and Metaverse characteristics*

Extended Reality (XR) serves as an umbrella term encompassing immersive technologies including Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR), each characterized by specific features and functionalities (Palmas et al., 2020). XR represents technologies enabling immersion in combined real-virtual environments and facilitating transitions across the reality-virtuality continuum (Milgram et al., 1994). Current XR technologies utilize various headsets enabling users to immerse themselves in completely virtual Metaverse worlds while simultaneously experiencing digital objects superimposed on real-world vision. Despite ongoing definitional debates, the Metaverse concept remains technically complex, with persistent, multi-user virtual worlds using portable avatars still presenting implementation challenges (Ball, 2022). For this study, we define the Metaverse as a 3D virtual social context characterized by technologies enabling user interaction through avatars in immersive digital spaces with synchronous interaction capabilities. Headsets provide immersive experiences while reproducing representations of physical society in virtual worlds (Bruni and Galvagno, 2025). We consider XR and Metaverse integration as creating unified immersive experiences serving as sense and context makers. Indeed, actually the headsets on the market permit seamlessly transition between 3D videos, digital object manipulation overlaid on real scenarios, and avatar-guided experiences in completely digital worlds within Metaverse applications.

*Place-making characteristics*

Place making represents a collaborative process extending beyond consumption-focused objectives (Richards and Duif, 2019). It emphasizes co-creation (Sepe and Pitt, 2014) and community quality of life enhancement (Richards and Duif, 2019). This continuous process involves people in improving their places and managing public spaces to make them attractive and interesting (Baker, 2019). Place making never truly ends, it requires ongoing collaboration to create places for people, with people (Bruni and Rauhut Kompaniets, 2024). The process prioritizes building and revealing sense of place (Sweeney et al., 2018; Dupre, 2019) while ensuring continuous community participation in place design and maintenance. Effective place-making generates contexts and requires continuous support from sense-making tools.

Digital technologies have transformed place-making practices, creating new opportunities for community engagement and spatial interaction. Recent years have seen an emerging focus on creative digital place-making applications that combine tangible and intangible resources, emotions, and creativity to capture public attention through narratives. This digital evolution

represents the intersection of people, place, and technology, enabling active citizen participation in neighborhood shaping (Basaraba, 2023). Technology implementations in urban environments reshape how communities experience places, providing enhanced opportunities for participation, place attachment, and experience through digital interfaces. Contemporary place-making must address both material and immaterial dimensions while leveraging technological capabilities to enhance collaborative processes. Community engagement drives knowledge acquisition and innovation needed for equitable, socially sustainable communities, positioning creative and digital innovations as essential tools for inclusive place development.

## 3. Methodology

This paper presents propositions describing potential XR and Metaverse support for placemaking processes. These propositions emerge from integrating place-making characteristics with XR and Metaverse capabilities. We employed a qualitative approach using MacInnis's (2011) relational framework, specifically the "Integrating" subtype. This approach implies the ability to *"see previously distinct pieces as similar often in terms of a unified whole whose meaning is different from its constituent parts"* (MacInnis, 2011). Our methodology involved three steps: (1) identifying place-making defining characteristics, (2) highlighting XR and Metaverse characteristics, and (3) integrating these characteristics to generate propositions for future research development.

## 4. Findings

Our analysis reveals an alignment between place-making process requirements, selected by collecting the most significant works of the authors who have published research on the topic of place making and XR/Metaverse technological capabilities, suggesting significant potential for digital enhancement of collaborative place development. XR and Metaverse technologies directly address the foundational need for co-creation by enabling collaborative virtual environments where multiple stakeholders can simultaneously contribute to place design and development, transcending traditional barriers of time and physical location (Sepe and Pitt, 2014).

| **Place making process requirements** | **XR and Metaverse capabilities** |
|---|---|
| Co-creation foundation (Sepe and Pitt, 2014) | Virtual environments where multiple stakeholders can simultaneously contribute to place-making *(for e.g.: co-design in complete 3D place/ambient simulation; beta 3D application to share with place internal-external stakeholders)* |
| Community quality of life enhancement (Richards and Duif, 2019) | Platforms for visualizing and testing place improvements before physical implementation, ensuring community needs alignment *(for e.g.: adding digital objects on the real physical scenarios in XR like digital bridges, buildings and alternative environment to test the people reaction)* |
| Continuous community engagement (Baker, 2019) | Accessible, always-available spaces for ongoing place management and community interaction regardless of physical limitations *(for e.g.: georeferenced XR digital noticeboards in the places involved in the place making project, open, where everyone can insert their own comments)* |
| Sense of place development (Sweeney et al., 2018; Dupre, 2019) | Immersive experiences that strengthen emotional connections to places through storytelling, historical recreation, and cultural representation *(for e.g.: immersive contents for place community; 3D videos; digital museums; 24h available AI avatars-touristic guide; physical guide digital experts )* |

| | |
|---|---|
| Context generation and sense-making | Dynamic, updateable digital layers capturing and communicating place meanings, values, and community narratives *(for e.g.: physical tourist guides experts in digital worlds, able to support the digital tourist-citizen in the place experience both in completely virtual environments and in mixed ones)* |

## 5. Conclusions and Implications

This study demonstrates that XR and Metaverse technologies represent more than promotional tools for places, they constitute fundamental instruments for transforming place-making processes. By creating digital metacontexts where people can really interact to build new experiences, these technologies enable new forms of community engagement with internal and external stakeholders, collaborative design, and meaning-making that extend beyond physical limitations empowering the sense-making. Our findings contribute to place-making theory by introducing the concept of *metacontexts* as digital spaces (independent or integrated with XR in the real place scenarios) where traditional placemaking processes can be developed, expanded, and made more inclusive. This represents a significant evolution in understanding how digital technologies can support and 'digital extend' community-driven place development. For practitioners, these technologies offer opportunities to engage broader community segments in place-making, test interventions before implementation, and create lasting digital archives of place-based knowledge and community values.

Future research should empirically test the propositions presented here, examine long-term impacts of XR-supported place-making initiatives, and investigate how different communities adapt these technologies for their specific place-making needs.

## References


Ball, M. (2022). *The metaverse: and how it will revolutionize everything*. Liveright Publishing.

Basaraba, N. (2023). The emergence of creative and digital place-making: A scoping review across disciplines. *New Media & Society*, 25(6): 1470–1497. https://doi.org/10.1177/14614448211044942

Brakus, J.J., Schmitt, B.H., & Zarantonello, L. (2009). Brand experience: what is it? How is it measured? Does it affect loyalty? *Journal of Marketing*, 73 (3): 52-68. https://doi.org/10.1509/jmkg.73.3.052

Bruni, R., & Galvagno, M. (2025). Virtual reality, authentic motivations: a classification of metaverse users based on VR/XR headset experience. *Electronic Commerce Research*, 125.

Bruni, R., & Rauhut Kompaniets, O. (2024). Street art and place-making of villages: Examples of Italian Painted Villages. *Journal of Place Management and Development*, 17(4), 527-557. https://doi.org/10.1108/JPMD-09-2023-0097.

MacInnis, D. J. (2011). A framework for conceptual contributions in marketing. *Journal of Marketing*, 75(4), 136-154.

Milgram, P., & Kishino, F. (1994). A taxonomy of mixed reality visual displays. *IEICE TRANSACTIONS on Information and Systems*, *77*(12), 1321-1329.

Palmas, F., & Klinker, G. (2020, July). Defining extended reality training: A long-term definition for all industries. In *2020 IEEE 20th International Conference on Advanced Learning Technologies (ICALT)* (pp. 322-324). IEEE.

Sharifi, A., Amirzadeh, M., & Khavarian-Garmsir, A. R. (2025). The metaverse as a future form of smart cities: A systematic literature review of co-benefits and trade-offs for sustainable development goals. *Cities*, *161*, 105879.

Taecharungroj, V., & Rauhut Kompaniets, O. (2024). Decoding Nordic cities: Uncovering multi-level place experiences from tweets for effective city branding. Place Branding and Public Diplomacy, 20(2), 157-179. https://doi.org/10.1057/s41254-023-00313-6

# Le piattaforme digitali transattive nel settore del gambling: lo sviluppo del betting exchange in Italia

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## Abstract

Negli ultimi anni le piattaforme digitali hanno assunto un ruolo centrale nell'economia moderna, avendo determinato la riconfigurazione delle dinamiche di mercato in numerosi settori industriali e dei servizi. In campo economico-manageriale gli studiosi hanno distinto tali piattaforme in due macro-tipologie: 1) le "piattaforme di innovazione", che consentono ad aziende terze (complementors) di creare prodotti e servizi che migliorano le funzionalità di un prodotto o servizio di base, come ad esempio nel caso degli sviluppatori di software che realizzano app per i sistema operativi, quali Microsoft Windows o Google Android; 2) le "piattaforme transattive", come Uber, Airbnb o Amazon, che mettono in contatto via internet acquirenti e venditori, riducendo i costi di ricerca e transazione per milioni di consumatori e fornitori. Di recente, le piattaforme transattive hanno fatto il loro ingresso anche nel settore del gambling. Negli ultimi anni infatti, seppur gradualmente, si sta sviluppando una innovativa tipologia di gioco, il Betting exchange, che fa leva su una piattaforma digitale gestita dai bookmaker. Questa piattaforma consente ai giocatori di scommettere l'uno contro l'altro, incrociando così la domanda e l'offerta di gioco via internet. Tale modello di puntata è, quindi, alternativo a quello "tradizionale" che prevede l'acquisto delle scommesse dai bookmaker sulla base delle quote da loro offerte in qualità di "banco". Obiettivo del lavoro è sviluppare un percorso di ricerca finalizzato ad analizzare le caratteristiche del Betting exchange e a comprendere quanto tale piattaforma digitale transattiva stia modificando – o potrà potenzialmente farlo in futuro – le dinamiche competitive e le modalità di consumo nel settore del gambling. Nel lavoro, ancora in corso di svolgimento, l'analisi si è focalizzata, in primo luogo, sullo studio delle caratteristiche e dello stato di sviluppo di tale piattaforma nel mercato regolamentato italiano delle scommesse.

*Keywords: piattaforme digitali transattive, piattaforme on line "peer to peer", internet gambling, betting exchange, Italia.*

## 1. Introduzione

È possibile definire una piattaforma digitale, in senso ampio, come un sistema sociotecnico che media almeno un lato dell'offerta e un lato della domanda, attraverso la tecnologia digitale (Parker et al., 2016). Gli attori 'tipo' di una piattaforma digitale sono: il "proprietario (o leader) della piattaforma", che la sviluppa, gestisce e controlla; i "*complementors*", che co-creano valore dal lato dell'offerta; gli utenti finali, che agiscono dal lato della domanda (Kretschmer et al., 2020; Schreieck, Wiesche, Krcmar, 2023).

Negli ultimi anni il tema delle piattaforme digitali ha ricevuto una crescente attenzione nel campo dei sistemi informativi e delle ricerche di natura economico-manageriale, visto il ruolo centrale che tali piattaforme hanno assunto nell'economia moderna.

Alcune piattaforme digitali di social media, come Facebook, Instagram o TikTok, hanno cambiato il modo in cui le persone interagiscono e condividono esperienze. Altre piattaforme digitali nel campo dei sistemi operativi, come Android e iOS, sono diventate centrali nello sviluppo delle innovazioni nel settore dei *device* mobili. Nel settore finanziario, piattaforme digitali come PayPal ed Apple Pay stanno rivoluzionando le modalità con le quali i clienti usano i mezzi di pagamento. Piattaforme on line "*peer-to-peer*", come Uber e Airbnb, che fungono da intermediari digitali mettendo in connessione domanda ed offerta tramite la Rete, stanno rivoluzionando il modo in cui si accede ai mezzi di trasporto e ai servizi di pernottamento (de Reuver, Sørensen, Basole, 2018).

Occorre però rilevare che gli studiosi in campo economico-manageriale, pur avendo aperto la strada alla ricerca sulle piattaforme digitali, tramite lo studio delle piattaforme interne e industriali (tra gli al: Rochet, Tirole, 2003; Gawer, Cusumano, 2002; Gawer, 2014; Thomas, Autio, Gann, 2014), per molto tempo non hanno considerato le tecnologie digitali come fattore chiave, dal punto di vista teorico, per spiegare i fenomeni studiati (de Reuver, Sørensen, Basole, 2018). Solo più di recente, il ruolo delle tecnologie digitali per l'analisi delle piattaforme settoriali è divenuto centrale anche in ambito manageriale. In proposito, alcuni studiosi 'pionieri' del tema delle piattaforme industriali "non digitali" (Cusumano, Gawer, Yoffie, 2019; Gawer, Cusumano, Yoffie, 2023) hanno analizzato più approfonditamente le caratteristiche distintive delle piattaforme on line, descrivendole come forme organizzative specifiche, che si estendono oltre i confini aziendali tradizionali e le catene di fornitura regolate da contratti, verso "ecosistemi" più ampi, meno formali e solitamente globali, che coinvolgono innovatori e fornitori di vari prodotti e servizi nell'economia digitale. Essi, hanno distinto tali piattaforme in due macro-tipologie: 1) le "piattaforme di innovazione" (*innovation platforms*), che consentono ad aziende terze (*complementors*) di creare prodotti e servizi che migliorano le funzionalità di un prodotto o servizio di base, come ad esempio nel caso degli sviluppatori di software che realizzano applicazioni per i sistemi operativi, quali Microsoft Windows, Google Android o iOS; 2) le "piattaforme transattive" (*transaction platforms*) – come Uber, Airbnb, Facebook, Alibaba o Amazon – che mettono in contatto via internet acquirenti e venditori, riducendo in questo modo i costi di ricerca e transazione per milioni di consumatori e fornitori.

Focalizzando l'attenzione sulle piattaforme transattive, è interessante evidenziare che, accanto alle piattaforme più note appena elencate, ormai consolidate nei settori in cui operano, ne stanno emergendo altre in diversi settori. Tra questi, uno molto significativo in termini economici e sociali è quello del gambling, nel quale negli ultimi anni, seppur gradualmente, si sta sviluppando un nuovo tipo di relazione tra *bookmaker* (operatore/impresa di gioco) e scommettitore, che prevede la connessione diretta tra giocatori via internet, mediata dal *bookmaker*. Come si avrà modo di approfondire in seguito, ciò ha dato luogo ad una innovativa tipologia di scommessa, il *Betting exchange*, che fa leva su una piattaforma digitale che consente al giocatore di effettuare le puntate "l'uno contro l'altro" (incrociando la domanda e l'offerta di gioco), invece che scommettere – come avviene per il gioco "tradizionale" – in base alle quote offerte dal bookmaker, in qualità di "banco".

Obiettivo del lavoro è sviluppare un percorso di ricerca finalizzato ad analizzare le caratteristiche del *Betting exchange* e a comprendere quanto tale piattaforma digitale transattiva stia modificando – o potrà potenzialmente farlo in futuro – le dinamiche competitive e le modalità di consumo nel settore del gambling. Nel lavoro, ancora in corso di svolgimento,

l'analisi si è focalizzata, in primo luogo, sullo studio delle caratteristiche e dello stato di sviluppo di tale piattaforma nel mercato regolamentato italiano delle scommesse.

## 2. Il *Betting exchange*: una piattaforma on line "*peer to peer*" nel settore del gambling

La forma di gioco del *Betting exchange* è stata creata da Andrew Black e Edward Wray, che nel 2000 hanno lanciato sul mercato *Betfair*, la prima piattaforma on line "*peer to peer*" nell'ambito delle scommesse. L'idea alla base di tale piattaforma era quella di creare un mercato dove i giocatori potessero piazzare le puntate l'uno contro l'altro, piuttosto che contro un *bookmaker*, facendo leva sulle potenzialità connettive a distanza proprie della Rete (Davies et al., 2005).

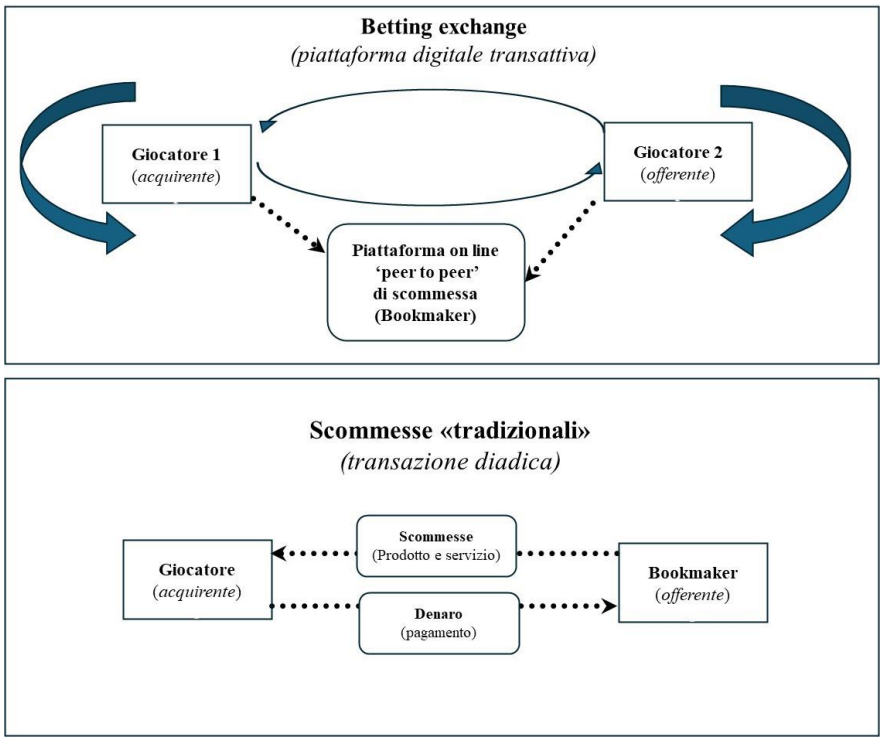



**Figura 1:** *Betting exchange* vs. Scommesse "tradizionali": da una relazione diadica a una transazione *platform based*. *Fonte*: ns. adattamento da Gawer, Cusumano, Yoffie, 2023.

In effetti, come schematizzato nella parte alta della Figura 1, il *Betting exchange* si basa su una piattaforma transattiva che abilita ad una nuova modalità di scommessa a distanza, per la quale i giocatori possono rivestire il ruolo di scommettitore o di banco e il *bookmaker* agisce come puro intermediario, limitandosi a mettere in contatto, attraverso la piattaforma on line e in maniera anonima, i singoli scommettitori (per questo sono dette anche "scommesse a interazione diretta tra singoli giocatori"). Le quote associate agli eventi su cui si scommette sono, quindi, stabilite dai giocatori stessi e l'operatore di gioco funge solo da "facilitatore", facendo incontrare domanda e offerta, trattenendosi come commissione un margine dall'importo delle vincite. Il *Betting exchange* rappresenta un'importante innovazione nel campo delle scommesse, in quanto è una forma di gioco "*peer to peer*" che sostituisce l'interazione diretta tra giocatori alla raccolta "tradizionale". Il modello "tradizionale" di gioco – come graficamente illustrato nella parte inferiore della Figura 1 – è infatti basato su una relazione diadica tra giocatore e *bookmaker*, il quale, tramite negozi di scommessa fisici

e/o siti web di gioco, accetta scommesse su eventi, principalmente sportivi, a un prezzo da lui definito, espresso indirettamente dalle quote di vincita offerte.

Nel *Betting exchange*, quindi, il *bookmaker* modifica il proprio profilo di rischio dal momento che si libera del cosiddetto "rischio di banco". Tale rischio, infatti, è assunto da uno dei due giocatori che si mettono in connessione tramite la piattaforma digitale, e il *bookmaker* crea solo le condizioni atte a favorire l'incontro tra giocatori con posizioni speculari (Pandimiglio, Spallone, 2013).

È da evidenziare che i due modelli si differenziano anche per l'effetto delle esternalità di rete (Schilling, 2011). Solo per i giocatori che acquistano tramite la piattaforma "*peer to peer*", infatti, oltre al tipo e al prezzo della scommessa, la presenza di più venditori (giocatori che "bancano la scommessa") attrae più acquirenti, e la presenza di più acquirenti (giocatori che "acquistano la scommessa") attrae più venditori. Questo crea un circolo virtuoso in conseguenza degli "effetti di rete mediati dalla piattaforma"[18] (Gawer, Cusumano, Yoffie, 2023).

Il meccanismo del *Betting exchange*, basato sulla compravendita delle quote, crea una dinamica di mercato simile a quella delle piattaforme on line "*peer to peer*" finanziarie, che mettono in contatto direttamente acquirenti e venditori di asset, come criptovalute o altri strumenti finanziari, senza la necessità di intermediari tradizionali come banche o broker. Letteralmente, infatti, il significato del termine *Betting exchange* in italiano è "borsa delle scommesse". Sono, infatti, molti i punti di contatto tra la pura disciplina finanziaria del trading con quella delle scommesse sportive mediate dalla piattaforma digitale. Nel *Betting exchange*, i termini "*punter*" e "*layer*", che descrivono i due ruoli che un utente può assumere nel gioco, sono presi a prestito dal mondo del trading. Il "*punter*" è colui che scommette a favore di un determinato esito (come nella scommessa sportiva classica), mentre il "*layer*" è l'utente che offre la quota, ovvero scommette contro l'accadimento di quell'esito (es. la sconfitta di una squadra in un evento sportivo), ruolo che nella scommessa "tradizionale" è svolto dal *bookmaker* (www.betfair.it). Le specifiche di funzionamento del gioco consentono inoltre di adottare strategie di "*arbitrage betting*", "*lay betting*" e "*cash out*", utilizzate nelle piattaforme digitali transattive di tipo finanziario (Liu, Donovan, Popov, 2024). Per questi aspetti specifici del gioco, talvolta ci riferisce al *Betting exchange* come "trading sportivo".

Nel tempo, tale tipologia di piattaforma digitale di scommessa, inizialmente introdotta nel Regno Unito dove ha sede *Betfair*, si è sviluppata anche in altri mercati nazionali. Accanto a *Betfair* si sono affermati nuovi player che hanno proposto piattaforme di *Betting exchange*, quali ad esempio *Smarkets, Orbit Exchange, Matchbook* e *Betdaq*. Anche in Italia circa dieci anni fa le piattaforme di gioco del *Betting exchange* hanno fatto il loro ingresso nel mercato regolamentato. Gli effetti di tale ingresso sono esaminati nel paragrafo successivo.

## 3. Lo sviluppo del *Betting exchange* in Italia

In Italia le scommesse del *Betting exchange* sono state autorizzate dal decreto Bersani del 2006, che ha aperto ad una ampia legalizzazione dei giochi on line nel mercato. La raccolta di tale modalità di scommessa è però stata effettivamente avviata nell'aprile del 2014, dopo l'emanazione di una serie di decreti attuativi e il superamento di alcune problematiche di coordinamento con la regolamentazione comunitaria. È bene segnalare che nel mercato regolamentato italiano, come per qualunque altra modalità di gioco, vige un regime concessorio per la vendita di scommesse tramite la piattaforma del *Betting exchange* e, quindi,

18 Le frecce curve presenti nello schema grafico del *Betting exchange*, riportato nella parte alta della Figura 1, indicano proprio gli effetti di rete omolaterali e trasversali.

solo gli operatori che hanno ottenuto tale concessione statale possono offrirle legalmente ai giocatori.

Per esaminare l'evoluzione di mercato del *Betting exchange*, si è proceduto ad elaborare l'andamento delle vendite, in termini di raccolta e spesa di gioco, dal 2014 (anno di avvio della raccolta di gioco), al 2023 (Figura 2).

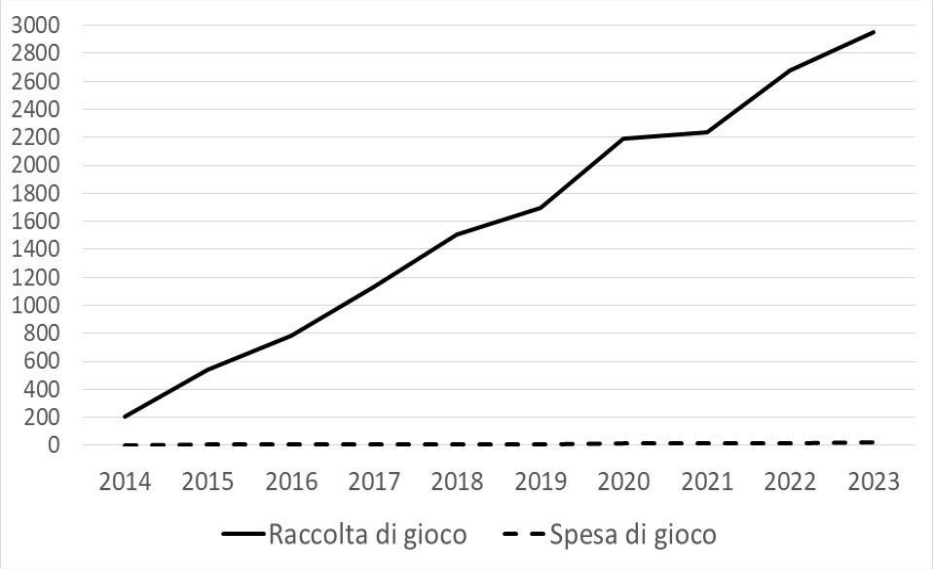



**Figura 2:** La raccolta e la spesa di gioco del *Betting exchange*. Mercato regolamentato italiano. Anni 2014-2023 (milioni di euro). *Fonte*: ns. elaborazione su dati dell'Agenzia delle Dogane e dei Monopoli (Adm)

Dalla figura 2 emerge che in termini di raccolta di gioco – pari al totale di tutte le somme scommesse e, quindi, incassate complessivamente dagli operatori con concessione dell'Adm – si è assistito ad una crescita costante che ha portato tale tipologia di scommessa a raggiungere nel 2023 un valore di circa 3 miliardi di euro. La spesa di gioco – pari alla raccolta di gioco meno le somme che ritornano ai giocatori sotto forma di vincita (denominate anche *pay-out*) – ha registrato, invece, valori molto contenuti. Ciò è la conseguenza del ruolo di puro intermediario assunto dal concessionario, che fa sì che il *pay-out* per tale scommessa sia il più alto tra tutte le forme di gioco erogate in Italia. Nel 2023, tale segmento di gioco ha restituito, infatti, in termini di vincita, il 99,35 per cento della raccolta di gioco, dando luogo ad una spesa di gioco molto contenuta, pari a 19,4 milioni di euro (ns. elaborazione su dati Adm, 2024).

## 4. Prime considerazioni e sviluppo della ricerca

L'analisi svolta, seppur inserita in un primo stadio della ricerca, consente di evidenziare alcuni interessanti aspetti relativi alle caratteristiche del *Betting exchange* e al suo stato di sviluppo in Italia.

Se si confronta la spesa di gioco per il *Betting exchange* con quella complessiva del mercato regolamentato, emerge che essa è al momento assolutamente residuale, rappresentando meno dello 0,1 per cento dei circa 20,7 miliardi di euro spesi nel gambling in Italia nel 2023. La residualità del modello di gioco risulta anche confrontando i livelli di spesa del *Betting exchange* con quelli delle scommesse sportive "tradizionali". Tale spesa, nel 2023, rappresenta

poco più dell'1 per cento di quella ottenuta tramite la vendita diretta da parte dei bookmaker dei giochi a base sportiva e ippica (ns. elaborazione su dati Adm, 2024).

Per un pieno sviluppo in Italia di tale categoria di scommessa dal punto di vista della spesa di gioco dovrebbero aumentare in maniera significativa i livelli di puntata/raccolta. Ma ciò sembra essere frenato da alcuni fattori.

In primo luogo, gli operatori di gioco sembrano temere che il gioco basato sulla piattaforma digitale transattiva possa penalizzare i risultati aziendali, visti i maggiori livelli di vincite medie per gli scommettitori e, quindi, i minori margini di guadagno ottenuti con la formula del *Betting exchange,* rispetto al modello tradizionale di scommessa (Agimeg, 2024). Il *pay-out* del *Betting exchange* nel 2023 – come già evidenziato – è stato infatti pari al 99,35 per cento della raccolta, mentre per le scommesse sportive "tradizionali" si aggira attorno all'86 per cento (ns. elaborazione su dati Adm, 2024). Tale segmento di scommessa risulta, pertanto, poco attrattivo per gli operatori di gioco.

In secondo luogo, essendo il *Betting exchange* una scommessa di tipo "*peer to peer*", la qualità dell'esperienza di gioco è condizionata dal raggiungimento di un certo livello di "liquidità di gioco". Occorre, cioè, che il sito di gioco metta in connessione via internet un numero elevato di giocatori in modo tale che ci sia, per i vari eventi su cui si punta, un volume di scommessa offerta (denaro che è in attesa di abbinamento) in linea con il volume di scommessa richiesta (denaro sulle scommesse abbinate). In sintesi, per il *Betting exchange* solo se si raggiungono sufficienti livelli di liquidità è possibile abbinare le puntate su un determinato evento (Flepp, Nüesch, Franck, 2017). Entrano quindi "in gioco" i rendimenti crescenti da adozione delle tecnologie dal lato della domanda, collegati agli effetti delle esternalità di rete, di cui si è già parlato in precedenza, che, potenzialmente, possono portare alla formazione di un mercato "*Winner takes all*". In Italia, però, l'aumento della liquidità è al momento frenato dal divieto normativo di mettere in connessione i giocatori italiani con quelli esteri, nell'ambito di una "liquidità internazionale" che moltiplicherebbe l'effetto delle esternalità di rete.

Un altro fattore di freno allo sviluppo del *Betting exchange* sembra collegato alla sua minore semplicità di gioco rispetto alle scommesse "tradizionali". In tale forma di scommessa, come già evidenziato, le puntate (punta e banca) sono molti simili, nella logica, a quelle effettuate sui titoli nei mercati di borsa. È utile quindi disporre di alcune conoscenze tecniche che aumentano le probabilità di vincita, e ciò riduce la platea potenziale di giocatori, rispetto a quella tipica delle scommesse sportive "tradizionali". Le osservazioni svolte suggeriscono un altro interessante aspetto. Per questa categoria di gioco, la natura e le caratteristiche distintive ne fanno al momento una modalità di accesso preferita da alcuni tipi di clienti. Il profilo-tipo per tale scommessa è, infatti, quello di un giocatore con elevate conoscenze tecniche di gioco e che nella scelta della modalità di puntata attribuisce particolare rilevanza ai benefici economici derivanti dalle maggiori quote di vincita, rispetto a quelle offerte dalle scommesse tradizionali. Guardando agli operatori di gioco, infine, emerge un assetto di mercato dominato da un singolo operatore. Ciò sembra confermare: da un lato, la minore attrattività di questo gioco per i bookmaker, visti i minori margini di guadagno; dall'altro, la tendenza allo sviluppo di un mercato del tipo *WTA,* in forza degli effetti positivi delle esternalità di rete. A dominare il mercato, infatti, è *Betfair*, che ha creato tale tipologia di gioco, introducendone poi la raccolta in Italia nel 2014. Tale impresa ha una posizione quasi monopolistica, come emerge dai dati del mercato italiano al primo semestre del 2022, che mostrano che *Betfair* incassava il 92 per cento della spesa di gioco. Gli altri due operatori attivi nel segmento erano *Betflag*, con una quota di mercato del 7,7 per cento, e *Betpoint* che, con una quota dello 0,2 per cento, si configurava come operatore marginale del business (e, infatti, nel 2023 ha deciso di non offrire più questo gioco) (Agimeg, 2022; 2024).

L'analisi svolta apre ad un approfondimento di ricerca finalizzato ad esaminare le differenze di sviluppo di tale tipologia di piattaforma in Italia rispetto ad altre nazioni, nonché a comprendere il bilanciamento, per i giocatori, tra i benefici connessi allo sviluppo del *Betting exchange*, in termini di maggiori vincite medie (che si traducono in un minor prezzo delle scommesse); e i costi sociali, in termini di aumento potenziale dei comportamenti di gioco eccessivo, data l'elevata elasticità della domanda che caratterizza i prodotti di gioco (Pandimiglio, Spallone, 2011). Inoltre, più in generale, lo studio in profondità, in Italia e all'estero, delle caratteristiche e dell'evoluzione del *Betting exchange*, nonché dei fattori di ostacolo e di rischio del suo sviluppo, potrebbe aiutare a comprendere quali siano le possibilità che in futuro tale piattaforma possa riconfigurare le dinamiche competitive e le modalità di consumo nel settore del gambling, come già avvenuto con altre piattaforme digitali transattive in diversi settori.

## Bibliografia


Adm - Agenzia delle Dogane e dei Monopoli (2024). *Libro Blu 2023. Relazione e Appendice*, www.adm.gov.it

Agimeg - Agenzia giornalistica sul mercato del gioco (2022). Betting Exchange: come sta andando il mercato e le quote dei concessionari, *Dati giochi*, 15 giugno, www.agimeg.it Agimeg - Agenzia giornalistica sul mercato del gioco (2024). A lavoro per formare la cultura del betting exchange agli scommettitori e poi per espandere il prodotto a tutti i bookmakers italiani, *Dati giochi*, 8 febbraio, www.agimeg.it

Cusumano, M. A., Gawer, A., Yoffie, D. B. (2019). *The business of platforms: Strategy in the age of digital competition, innovation, and power* (Vol. 320). New York: Harper Business. Davies, M., Pitt, L., Shapiro, D., Watson, R. (2005). Betfair. com: Five technology forces revolutionize worldwide wagering. *European Management Journal*, *23*(5), 533-541.

de Reuver, M., Sørensen, C., Basole, R. C. (2018). The Digital Platform: A Research Agenda. *Journal of Information Technology*, 33(2), 124-135.

Flepp, R., Nuesch, S., Franck, E. (2017). The liquidity advantage of the quote-driven market: Evidence from the betting industry. *The Quarterly Review of Economics and Finance*, 64, 306317.

Gawer, A. (2014). Bridging differing perspectives on technological platforms: Toward an integrative framework. *Research policy*, 43(7), 1239-1249.

Gawer, A., Cusumano, M. A. (2002). *Platform leadership: How Intel, Microsoft, and Cisco drive industry innovation*. Boston: Harvard Business School Press.

Gawer, A., Cusumano, M., Yoffie, D. (2023). "The platform organization". In Snow, C.C., Fjeldstad, Ø. D. (Eds.). *Designing adaptive organizations*. Cambridge University Press, 86-103. Kretschmer, T., Leiponen, A., Schilling, M., Vasudeva, G. (2022). Platform ecosystems as metaorganizations: Implications for platform strategies. *Strategic Management Journal*, 43(3), 405424.

Liu, H., Donovan, C., Popov, V. (2024). A Comparison between Financial and Gambling Markets. *arXiv preprint arXiv:2409.13528*.

Pandimiglio, A., Spallone, M. (2011). L'elasticità della domanda nel mercato italiano dei giochi, *Casmef Working Paper Series*, n. 8, Luiss Guido Carli.

Pandimiglio, A., Spallone, M. (2013). "La valutazione economica delle innovazioni fiscali: metodologia e anticipazioni", in Fondazione Bruno Visentini*, La fiscalità dei giochi: Analisi giuridica ed economica,* Luiss Guido Carli.

Parker, G. G., Van Alstyne, M. W., Choudary, S. P. (2016). *Platform revolution. How networked markets are transforming the economy and how to make them work for you.* First edition. New York: W.W. Norton & Company.

Rochet, J. C., Tirole, J. (2003). Platform competition in two-sided markets. *Journal of the European Economic Association*, 1(4), 990-1029.

Schilling, M. A. (2011). "To protect or to diffuse? Appropriability, network externalities, and architectural control". In Gawer, A. (ed), *Platforms, Markets and Innovation*. Northampton, Mass: Edward Elgar.

Schreieck, M., Wiesche, M., Krcmar, H. (2023). Governing innovation platforms in multibusiness organisations. *European Journal of Information Systems*, *32*(4), 695-716.

Thomas, L., Autio, E., Gann, D. (2014). Architectural Leverage: Putting Platforms in Context, *The Academy of Management Perspectives,* 28(2), 198–219.

# The Phygital Customer Experience in Wellness Settings: A Qualitative Analysis

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## Abstract

This study explores how integrating physical and digital touchpoints, known as phygital experiences, shapes wellness-experience management and perception in technologically advanced fitness centers. Guided by Batat's Phygital Customer Experience and Funk's Sport Experience Design frameworks, the analysis draws on 14 semi-structured interviews with managers, trainers, and members of three techintegrated centers in Spain, Italy, and the UK. Analysis revealed four key themes: synergistic design, engagement, inclusiveness, and customer-centricity, that illustrate how value is co-created across physical, digital, human, and media connectors and redefine relationships between users, organizations, and context in hybrid environments. The findings empirically support the Phygital Customer Experience framework and extend Sport Experience Design to the wellness domain. While focused on urban fitness centers and active users, limiting broader generalization, the study offers actionable insights for wellness providers seeking to deliver phygital services and enrich member experiences, and highlights directions for future research into technology-resistant populations and other wellness contexts.

*Keywords: Phygital customer experience, wellness, SX framework, PH-CX framework, service design, customer-centricity*

### 1. Introduction

The wellness and fitness industry is rapidly becoming "phygital", as wearables, mobile apps, and immersive AR combine with physical facilities to reshape the user experience (Andreasson & Johansson, 2014; Ozdamli & Milrich, 2023; Pizzo et al., 2021). Yet much of the existing literature continues to treat physical and digital touchpoints as distinct domains, restricting our understanding of the holistic ecosystems in which value is co-created through their interplay (Batat, 2022). Phygital research also remains concentrated in retail, tourism, and luxury (Del Vecchio et al., 2023) and frequently portrays customer journeys as linear (Mele et al., 2024). Despite rapid digitalisation, the wellness sector remains underexplored. Fitness centers offer a setting where members interact with facilities, trainers, and digital platforms (Pizzo et al., 2021), making them ideal to study how touchpoints shape the customer experience. Technology-mediated interactions are increasingly central to these experiences (Funk, 2017).

Addressing these gaps, the present study investigates how physical, digital, human, and media connectors interact within wellness centres to produce non-linear, adaptive, and emotionally rich customer journeys. Grounded in the Phygital Customer Experience (PH-CX) model (Batat, 2022) and the Sport Experience Design (SX) framework (Funk, 2017), we explore two questions: (1) How does the seamless integration of digital and physical touchpoints influence the management of the wellness experience? and (2) How does this integration shape customers' perceptions of the wellness experience? To address these questions, the study employs semi-structured interviews (Adams, 2015) with a purposive sample of gym members, instructors, and managers from different technologically advanced wellness centers located in Madrid, Rome, and London.

Findings indicate that combining wearables, mobile apps, immersive displays, and expert support enables real-time personalisation, optimises training workflows, and integrates customer-centric logic into service design. For participants, such integration heightens engagement through deeper personal involvement and digitally mediated peer interaction, while also fostering inclusiveness by accommodating diverse fitness levels, goals, and technological skills. Empirically supporting the PH-CX model and extending the SX framework to phygital wellness, the study redefines relationships among users, organisations, and context, showing how physical, digital, human, and media connectors co-create value through mutually reinforcing mechanisms of engagement, inclusiveness, and customer-centricity. From a managerial perspective, the results recommend providers to align digital tools with user goals, empower trainers as human bridges across touchpoints, and cultivate accessible, community-driven services that welcome a variety of abilities and digital expertise.

## 2. Methodology

This study used a qualitative approach to explore the emerging phenomenon of phygital customer experiences in wellness centers, where such methods are well-suited given the limited existing research (Lim, 2024).

### 2.1 Research context

The study examines how three leading fitness chains are redefining wellness through phygital integration: O2 Wellness in Madrid; Forum Sport Center in Rome; Virgin Active (Rome, Milan, London).

### 2.2 Data collection

Semi-structured interviews were chosen for their balance of consistency and flexibility in exploring emerging phenomena (Adams, 2015). Fourteen participants (2 managers, 3 instructors, 9 members) from technologically advanced wellness centers in Spain, Italy, and the UK were recruited via purposive sampling (Bouncken et al., 2025), selecting individuals with meaningful engagement in phygital environments (Batat, 2022). Sample size was justified using Malterud et al., (2016) information power concept, citing the study's narrow focus, highly specific sample, and application of Funk's, (2017) SX framework, reducing the need for a large sample. Data collection occurred January-March 2025 using three stakeholder-specific interview guides. Interviews (30-40 minutes) were conducted remotely via video/phone (Hanna, 2012), audio-recorded, transcribed, and translated (from Italian) prioritizing conceptual equivalence (van Nes et al., 2010).

### 2.3 Data analysis

We applied Braun & Clarke's, (2006) six-step qualitative content analysis, using Funk's SX framework as a coding guide. Interview transcripts were lineby-line coded, grouped into themes, like "synergistic design", that showed how wellness centers blend physical and digital

touchpoints. The study was informed by two complementary frameworks: the PH-CX framework (Batat, 2022), defining phygital interaction components, and the SX framework (Funk, 2017), guiding research questions and analysis structure to explore sport user-context-organization interplay.

## 3. Findings

Our findings indicate that phygital fitness centers enhance the exercise experience through four mutually reinforcing pillars: synergistic design, engagement, inclusiveness, and customer-centricity, each of which is both conceptually distinct and mutually reinforcing. **Synergistic design** emerges when digital and physical touchpoints merge. Wearable devices stream live biometrics to trainers, who can recalibrate programs instantaneously, while virtual coaching systems complement onsite staff, producing a dynamic equilibrium between autonomous self-regulation and expert supervision. **Engagement** operates on two axes. On the customer-to-brand dimension, synchronised devices enable members to customise routines and visualise longitudinal progress, yet many report residual friction when integrating third-party tracking applications. On the customer-to-customer dimension, digitally mediated communities, WhatsApp groups, leaderboards, and gamified challenges, foster social connections, although respondents still desire more, supported group events that maintain motivational momentum. **Inclusiveness** is advanced through hybrid service modalities: live-streamed classes, remote coaching sessions, and interactive, multilingual displays, that accommodate heterogeneous customers. Nevertheless, the complexity of certain interfaces can alienate non-expert technology users, underscoring the indispensable role of trainers as data translators who convert information into actionable insight. Finally, **customer-centricity** foregrounds the principle that technological innovation should amplify, not neglect, human needs. While immersive tools demonstrably heighten enjoyment and adherence, interviewees consistently emphasise that the motivational, interpretive, and empathic functions performed by trainers remain irreplaceable.

## 4. Discussion and Implications

Addressing RQ1, the study shows that blending digital and physical touchpoints strengthens wellness management by enabling more personalised services, providing trainers with real-time data that sharpens their support, and creating a seamless, customer-centric journey across channels. Turning to RQ2, the same integration shapes user perceptions by elevating engagement, widening inclusiveness through remote access and adaptive interfaces, and cultivating immersive, motivating environments that keep participants involved.

From a theoretical standpoint, this study empirically supports and extends two complementary models: Funk's, (2017) SX and Batat's, (2022) PH-CX, within the under-explored domain of indoor wellness. Responding to recent calls for deeper insight into phygital integration (Del Vecchio et al., 2023; Mele et al., 2024), the findings confirm that the seamless integration of physical and digital touchpoints is reshaping service design and management, while advancing Batat's holistic ecosystem view of value creation, which highlights immersive, emotional and customer-centred experiences. Funk's, (2017) SX framework, which maps interactions among user, context, and organization across four relational domains, can be reinterpreted to describe a phygital wellness ecosystem. Area A (user + context) becomes the engagement layer, where phygital technologies drive practical, emotional, sensory, and social engagement. Area B (user + organisation) is reframed as the inclusiveness layer, as trainers and digital touchpoints jointly deliver personalised and accessible services. Area C (organisation + context) becomes the customer-centricity layer, where datadriven design aligns offerings with evolving member needs, echoing Batat's technicality. Finally, Area D (user + context + organisation) represents the phygital wellness

experience, a seamless journey that realises Batat's continuum of value. Figure 1 shows how the user, context, and organisation interact to co-create value in phygital environments.

From a managerial perspective, indoor wellness environments are most effective when managers coordinate physical, digital, media and human resources around customercentred design. Wearables and apps generate real-time data yet remain disconnected from context (Pizzo et al., 2021), so trainers must become interpreters who translate metrics into personalised instruction and co-create service protocols to enhance engagement and outcomes. Gamified features such as leaderboards, badges and virtual competitions can intensify engagement, but without careful mediation they risk diverting attention from members' goals; framing digital rewards within each user's broader fitness plan ensures that playful elements reinforce, rather than diminish, meaningful progress. Equally, rigid targets, exemplified by the popular 10 000-step rule, may reduce autonomy and intrinsic motivation. Treating technology as a supportive tool that enables self-determined goal setting sustains long-term commitment and physical activity. Thus, human expertise, purposeful gamification and autonomy-supportive design mutually reinforce effective hybrid wellness services.




**Figure 1:** Venn diagram illustrating the revised SX framework applied to the phygital experience in wellness contexts.

## 5. Limitations and Future Research

By concentrating on advanced, gym-based wellness centres, this study overlooks other phygital formats, such as digitally enhanced Pilates studios, suggesting that future research should broaden the contextual lens. The sample excluded non-users and dropouts, leaving resistance, disengagement and potential re-engagement unexamined; incorporating these groups would illuminate barriers and motivation cycles across the user journey. Findings rest on qualitative data that capture emotional, functional and social dimensions yet still require quantitative and mixed-methods empirical testing across larger, more diverse populations. Moreover, the data-privacy and security implications of wearables and fitness apps remain underexplored. Future research should further investigate the potential intrusiveness of such technologies and their impact on users' sense of autonomy and privacy within phygital

environments. Finally, because the analysis offers only a time-limited observation, it cannot track the rapid emergence of innovations such as immersive VR workouts or AI-driven coaching; longitudinal studies are therefore essential to follow how continual technological change reshapes phygital experiences and how organisations evolve to sustain value over time.

## References


Adams, W. C. (2015). Conducting Semi-Structured Interviews. In *Handbook of Practical Program Evaluation: Fourth Edition* (pp. 492–505). Wiley Blackwell. https://doi.org/10.1002/9781119171386.ch19

Andreasson, J., & Johansson, T. (2014). The Fitness Revolution. Historical Transformations in the Global Gym and Fitness Culture. *Sport Science Review*, *23*(3–4). https://doi.org/10.2478/ssr-2014-0006

Batat, W. (2022). What does phygital really mean? A conceptual introduction to the phygital customer experience (PH-CX) framework. *Journal of Strategic Marketing*. https://doi.org/10.1080/0965254X.2022.2059775

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Del Vecchio, P., Secundo, G., & Garzoni, A. (2023). Phygital technologies and environments for breakthrough innovation in customers' and citizens' journey. A critical literature review and future agenda. *Technological Forecasting and Social Change*, *189*. https://doi.org/10.1016/j.techfore.2023.122342

DiCicco-Bloom, B., & Crabtree, B. F. (2006). The qualitative research interview. In *Medical Education* (Vol. 40, Issue 4, pp. 314–321). https://doi.org/10.1111/j.1365-2929.2006.02418.x

Funk, D. C. (2017). Introducing a Sport Experience Design (SX) framework for sport consumer behaviour research. In *Sport Management Review* (Vol. 20, Issue 2, pp. 145–158). Elsevier Ltd. https://doi.org/10.1016/j.smr.2016.11.006

Hanna, P. (2012). Using internet technologies (such as Skype) as a research medium: A research note. *Qualitative Research*, *12*(2), 239–242. https://doi.org/10.1177/1468794111426607

Lim, W. M. (2024). What Is Qualitative Research? An Overview and Guidelines. *Australasian Marketing Journal*. https://doi.org/10.1177/14413582241264619

Malterud, K., Siersma, V. D., & Guassora, A. D. (2016). Sample Size in Qualitative Interview Studies: Guided by Information Power. *Qualitative Health Research*, *26*(13), 1753–1760. https://doi.org/10.1177/1049732315617444

Mele, C., Di Bernardo, I., Ranieri, A., & Russo Spena, T. (2024). Phygital customer journey: a practice-based approach. *Qualitative Market Research*, *27*(3), 388–412. https://doi.org/10.1108/QMR-08-2023-0102

Ozdamli, F., & Milrich, F. (2023). Positive and Negative Impacts of Gamification on the Fitness Industry. In *European Journal of Investigation in Health, Psychology and Education* (Vol. 13, Issue 8, pp. 1411–1422). Multidisciplinary Digital Publishing Institute (MDPI). https://doi.org/10.3390/ejihpe13080103

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful Sampling for Qualitative Data Collection and Analysis in Mixed Method Implementation Research. *Administration and Policy in Mental Health and Mental Health Services Research*, *42*(5), 533–544. https://doi.org/10.1007/s10488-013-0528-y

Pizzo, A. D., Baker, B. J., Jones, G. J., & Funk, D. C. (2021). Sport experience design: wearable fitness technology in the health and fitness industry. *Journal of Sport Management*, *35*(2), 130–143. https://doi.org/10.1123/JSM.2020-0150

Van Nes, F., Abma, T., Jonsson, H., & Deeg, D. (2010). Language differences in qualitative research: Is meaning lost in translation? *European Journal of Ageing, 7(4), 313–316*. https://doi.org/10.1007/s10433-010-0168-y

# Exploring the dynamics of open innovation and artificial intelligence: A focus group study with experts

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## Abstract

This paper explores the growing importance of artificial intelligence (AI) and its integration into open innovation, drawing upon the theoretical framework proposed by Broekhuizen et al. (2023). We adopted an exploratory qualitative approach—focus groups—and applied the model within a specific regional setting with the aim of understanding how experts perceive and implement AI applications to support open innovation practices. The findings confirm the growing role of AI as an enabler of open innovation, while also highlighting significant heterogeneity in how organisations adopt and interpret it. The nine functions that emerged from the focus groups show that AI is not only perceived as an operational tool but also as an object of governance, mediation, and ethics. The research serves both theoretical and managerial implications: theoretically, it enriches our understanding of the AI–open innovation intersection by revealing that AI's roles go beyond technical functions, encompassing symbolic, regulatory, and ethical dimensions; managerially, it highlights how SMEs should adopt incremental AI strategies that emphasise small-scale experimentation, inhouse training, and the co-development of shared platforms with other ecosystem stakeholders.

*Keywords: open innovation; artificial intelligence; AI; innovation ecosystem; digital transformation; focus group*

## 1. Introduction

The rising prominence of the open innovation paradigm reflects a growing interest in collaborative ecosystems, where co-creation among heterogeneous actors offers an effective response to the increasing complexity and dynamism of today's economic and technological environment. The open innovation approach is based on the joint exploitation of resources inside and outside the organisation, and favours the integration of ideas, knowledge, processes and technologies from multiple and complementary sources. Open innovation, as according to Deloitte (2023), derives advantages and its effects are evident in transforming innovation processes and strengthening the competitive capacity of companies. In this regard, innovation ecosystems are conceived as fertile contexts where economic, financial and social benefits can be achieved for all stakeholders (McKinsey & Company, 2023).

According to the Open Innovation Report 2023, the uptake of open innovation practices is significantly increasing: 72% of European companies have initiated collaborations with start-ups and 50% have entered into partnerships with other entrepreneurial actors (Sopra Steria, 2023). Compared to the closed and internal model, open innovation is distinguished by the inclusion of a variety of external actors - such as universities, research centres, start-ups, customers, suppliers and even competitors - in the innovation generation and development process. This allows for more agile and strategic access to skills and technologies not immediately available within the organisation.

In parallel, digital transformation is acquiring an increasingly central role in the redefinition of business strategies, pushing companies to integrate new technologies into their processes with the aim of increasing their efficiency, productivity and sustainability (Statista, 2024). As such, the integration of AI technologies into organisational processes is broadly recognised as a key stage of development for progression digital transformation initiatives. In this scenario, artificial intelligence (AI) is one of the most relevant technologies that can strengthen and enhance the dynamics of open innovation. From predictive analytics through natural language processing and machine learning to automation systems, the multiple applications of AI make it a strategic lever for innovation and at the same time pose fresh challenges, mostly through the evolution of job functions and the need for an increasingly specialisation of skill sets (Statista, 2024).

Although the relevance of open innovation and AI has been acknowledged in previous studies, there is still a limited qualitative understanding of these phenomena, as highlighted by Anchayhua et al. (2025). For this reason, it appears interesting to explore experts' viewpoints with the aim of understanding in greater detail how such phenomena are impacting the socio-economic and technological context of the Lazio Region. By engaging stakeholders with a greater knowledge base, broader contextual understanding of the opportunities and challenges associated with open innovation and AI will be identified in this regional context.

## 2. Theoretical background

Over the past two decades, open innovation has significantly reshaped the way organisations develop and bring novel ideas to the market. This concept, which was originally coined by Chesbrough in 2003, highlights the limitations related to the traditional "closed" innovation model, where R&D are kept strictly internal and intellectual property is tightly controlled. On the contrary, open innovation promotes the purposeful use of external knowledge sources alongside internal efforts to accelerate innovation and adapt to rapidly changing environments (Chesbrough & Appleyard, 2007). Such a shift has led firms to embrace collaboration with a broad set of actors, involving startups, universities, institutions, research centres, suppliers, and customers, thereby transforming the innovation process into a more dynamic and networked process (Bogers et al., 2018; Deloitte, 2023). Adopting an ecosystem-centric perspective highlights how innovation has evolved into a more collective endeavour by involving a broad spectrum of participants from across organizational and sectoral boundaries (Dodgson et al., 2006). The concept of open innovation, once largely associated with industrial contexts, now extends far beyond its original domain and influences a broad range of sectors like the public sector (Mergel, 2021), financial services (Fasnacht & Fasnacht, 2018), museums and exhibition spaces aimed at enhancing visitors' experiences (García-Muiña et al., 2019), tourism (Hermawati et al., 2020), as well as the power and energy sector (Greco et al., 2017).

This shift from closed to open innovation models is evident in both large corporations and small and medium-sized enterprises (SMEs), although their motivations and obstacles diverge rather sharply. Large firms, typically equipped with in-house R&D resources, have historically leaned toward closed innovation. Yet, as market demands grow more complex and speed becomes crucial, these organisations increasingly adopt hybrid models. For example, Mitsubishi Electric's strategy blends internal innovation and collaborative standard-setting, balancing the protection of intellectual property with the need to supplement internal resources (Kajiura, 2012). In addition, large firms frequently harness advanced information technology to coordinate both closed and open innovation processes, adapting their strategies to fit organisational priorities (Andrade-Rojas et al., 2024). In contrast, SMEs often lack the capacity to innovate solely through internal means. Instead, they depend heavily on

open innovation networks and partnerships to access external knowledge, which is essential for their survival and growth. Empirical studies, such as those focusing on industrial SMEs and technology firms in South Korea, underscore the significance of these collaborations (Roberts and Spedale, 2025; Heusler et al., 2024; Grama-Vigouroux et al., 2020). While SMEs can derive significant advantages from AI-enabled open innovation, they also contend with ongoing resource constraints, making robust organisational capabilities and supportive innovation ecosystems vital (Jin et al., 2022; Hitchen et al., 2017).

Across both organisational types, cultural and structural barriers, like the "Not Invented Here" syndrome and differing attitudes toward risk, can impede openness (BurgerHelmchen, 2024).

Artificial intelligence (AI) has significantly altered the landscape of open innovation across organisations, regardless of the enterprise's size. AI enhances firms' abilities to absorb and process external knowledge, accelerating innovation cycles and enabling more agile decision-making (Bahoo et al., 2023). This becomes particularly important in rapidly changing environments, where the ability to quickly identify and seize emerging opportunities can be critical (Sahoo et al., 2023). AI-powered platforms and ecosystems are facilitating more seamless collaboration - firms can now engage with external partners more effectively, as exemplified by Chinese open innovation platforms and Haier's micro-community approach (Cricchio et al., 2025; Li et al., 2024; Steiber and Alvarez, 2024). However, realizing these strategic benefits depends on the presence of robust organisational support structures. Essential factors include digital knowledge management, a culture that supports openness to new ideas, and empowering employees to contribute meaningfully. This is especially pertinent for SMEs, which often lack formal innovation infrastructures and therefore require tailored support to fully leverage AI's capabilities (Naruetharadhol et al., 2022; Jin et al., 2019; Radziwon and Bogers, 2019). Furthermore, AI augments established innovation methodologies such as crowdsourcing, enabling more sophisticated filtering and learning processes that expand firm's capacity to utilise external ideas (Füller et al., 2021). Nevertheless, collaborative innovation in AI remains complex. For instance, while university-industry partnerships generate a high volume of AI-related patents, these patents typically have less impact than those developed independently by firms or academic institutions. This highlights some of the challenges and nuances associated with AI as a general-purpose technology (Messeni Petruzzelli et al., 2023).

Following the definition of the key theoretical foundations of open innovation - considering both large enterprise and small and medium-sized enterprise - and having acknowledged the growing significance of artificial intelligence in these processes, this study draws upon the theoretical framework proposed by Broekhuizen et al. (2023). Their framework presents a 3x3 matrix that aligns the three stages of open innovation (i.e. initiation, development, realization) with three management functions of AI (i.e. mapping, coordinating, controlling) (Table 1). This approach seeks to clarify how various AI applications can augment or automate human tasks, thereby addressing persistent challenges in open innovation. In our study, we focus on understanding how enterprises are integrating AI into open innovation practices. Specifically, we examine AI's role in facilitating collaboration, managing risks, safeguarding knowledge and data, and identifying new opportunities.

| | | AI functions | | |
|---|---|---|---|---|
| | | **Mapping** | **Coordinating** | **Controlling** |
| **Open innovation stages** | **Initiation** | *I – AI as scout* | *II – AI as matchmaker* | *III – AI as forecaster* |
| | **Development** | *IV – AI as cartographer* | *V – AI as conductor* | *VI – AI as whistleblower* |
| | **Realization** | *VII – AI as vanguard* | *VIII – AI as broker* | *IX – AI as custodian* |

**Table 1:** 3x3 Matrix (Broekhuizen et al., 2023)

It is therefore of particular interest to investigate this phenomenon through an exploratory qualitative approach (Anchayhua et al., 2025) - namely, focus groups - by applying this model within a specific regional and contextual setting. With this in mind, we pose the following research question (RQ):

RQ: How do experts consider and implement AI applications to support open innovation practices?

## 3. Methodology

### 3.1 Materials and methods

For this study we employed focus groups as the primary research method with the aim of interviewing innovation experts from the Lazio Region. In this view, our goal was to gain a deeper understanding of how open innovation practices and emerging technologies, especially artificial intelligence, are being adopted and developed within the regional entrepreneurial ecosystem.

Focus groups operate as a qualitative research tool where participants engage in collective dialogue, allowing for the emergence of rich insights through shared experiences and perspectives (Morgan and Krueger, 1998). Each session commenced with a concise presentation that clarified the study's objectives and anticipated outcomes. This introductory segment explained the underlying rationale of the research, emphasizing its relevance for participating organizations. Key themes included the integration of artificial intelligence and open innovation within regional business environments, the significance of collaboration and trust within innovation networks, and the strategic impact of digital transformation at the local level. The primary goals of the focus groups were to identify both challenges and opportunities unique to the Lazio Region, and to gather expert perspectives regarding the application and limitations of AI as a driver of innovation. Insights generated during these discussions also informed the development of interview protocols for subsequent engagements with managers from small and medium-sized enterprises in the Region.

The focus group sessions, conducted online on June 5th, followed a structured set of questions grounded in the theoretical framework outlined by Broekhuizen et al. (2023).

These questions were specifically crafted to prompt participants to reflect on key themes such as innovation, technology adoption, and inter-organizational collaboration. Each session, conducted in English, lasted roughly three hours. A trained moderator led the discussions, maintaining alignment with central topics and encouraging engagement, while an assistant managed note-taking and logistical matters. The first session included five participants, while the second comprised two.

### 3.2 Sample

The sample consisted of seven enterprises which exhibited a heterogeneous mix of size, sector, and revenue. To guarantee a diversity of perspectives and a multidisciplinary approach, the selection was based on strict criteria: interviewees needed demonstrable expertise in innovation and digital transformation. The sample's varied backgrounds, sectors and organisational sizes were intended to provide a comprehensive and multidimensional understanding of the subject matter. Most participants (71.4%) belonged to small enterprises with fewer than 50 employees, medium enterprises accounting for 14.3%, and large enterprises making up the remaining 14.3%. This distribution indicates that there is an overwhelming representation of smaller firms in the regional innovation space. With respect to sectoral association, the sample included firms in manufacturing (28.6%), services (28.6%), technology (14.3%), marketing and communication (14.3%), and food and beverage (14.3%), suggesting a diversified yet relatively balanced representation of industry sectors. With respect to annual revenue, almost half of the enterprises (42.9%) had revenue below 1 million euros; 28.6% had revenues of between 5-20 million euros; and 28.6% had revenues greater than 20 million euros. No firms had revenues of between 1 and 5 million euros. This profile indicates that the sample included mainly small firms, engaged in multiple sectors, and were young in terms of finances (Table 2).

| Gender | n (%) |
|---|---|
| Male | 3 (42,9%) |
| Female | 4 (57,1%) |
| Enterprise | |
| Small enterprise (< 50 employees) | 5 (71,4%) |
| Medium enterprise (50-250 employees) | 1 (14,3%) |
| Large enterprise (> 250 employees) | 1 (14,3%) |
| Sector | |
| Manufacturing | 2 (28,6%) |
| Services | 2 (28,6%) |
| Technology | 1 (14,3%) |
| Marketing & communication | 1 (14,3%) |
| Food & beverage | 1 (14,3%) |
| Revenue | |

| | |
|---|---|
| < 1 million 3 (42,9%) 1 – 5 million | 0 |
| 5 – 20 million | 2 (28,6%) |
| > 20 million | 2 (28,6%) |

**Table 2:** A socio-demographic profile of focus group participants (n =7)

## 4. Results

In this section we present the findings emerging from a series of questions posed to the sample, structured around the theoretical model developed by Broekhuizen et al. (2023) (Table 3 and Figure 1).

| **Phases** | **Clusters** | **Respondents** |
|---|---|---|
| *I – AI as scout* | 1. Opportunity identification through AI | R1, R4 |
| | 2. Partner discovery and network expansion | R1, R5 |
| | 3. Data analysis and scenario simulation | |
| | 4. AI integration in business tools | R2, R3 |
| | | R4, R5 |
| *II – AI as matchmaker* | 1. AI for streamlining internal coordination | R3 |
| | 2. AI-enhanced traditional coordination tools | |
| | 3. AI for communication efficiency | R2, R5 |
| | 4. AI in balancing remote access and cybersecurity | |
| | 5. Limited collaborative AI experience | R2 |
| | 6. AI-generated outputs supporting coordination | R3 |
| | | R5 |
| | | R6 |

| | | |
|---|---|---|
| *III – AI as forecaster* | 1.<br>2. Human supervision and strategic judgment<br>3. Automation and early warning systems<br>4. Financial and credit risk management Predictive monitoring and pattern recognition<br>5. Regulatory and product safety compliance | R1, R3<br>R2<br>R4<br>R5<br>R6 |
| *IV – AI as cartographer* | 1. Data security and confidentiality<br>2. Culture of data and openness<br>3. Role of AI as enabler<br>4. Human oversight and legal frameworks | R3, R4, R5, R6, R7<br>R1, R2, R5, R6<br>R1, R2, R5, R7<br>R2, R4, R6 |
| *V – AI as conductor* | 1. Legal and authorial uncertainty<br>2. Private AI and internal frameworks<br>3. Trust, fear and openness dilemma<br>4. Technical solutions (blockchain/NDA)<br>5. Strategic value of data | R1, R2, R3<br>R2, R4, R5<br>R1, R2, R3<br>R1, R4, R5<br>R2, R5 |
| *VI – AI as whistleblower* | 1. Ethics, bias, and social impact<br>2. Need for regulation and common frameworks<br>3. Transparency, human oversight, accountability<br>4. Pluralism in technology and avoiding monopolies<br>5. Education, certification, and internal ethics<br>6. Limitations of control and guarantees | R1, R3, R5<br>R2, R3, R6, R7<br>R1, R2, R6<br>R1, R2<br>R6, R7<br>R4, R5, R7 |
| *VII – AI as vanguard* | 1. Process improvement<br>2.<br>3. Challenges and difficulties | R2, R3, R4, R5,<br>R6, R7<br>R1, R3, R4, R5,<br>R6, R7 |

| | | |
|---|---|---|
| | Strategic and cultural issues | R1, R3, R5, R7 |
| *VIII – AI as broker* | 1. Operational optimisation | R2, R7 |
| | 2. Collaboration and networks | R1, R2, R4 |
| | 3. Human role and ethics | R2, R3, R4 |
| | 4. Strategic matching | R1, R3, R5 |
| *IX – AI as custodian* | 1. Scepticism and regulation need | R1, R2, R3, R5, R7 |
| | 2. AI as a monitoring tool | R6 |
| | 3. No relevant IP to protect | R7 |

**Table 3:** Authors' own elaboration based on Broekhuizen et al. (2023)

The first area of investigation - *AI as scout* - aimed at discovering how AI can be a valuable instrument for finding new opportunities and partners. The interviewees described how AI is seen as a transformational and operational improvement. The first theme to emerge was opportunity identification through AI, as participants such as R1 stated, "*opportunities emerge across all organisational areas—from manufacturing to HR—by addressing inefficiencies and waste.*" R4 agreed and explained that by relying on an AI-system monitoring mobile network signals she was able to, "*identify clients we didn't even know existed and sign contracts with them.*" The second theme was related to the identification of new partners and building networks, and how AI can be an integrating end-product for ecosystem-building and strategic matchmaking. For example, R1 commented on the impact for both large corporations and SMEs, as he laid out the necessity for "*assessing before doing*" to make sure everyone was supported and aligned. There was an example provided from R5, a startup founder, as well: "*We built a project that would link our unique characteristics of our patented product to unique market opportunities.*" The third theme identified was in analysing data and modelling scenarios, whereby R2 mentions AI's ability to execute "*powerful matching of data across multiple databases to identify the ideal possible interlocutor.*" Lastly, a fourth theme addresses the connection of AI with business tools and processes. In this context, R4 describes how human relations skills can be combined with AI to create pathways into untapped geographic markets. In a similar position, R5 describes a multilayered, geo-data analysis approach using AI to filter and narrow down on viable applications of a digital product.

The second area of investigation - *AI as matchmaker* - aimed at understanding how AI can facilitate coordination and collaboration. Participants showed diverse perspectives of AI's role in enhancing coordination and collaboration. A range of themes demonstrated everything from simplified tools to AI-generated outputs all for coordinating teams. R3 explicitly pointed out the need to simplify the complexity of internal tools, saying, "*We went the reverse route; we chose to use simpler tools all supported by AI, which will assist them in their workflows."* Integration with coordination platforms was recognized across the board. R5 noted, "*For larger teams, AI significantly accelerates coordination, especially when you manage to use something like*

*ClickUp,*" while R2 pointed out that AI-enhanced planning tools and accelerated email prioritization are becoming indispensable. On the communications side, R2 shared some ambivalence about AI automation: "*I still like to do summaries myself… It helps me keep in my own alignment, even if it is more tiring.*" Security concerns were also noted, as R3 recalled a security breach that forced the company to restrict external remote collaboration and spend money on building a new infrastructure. In contrast to these opinions, R6 stated that she had limited experience of AI tools for group collaboration: *"The tools I have used have been more for individual use rather than collaborative team work."* In contrast, R7 provided a specific instance of the use of AI in improving coordination and stated, "*We developed an AI app to help optimize employees and management structure, it allowed for more objective and efficient coordination. It was the AI output which allowed us to improve in these areas*". These contributions indicate that while generative AI's capability to streamline workflows and enhance existing tools is valued, and that it is being explored in a real-time group collaborative nature, the emphasis has been on new processes for generating output and preserving process objectivity.

In the third area of investigation - *AI as forecaster* - the interviewees emphasized five key areas in the domain of utilisation of AI in risk management and successful business management. The first was a strong indication that human supervision is essential, and that each entrepreneur or decision making individual plays invaluable functions. For instance, R1 stated: "*We still have to supervise.... assessing success and risks remains the entrepreneur's responsibility*" while R3: "*There is no way I would completely trust what AI would say, reasoning is still human*". The second cluster was the use for implementation of early warning systems, which provides a similar arrangement over and above normal utilisation. In this case, R2 explained how their system has the ability to flag potentially critical situations for client companies, where AI would be able to detect and utilise for significant labour savings, and reduced reliance on individuals; "*AI can monitor, and work on lesser observed cases and even be automated for success*". The next cluster has relevance from an administrative, and also credit risk domain. But specifically with the mention of R4 utilising AI to assess client solvency - as he pointed out "*I utilise AI to assess clients and their creditworthiness supplier, and to rest easier regarding future insolvency, especially to corner surplus on our potential and have sustainable alternatives towards business decisions*". In the fourth cluster, AI was seen as the process of discovery of underlying and hidden patterns. R5 illustrated how monitoring could be extended to patterns in subtle signals - including SEO trends - to assist someone in pre-empting upcoming risks: "*AI has its place in recognizing patterns that could be expanded to web positioning, to assist in the efforts of those who monitor online environments.*" Finally, the fifth cluster revealed AI in respect of safety and regulatory compliance. R6 articulated AI's relevance in risk modelling in respective products, especially in areas such as toys involving chemical materials. "*AI had the potential to model risk parameters from input by supplier, to the final product itself, and posed a pathway to contextualize safety monitoring.*"

The fourth area of investigation - *AI as cartographer* - aimed at discovering how AI can overcome barriers to data sharing and promote data use. The first main challenge highlighted by participants is data security and confidentiality, as multiple respondents, such as R3 and R6, showed strong hesitance to share internal or sensitive data. For example, R3 indicates that "*the more a system opens up, the more it is vulnerable*," and companies will likely have "*a space of security*" because they are careful and trusting in change. In parallel to that discussion, participants discussed a data-sharing culture, specifically in terms of sharing data in open data, and structured collaboration. R1 emphasized the "*promotion of a data culture*" from the "*networking of companies, public institutions and universities*" to support data openness, while R5 emphasized AI can help "*favour a culture of data use*" mainly through the intelligent use of open data. In addition, AI is also framed as a facilitator to provide richer collaboration and access to actionable insights from less-sensitive data. As R2 stated, "*AI tools can enhance communication, even around risk*", but human interpretation is still needed to extract actionable value. Similarly, R7 noted that AI has made "*raw data more available*", even if companies "*keep the targeted data*

*close to home*". Finally, participants expressed some concern about a lack of legal clarity and need for human oversight, such as R4 noted, "*AI use is still legally unstable*", particularly in personal data-related scenarios.

R6 reiterated: knowledge can only be shared "*as long as it's involved in researchprojects that are protected by an NDA*", showing the necessity for formal agreements and regulatory protections.

The fifth area of investigation - *AI as conducter* - aimed at understanding how to harmonise ideas while protecting information. Here, participants generally recognised the difficulty of integrating creativity and collaboration with the imperative of safeguarding information. A first principal theme relates to legal and authorial ambiguity, such as R3 declares: "*The notion of authorship is becoming outdated... as soon as you share, you lose part of your intellectual ownership*." R1 states: "*There are no clear laws, and it's difficult to provide a complete answer at this moment*." This uncertainty contributes to what we present as the trust-fear-openness paradox, whereby R3 emphasises the multiplicity of attitudes: "T*here's fear, availability, openness... it is a process that is still evolving*" while R2 also echoes such ambivalences: "*We are already writing for the machines- we're feeding them, and while doing so, we are losing the protection*." Some participants do offer to implement technical and organisational means of safeguard such as R1 states: "*An intelligent system could cover who has access to what, supported by maybe a blockchain for tracing*" while R5 recalls: "*In my company we used NDAs internally to limit access to sensitive data from the e-commerce client*." Private AI and internal workflows are identified as a useful middle ground. R2 notes: "*For those companies who are primarily worried about exposing data, they should work with private AI which is custom-trained on their datasets instead of large public models*." R5 echoes this: "*At least we give ourselves a healthy operational model*." Finally, interviewees highlight the strategic value of proprietary data whereby R2 cautions: "*Company data is frequently sensitive and strategic - we have to protect it with intentionality, knowledge, and compliant tools*." Overall, while the interviews don't reveal any concrete answer, they suggest an environment where manifesting protection and innovation must evolve together as the landscape evolves - bound to evolve with both legal change and technological potential.

The sixth area of investigation - *AI as whistleblower* - focused on how AI can guarantee ethical behaviour and security. The discussion contained several different perspectives about how AI might be a vehicle for ethical practices as well as address the barriers of data-sharing. The first theme spoke to the ethical fragility and social impact of AI, with an uneasiness that AI will also perpetuate and amplify societal biases. As R3 suggests, "*AI learns from our input. If the input is untrue, then the output is more untrue, and possibly amplified*." Concerns manifested over polarisation, R3 warned that "*open environments could just reflect the echo chambers of social media*." The second theme was the desire for structural frameworks and shared protocols. R2 pointed out, "*We became a member of RETIC which helps us define frameworks in this space. However, everything is still a work in progress*." While there was some scepticism as to the probability of effective regulation as with R5 speaking to this point, "*There are no guarantees of ethical behaviour with AI, just as there are no guarantees with the internet*." Another theme was consensus that transparency, and human oversight is of utmost importance. R1 stressed the need to, "*keep everyone in the loop to have a measured human control*." Relatedly, technological pluralism was framed as an opportunity to encourage a diversity of perspectives, and opportunities to help mitigate monopolies, and promote critical thinking. R2 remarked "*Having technologies helps us compare outputs - assuming we're trained and critical enough to do it.*" Education and certification emerged as real ways to incorporate ethics into organisations. R6 spoke about training staff and following communication guidelines, while R7 envisioned "*certifications for AI use like we have for sustainability or gender.*" Finally, some participants had doubts about control. R4 presents this perspective: "*AI is a weapon. It can be used for good or evil; but we can't control anything.*" R7 added, "*There's so many things we can't even monitor anymore.*"

In the seventh area of investigation - *AI as vanguard* - the aim was to understand how AI can be used to identify business opportunities. Participants frequently noted that AI offers excellent opportunities for increasing and reducing business processes, particularly for SMEs involved in open innovation. R2 noted that AI has the ability to "*reduce the burden of repetitive work within companies and help them to concentrate on what is really their core business, in a tailored way,*" indicating that AI offers the ability for companies to redistribute their resources toward more productive endeavours by automating specific repetitive elements of operations. R3 added that AI represents a "*characterising component of collaborative environments between institutions and companies*" and can help "*reduce the difficulty of dealing with large datasets and dealing with organisational processes*," all of which support decision-making is and effort-related outputs within multiple workflows associated with organizational activities and efficiencies. This ultimately reaffirms AI's potential to cultivate collaborative and interdependent virtual innovation ecosystems, where entities leverage shared knowledge to develop improvements in process. R5 focused on customer management noting that AI "*can support the effort that, not too long ago, needed several operators*," pointing to areas associated with customer care and lead management which are paramount areas of business. The adoption of AI-based automated support in such places will not only drive efficiencies, but enhance the customer experience by enabling faster responses and more customized touch points in service delivery. R4 discussed the importance of industry-specific customisation, and he noted that AI can be useful in "*processing lots of information, orienting clients, moment, and merchandising concerns*," to create customised solutions that reflect the individual operational requirements of the various sectors. This particular flexibility and fit of AI makes it a contributing solution in the open innovation context. At the strategic level, R1 commented on the pivotal opportunity that open innovation represents, in "*opening companies up to outside knowledge and experiences*," to support the development of clear innovation road maps for process improvement. This indicates the need to integrate internal competencies with the external technological evolution for optimal benefit.

In the eighth area of investigation - *AI as broker* - participants shared a complex view of AI's role in managing activities and resources with multiple partners. One primary insight was the performance features of AI-driven platforms, including centralised booking or CRM platforms that take in inputs from many sources while reducing a logistical risk of overbooking. As R7 stated, " *It allows you to optimise the data flows and avoid risks that happen all the time, like overbooking.*" Another area emphasised how AI can enable collaboration between multiple partners, also internally and externally, by removing real time data sharing and trust barriers. R1 explained that a developed platform would aid the development of a business network, by inducing "*collaboration and lowering the distrust inherent in entrepreneurial ecosystems.*" Subsequently, it was identified that human- AI interface, and human-led initiative, are important to education and labour. R3 stated that platforms only "*help*," but, "*with a large management effort*," and if there is excessive reliance on AI, "*there's a risk that people stop acting and delegate to the machine.*" In this respect R4 added that AI can "*help processing the data with a lot of partners*," but human capacity to lead is indispensable. Finally, the last cluster highlighted an interest in AI-enabled strategic intelligence and matching primarily in education and labour markets. R5 suggested that "*university databases matched the need required from the company*", and R3 noted that this proactive matching was already being investigated, but both R3 and R5 warned about organisation governance and personal active contribution.

The ninth area of investigation - *AI as custodian* - aims at understanding how AI ensures fair distribution and protects intellectual property. Participants' responses revealed that there is a dominant scepticism about AI's capabilities currently to assure fairness in distribution and to secure IP. Several respondents including R1 and R3 firmly state that it "*won't be able to guarantee it*" and that the regulation "*needs to be regulated somehow sooner or later.*" (R3). R2 acknowledges that we need a legal frame but admits "*There must be a reference regulation... but I don't have enough*

*competence on that subject.*" That said, there is some cautious encouragement from R5 who expresses hope of AI: "*We hope it's intelligent enough to find a way... but it's tough.*" R6 does point to an existing AI case where the technology is actively being used to report oversights into brand misuse online. "*There has to be someone comparing these reports constantly... I can't do it by myself.*" Finally, R7 introduces a different flavour to the conversation by explaining that because their business does not hinge on IP, instead based on experience, they serve as a counterexample of the issue.

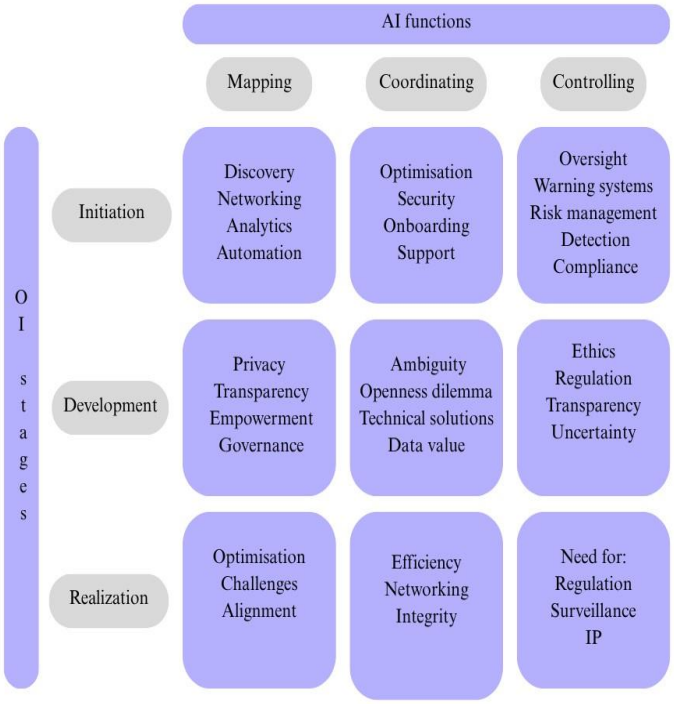



**Figure 1:** Authors' own elaboration based on Broekhuizen et al. (2023)

## 5. Discussion

This paper examines a burgeoning theme in innovation studies: the convergence of open innovation and artificial intelligence (AI), with an empirical focus on SMEs in the Region Lazio. Although AI's strategic importance for collaborative innovation is well recognised, qualitative research on how regional actors perceive, adopt, and integrate AI into their open innovation processes remains scarce. Our study fills this gap by exploring the functional roles that practitioners assign to AI across the stages of open innovation, while also mapping key barriers and enabling conditions.

The findings reaffirm AI's growing importance as an enabler within open innovation, strengthening both empirical and theoretical insights from recent literature. Yet, we also reveal considerable heterogeneity in how organizations adopt and interpret AI, resulting in a context-dependent and dynamic landscape. Aligned with Broekhuizen et al. (2023), our focus groups surfaced nine distinct AI functions, demonstrating that AI is regarded not only as an operational tool but also as an object of governance, mediation, oversight, and ethical reflection. In the Lazio context, SMEs experiment with AI at various points in the innovation cycle—particularly in mapping, coordination, and forecasting (AI as "*scout*," "*matchmaker*,"

and "*forecaster*"). Some firms, such as R2 and R7, leverage AI to streamline resource management and monitor patterns and risks, reflecting a tactical, performance-oriented approach, aligning with Kajiura (2012). Others, like R6 and R4, highlight regulatory uncertainties, ambiguities around IP, and the need for human oversight — concerns that align with the rationale behind proactive strategies aiming to balance IP protection with the need to collaborate and innovate (Kajiura, 2012) —casting AI in roles akin to "*whistleblower*." A prominent tension emerged between openness and protection, evidenced by selective use of tools such as NDAs, private AI systems, and blockchain. This underscores that the propensity for open innovation depends not only on technological capabilities but also on cultural and regulatory constraints, echoing the structural and cognitive barriers identified by Burger-Helmchen (2024). Simultaneously, our research shows that AI can bridge otherwise distant organisational spheres—companies, institutions, and academia— through initiatives like RETIC projects and university–industry matching platforms. This aligns with the findings exemplified by Cricchio et al. (2025), showing how open innovation platforms enable firms to balance collaboration and specialisation.

Overall, our results suggest that AI-driven digital transformation is never neutral but is shaped by strategic choices and organisational interpretations that redefine open innovation logics. As such, AI functions as a generative technology - capable of amplifying both the promise and the ambivalence of open innovation - and demands a flexible, reflexive, and multi-level management approach.

## 6. Conclusion

This study offers an initial qualitative contribution to understanding AI-enhanced open innovation processes in SMEs. It demonstrates that AI adoption is gradual and influenced not only by technical resources but also by cultural, institutional, and relational factors. Interviewed firms fluctuate between openness and caution, enthusiasm and scepticism. To achieve systemic impact, coordination between public and private actors will be essential to develop shared skills, regulations, and infrastructure. In this scenario, AI functions not as a substitute but as an amplifier of collective intelligence within regional ecosystems.

Theoretically, this work enriches our understanding of the AI–open innovation intersection by revealing that AI's roles extend beyond technical functions to include symbolic, regulatory, and ethical dimensions. New tensions emerge - between openness and control, and between automation and human agency - that warrant further theoretical exploration. From a managerial perspective, the implications are clear: SMEs should pursue incremental AI strategies, emphasizing small-scale experimentation, in-house training, and the development of shared platforms with other ecosystem stakeholders. Simultaneously, regional institutions can build trust and promote interoperability among systems and actors.

The main limitation lies in the sample's size and scope: although it ensured sectoral and organisational diversity, the empirical base remains small (n = 7) and confined to a single geographic area. Moreover, the qualitative focus group methodology enables rich phenomenological insights but does not support broad generalisation.

Future research could expand to other regions and integrate quantitative (surveys, network analysis) and longitudinal methods to track AI adoption over time in open innovation processes. Additionally, examining the role of intermediaries - such as universities, incubators, and public bodies - in facilitating SMEs' transition to AI-based collaborative models would be valuable. Finally, given widespread concerns about regulatory uncertainty and reputational risk, the ethical and legal dimensions of AI adoption deserve dedicated study.

## References


Anchayhua, N., Villanueva-Llapa, A., & Zúñiga-Núñez, M. F. (2025). Open innovation in Smes: a literature review. Ingeniería y Competitividad, 27(1).

Andrade-Rojas, M. G., Saldanha, T. J., Kathuria, A., Khuntia, J., & Boh, W. (2024). How information technology overcomes deficiencies for innovation in small and medium-sized enterprises: closed innovation vs. open innovation. Information Systems Research, 35(4), 1981-2012.

Bahoo, S., Cucculelli, M., & Qamar, D. (2023). Artificial intelligence and corporate innovation: A review and research agenda. Technological Forecasting and Social Change, 188, 122264.

Bogers, M., Chesbrough, H., & Moedas, C. (2018). Open innovation: Research, practices, and policies. California management review, 60(2), 5-16.

Broekhuizen, T., Dekker, H., de Faria, P., Firk, S., Nguyen, D. K., & Sofka, W. (2023). AI for managing open innovation: Opportunities, challenges, and a research agenda. Journal of Business Research, 167, 114196.

Burger-Helmchen, T. (2024). Crowdsourcing of Inventive Activities, AI, and the NIH Syndrome. Administrative Sciences, 14(11), 300.

Chesbrough, H. W. (2003). Open innovation: The new imperative for creating and profiting from technology. Harvard Business Press.

Chesbrough, H. W., & Appleyard, M. M. (2007). Open innovation and strategy. California management review, 50(1), 57-76.

Cricchio, J., Barabuffi, S., Crupi, A., & Di Minin, A. (2025). China's new knowledge brokers. A patent citations network analysis of the artificial intelligence open innovation ecosystem. Journal of Engineering and Technology Management, 76, 101870.

Deloitte (2023). Accelerare l'Innovazione nell'ecosistema salute: Strumenti e leve strategiche per cogliere le opportunità di investimento del PNRR.

https://www2.deloitte.com/it/it/pages/life-sciences-and-healthcare/articles/accelerareinnovazione-ecosistema-salute.html

Dodgson, M., Gann, D. & Salter, A. (2006). The role of technology in the shift towards open innovation: the case of Procter and Gamble. R&D Management, 36, 3, 333–364.

Fasnacht, D., & Fasnacht, D. (2018). Open innovation in the financial services (pp. 97130). Springer International Publishing.

Füller, J., Hutter, K., & Kröger, N. (2021). Crowdsourcing as a service–from pilot projects to sustainable innovation routines. International Journal of Project Management, 39(2), 183-195.

García-Muiña, F. E., Fuentes-Moraleda, L., Vacas-Guerrero, T., & Rienda-Gómez, J. J. (2019). Understanding open innovation in small and medium-sized museums and exhibition halls: An analysis model. International Journal of Contemporary Hospitality Management, 31(11), 4357-4379.

Grama-Vigouroux, S., Saidi, S., Berthinier-Poncet, A., Vanhaverbeke, W., & Madanamoothoo, A. (2020). From closed to open: A comparative stakeholder approach for developing open innovation activities in SMEs. Journal of Business Research, 119, 230-244.

Greco, M., Locatelli, G., & Lisi, S. (2017). Open innovation in the power & energy sector: Bringing together government policies, companies' interests, and academic essence. Energy Policy, 104, 316-324.

Hermawati, A., Nurwati, N., Suhana, S., Machmuddah, Z., & Ali, S. (2020). Satisfaction, HR, and open innovation in tourism sector. Journal of Open Innovation: Technology, Market, and Complexity, 6(4), 182.

Heusler, A. H., Foutz, N. Z., Spann, M., & Stich, L. (2025). The idea marketplace: Diversity, social capital, and innovation. Journal of the Academy of Marketing Science, 53(1), 150-171.

Hitchen, E. L., Nylund, P. A., Ferràs, X., & Mussons, S. (2017). Social media: Open innovation in SMEs finds new support. Journal of Business Strategy, 38(3), 21-29.

Jin, J., Guo, M., & Zhang, Z. (2019). Selective adoption of open innovation for new product development in high-tech SMEs in emerging economies. IEEE Transactions on Engineering Management, 69(2), 329-337.

Kajiura, M. (2012). Open innovation of consensus standard–cases of business model creation in ICT. International Journal of Enterprise Network Management, 5(2), 126143.

Li, Y., Chen, H., Wei, L., & Wei, L. (2024). Open Innovation, Organizational Resilience and the Growth of SMEs in Crisis Situations. IEEE Transactions on Engineering Management.

McKinsey & Company (2023). Building innovation ecosystems: Accelerating tech hub growth. https://www.mckinsey.com/industries/public-sector/our-insights/buildinginnovation-ecosystems-accelerating-tech-hub-growth

Mergel, I. (2021). Open innovation in the public sector: drivers and barriers for the adoption of Challenge. gov. In Digital Government and Public Management (pp. 94113). Routledge.

Messeni Petruzzelli, A., Murgia, G., & Parmentola, A. (2023). Opening the black box of artificial intelligence technologies: unveiling the influence exerted by type of organisations and collaborative dynamics. Industry and Innovation, 30(9), 1213-1243.

Morgan, D.L., Krueger, R.A. (1998). The Focus Group Kit vols. 1–6.

Naruetharadhol, P., Srisathan, W. A., Gebsombut, N., Wongthahan, P., & Ketkaew, C. (2022). Industry 4.0 for Thai SMEs: Implementing open innovation as innovation capability management. International Journal of Technology, 13(1), 48-57.

Radziwon, A., & Bogers, M. (2019). Open innovation in SMEs: Exploring interorganizational relationships in an ecosystem. Technological Forecasting and Social Change, 146, 573-587.

Roberts, D. L., & Spedale, S. (2025). Leadership Dynamics in Open Innovation: A Dynamic Process Model. British Journal of Management.

Sahoo, S., Kumar, S., Donthu, N., & Singh, A. K. (2024). Artificial intelligence capabilities, open innovation, and business performance–Empirical insights from multinational B2B companies. Industrial Marketing Management, 117, 28-41.

Sopra Steria (2023). The Open Innovation Report 2023 - Surviving the storm. https://www.soprasteria.com/newsroom/press-releases/details/the-open-innovationreport-2023

Statista (2024). Digital transformation - statistics & facts. https://www.statista.com/topics/6778/digital-transformation/#topicOverview

Steiber, A., & Alvarez, D. (2024). AI-driven digital business ecosystems: a study of Haier's EMCs. European Journal of Innovation Management.

# Marketing Innovation and Digital Technologies Integration in Luxury Brands: Evidence from Italy

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## Abstract

This study investigates how Italian luxury brands integrate digital technologies and marketing innovation in ways that align with their established brand identity. While the luxury sector is increasingly adopting tools like AI, AR/VR, and social media, existing research often overlooks how these changes are implemented in culturally embedded industries. Focusing on Italian firms, the research examines how digital initiatives are developed, how partnerships with external actors are managed, and how consistency is maintained across different channels. Using a qualitative multiple case study approach, the study draws on interviews with managers and consumers to better understand how innovation is shaped by internal capabilities and brand values. The findings aim to contribute to discussions on digital transformation in sectors where tradition and strategic differentiation remain key.

*Keywords: Luxury branding, digital technologies, marketing innovation, value creation, Italy*

### 1. Introduction & Background

Luxury brands are traditionally associated with symbolic value creation rooted in heritage, craftsmanship, and cultural capital. In an increasingly digital and data-driven environment, these brands are rethinking how they engage with consumers, communicate exclusivity, and deliver value through new technologies. Rather than replacing tradition, marketing innovation and digital tools offer new ways for luxury firms to strengthen their identity while staying relevant in a fast-evolving global market. This ongoing shift reflects a broader process of co-evolution between marketing and innovation, wherein firms must simultaneously adapt their internal capabilities and redefine how value is created, delivered, and perceived. For luxury brands, this involves integrating advanced digital technologies and marketing innovation with long-standing symbolic assets such as exclusivity, authenticity, and aesthetic heritage. While the literature on digital transformation and marketing innovation is expanding, most research focuses on general retail or tech-forward industries. Less is known about how firms in tradition-rich sectors like luxury fashion integrate digital innovation with brand heritage and symbolic value creation. This gap is particularly evident in culturally embedded contexts like Italy, where creativity, craftsmanship, and brand identity are tightly interwoven. Addressing this gap, this paper aims to how Italian luxury firms leverage digital tools and marketing innovation to co-evolve their value propositions while preserving exclusivity and authenticity.

## 2. Literature Review

This literature review synthesizes key academic contributions at the intersection of luxury branding, digital transformation, and marketing innovation. It is structured thematically to highlight conceptual advancements and identify underexplored areas that inform the research questions.

Digital Technologies in Luxury Marketing: Digital technologies are increasingly seen as strategic imperatives rather than optional tools, especially in luxury marketing. Plangger et al. (2022) argue that firms that frequently adopt emerging technologies such as artificial intelligence (AI), machine learning, and AR/VR lead in customer experience innovation and overall market performance. Historically, luxury brands approached digital with caution, concerned about maintaining exclusivity and symbolic capital in an open, accessible digital world (Rovai, 2018). Early literature characterized luxury's digital adaptation as reluctant and fragmented. However, in the last decade, a significant shift has occurred. AI-driven personalization, immersive AR/VR showrooms, and advanced data analytics are now commonly employed to simulate boutique experiences online while retaining luxury cues such as scarcity, intimacy, and storytelling (Athaide et al., 2024; Hoyer et al., 2020). The digital transformation of luxury is not merely about channel expansion, but about rethinking how symbolic value is digitally conveyed. Brands such as Gucci, Dior, and Bottega Veneta have launched integrated campaigns where technological interaction complements traditional brand codes, showing digital process in the sector.

Gap: Despite this shift, limited research investigates how digital technologies are strategically integrated in ways that uphold a brand's cultural heritage, aesthetic traditions, and symbolic distinctiveness.

Marketing Innovation and Luxury Consumer Engagement: In parallel to technological adoption, luxury brands are embracing marketing innovation as a means to connect with new generations while reinforcing prestige. Traditional luxury marketing was largely top-down and image-focused. In contrast, modern strategies incorporate twoway engagement through social media, influencer marketing, and user-generated content. Chanel's "We Love Coco" campaign, which engaged consumers through curated Instagram content, exemplifies this shift (Alonso, 2018). Other maisons like Louis Vuitton and Balmain use behind-the-scenes storytelling and livestreamed fashion shows to build transparency and emotional connection. Academic studies suggest that these strategies are not just communication tools; they influence consumer perception, loyalty, and willingness to pay (Godey et al., 2016). Experiential pop-ups, augmented reality filters, and mobile-exclusive launches reflect a reorientation toward experiential, participatory luxury that maintains emotional exclusivity. Marketing innovation, therefore, becomes a driver of symbolic value creation, not a departure from it.

Gap: Although consumer responses to these innovations are increasingly studied, there is still a lack of insight into how luxury brands internally manage and coordinate such campaigns, especially when involving external agencies, platforms, or influencers, to maintain coherence with brand identity.

Omnichannel Integration in Luxury Retail: Luxury brands have increasingly implemented omnichannel strategies to provide seamless, integrated experiences across physical and digital touchpoints (Guzzetti et al., 2024). Consumers no longer distinguish between online and offline: 68% of luxury shopping journeys begin online, even if the final purchase occurs in-store (Athaide et al., 2018). The pandemic accelerated digital adaptation, pushing brands to rethink flagship stores, invest in mobile-first platforms, and adopt virtual clienteling tools. Valentino's omnichannel expansion, which led to a 62% increase in online sales, is an

example of successful alignment between back-end integration and front-end experience (Belvedere et al., 2021). Yet omnichannel transformation involves more than digital tools, it requires cultural and structural change inside the organization. Sutanto et al. (2024) emphasize the importance of consistency across brand touchpoints to reinforce luxury positioning, and warn that disjointed experiences erode trust and symbolic equity.

Gap: While the technical and commercial aspects of omnichannel retail are well-documented, few studies explore the strategic and organizational enablers that luxury brands require to implement these initiatives while preserving brand coherence.

Value Creation and Co-Creation Through Innovation: Digital and marketing innovations in luxury are not only about efficiency or reach, they are central to value creation. This value is multifaceted: it strengthens the consumer experience (through personalization and interactivity), improves brand equity (through symbolic resonance and community), and firm performance (through new markets and revenue streams). Hoyer et al. (2020) describe this as a reconfiguration of the customer journey into one that is more immersive, participatory, and relational. Luxury consumers today are not passive recipients but active participants in brand storytelling. As Alonso (2018) shows, usergenerated content, influencer partnerships, and branded communities empower consumers to shape brand narratives, building loyalty and emotional investment. At the same time, luxury brands are leveraging digital platforms to scale these co-creation processes without compromising exclusivity. Yet this requires careful orchestration.

Gap: There is limited research on how luxury brands manage co-creation partnerships, especially with tech providers, platforms, and creatives, in ways that support symbolic brand integrity and long-term differentiation.

Toward a Research Agenda: Drawing on the gaps identified, this study aims to develop a research agenda at the intersection of brand strategy, marketing innovation, and digital transformation in the luxury context. It responds to the following unresolved questions:

- How do luxury firms integrate digital technologies in ways that align with cultural heritage and brand values?

- What role do external partnerships (e.g., tech agencies, influencers) play in shaping innovation strategies, and how are these collaborations governed?

- How do luxury firms manage internal structures and cultures to support consistent, omnichannel brand expression?

- What are the strategic trade-offs luxury brands face when balancing tradition with innovation?

By focusing on Italian luxury firms, an underexplored yet culturally significant context, this study contributes to understanding how innovation can be aligned with identity. It positions digital transformation not as a rupture from luxury's roots, but as a reconfiguration of symbolic value creation for the 21st century.

## 3. Methodology

This study adopts a qualitative multiple case study approach to explore how Italian luxury brands engage in digital transformation and marketing innovation while preserving brand identity and tradition. Case study methodology is well-suited for examining complex strategic phenomena embedded in specific cultural contexts (Yin, 2018). The research will include 5 to 7 Italian luxury firms from sectors such as fashion, accessories, and beauty, selected for

their visible engagement in digital innovation. Data collection will rely on two primary sources: (1) semi-structured interviews with key professionals (e.g., marketing, branding, or digital transformation managers), and (2) in-depth interviews with luxury consumers who have engaged with digital brand experiences (e.g., AR try-ons, digital campaigns, personalized e-commerce). These two perspectives will offer insights into how innovation is both developed and experienced. Secondary sources, such as corporate reports, websites, campaign materials, and media coverage, will be used to triangulate findings. A cross-case thematic analysis will be employed, first identifying themes within each case, then comparing across firms and consumer narratives to surface patterns in how digital innovation creates value while preserving symbolic capital.

Analysis Approach: Once data collection begins, qualitative data will be coded thematically using a grounded approach. Early categories will be derived from the literature on brand innovation, digital capabilities, and organizational identity. The goal is to uncover patterns in how luxury firms manage the tension between innovation and brand coherence. This methodological foundation will also serve to pilot and refine a broader research design for subsequent stages of the doctoral project, including potential comparative studies with other national contexts or value chain actors.

Questionnaries:
Target Respondents:
- Brand innovation managers
- Marketing directors or CMOs
- Digital transformation leads
- Sustainability or communication managers (if relevant)

Interview Duration: ~45–60 minutes
Format: Online or in-person, semi-structured interviews
Interview Themes & Example Questions:

1. Strategic Objectives and Innovation
- What are your strategic goals related to digital transformation?
- How do digital tools support your brand positioning or growth strategy?

2. Role of Brand Identity and Heritage
- How do brand values or heritage influence your innovation decisions?
- How do you ensure consistency across digital and physical channels?

3. External Collaborations and Partner Ecosystems
- Do you work with external partners (e.g., tech providers, agencies)?
- How are these partnerships managed to ensure brand coherence?
- What challenges or benefits arise from outsourcing parts of innovation?

4. Omnichannel and Customer Experience
- How is your brand integrating physical and digital customer journeys?
- What tools or platforms are key to your omnichannel strategy?

5. Future Outlook
- What do you see as the next big innovation priority for your brand?
- Where do you see the biggest internal capability gaps?
- How do you think the luxury sector will evolve digitally in the next 5 years?

## 4. Expected Contributions

This study contributes to the understanding of how luxury brands integrate digital technologies and marketing innovation in ways that align with their heritage and brand identity. By focusing on Italian firms, it highlights practices and challenges in a context where tradition and creativity are closely connected. The research also offers insights into how luxury companies manage internal structures and external collaborations to support

innovation while maintaining consistency across channels. These findings may support both academic discussions on brand transformation and practical considerations for managers navigating similar tensions between tradition and change.

## References


Alonso, T. (2018, June 21). Chanel: From Pop-Ups to Digital Strategies. FashionNetwork. (Online news article).

Ataide, A. A., Brandao Pinto da Cunha, A. M., Loureiro, S. M. C., Vrontis, D., Weber, Y., & Tsoukatos, E. (2018). Luxury on omni-channel retail: a literature review approach. Research Advancements in National and Global Business Theory and Practice, 14811483.

Athaide, G. A., Jeon, J., Raj, S. P., Sivakumar, K., & Xiong, G. (2025). Marketing innovations and digital technologies: A systematic review, proposed framework, and future research agenda. Journal of Product Innovation Management, 42(1), 144–165.

Belvedere, V., Martinelli, E. M., & Tunisini, A. (2021). Getting the most from Ecommerce in the context of omnichannel strategies. Italian Journal of Marketing, 2021(4), 331–349.

Godey, B., Manthiou, A., Pederzoli, D., Rokka, J., Aiello, G., Donvito, R., & Singh, R. (2016). Social media marketing efforts of luxury brands: Influence on brand equity and consumer behavior. Journal of Business Research, 69(12), 5833–5841.

Guzzetti, A., Crespi, R., & Belvedere, V. (2024). Phygital luxury experiences. A Corresponding author analysis on retail technologies. International Journal of Consumer Studies, 48(2), e13008.

Hoyer, W. D., Kroschke, M., Schmitt, B. H., Kraume, K., & Shankar, V. (2020). Transforming the customer experience through new technologies. Journal of Interactive Marketing, 51, 57–71.

Plangger, K., Grewal, D., de Ruyter, K., & Tucker, C. (2022). The future of digital technologies in marketing: A conceptual framework and an overview. Journal of the Academy of Marketing Science, 50(6), 1125-1134.

Rovai, S. (2018). Digitalisation, luxury fashion and "Chineseness": The influence of the Chinese context for luxury brands and the online luxury consumers experience. Journal of Global Fashion Marketing, 9(2), 116–128.

Sutanto, J. E., Harianto, E., Nursaid, & Krisprimandoyo, D. A. (2024). Revolutionizing the runway: How technological and marketing innovation fuse market sensing on marketing performance in fashion industry. Cogent Business & Management, 11(1), 233467.

# Strategic Integration of Conversational AI in Retail SMEs: Addressing Organizational Readiness and Budget Constraints

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## Abstract

This study examines the adoption of conversational artificial intelligence (AI) systems—chatbots, virtual assistants, and generative agents—by small and medium-sized enterprises (SMEs) in retail e-commerce. While existing research highlights potential benefits, little is known about SME adoption in practice. Using the Technology–Organization–Environment (TOE) framework, this study analyzes strategies, barriers, and drivers through semi-structured interviews with Italian e-commerce managers. Findings show that leadership vision often outweighs technical readiness, with customer service automation as the dominant use case. Yet challenges remain around balancing automation with human interaction, ensuring data quality and usability, and leveraging ecosystem partnerships. Hybrid human–AI models emerge as a practical pathway, reflecting the sector's need for scalable but customer-centric solutions. The study develops the theoretical discussion on SME-specific adoption dynamics and provides actionable insights for resource-constrained firms pursuing AI integration.

*Keywords: Customer Service Automation, Conversational AI, SMEs, Retail E-Commerce, Generative AI, Chatbots*

## 1. Introduction and Problem Statement

Small and medium-sized Italian companies operating mainly in the e-commerce retail sector represent a dynamic segment of the digital economy. Although they account for a minority of SMEs overall, their impact is growing: in the ATECO 47.91.1 category ("retail sale of any type of product via the internet"), over 41,700 businesses are expected in 2025 (ISTAT). Many of these firms are digital natives, structured from the outset to sell online via direct-to-consumer (D2C) channels, marketplaces, and social commerce, with business models based on digitized processes, lean management, and customer-centricity. Growth has been further accelerated by the pandemic and public initiatives such as Transition Plan 4.0 and regional digitization incentives.

Despite this momentum, retail SMEs face significant challenges, including intense competition, platform dependence, rising logistics costs, and scalability issues. In this context, conversational artificial intelligence (AI) systems—such as AI-powered chatbots, virtual assistants, and generative AI agents—are reshaping customer service, marketing, and operations. These tools promise benefits such as 24/7 availability, faster responses, lower

costs, and personalized engagement (Kumar et al., 2024; Kedi et al., 2024), yet their adoption is constrained by limited budgets, lack of internal technical skills, and immature digital infrastructures (Schönberger, 2023; Kumar et al., 2024). Organizational readiness also matters: firms require both robust infrastructure and adaptable cultures to support AI-driven change, while data availability—including structured product information and customer interaction histories—remains essential (Hau, 2023).

Current research often emphasizes barriers, user acceptance, or system design in SMEs (Rese et al., 2020; Tran et al., 2021), with less attention to integration strategies. While rule-based chatbots in service and sales have been studied, the strategic use of conversational generative AI—capable of adaptive, context-aware dialogue—remains underexplored (Kumar et al., 2024). This study addresses this gap by investigating how retail e-commerce SMEs can strategically integrate conversational AI, considering organizational readiness and budget constraints, and by offering scalable strategies aligned with SME capabilities.

## 2. Literature Review

**Conceptualizing Conversational AI Systems:** Conversational AI refers to software agents capable of interacting via natural language. These range from rule-based chatbots to advanced generative systems powered by large language models. In retail e-commerce SMEs, they support customer inquiries, product recommendations, lead generation, and 24/7 customer service (Kumar et al., 2024; Zeng et al., 2023). Generative agents, such as those built on GPT models, enable context-aware and adaptive dialogue (Kedi et al., 2024). However, much of the literature still emphasizes traditional chatbots, with conceptual boundaries between types often unclear (Pantano & Pizzi, 2020).

**AI Adoption in SMEs:** SMEs recognize the value of AI but face hurdles such as limited funding, skills gaps, and difficulties in embedding new technologies into existing workflows (Schönberger, 2023; Rizomyliotis et al., 2022). Organizational inertia, vendor dependence, and uncertain ROI further constrain adoption (Albats et al., 2023). Regional variations also exist, with digitally mature markets displaying faster uptake than emerging ones (Yusuf et al., 2024). Few studies examine how SMEs can mitigate these barriers through phased, low-risk approaches.

Two recurring adoption challenges are emphasized in the literature.

- Technical expertise: Many SMEs lack in-house AI capabilities, relying instead on external vendors or user-friendly solutions (Ridho, 2023; Hau, 2023).

- Data readiness: Effective conversational systems require not only structured product and customer data but also consistency, context, and accessibility (Li et al., 2020). Fragmented or low-quality datasets reduce system performance, while recent advances such as retrieval-augmented generation (RAG) highlight how integrating organizational data into generative models can enhance personalization and trust.

Budget constraints often limit experimentation with advanced or custom-built systems. SMEs tend to adopt scalable, cost-effective solutions such as off-the-shelf chatbots, cloud-based services, or open-source platforms (Thatavarthi, 2023; Alkudah & Almomani, 2024).

## 3. Theoretical Positioning

Building on SME adoption research, this study applies the Technology–Organization–Environment (TOE) framework (Tornatzky & Fleischer, 1990) to examine conversational AI adoption. In retail e-commerce, technological demands such as system interoperability, scalability, and integration with existing platforms intersect with organizational realities like

limited data readiness, managerial commitment, and workforce skills. These internal conditions are further shaped by external dependencies: eCommerce SMEs rely heavily on vendor ecosystems such as Shopify or Amazon, face compliance requirements under GDPR, and operate under competitive pressure to deliver real-time personalization (Schönberger, 2023; Schwaeke et al., 2025).

The interplay of these factors produces uneven adoption pathways. For some firms, strong alignment between data resources, leadership support, and ecosystem partnerships allows conversational AI to become a strategic enabler. For others, weak readiness or external pressures accelerate adoption faster than capabilities can keep pace, resulting in underutilization or failure. It is this dynamic configuration of resources, context, and strategy—rather than isolated enablers or barriers—that provides the theoretical foundation for this study.

## 4. Research Question and Objectives

This study is guided by the following research question:

How can retail e-commerce SMEs strategically integrate conversational AI systems, considering their organizational readiness, data readiness, and budget constraints?

To answer this, the study aims to:

- Identify enablers and barriers influencing AI adoption in retail SMEs.
- Examine organizational readiness, with specific attention to data readiness for personalization and customer acquisition, alongside technical capacity.
- Explore scalable implementation strategies tailored to SMEs.
- Analyze use cases of conversational generative AI in marketing and customer engagement, including hybrid human–AI service models.
- Develop a framework to support strategic, resource-aware adoption within the TOE framework.

## 5. Methodology

This study adopts a qualitative, exploratory design, grounded in an interpretivist perspective, to examine how retail e-commerce SMEs approach conversational AI integration. Semi-structured interviews were conducted with decision-makers from five Italian SMEs in the fashion, cosmetics, and jewelry subsectors, which are highly reliant on digital customer interaction (ISTAT). Firms were selected according to the EU SME definition (<50 employees, ≤€10M turnover/balance sheet).

Interviews explored motivations, barriers, and strategies for AI adoption, with particular attention to resource constraints and organizational reasoning. Data were thematically analyzed using both inductive coding and the TOE framework as a guiding lens. Codes captured technological readiness, organizational capacity, leadership vision, and environmental pressures. Cross-case comparison enabled identification of recurring themes and divergent approaches across subsectors.

## 6. Findings and Contributions

The interviews reveal several dynamics shaping the adoption of conversational AI. Leadership support and a clear strategic vision often outweighed technical readiness, with firms advancing despite limited infrastructure. Customer service automation was the dominant use case, yet managers stressed the need to maintain a human element, pointing

toward hybrid models where AI manages routine queries and staff handle higher-value interactions. Data readiness emerged as critical: while structured customer histories enable personalization, fragmented or incomplete data hinder outreach to new customers and limit AI potential. Generative AI can partly bridge these gaps by accelerating enrichment and classification, making readiness less daunting for SMEs. Ultimately, progress depends on treating data as a business asset rather than a purely technical concern. Several SMEs also emphasized reliance on external vendors and platforms, underlining the role of ecosystem partnerships in compensating for resource gaps.

The results suggest that SMEs benefit most from phased, resource-conscious adoption strategies that balance efficiency with differentiation in customer experience. Rather than prematurely pursuing advanced capabilities, firms are advised to focus on data preparedness, select use cases aligned with strategy, and combine AI-driven efficiency with human empathy. These insights provide a more nuanced understanding of how SMEs can realistically and strategically integrate conversational AI under resource constraints.

## References


Albats, E., Smith, L., & Diba, M. (2023). Understanding AI adoption in SMEs: Interactions across functional domains. Journal of Small Business Management.

Alkudah, K., & Almomani, I. (2024). Open-source AI and retail automation: Opportunities for SMEs. International Journal of Retail & Distribution Management, 52(1), 102–117.

Cillo, P., & Rubera, G. (2025). Generative AI in innovation and marketing processes: A roadmap of research opportunities. Journal of the Academy of Marketing Science, 53, 684–701.

Dwivedi, Y. K., Kshetri, N., Hughes, L., Slade, E. L., Jeyaraj, A., Kar, A. K., Baabdullah, A. M., Koohang, A., Raghavan, V., & Ahuja, M. (2023). Generative artificial intelligence in marketing: Applications, opportunities, challenges, and research agenda. International Journal of Information Management, 75, 102716.

Hau, Y. S. (2023). AI and organizational culture in SMEs. International Journal of Information Management, 68, 102582.

Huang, M.-H., & Rust, R. T. (2024). The Caring Machine: Feeling AI for Customer Care. Journal of Marketing, 88(5), 1–23.

Kedi, M., Zhang, L., & Lee, Y. (2024). Integrating conversational AI in SMEs. AI and Society.

Kumar, V., Dixit, A., Javalgi, R., & Sharma, A. (2024). AI-powered marketing: What, where, and how? Journal of the Academy of Marketing Science, 52(1), 5–29.

Li, Y., Wang, S., & Gao, J. (2020). Personalized chatbot services in e-commerce: Applications and challenges. Electronic Commerce Research and Applications, 40, 100954.

Ridho, A. (2023). AI readiness and cost-effective tools for SMEs. Technology in Society, 75, 102353.

Rizomyliotis, P., Konstantoulaki, K., & Kostopoulos, I. (2022). Intelligent communication and customer satisfaction in SMEs: The role of AI. Journal of Business Research, 143, 191–202.

Schönberger, D. (2023). Challenges in AI adoption for SMEs: A cross-continental perspective. Technological Forecasting and Social Change, 190, 122436.

Schwage, S., Maresch, D., & Gartner, J. (2025). The new normal: The status quo of AI adoption in SMEs. Technological Forecasting and Social Change, 198, 122945.

Thatavarthi, A. (2023). AI integration strategies in e-commerce platforms. Procedia Computer Science, 212, 839–846.

Zeng, Y., Liao, Y., & Wang, H. (2023). Chatbots and customer engagement in retail: An interactive marketing perspective. Journal of Interactive Marketing, 61, 35–49.

# Integrating Gamification into the Consumer Journey: A Conceptual Model and Research Proposition

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## Abstract

This paper develops a conceptual framework explaining how gamification mechanisms influence consumer behavior across the Consumer Decision Journey (CDJ). While gamification has gained prominence in marketing, its theoretical integration with decision-making remains fragmented. We propose that game elements - such as challenges, points, narratives, and social comparisons - activate psychological levers (e.g., curiosity, mastery, urgency, social validation) at each CDJ stage. Drawing from consumer behavior and gamification literature, we develop five propositions illustrating how gamified design enhances problem recognition, search, evaluation, purchase, and post-purchase engagement. A synthesis model guides future empirical inquiry and managerial application, bridging design logic with consumer psychology and advancing theory on digitally mediated journeys.

*Keywords: Gamification, Consumer Journey, Digital Marketing, Consumer Behaviour, Conceptual Paper.*

## 1. Introduction

Gamification (i.e. the use of game-design elements in non-game contexts) has become a prominent strategy to enhance consumer experiences, stimulate engagement, and influence behavior (Deterding et al., 2011; Huotari & Hamari, 2017). When aligned with broader objectives, such as sustainability, gamified features can effectively shape pro-environmental behavior through engaging interactions (Mulcahy et al., 2020). As digital environments increasingly mediate brand–consumer relationships, scholars have explored the motivational and behavioral effects of gamification (Hamari et al., 2014). Yet, research has primarily focused on isolated applications like loyalty programs (Hofacker et al., 2016) or branded apps (Eppmann et al., 2018), limiting a holistic view of its strategic potential across the entire decision process. For example, gamified features in e-commerce have been shown to boost emotional engagement and shape consumer attitudes (Huang & Benyoucef, 2013).

We argue that gamification is underleveraged across the full Consumer Decision Journey (CDJ) - from problem recognition to post-purchase. The CDJ, as conceptualized by Engel et al. (1995), Puccinelli et al. (2009), and Lemon and Verhoef (2016), structures consumer behavior into sequential yet interactive stages. However, gamification research has mostly emphasized downstream outcomes like loyalty and advocacy, neglecting earlier phases such as need recognition and evaluation.

To fill this gap, this paper proposes a stage-based conceptual framework that integrates gamification mechanisms across each CDJ stage. We draw on gamification literature,

decision-making theory, and digital marketing to explain how game elements can enhance consumer motivation, cognition, and behavior throughout the journey.

The paper aims to develop a theory-driven model that aligns gamification tools (e.g., challenges, narratives, or social comparisons) with consumer psychological drivers at each decision stage. Our contributions are threefold. First, we map game elements to motivational goals across the CDJ. Second, we identify key psychological mechanisms (e.g., curiosity, mastery, urgency, belonging) that link gamified design to consumer behavior. Third, we propose five testable propositions and directions for future research, responding to calls for more integrative, actionable models in marketing (Kindermann et al., 2023; Golder et al., 2012; Högberg et al., 2019a).

## 2. Theoretical Background

Gamification refers to the use of game-design elements in non-game contexts to motivate and influence behavior (Deterding et al., 2011). Its effectiveness in marketing depends on how well game mechanisms align with consumers' psychological needs, a connection still underdeveloped in many contexts (Li et al., 2024). Increasingly used to foster engagement and loyalty through points, badges, and narrative quests, gamification can also create experiential value aligned with broader goals like sustainability (Huotari & Hamari, 2017; Hofacker et al., 2016; Zhou et al., 2023). While studies highlight its positive effects on enjoyment, perceived usefulness, and behavioral intentions (Eppmann et al., 2018), most focus on isolated touchpoints, such as loyalty programs or branded apps, neglecting its role across the broader decision cycle (Hamari et al., 2014).

Gamification literature tends to follow either a design-centric or psychology-centric lens, but few works connect game mechanics to consumer decision-making stages. Understanding this alignment, especially in value co-creation contexts, could provide a stronger foundation for marketing strategies (Xu et al., 2017).

The Consumer Decision Journey (CDJ), described by Engel et al. (1995), Puccinelli et al. (2009), and Lemon and Verhoef (2016), outlines five sequential stages: problem recognition, information search, evaluation, purchase, and post-purchase. Despite its wide adoption, the model has been criticized for its linearity, as digital interactions introduce complexity through micro-moments and emotional nudges (Whittaker et al., 2021; Court et al., 2009; Edelman, 2010). Particularly in gamified or app-mediated contexts, journeys are increasingly non-linear, requiring models that capture iterative and interactive experiences (Lemon & Verhoef, 2016; Abou-Shouk & Soliman, 2021). Yet, there are no studies that integrate gamification with CDJ stages in a systematic and theory-driven manner.

We argue that gamification, when aligned with consumers' motivational goals, can enrich experiences across the CDJ. However, current practices often remain superficial, lacking systematic motivational alignment (Högberg et al., 2019b). Building on Eppmann et al.'s (2018) conceptualization of gameful experiences—enjoyment, absorption, creative thinking, activation, and affect—we propose a framework linking specific gamification elements to psychological levers at each CDJ stage. This responds to recent calls for integrating diverse theoretical insights into richer conceptual models (Kindermann et al., 2023; Golder et al., 2012) and offers guidance for designing gamified experiences that empower and engage consumers throughout their journey (Mishra & Malhotra, 2021).

## 3. Conceptual Framework: Gamification Across the Consumer Journey

This section introduces a conceptual framework mapping gamification mechanics to consumer motivations across the CDJ stages: problem recognition, information search, evaluation, purchase, and post-purchase (Figure 1).

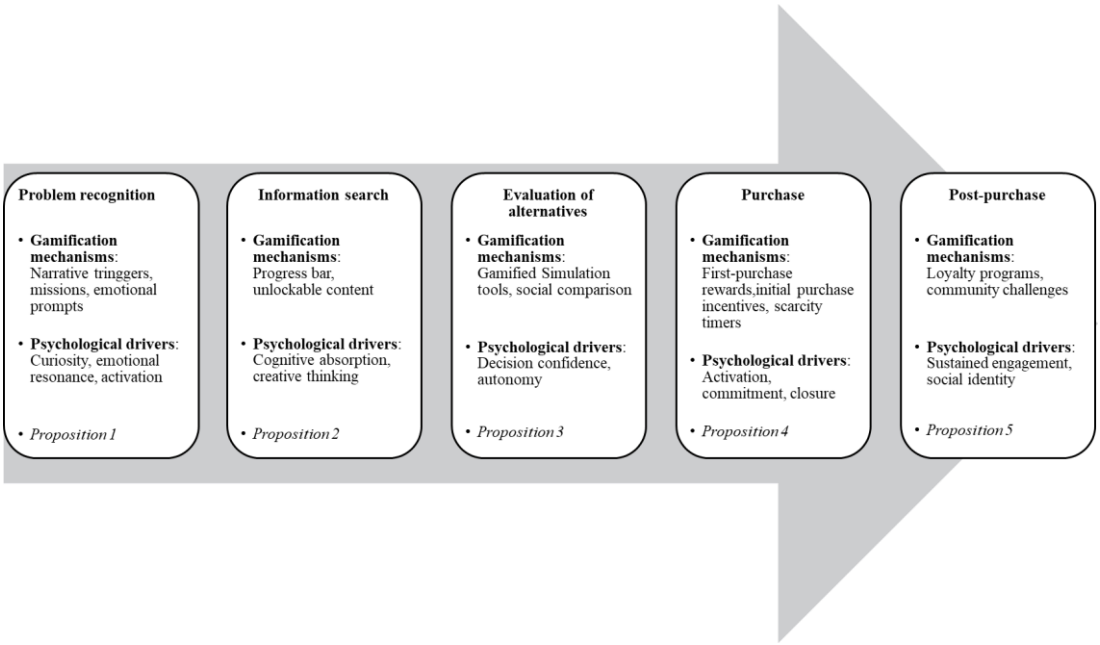



**Figure 1:** Conceptual Framework Gamification and the Consumer Decision Journey
(Source: Authors' elaboration, 2025)

Drawing from consumer behaviour literature (i.e. curiosity, autonomy, mastery, and belonging), we demonstrate how game design elements can strategically guide cognitive, emotional, and behavioral responses.

In the problem recognition stage, gamified elements like identity quizzes and discovery prompts activate curiosity and emotional reflection, prompting consumers to recognize latent needs (Yang et al., 2023). During information search, mechanisms such as unlockable content and interactive tutorials deliver feedback and progress markers, enhancing cognitive absorption and making exploration intrinsically rewarding (Högberg et al., 2019a).

At evaluation, gamified comparison tools and rating challenges simplify complex trade-offs, strengthening decision confidence and perceived mastery. In the purchase phase, features like countdown timers and symbolic milestones introduce urgency and emotional gratification, transforming transactions into meaningful achievements (Li et al., 2023). Finally, the post-purchase stage leverages community missions, loyalty tiers, and review incentives to reinforce habits, social belonging, and ongoing engagement.

Gamification here is not a superficial tactic but a strategic architecture aligned with consumer psychology. It enables firms to design experiences that move consumers across decision phases while cultivating long-term involvement (Xi & Hamari, 2020; Behl et al., 2022).

To support this model, Table 1 summarizes CDJ stages, core goals, psychological levers, and corresponding gamification mechanisms. Figure 1 visually illustrates the integrated dynamics between design features and motivational states across the journey.

| CDJ Stage | Core Consumer Goal | Psychological Lever | Gamification Mechanism *(Examples)* |
|---|---|---|---|
| ***Problem Recognition*** | Realize need or latent desire, generate needs | Curiosity, Identity Alignment | Narrative prompts, Discovery missions, Persona quizzes, thematic missions |
| ***Information Search*** | Explore and understand brand/product options/knowledge | Autonomy, Perceived Competence, Goal Progress | Unlockable content, Interactive tutorials, Achievement badges |
| ***Evaluation*** | Compare and decide among alternatives | Mastery, Decision Confidence, Trust, social proof | Gamified filters, Rating challenges, Comparison games |
| ***Purchase*** | Finalize the transaction | Urgency, Emotional Reward, Gratification | Countdown timers, Milestone celebrations, Surprise offers, social referrals |
| ***Post-Purchase*** | Continue engagement and co-create value, build loyalty | Belonging, Habit Formation, Self-expression | Community missions, Loyalty tiers, Review incentives |

**Table 1:** Mapping Gamification to the Consumer Decision Journey (Source: Authors' elaboration, 2025).

This structured conceptual framework sets the foundation for formal theoretical propositions detailed in the subsequent section.

## 4. Proposition Development

Building on the conceptual framework outlined above, we propose a series of theoretical propositions that articulate precisely how gamification influences consumer behavior across different stages of the CDJ. These propositions operationalize the psychological levers identified previously (i.e. curiosity, autonomy, mastery, urgency, and belonging), illustrating clear, testable relationships between gamified mechanisms and consumer responses. At the earliest CDJ stage, problem recognition, consumers may lack explicit awareness of their latent needs. Here, gamified mechanisms like exploratory quizzes and symbolic tasks stimulate curiosity and foster identity alignment, promoting self-reflection. Such reflective gamification can especially enhance awareness of sustainability-related behaviors and lifestyle gaps, suggesting the first proposition:

*Proposition 1. Gamification mechanics that stimulate curiosity (e.g., quizzes, exploratory tasks) enhance consumer problem recognition by prompting self-reflection on latent needs or lifestyle gaps.*

Transitioning to information search, consumers aim to resolve uncertainty by acquiring product-related knowledge. At this stage, autonomy and competence become pivotal motivational drivers (Ryan & Deci, 2000). Gamification techniques such as unlockable content, interactive tutorials, and exploration rewards facilitate active learning and cognitive engagement. Thus, the second proposition is derived:

*Proposition 2. Gamified tools that support mastery-oriented discovery (e.g., interactive guides, unlockable content) increase the depth and persistence of consumer information search.*

In the subsequent evaluation phase, consumers engage in comparing alternatives, a cognitively demanding process often associated with decision fatigue. Gamified decision aids, including visual comparisons, rating challenges, and simulated environments, can simplify complex decisions, enhancing perceived mastery and reducing cognitive load. Consequently, we propose the third proposition:

*Proposition 3. Gamification elements that create cognitive challenge and comparison (e.g., product simulations, rating games) improve the quality of alternative evaluation.*

At the purchase stage, the consumer decision culminates, significantly influenced by emotional triggers and urgency. Mechanisms such as countdown timers and symbolic milestones embed emotional significance, reinforcing immediate conversion through heightened urgency and gratification (García-Jurado et al., 2021). Hence, our fourth proposition emerges:

*Proposition 4. Gamification mechanics invoking urgency and symbolic reward (e.g., countdowns, milestone celebrations) increase purchase likelihood by leveraging time-sensitive motivational levers.*

Finally, post-purchase experiences remain essential for sustained consumer relationships and ongoing brand engagement. Gamification strategies like community missions and loyalty tiers facilitate identity expression, habitual engagement, and co-creation of value, fostering emotional bonds and long-term loyalty. The fifth proposition thus states:

*Proposition 5. Gamified experiences that promote community engagement and reward continuity (e.g., loyalty tiers, review missions) strengthen post-purchase behavior through habit formation and identity expression.*

Collectively, these propositions provide clearly defined theoretical pathways, explicitly guiding future empirical research and offering practical insights for strategically integrating gamification across the CDJ.

## 5. Discussion and Future Research

### 5.1 Theoretical and Managerial Implications

This paper advances marketing theory by conceptually integrating gamification across the full CDJ, responding to calls for comprehensive engagement models (Huotari & Hamari, 2017; Lemon & Verhoef, 2016). It aligns game elements (e.g. challenge, progression, and social incentives), with psychological drivers like curiosity, autonomy, and commitment (Deterding et al., 2011; Eppmann et al., 2018), contributing to a dynamic, consumer-centric theory of gamification (Kindermann et al., 2023). The proposed propositions offer testable pathways and invite integration with self-determination and flow theory.

Managerially, the framework offers actionable guidance for designing gamified experiences aligned with each CDJ phase. Beyond loyalty programs, marketers should engage consumers early using tools like narrative prompts and exploratory challenges. Tailoring gamified features to stage-specific emotions, such as mastery during evaluation or belonging post-purchase, can enhance engagement and co-creation (Dzandu et al., 2022). The model also fosters cross-functional integration of UX, behavioral design, and strategy. In the face of digital fatigue, gamification provides an intrinsically motivating alternative to traditional promotions.

## 5.2 Future Research Agenda

The framework suggests several avenues for further inquiry. First, future studies should empirically validate how specific gamification mechanics affect psychological processes across CDJ stages. Experimental and field research can clarify how combinations of mechanics and motivations shape journey progression.

Second, scholars should explore boundary conditions that influence gamification's impact. Game features like leaderboards may drive engagement in some contexts but reduce it in others. Cross-cultural and segmentation studies can reveal how gamification interacts with traits, norms, market maturity, and product categories.

Third, research should address temporal dynamics: Do gamified touchpoints build loyalty over time or lose effectiveness due to novelty wear-off? Longitudinal studies can assess how early-stage gamification influences long-term behaviors like advocacy.

Fourth, future work should explore the interplay between gamification and emerging technologies (e.g., AI, avatars, AR). Personalized, real-time game elements may reshape decision quality and value creation across the CDJ. Domain-specific applications (e.g., sustainability, health, education) also raise new opportunities and ethical questions.

Finally, more work is needed on how gamification alters consumption meanings. As brands embed game mechanics into value propositions, researchers should examine consumer interpretations. Do gamified purchases feel playful, manipulative, or identity-affirming? Such inquiry can enrich theory on experiential consumption and brand relationships.

## 6. Conclusion

This paper proposes a conceptual framework integrating gamification into the Classical CDJ, offering new insight into how gameful design can guide motivations and behaviors across the consumer journey. Moving beyond isolated applications, it positions gamification as a strategic logic for experience orchestration.

By linking gamification to stage-specific psychological mechanisms, this work advances both gamification and decision-making theory. It answers calls for actionable, theory-driven models that bridge scholarship and practice, while emphasizing the need for contextual alignment between mechanics and consumer needs.

The propositions and future research directions provide a foundation for empirical testing and cross-contextual extension. Practically, the model encourages marketers to view gamification not merely as a tool, but as a strategic driver for shaping meaningful consumer–brand interactions. Ultimately, this work supports a more integrated, purposeful application of gamification in marketing that goes beyond driving engagement to architecting motivationally aligned, context-sensitive consumer experiences.

## References

Abou-Shouk, M., & Soliman, M. (2021). The impact of gamification adoption intention on brand awareness and loyalty in tourism: The mediating effect of customer engagement. *Journal of Destination Marketing & Management*, *20*, 100559.

Behl, A., Jayawardena, N., Pereira, V., Islam, N., Del Giudice, M., & Choudrie, J. (2022). Gamification and e-learning for young learners: A systematic literature review, bibliometric analysis, and future research agenda. *Technological Forecasting and Social Change*, *176*, 121445.

Deterding, S., Sicart, M., Nacke, L., O'hara, K., & Dixon, D. (2011). Gamification. using game-design elements in non-gaming contexts. In *CHI'11 extended abstracts on human factors in computing systems* (pp. 2425-2428).

Dzandu, M. D., Hanu, C., & Amegbe, H. (2022). Gamification of mobile money payment for generating customer value in emerging economies: The social impact theory perspective. *Technological Forecasting and Social Change*, *185*, 122049.

Engel, J. F., Blackwell, R. D., & Miniard, P. W. (1995). Consumer behavior (Int. ed.). *Florida: The Dryden Press*.

Eppmann, R., Bekk, M., & Klein, K. (2018). Gameful experience in gamification: Construction and validation of a gameful experience scale [GAMEX]. *Journal of interactive marketing*, *43*(1), 98-115.

García-Jurado, A., Torres-Jiménez, M., Leal-Rodríguez, A. L., & Castro-González, P. (2021). Does gamification engage users in online shopping?. *Electronic Commerce Research and Applications*, *48*, 101076.

Golder, P. N., Mitra, D., & Moorman, C. (2012). What is quality? An integrative framework of processes and states. *Journal of marketing*, *76*(4), 1-23.

Hamari, J., Koivisto, J., & Sarsa, H. (2014, January). Does gamification work?--a literature review of empirical studies on gamification. In *2014 47th Hawaii international conference on system sciences* (pp. 3025-3034). Ieee.

Hofacker, C. F., De Ruyter, K., Lurie, N. H., Manchanda, P., & Donaldson, J. (2016). Gamification and mobile marketing effectiveness. *Journal of Interactive Marketing*, *34*(1), 25-36.

Högberg, J., Ramberg, M. O., Gustafsson, A., & Wästlund, E. (2019b). Creating brand engagement through in-store gamified customer experiences. *Journal of Retailing and Consumer Services*, *50*, 122-130.

Högberg, J., Shams, P., & Wästlund, E. (2019a). Gamified in-store mobile marketing: The mixed effect of gamified point-of-purchase advertising. *Journal of Retailing and Consumer Services*, 50, 298-304.

Huang, Z., & Benyoucef, M. (2013). From e-commerce to social commerce: A close look at design features. *Electronic Commerce Research and Applications*, *12*(4), 246-259.

Huotari, K., & Hamari, J. (2017). A definition for gamification: anchoring gamification in the service marketing literature. *Electronic markets*, *27*(1), 21-31.

Kindermann, B., Wentzel, D., Antons, D., & Salge, T. O. (2024). Conceptual contributions in marketing scholarship: Patterns, mechanisms, and rebalancing options. *Journal of marketing*, *88*(3), 29-49.

Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of marketing*, *80*(6), 69-96.

Li, M., Jiang, Z. J., & Ma, G. (2023). The puzzle of experience vs. memory: Peak-end theory and strategic gamification design in M-commerce. *Information & Management*, *60*(2), 103749.

Li, M., Lu, M., Akram, U., & Cheng, S. (2024). Understanding how customer social capital accumulation in brand communities: A gamification affordance perspective. *Journal of Retailing and Consumer Services*, *78*, 103761.

Mishra, S., & Malhotra, G. (2021). The gamification of in-game advertising: Examining the role of psychological ownership and advertisement intrusiveness. *International Journal of Information Management*, *61*, 102245.

Mulcahy, R., Russell-Bennett, R., & Iacobucci, D. (2020). Designing gamified apps for sustainable consumption: A field study. *Journal of Business Research*, *106*, 377-387.

Puccinelli, N. M., Goodstein, R. C., Grewal, D., Price, R., Raghubir, P., & Stewart, D. (2009). Customer experience management in retailing: understanding the buying process. *Journal of retailing*, *85*(1), 15-30.

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary educational psychology*, *25*(1), 54-67.

Whittaker, L., Mulcahy, R., & Russell-Bennett, R. (2021). 'Go with the flow'for gamification and sustainability marketing. International Journal of Information Management, 61, 102305.

Xi, N., & Hamari, J. (2020). Does gamification affect brand engagement and equity? A study in online brand communities. *Journal of Business Research*, 109, 449-460.

Xu, F., Buhalis, D., & Weber, J. (2017). Serious games and the gamification of tourism. *Tourism management*, *60*, 244-256.

Yang, X., Yang, J., Hou, Y., Li, S., & Sun, S. (2023). Gamification of mobile wallet as an unconventional innovation for promoting Fintech: An fsQCA approach. *Journal of Business Research*, *155*, 113406.

Zhou, F., Lin, Y., Mou, J., Cohen, J., & Chen, S. (2023). Understanding the dark side of gamified interactions on short-form video platforms: Through a lens of expectations violations theory. *Technological Forecasting and Social Change*, *186*, 122150.

# New Frontiers for Value Co-Creation in the Entertainment Industry

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## Abstract

This paper investigates the evolving role of Artificial Intelligence (AI) in reshaping value co-creation within the entertainment industry. Drawing on the theoretical foundations of Service-Dominant (S-D) logic, customer engagement, and socio-technical frameworks, the study explores how AI integration enhances or hinders customer participation in cocreation processes. Through a qualitative analysis it examines real-world applications of AI, such as personalization engines, generative tools, and predictive analytics. The findings reveal a dual-track model of value co-creation: (1) Human-Machine Co-creation, where AI augments user experience through personalization and immersion; and (2) Customer-Company Co-creation, rooted in emotional bonding and symbolic participation. While AI can deepen engagement and streamline creative processes, intrusive implementations risk alienating users and eroding brand authenticity. Case studies highlight that customer participation thrives when AI is adopted transparently and respectfully to support human creativity. Conversely, overreliance on AI in emotionally or culturally significant domains can damage trust and weaken the brand-fan relationship. The study concludes that effective AI deployment requires ethical design, narrative sensitivity, and strategic alignment with human values. These insights offer practical guidance for marketers, policymakers, and researchers navigating AI-enabled co-creation in the digital economy.

*Keywords: Artificial Intelligence, Innovative Marketing, Value co-creation, Customer Engagement*

## 1. Introduction

In an era of accelerating digital transformation, the entertainment industry has become a fertile ground for technological experimentation and consumer engagement. Fuelled by advancements in Artificial Intelligence (AI), companies are rapidly reshaping how content is created, distributed, and consumed (Hallur et al., 2021). From recommendation systems on platforms like Netflix and Spotify to generative AI tools in music, film, and gaming, intelligent technologies are no longer confined to backend efficiencies—they now actively shape the emotional and symbolic experiences at the heart of entertainment. This shift represents more than a technical upgrade; it marks a cultural and strategic inflection point where machines participate in co-creating value alongside humans.

The implications of this evolution are profound. Marketing scholarship has increasingly adopted the lens of value co-creation, particularly through the Service-Dominant (S-D) logic proposed by Vargo and Lusch (2004, 2008), which reframes value as something that emerges through collaborative interaction rather than being embedded in products. As AI technologies become more autonomous and generative, their role within this co-creative framework grows more complex. AI is no longer just an enabler of personalization or

automation—it can act as a semi-autonomous contributor to creative processes, content generation, and even customer experience design. This raises essential questions about the nature of human participation: Is AI deepening the customer's role as a co-creator of value, or is it displacing it?

Existing research has provided important insights into the use of AI in personalization, predictive analytics, and customer engagement (Gama & Magistretti, 2025; Banh & Strobel, 2023). Scholars have also highlighted the potential of AI to enhance customer experience by making content more relevant, timely, and interactive (Chandra & Rahman, 2024). However, much of this work has focused on AI's operational or technical capabilities, with limited attention paid to its broader impact on the relational and symbolic dimensions of marketing—especially in emotionally charged, creative industries like entertainment. The few studies that touch on co-creation with AI tend to treat technology as a background tool rather than a visible, influential actor in the value formation process. As AI becomes more embedded in storytelling, fandom, and identitybased engagement, these limitations become more pressing.

This paper seeks to fill that gap by investigating the evolving interplay between AI and customer participation in the value co-creation process. Specifically, it explores under what conditions AI integration enhances or hinders customer participation in value cocreation processes within the entertainment industry. This question is especially urgent in sectors where value is co-produced not only through functionality and convenience but through emotional resonance, symbolic meaning, and creative agency. The goal is to understand how AI can serve as a supportive partner in co-creation—augmenting rather than replacing human input—and to identify the risks associated with misaligned or overly intrusive implementations. By combining theoretical insights from S-D logic, customer experience theory, and socio-technical systems with empirical case analysis, this study offers a framework for navigating the promises and perils of AI-enabled co-creation in one of the most dynamic and culturally significant domains of the digital economy.

## 2. Literature Review

The growing influence of digital technologies has brought forth a fundamental shift in how organizations operate, compete, and engage with customers. This process, known as digital transformation, is more than a technological upgrade—it signifies a deep, structural change that reshapes the identity and functionality of organizations (Hovorka & Mueller, 2025). At the heart of this transformation is Artificial Intelligence (AI), a general-purpose technology capable of adapting across industries, reshaping both operational processes and strategic orientations (Gama & Magistretti, 2025). AI in marketing refers to the use of advanced algorithms and computational models—ranging from machine learning to generative AI—to analyse consumer data, predict behaviours, automate decisions, and personalize experiences at scale. As digitalization accelerates, AI has become an essential enabler of data-driven marketing strategies, offering tools to enhance segmentation, customer relationship management, dynamic pricing, and targeted content delivery.

The origins of this evolution trace back to foundational work on information theory, such as Claude Shannon's conceptualization of the "bit" in 1948, which paved the way for digitized information processing (Hilbert, 2020). Since then, the widespread availability of broadband internet, the exponential growth of data, and advances in storage and computing power have set the stage for AI's rise as a central component of contemporary marketing. These developments have enabled firms to integrate AI into existing workflows and customer journeys, often reshaping the interface between brand and consumer in the process. AI's versatility lies in its ability to learn from data without explicit programming, through subfields like machine learning (ML), which identifies patterns and improves performance over time,

and deep learning (DL), which leverages neural networks to handle unstructured and high-dimensional data. The latest wave— generative artificial intelligence (GAI)—introduces a powerful shift: instead of simply analysing or classifying data, AI systems now possess the ability to generate new content, ideas, and narratives. This opens new avenues for co-creation with customers, personalized storytelling, and dynamic campaign optimization (Banh & Strobel, 2023).

From a strategic perspective, AI is not merely an automation tool; it is increasingly viewed as a core capability that drives innovation and competitive advantage. Organizations are embedding AI into their innovation management processes, enabling faster experimentation, adaptive product development, and more effective market sensing (Gama & Magistretti, 2025). However, alongside these opportunities, challenges persist— including data privacy concerns, algorithmic transparency, ethical considerations, and the potential depersonalization of customer interactions. Despite these tensions, the momentum of AI adoption in marketing is undeniable. As digital transformation continues to reshape organizational landscapes, AI is expected to become even more embedded in marketing decision-making, pushing boundaries around personalization, engagement, and customer empowerment.

The integration of Artificial Intelligence (AI) into marketing has introduced new dynamics to the value co-creation process. Value co-creation has emerged as a cornerstone of contemporary marketing thought, reflecting a shift from firm-centred production models toward collaborative processes of value generation between multiple actors. This perspective is rooted in the service-dominant (S-D) logic proposed by Vargo and Lusch (2004, 2008), which reconceptualizes value not as something embedded in goods or services, but as something co-created through interactions, experiences, and the integration of resources. The S-D logic asserts that service—the application of skills and knowledge for the benefit of another party—is the fundamental basis of exchange, and that all actors (individuals, firms, institutions) are resource integrators operating within dynamic networks. As the framework has evolved, it has emphasized the inherently experiential, interactive, and phenomenologically determined nature of value, while also highlighting the importance of systemic connections and the need for new, non-goodsdominant language to describe marketing processes. In their extensive revisitation of foundational premises, Vargo and Lusch (2008) reinforced the notion that value is always co-created, contextually interpreted, and shaped through interactions among social and economic actors.

This foundational shift in understanding value has been amplified in the digital era by the emergence of Artificial Intelligence (AI) as a key participant in co-creation. AI-enabled technologies now act as active collaborators in value processes, giving rise to a new mode of interaction: human-machine value co-creation. These intelligent systems—ranging from chatbots and recommendation engines to generative AI models—enable real-time, responsive, and personalized engagement with customers, shaping both experience and outcome (Bosisio, 2024; Chandra & Rahman, 2024). Unlike traditional tools of automation, AI is capable of learning, adapting, and even generating new content, transforming it into an operant resource that contributes meaningfully to the co-creation process. Whether through deliberate engagement mechanisms like customization interfaces or through ambient systems that respond to user behavior and feedback, AI systems extend the co-creative role beyond human actors. As such, they mirror the S-D logic's emphasis on interactive networks and resource integration, while also introducing new forms of agency into the co-creation landscape.

Nonetheless, the involvement of AI does not diminish the centrality of human-centred value co-creation. Traditional customer-company co-creation remains vital, particularly in contexts that rely on empathy, shared meaning, and goal alignment (Tuunanen et al.,

2024). In what S-D logic refers to as the "joint sphere" of interaction, customers and firms collaborate through dialogue, mutual understanding, and context-sensitive service experiences. Rather than replacing these mechanisms, AI augments them—enhancing personalization, responsiveness, and co-decision making, especially when designed to simulate human-like traits such as empathy and adaptivity (Chandra & Rahman, 2024). The co-creation ecosystem is thus increasingly hybrid, comprising a blend of humanhuman, human-AI, and platform-mediated interactions (Wang et al., 2024). These networked exchanges exemplify the S-D logic view of value creation as a systemic, multiactor process. In this way, AI's integration into marketing not only reflects a technological advancement but also deepens the theoretical and practical dimensions of value cocreation, reaffirming the customer's role as a proactive, empowered, and contextually situated co-creator of value.

To complement the theoretical lens of Service-Dominant logic and enrich our understanding of AI-enabled value co-creation, additional marketing and socio-technical frameworks are instructive. First, Customer Experience Theory provides a vital foundation for analysing how AI affects consumers' holistic interactions across emotional, cognitive, and sensory dimensions. As Verhoef et al. (2009) emphasize, customer experience is dynamic and multifaceted, shaped by both firm-controlled elements and external social contexts—making it an essential dimension of AI-mediated engagement. Second, technology acceptance frameworks, including the Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology (UTAUT), offer insights into how users' perceptions of usefulness and ease of use influence their willingness to co-create with AI systems (Venkatesh et al., 2003; Silva, 2015). If customers perceive AI as opaque, overly complex, or non-intuitive, their engagement may decline, inhibiting co-creation processes. Third, Customer Engagement Theory highlights the emotional, cognitive, and behavioural investments customers make in brand interactions (Brodie et al., 2011). AI systems that enable real-time feedback, interactivity, and relevance can foster deeper engagement, which serves as a precursor to value cocreation. Finally, Actor-Network Theory (ANT) challenges anthropocentric models by recognizing non-human actants—such as AI—as integral components of socio-technical networks (Dwiartama & Rosin, 2014). ANT's emphasis on the relational agency of machines supports the conceptualization of AI not merely as a tool, but as an active participant in value creation ecosystems. These theoretical perspectives collectively underscore the multifactorial and dynamic nature of AI-enabled co-creation, where acceptance, engagement, and distributed agency mediate the quality and outcomes of marketing interactions. This extended framework enables a richer understanding of how intelligent technologies shape, support, or even constrain participatory value exchange across hybrid (human-machine) networks.

## 3. Methodology

This study adopts a qualitative approach, using case studies from multiple sectors. Data were collected through interviews and document analysis. To investigate how the integration of Artificial Intelligence (AI) influenced customer participation in the value co-creation process within contemporary marketing strategies, we employed a qualitative single-sector case study design (Yin, 2009; Yin, 2018). This methodological approach was particularly well-suited to capture the complex, socio-technological, and contextspecific dynamics surrounding AI integration in a digitally mature industry. The aim was not merely to examine technological adoption, but to explore how AI reshaped consumer experiences, participation, and engagement within marketing practices. The entertainment sector was selected as the

empirical setting for this research due to its high degree of digital transformation, deep reliance on customer engagement, and dynamic use of crossmedia marketing strategies—all of which positioned it as a fertile ground for examining

AI-driven co-creation processes (Greenaway et al., 1995; Clarke & Gibson-Sweet, 1999; Jain et al., 2017).

A qualitative case study approach enabled us to investigate how entertainment companies were deploying AI to foster participatory value creation—such as through recommendation algorithms, generative tools, real-time audience analytics, or interactive content. This approach allowed for an in-depth analysis of technological, organizational, and cultural mechanisms driving customer involvement in co-creating value. By adopting an exploratory lens, we were able to delve into how human and machine collaboration unfolded in specific business models, marketing strategies, and content delivery formats.

The entertainment industry was selected based on several criteria relevant to the research objective:

- High Level of AI Integration: The entertainment sector has been a leading adopter of AI tools, ranging from generative AI in content creation to machine learning in customer profiling, chatbots, and personalization engines.

- Market Dynamism and Cultural Centrality: Entertainment is a rapidly evolving industry with significant cultural influence and economic value, offering unique insights into digital business transformation and value co-creation.

- Customer Experience Orientation: User-centricity is embedded in entertainment business models, making this sector ideal for examining participatory mechanisms and personalized experiences driven by AI.

- Cross-Media Capabilities: Entertainment companies operate across multiple digital platforms (e.g., streaming, gaming, music, social media), enabling the investigation of coordinated AI-driven strategies that amplify consumer interaction.

- Availability of Rich Secondary Data: The sector benefits from an abundance of public and secondary sources including corporate communications, industry reports, technical white papers, and digital archives.

Rather than adopting a multi-sector comparative framework, this study concentrated exclusively on sub-segments within the entertainment industry to maintain analytical depth while still capturing a diverse range of AI applications. A sectoral analysis was first conducted to identify key areas where AI had a marked influence on customer participation and co-creation. Following this analysis, four focal sub-sectors were selected: film and television, music, gaming, and sports entertainment. These areas were chosen due to their advanced AI implementation and distinct approaches to customer interaction.

Data collection was conducted using qualitative content analysis of secondary sources. Materials included industry white papers, investor reports, executive interviews, trade journals, digital marketing audits, and official press releases from major entertainment firms. This triangulated data approach enhanced the robustness and reliability of the research, enabling cross-validation of insights across independent and reputable sources. Thematic coding was employed to analyse how AI tools supported value co-creation. Key themes included personalization, automation of creative processes, data-driven audience segmentation, and interactive consumer experiences. These themes were mapped against the

theoretical framework of co-creation to identify mechanisms through which AI shaped the customer journey and enabled participatory value exchange.

By focusing on a single yet diverse sector, the study was able to produce grounded and context-sensitive insights. The entertainment industry, as a microcosm of digital transformation, served as a powerful lens through which to explore emerging dynamics in customer-centric business models. Moreover, concentrating on this sector provided clarity and coherence to the analysis, allowing for a more focused examination of how AI is reconfiguring not just marketing tools, but the very nature of consumer involvement in the creation of cultural and commercial value. This methodology ultimately allowed for a nuanced understanding of the research question by situating AI integration within realworld marketing ecosystems. It provided valuable perspectives on the changing relationship between companies and consumers, as mediated by intelligent technologies in one of the most innovation-driven and customer-focused industries in the digital economy.

## 5. Results and Discussion

The entertainment industry—encompassing film, television, music, gaming, and sports— is uniquely positioned at the crossroads of human creativity and technological innovation. As Artificial Intelligence (AI) becomes deeply integrated into content production, distribution, and consumption, it is reshaping the dynamics of value co-creation in two distinct and, at times, conflicting directions: human-machine value co-creation and customer-company value co-creation. This section explores the conditions under which AI integration either enhances or hinders customer participation in these intertwined processes.

Across the entertainment sector, AI has proven highly effective in enhancing humanmachine value co-creation by supporting efficiency, personalization, and interactivity.

Netflix's sophisticated recommendation engine exemplifies this application. By analysing granular user data—such as watch history, time of day, and even pause behavior—Netflix continuously tailors its content recommendations to align with individual user preferences. This personalization strategy has not only increased user satisfaction but also improved retention and engagement metrics, affirming AI's role as a co-creator of value through responsive content curation.

Similarly, Spotify's introduction of its AI-powered "DJ" showcases the power of generative AI in deepening engagement through context-aware, dynamic audio experiences. The DJ synthesizes real-time data and user preferences to simulate a humanhosted radio experience, increasing usage time and emotional resonance without replacing musical content creation itself. In both cases, AI does not displace human creativity but augments the consumer journey by enhancing discoverability and contextual relevance.

In gaming, the upcoming Nintendo Switch 2's use of NVIDIA's AI-based Deep Learning Super Sampling (DLSS) illustrates another form of machine-enhanced value creation. Here, AI contributes not to the game's narrative content, but to performance optimization—smoother graphics, realistic lighting, and faster processing. These advancements enhance the player's sensory immersion and allow developers to stretch the platform's technical limits, thus generating additional value without intruding on creative direction. Such AI integration underscores the potential of machines to become collaborative agents that work alongside human inputs. These systems create new experiential layers that would be otherwise impossible or inefficient to achieve manually, supporting the logic of human-machine co-creation as a complementary and scalable framework.

Despite these technological benefits, the same AI capabilities can undermine customercompany value co-creation, particularly when used intrusively in the creative core of entertainment production. Entertainment products are not utilitarian commodities; their value derives from emotional resonance, cultural significance, and artistic expression—all deeply human attributes. When AI is perceived as supplanting rather than supporting human input, customer engagement often falters, and the communal process of cocreating value with a brand gets disrupted.

The controversy surrounding Timbaland's AI-driven record label, *Stage Zero*, illustrates this clearly. The label's launch of *TaTa*, a virtual artist powered by generative AI, drew criticism from fans and musicians alike, particularly after it was revealed that public music submissions were used to train the AI model. Many perceived this as a shift away from nurturing real human talent toward manufacturing artificial personas. The backlash centred not only on the ethics of data use, but on the perceived erosion of authenticity and emotional depth Regardless of the factual basis of these claims, the perception of AI's intrusive presence eroded fans' sense of connection to the artist. This backlash demonstrates a broader risk: when customers feel that authenticity and emotional depth are sacrificed for efficiency or trend alignment, they may disengage not only from the product but from the brand itself.

A similar pattern emerged with Disney's AI-related missteps. The animated film *Wish* faced speculation that AI had been used in music composition, specifically regarding a song performed by Chris Pine that critics described as lacking emotional richness. Additionally, fan scepticism intensified when promotional materials—such as a visually flawed poster for *The Fantastic Four: First Steps*—were suspected to be AI-generated, leading to public backlash and decreased trust in the brand's creative integrity. Even at Disneyland, suspected AI-generated artwork was discreetly removed due to negative fan reactions.

These examples illustrate how intrusive AI integration—where machines encroach on tasks traditionally reserved for human artistic judgment—can compromise the symbolic and emotional capital of entertainment products. When audiences perceive content as "algorithmically hollow," their willingness to celebrate, share, and emotionally invest in a brand diminishes. This erodes the customer-company value co-creation loop, particularly the peer-to-peer diffusion of cultural value that sustains media franchises.

In the entertainment sector, customer-company value co-creation often manifests through symbolic participation, where audiences become brand advocates by celebrating content, creating fan communities, and extending narratives through user-generated media. The success of media franchising models—like those employed by Disney—depends heavily on this symbolic participation. Disney's model thrives by emotionally engaging customers in a cross-generational value loop, where stories and characters become part of a family or cultural identity. Fans don't just consume—they advocate, recreate, and spread the brand's meaning. This enables content to maintain relevance and profitability for decades, often resonating with new generations long after its initial release, thanks to the emotional connection first established with original consumers and passed on to their close circles. However, as observed in the decline of the Marvel Cinematic Universe and *Star Wars* fandom, oversaturation and perceived declines in quality due to rushed production and inconsistent narratives (partially enabled by AI-supported scalability) have diluted this participatory energy. Instead of elevating customer-company co-creation, the relentless drive for content expansion—often made feasible by AI-supported analytics and automation—has had a paradoxical effect: it crowds out the space for meaningful emotional engagement, turning once highly celebrated properties into background noise. These results highlight a crucial tension: AI may scale production and facilitate efficiency, but this very acceleration

risks displacing the slow-burn cultural resonance needed to sustain symbolic value co-creation.

The entertainment industry thus finds itself at a strategic inflection point. AI offers immense potential to support value co-creation—but only when its integration respects the boundaries of human judgment, creativity, and emotional labour. Case studies across subsectors point to specific conditions under which AI enhances rather than hinders cocreation:

- Non-Intrusiveness: AI should act as a facilitator rather than a replacement. Spotify's DJ or Netflix's personalization engines exemplify systems that increase engagement without infringing on creative domains.

- Transparency and Curation: Consumers are more receptive to AI when its role is clear, curated, and aligned with human oversight. Nintendo's cautious approach to AI in game development and Disney's renewed emphasis on quality over quantity reflect this awareness.

- Creative Amplification: AI should help human creators do more of what they do best—streamlining logistics, enhancing interactivity, and expanding expressive potential—rather than generating core narrative or artistic content.

- Preservation of Brand Meaning: Especially in franchising, symbolic capital is fragile. When AI disrupts the emotional contract between brand and fan, the network effects that drive value co-creation collapse.

In short, human-machine co-creation can reinforce customer-company co-creation only when AI is positioned as a support mechanism, not as a substitute for the human experience at the heart of entertainment.

To conceptualize the insights drawn from the case studies and theoretical frameworks,

*Table 1* presents a dual-track model of value co-creation in AI-integrated entertainment. This model distinguishes between two interrelated but distinct forms of co-creation: "Human-Machine Co-creation" and "Customer-Company Co-creation". Each operates according to specific value drivers, assigns a different role to AI, and carries unique risks when AI integration is misaligned with stakeholder expectations.

| **Type of Co-creation** | **Value Driver** | **Role of AI** | **Risk when misaligned** |
|---|---|---|---|
| *Human-Machine* | Efficiency, Personalization and immersion, Data processing and insights | Augmenter of capabilities, Scenario simulator, Optimizer of operations | Customer passivity or alienation, Over-automation, Bias or error amplification |

| | | | |
|---|---|---|---|
| *Customer-Company* | Brand advocacy and word of mouth, Loyalty and repeated purchases,<br><br>Isolation of competitors | Quality enhancer,<br><br>Trend detector,<br><br>Co-designer,<br><br>Brainstorming | Loss of authenticity and customer engagement,<br><br>Damage to brand reputation |

**Table 1:** AI and the Dual Modes of Value Co-creation

"*Human-Machine*" refers to value that is co-created directly through interaction between the user and intelligent technologies. Here, AI functions as a supportive agent, enhancing the efficiency, personalization, and immersion of user experiences. Examples include Netflix's algorithmic recommendation engine or Spotify's AI-powered DJ—tools that respond to behavioural data to deliver tailored, seamless content journeys. In these cases, AI adds value by making the entertainment experience more relevant, convenient, and context sensitive. However, when the role of AI in human-machine co-creation is misaligned—especially when it becomes too dominant or overly directive—the result can be customer passivity or alienation. Users may feel that their agency is diminished or that their experience is overly mediated by algorithms, leading to a reduction in emotional involvement. For instance, overly aggressive personalization may trap users in content bubbles, suppressing discovery and novelty, thereby dampening their active role in cocreation.

"*Customer-Company*" centres on the relational, symbolic, and experiential interactions between consumers and entertainment brands. Here, value is generated through symbolic participation and emotional bonding—activities such as fandom, advocacy, and community-building that contribute to a brand's cultural capital. AI's role in this sphere should be one of curated enhancement: amplifying human creativity, facilitating participatory storytelling, or supporting shared experiences without overshadowing the human core. When AI is misused in this context—particularly when it intrudes into creative domains that are culturally and emotionally significant—the results can be far more damaging. The risk is the loss of trust, authenticity, and brand equity, as demonstrated in controversies like the backlash to suspected AI use in Timbaland's Stage Zero or Disney's marketing materials. If fans perceive that AI has supplanted human creativity or diluted the emotional depth of the content, the co-creation relationship deteriorates, often irreversibly.

Crucially, these two tracks of value co-creation are not mutually exclusive; they are interdependent and must be strategically aligned. Successful AI integration in entertainment requires a nuanced approach that maximizes the benefits of machine augmentation without compromising the human authenticity that underpins long-term brand loyalty and cultural resonance. The table underscores the need for boundary management—ensuring that AI operates as a tool that extends rather than replaces human creativity and relational engagement. It calls for transparency, ethical design, and intentional curation of AI roles within content ecosystems to avoid eroding the symbolic and emotional anchors that support customer-company value co-creation. This model not only encapsulates the findings of this research but also offers a conceptual roadmap for navigating the evolving landscape of AI-enabled marketing. It reinforces the central thesis: that AI can enhance value co-creation when deployed as an empathetic, contextsensitive partner in both technological and symbolic domains, but can equally undermine it when its use disrupts the affective and participatory dimensions that define the entertainment experience.

## 6. Conclusion

This paper explored how AI integration reshapes customer participation in value cocreation within the entertainment industry. The findings converge along three interrelated trajectories. First, AI's role as a co-creative agent is highly contingent on how it is embedded within the user experience—enhancing immersion, personalization, and responsiveness in ways that support rather than substitute human creativity. Second, while AI enables a new mode of human-machine value co-creation, its influence on customercompany value co-creation is more fragile, hinging on trust, authenticity, and emotional resonance. Third, the co-creative ecosystem in entertainment is increasingly hybrid, requiring deliberate alignment between technological affordances and symbolic expectations. When AI is perceived as augmentative, it can strengthen both user engagement and brand affinity; when perceived as intrusive or synthetic, it can trigger disengagement and erode cultural capital.

For managers, this study underscores the need to position AI as a curator and amplifier of human expression, not as a creative replacement. Strategic integration should prioritize transparency, emotional resonance, and user empowerment. AI should be deployed with sensitivity to narrative authenticity and brand identity, particularly in fan-centric industries like entertainment. For policymakers, the findings highlight the need for regulation that balances innovation with ethical standards around data use, content authenticity, and consumer transparency. Guardrails must protect against over-automation that could displace human creative labour or mislead consumers regarding AI-generated content. For academics, this research contributes to evolving theories of value co-creation by mapping the interplay between AI agency and customer participation. However, it is limited by its single-sector focus. While the entertainment industry offers rich, diverse contexts for studying co-creation, its cultural specificity may not fully represent dynamics in other industries. Furthermore, this qualitative approach yields deep, contextual insights but may overlook generalizable patterns across larger datasets. Future research should integrate quantitative methods to validate these findings at scale and explore sectoral comparisons to refine theory and practice around AI-enabled co-creation across the broader digital economy.

## References


Banh, L., & Strobel, G. (2023). Generative artificial intelligence. *Electronic Markets*, 33(1), 63.

Bosisio, J. (2024). A research landscape on customer co-creation value: a systematic literature network analysis. *Italian Journal of Marketing*, *2024*(3), 339-368 Brodie, R. J., Hollebeek, L. D., Jurić, B., & Ilić, A. (2011). Customer engagement: Conceptual domain, fundamental propositions, and implications for research. *Journal of service research*, *14*(3), 252-271.

Chandra, B., & Rahman, Z. (2024). *AI-Driven Value Co-Creation: Deliberate vs. Spontaneous Customer Participation*.

Clarke, J., & Gibson-Sweet, M. (1999). The use of corporate social disclosures in the management of reputation and legitimacy: a cross sectoral analysis of UK Top 100 Companies. *Business Ethics: A European Review*, 8(1), 5-13.

Dwiartama, A., & Rosin, C. (2014). Exploring agency beyond humans: the compatibility of Actor-Network Theory (ANT) and resilience thinking. *Ecology and Society*, *19*(3). Gama, F., & Magistretti, S. (2025). Artificial intelligence in innovation management: A review of innovation capabilities and a taxonomy of AI applications. *Journal of Product Innovation Management*, 42(1), 76–111.

Greenaway, D., Hine, R., & Milner, C. (1995). Vertical and horizontal intra-industry trade: a cross industry analysis for the United Kingdom. *The economic journal*, 105(433), 1505-1518.

Hallur, G. G., Prabhu, S., & Aslekar, A. (2021). Entertainment in era of AI, big data & IoT. *Digital Entertainment: The Next Evolution in Service Sector*, 87-109. Hilbert, M. (2020). Digital technology and social change: the digital transformation of society from a historical perspective. *Dialogues in Clinical Neuroscience*, 22(2), 189–194. Hovorka, D. S., & Mueller, B. (2025). Speculative foresight: A foray beyond digital transformation. *Information Systems Journal*, 35(1), 140–162.

Jain, R., Aagja, J., & Bagdare, S. (2017). Customer experience–a review and research agenda. *Journal of service theory and practice*, 27(3), 642-662.

Prahalad, C. K., & Ramaswamy, V. (2004). *Co-creating unique value with customers*.

Strategy & Leadership, 32(3), 4–9.

Silva, P. (2015). Davis' technology acceptance model (TAM)(1989). *Information seeking behavior and technology adoption: Theories and trends*, 205-219.

Steyer, R., Schmitt, M., & Eid, M. (1999). Latent state–trait theory and research in personality and individual differences. *European Journal of Personality*, *13*(5), 389-408. Tuunanen, T., Lumivalo, J., Vartiainen, T., Zhang, Y., & Myers, M. D. (2024). Microlevel mechanisms to support value co-creation for design of digital services. *Journal of Service Research*, *27*(3), 381-396.

Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: continuing the evolution. Journal of the Academy of marketing Science, 36, 1-10.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. *MIS quarterly*, 425-478. Verhoef, P. C., Lemon, K. N., Parasuraman, A., Roggeveen, A., Tsiros, M., & Schlesinger, L. A. (2009). Customer experience creation: Determinants, dynamics and management strategies. *Journal of retailing*, *85*(1), 31-41.

Wang, C., Zhao, X., & Hong, J. (2024). A Meta-Analysis of the Effects of Interaction on Value Co-Creation in Online Collaborative Innovation Communities Based on the Service Ecosystem Framework. *Behavioral Sciences*, *14*(12), 1177.

Yin, R. K. (2009). *Case study research: Design and methods* (Vol. 5). sage.

Yin, R. K. (2018). *Case study research and applications*.

# From E-Commerce Habits to Chatbot Acceptance: Extending the Technology Acceptance Model to Ai Conversational Agents

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## Abstract

This study explores how consumers' familiarity with e-commerce, as well as their perceived benefits and barriers related to it, influence the acceptance of AI-powered chatbots in online shopping contexts. Drawing on the Technology Acceptance Model (TAM), the research integrates external variables such as frequency of e-commerce use and perceived convenience, risk, and lack of physical interaction with chatbot adoption. A survey was conducted on 220 participants, and data were analyzed using ANOVA and Structural Equation Modeling (SEM). Results show that e-commerce usage frequency significantly shapes how users perceive the benefits and barriers of online shopping. However, it does not directly influence their perception of chatbot usefulness or ease of use. Among the factors considered, only perceived convenience was found to positively affect both TAM constructs. The model confirms that perceived usefulness and, to a lesser extent, ease of use predict attitude toward chatbots, which strongly influences behavioral intention. These findings extend the TAM framework to the domain of conversational AI, offering theoretical insights and practical guidelines for improving chatbot adoption strategies in e-commerce environments.

*Keywords: AI, chatbot, e-commerce, consumer perception, TAM*

## 1. Introduction

E-commerce has emerged as a fundamental pillar of the global economy, redefining interactions between businesses and customers and driving profound socio-economic transformation (Hendricks & Mwapwele, 2024). The continuous evolution of e-commerce is evidenced by the increasing growth in online sales. In 2024, global retail e-commerce sales reached an estimated 6 trillion U.S. dollars and forecasts suggest a 31% increase over the next few years, approaching nearly 8 trillion dollars by 2028 (Statista, 2025).

In recent years, the adoption of AI-powered chatbots in e-commerce has grown exponentially, progressively transforming the way in which communication takes place between retailers and consumers (Tran et al., 2021). Thanks to the advancement of large language models (LLMs), chatbots have become more intelligent, enhancing the quality of customer interactions. Additionally, the widespread use of tools like ChatGPT, Gemini, and Claude have familiarized users with conversational AI, thereby accelerating the growth of the chatbot market in e-commerce.

Since more and more companies are investing in this technology (e.g. Amazon, Zalando…) due to its benefits, such as reduced operating costs and service efficiency, it is essential to understand how consumers experience the interaction with chatbots (Li & Wang, 2023). Gaining such insights can help to prevent user resistance and ensure that the implementation of chatbots yields a positive return on investment.

Despite its importance existing research on this topic remains scarce (Jiang et al., 2022; Li & Wang, 2023), highlighting the need for further studies to better understand this phenomenon.

Therefore, this study aims to explore the consumers' perception of, and willingness to use, chatbots during online shopping experiences specifically considering how familiarity with e-commerce, along with its perceived benefits and barriers, influence such perceptions and usage intentions. In detail, the study seeks to answer two research questions: (1) What are the main benefits and barriers associated with e-commerce, and how do they vary based on consumers' level of e-commerce usage? (2) How are chatbots perceived in online shopping experiences, and to what extent can e-commerce usage, perceived benefits and barriers shape such perception of and intention towards chatbots?

To address these questions, a quantitative study based on 220 participants was carried out. Findings revealed that consumers with higher levels of e-commerce usage perceive different benefits and barriers compared to those who use it less frequently. In particular, those who perceive e-commerce as convenient are more likely to find chatbots both useful and easy to use, which in turn positively influences their attitude towards and intention to use chatbots.

## 2. Theoretical Background

E-commerce: benefits and barriers. E-commerce adoption is influenced by a combination of perceived benefits and barriers, which vary depending on the individual and organizational context. Among the main benefits, there is the ability to shop online 24/7 year-round, the convenience of ordering products from anywhere, including via mobile devices, the ease of comparing prices and reading reviews, and the significant time savings by avoiding in-store visits (Taher, 2021). By contrast, common barriers such as data security, financial loss, and risk of receiving counterfeit or low-quality products, have been often identified as important challenges affecting e-commerce adoption (Handoyo, 2024).

Previous studies on technology acceptance have shown that experience with a given technology alters users' perceptions of it (Burton-Jones & Hubona, 2006; Venkatesh et al., 2003). In the context of e-commerce, this implies that the more individuals become familiar with online shopping, the more they recognize its benefits and tend to perceive fewer barriers (Lian & Yen, 2014; Nirmala & Devi, 2011). Extending this perspective, the first hypothesis of the study aims to validate these findings by confirming their robustness in the current context and sample:

H1: Consumers' frequency of e-commerce usage shapes the benefits and barriers they perceive.

AI Chatbots in E-commerce. Artificial intelligence has revolutionized e-commerce, improving customer experience, optimizing operational efficiency, and enhancing data-driven decision making (Bawack et al., 2022). Its applications range from intelligent inventory management and demand forecasting to creating highly targeted and personalized marketing campaigns. AI is key in automating interactions with consumers through virtual assistants and chatbots, capable of handling a wide range of customer requests without the need for human intervention (Wang et al., 2023). Chung et al. (2019) noted that chatbots help buyers

save time and provide useful insights on product availability and performance. Moreover, Lee and Li (2023) found that chatbot features like 24/7 access, information integration, and interactivity positively influence customer perceptions and increase adoption. However, Luo et al. (2019) stated that when customers are aware of the chatbot's presence from the start, their purchase intention decreases, indicating a prejudice against these tools. Despite numerous studies on chatbot adoption in e-commerce, there is still little clarity about the factors that influence their perception and use (Zhang et al., 2024), likely because these systems are becoming increasingly intelligent and their perception evolves over time (Zehnle et al., 2025).

Hypotheses development. To investigate the determinants of chatbot acceptance in e-commerce, this study adopts the Technology Acceptance Model (TAM) (Davis, 1989), a widely used framework explaining how users come to accept and use new technologies. Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) are key predictors of Attitude (ATT) towards technology, which in turn affects Behavioural Intention (BI) to use it.

In this study, TAM is extended by incorporating consumers' level of e-commerce usage and their perceived benefits and barriers as external antecedents of PU and PEOU. Based on this framework, the following hypotheses are proposed:

H2: The level of usage of e-commerce positively influences both PU and PEOU

H3: Perceived benefits associated to e-commerce positively influence both PU and PEOU, while perceived barriers associated to e-commerce negatively influence them

H4: PU and PEOU of chatbots positively influence the attitude towards them

H5: The attitude towards chatbots positively influences the behavioural intention to use it

## 3. Methodology

Data for this study were collected through an online self-administered questionnaire distributed over a six-month period (January–June 2025). The survey investigated four main areas: (i) the frequency of e-commerce usage, (ii) perceived benefits and barriers related to online shopping, (iii) the core constructs of the Technology Acceptance Model (TAM) related to chatbots adoption in e-commerce, and (iv) respondents' socio-demographic characteristics.

All items were measured on a 7-point Likert scale (1= strong disagreement/very unlikely; 7= strong agreement/very likely). A total of 220 valid responses were obtained.

Data analysis was conducted using R software version 3.0, including both descriptive statistics and inferential analyses. In particular, ANOVA was performed to assess differences in perceived benefits and barriers (H1), as well as in chatbots' perceived PU and PEOU (H2), across groups with different levels of e-commerce usage, while Structural Equation Modeling (SEM) was employed to test the relationships among variables as hypothesized in this study (H3–H5).

## 4. Results

Respondents reported a moderate use of e-commerce, with a mean score of 4.33 (SD = 1.67). Based on their responses, participants were grouped into three usage categories: Low Users (n = 37, scores 1-2), Medium Users (n = 128, scores 3-5), and High Users (n = 55, scores 6-7). A one-way ANOVA was conducted to examine whether these groups perceive e-commerce benefits and barriers differently. Results revealed statistically significant differences in several dimensions. Practical benefits such as convenience, time saving, and

24/7 accessibility showed significant variation across groups ($p = 0.0107$), with High Users reporting greater appreciation for these aspects compared to Low Users. Information richness was also perceived differently ($p < 0.001$), with both Medium and High Users rating e-commerce as more informative than Low Users. Significant differences emerged for perceived risks, especially regarding data privacy and payment security ($p = 0.0049$) and delivery reliability ($p < 0.001$). Low Users tended to perceive these risks as higher. Finally, users diverged strongly on the disadvantage of lacking physical contact with products and sellers ($p < 0.001$), which was perceived as more problematic by Low Users. In contrast, no significant differences were found among the groups in their evaluation of enjoyment, advantageous prices, or the ability to find personalized products, suggesting that these aspects are perceived similarly regardless of usage intensity.

These findings support H1, confirming that e-commerce usage significantly shapes users' perception of its benefits and barriers. Specifically, as usage intensity increases, the overall perception of benefits tends to rise, while the perception of barriers tends to decrease.

However, when examining whether e-commerce usage also influences the perception of chatbots, specifically their PEOU ($p = 0.961$) and PU ($p = 0.821$), no statistically significant differences were found among user groups. Therefore, H2 is not supported.

Among the examined predictors, only perceived convenience significantly influenced PEOU ($p < 0.001$) and PU ($p = 0.020$), supporting H3 only partially.

Regarding H4, both perceptions constructs had a positive effect on users' attitude toward chatbots, with PU showing a strong and significant influence ($p < 0.001$), while the effect of PEOU was marginally significant ($p = 0.052$).

Finally, H5 was fully supported: ATT toward chatbots had a strong positive effect on BI ($p < 0.001$).

## 5. Discussions

This study explores how consumers' familiarity with e-commerce, and their perceptions of its benefits and barriers, affect their evaluation and acceptance of AI chatbots in online shopping. The findings offer several insights. First, the support for H1 confirms that e-commerce usage frequency significantly shapes consumers' perceptions. High-frequency users tend to recognize more of the practical benefits of e-commerce - such as convenience, information richness, and delivery efficiency - and perceive fewer barriers related to privacy, trust, or the lack of physical interaction. This is consistent with previous literature (Burton-Jones and Hubona, 2006; Venkatesh et al., 2003), which shows that repeated digital experiences increase familiarity and reduce perceived risks. Surprisingly, H2 was not supported. The expected relationship between e-commerce usage and chatbot-specific perceptions, (i.e. PU and PEOU) did not emerge. This suggests that frequent exposure to online shopping alone is not sufficient to shape consumers' perceptions of chatbot quality. This finding diverges from what TAM extensions typically predict and it may indicate that chatbot evaluations rely more on direct interaction with the tool rather than general digital experience.

H3 was partially supported, as only one benefit (i.e. perceived convenience) significantly predicted PU and PEOU. Other expected predictors such as perceived risks, absence of physical contact, and product information did not show significant effects. This indicates that practical and time-saving advantages remain the most influential factors in shaping perceptions of chatbot usefulness and ease of use, confirming findings from Chung et al.

(2019) and Lee & Li (2023), but not fully aligning with studies that emphasize trust and risk as dominant factors (Luo et al., 2019).

The results strongly support H4 and H5, in line with the original TAM framework (Davis, 1989). Both PU and, to a lesser extent, PEOU were positively associated with consumers' attitude toward chatbots, which in turn strongly influenced their intention to use. The dominant role of PU in shaping attitude aligns with prior research highlighting that PUis often the most critical driver of technology acceptance (Davis, 1989).

## 6. Implications and Conclusions

This study contributes to the literature by extending the TAM to AI-based chatbots in e-commerce, addressing the need to understand how users evaluate increasingly intelligent and adaptive technologies. By integrating perceived benefits/barriers and e-commerce usage as external variables, the study refines TAM's explanatory power, showing that only specific factors like perceived convenience influence chatbot perceptions. The findings confirm the central role of PU in shaping attitude and intention, while highlighting a weaker role for PEOU, suggesting that in AI contexts, outcome value may matter more than usability. Moreover, the lack of a direct link between usage frequency and chatbot perception suggests that general digital familiarity is not sufficient to drive chatbot acceptance, calling for new theoretical insights into human–AI interaction dynamics. From a managerial perspective, the findings highlight the importance of emphasizing convenience in chatbot design and communication strategies. Since perceived convenience significantly drives perceived usefulness and ease of use, companies should ensure that chatbot interactions clearly save users time, simplify tasks, and replicate the key advantages of e-commerce. Moreover, the fact that attitude strongly predicts usage intention suggests that businesses should focus on shaping positive first impressions through intuitive design, proactive support, and transparency about chatbot capabilities.

Despite these contributions, some limitations of the study must be acknowledged. First, the data are based on self-reported measures, which may be subject to social desirability bias. Second, while the study identifies perceived benefits and barriers, it does not directly assess actual chatbot interaction, a factor that could significantly influence perceptions, especially in AI contexts. Third, the cross-sectional design limits the ability to track how perceptions evolve over time as users gain more experience with chatbots. Future research could address these limitations by employing longitudinal designs or experimental settings that involve real-time chatbot usage. Additionally, further studies could explore the impact of factors such as transparency, personalization, or anthropomorphism on trust and acceptance. Finally, given the growing role of generative AI, future work should also examine how AI identity disclosure and the perceived autonomy of chatbots influence user behavior across different cultural or generational segments.

## References

Bawack, R. E., Wamba, S. F., Carillo, K. D. A., & Akter, S. (2022). Artificial intelligence in E-Commerce: a bibliometric study and literature review. Electronic markets, 32(1), 297-338.

Burton-Jones, A., & Hubona, G. S. (2006). The mediation of external variables in the technology acceptance model. Information & management, 43(6), 706-717.

Chung, M., Ko, E., Joung, H. and Kim, S.J. (2019), "Chatbot e-service and customer satisfaction regarding luxury brands", Journal of Business Research, 117, 587-595.

Davis F.D., Bagozzi R.P., Warshaw P.R. (1989). Technology acceptance model. Management Science, 35(8), 982–1003.

Handoyo, S. (2024). Purchasing in the digital age: A meta-analytical perspective on trust, risk, security, and e-WOM in e-commerce. Heliyon, 10(e29714 ).

Hendricks, S., & Mwapwele, S. D. (2024). A systematic literature review on the factors influencing e-commerce adoption in developing countries. Data and Information Management, 8(1), 100045.

Jiang, K., Qin, M., & Li, S. (2022). Chatbots in retail: How do they affect the continued use and purchase intentions of Chinese consumers? Journal of Consumer Behaviour, 21(4), 756–772.

Lee, K. W., & Li, C. Y. (2023). It is not merely a chat: Transforming chatbot affordances into dual identification and loyalty. Journal of Retailing and Consumer Services, 74, 103447

Li, M., & Wang, R. (2023). Chatbots in e-commerce: The effect of chatbot language style on customers' continuance usage intention and attitude toward brand. Journal of Retailing and Consumer Services, 71, 103209.

Lian, J. W., & Yen, D. C. (2014). Online shopping drivers and barriers for older adults: Age and gender differences. Computers in human behavior, 37, 133-143.

Luo, X., Tong, S., Fang, Z., & Qu, Z. (2019). Frontiers: Machines vs. humans: The impact of artificial intelligence chatbot disclosure on customer purchases. Marketing Science, 38(6), 937–947

Nirmala, R. P., & Dewi, I. J. (2011). The effects of shopping orientations, consumer innovativeness, purchase experience, and gender on intention to shop for fashion products online. Gadjah mada international journal of business, 13(1), 65-83.

Statista (2025): Retail e-commerce sales worldwide from 2022 to 2028. Available on: https://www.statista.com/statistics/379046/worldwide-retail-e-commerce sales/#:~:text=In%202024%2C%20global%20retail%20e,eight%20trillion%20dollars%20by%202028 (late access: 09/06/2025)

Taher, G. (2021). E-Commerce: Advantages and Limitations. International Journal of Academic Research in Accounting Finance and Management Sciences, 11(1), 153-165.

Tran, A. D., Pallant, J. I., & Johnson, L. W. (2021). Exploring the impact of chatbots on consumer sentiment and expectations in retail. Journal of Retailing and Consumer Services, 63, 102718.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User acceptance of information technology: Toward a unified view. MIS quarterly, 425-478.

Wang, C., Ahmad, S. F., Ayassrah, A. Y. B. A., Awwad, E. M., Irshad, M., Ali, Y. A., ... & Han, H. (2023). An empirical evaluation of technology acceptance model for Artificial Intelligence in Ecommerce. Heliyon, 9(8).

Zehnle, M., Hildebrand, C., & Valenzuela, A. (2025). Not all AI is created equal: A meta-analysis revealing drivers of AI resistance across markets, methods, and time. International Journal of Research in Marketing.

Zhang, X., Chen, A. L., Piao, X., Yu, M., Zhang, Y., & Zhang, L. (2024). Is AI chatbot recommendation convincing customer? An analytical response based on the elaboration likelihood model. Acta Psychologica, 250, 104501.

# The Impact of Mastery Orientation on Reactions Toward Generative AI

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## Abstract

Generative AI (GenAI) tools are becoming increasingly present in people's everyday lives. It is therefore not surprising that research is examining the impact of this technology in several domains. However, how personality traits influence users' adoption and reactions towards GenAI is still an understudied topic. Through a survey-based study, we focus on the trait of mastery orientation and test its impact on attitudinal and behavioural reactions towards GenAI. Results show an indirect and positive effect of mastery orientation towards the width of usage of GenAI and an indirect and negative effect on the AI anxiety about job replacement. Both effects are mediated by attitude.

*Keywords*: *Generative AI, Mastery orientation, Personality traits, Human-computer interaction*

## 1. Introduction and theoretical background

If Artificial Intelligence (AI) has been traditionally a topic that was part of the popular culture mainly in the form of fictional stories (e.g., "2001: A Space Odyssey"), now it is becoming part of the popular culture in its actual form. Indeed, AI, and Generative AI (GenAI) in particular, is becoming part of the everyday life of a lot of people (Ritcher, 2025), and part of new business ideas and models (O'Neill, 2024).

From a behavioural perspective, research has investigated GenAI and its impact in multiple contexts such as ethics (Stahl & Eke, 2024), productivity (Dell'Acqua et al., 2023), or creativity (Lee & Chung, 2024). Some studies have taken a more user-centric perspective, investigating how users' personality traits can influence their GenAI behaviour (Faruk et al., 2023; Kovbasiuk et al., 2024). However, a personality trait that is still understudied in the GenAI adoption setting is mastery orientation.

The concept of mastery orientation comes from the goal theory (Ames, 1992), which studies the meaning that people attach to achievements. Traditionally, there are two different orientations that explain the meaning of an achievement: mastery orientation and performance orientation. While performance orientation is more connected to the idea of doing something to demonstrate superiority and outperform peers (Martin et al., 2008, Senko & Miles, 2008), mastery orientation is more connected with the idea of affirming competence (Martin et al., 2008) and to develop abilities and knowledge (Senko & Miles, 2008): therefore, the evaluation of a performance is self-referenced and the demonstration of abilities is based on the expression of maximum effort (Treasere & Roberts, 1994). Research on mastery orientation in employee settings sheds light on the fact that people with mastery orientation

put faith in their effort rather than their existing ability, seek challenging tasks, and have faith in their effort even in the face of adversity or failure (Kumar et al., 2022).

Based on these findings, we argue that people with high levels of mastery orientation can have a positive approach towards GenAI tools. Indeed, AI has been shown to elicit resistance and negative reactions: people can feel threatened by the risks of being replaced by AI in a task they enjoy (Leung et al., 2018), and high-skilled employees can feel that the implementation of GenAI tools can threaten their skill-based status (SimanTov-Nachlieli, 2024). We propose that this may not be the case for people with high levels of mastery orientation. That is because the threat of GenAI is based on the output and its efficiency in producing content, but not necessarily in the process of producing an output. In other words, people who have high levels of mastery orientation are not threatened by GenAI production of content because they are more focused on the acquisition of competence and in its process, rather than the result itself. This lack of threat can result in a positive attitudinal and behavioural reaction towards GenAI. Therefore, based on literature about mastery orientation (e.g., Kumar et al., 2022) and AI usage (e.g., Puntoni et al., 2019), we propose the following hypotheses:

H1. People with high (vs. low) levels of mastery orientation (a) use GenAI in more contexts (i.e., width of use) and (b) perceive the risk of being replaced less (i.e., AI anxiety about job replacement).

H2. The effects of mastery orientation on the width of usage and AI anxiety about job replacement are mediated by attitude. In particular, people with high (vs. low) levels of mastery orientation have a more positive attitude towards GenAI that, in turn, (a) positively impact the width of use, and (b) negatively impact AI anxiety about job replacement.

The frameworks that will be tested are represented in Figure 1 and Figure 2.

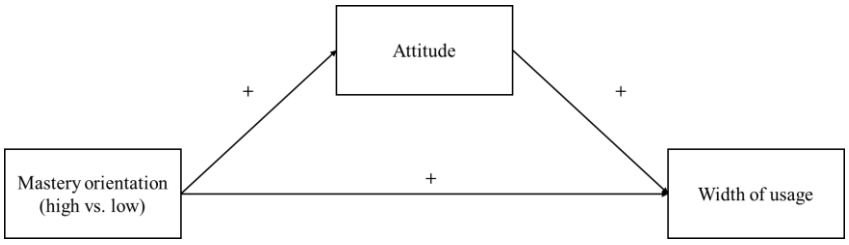



**Figure 1:** H1a and H2a

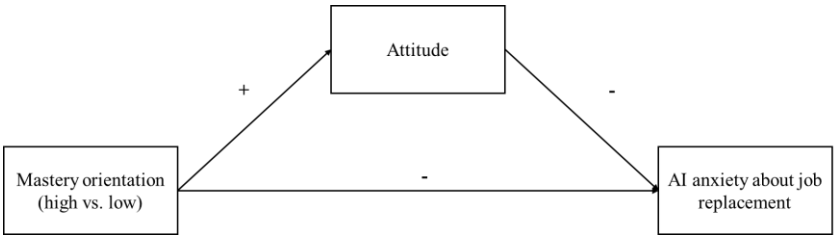



**Figure 2:** H1b and H2b

## 2. Methodology

As an initial exploration of the topic, we conducted a survey-based study with a sample of 96 Italian respondents (29.2% men; average age 23.3 years, SD = 3.70). We measured respondents' mastery orientation (three items adapted from Kumar et al., 2022), attitude towards GenAI tools (five items adapted from Becker-Olson, 2003; Coyle & Thorson, 2001; Song & Zinkhan, 2008), GenAI width of usage (calculated as the sum of contexts of use, i.e., work, study, hobbies, personal purposes), AI anxiety about job replacement (three items adapted from Wang and Wang, 2022).

## 4. Results

The 96 respondents were assigned to two mutually exclusive groups based on a median split (median = 4.83) of the composite scores on the mastery orientation scale. These groups represented individuals with high and low mastery orientation. Then, we performed two separate mediation analyses to test H1 and H2 (Process Model 4; Hayes, 2022).

Findings (Table 1) showed that there was no significant direct effect of mastery orientation on GenAI width of use or on perceived risk of job replacement. Therefore, H1a and H1b were not supported. However, results showed that individuals' mastery orientation significantly affected their attitude towards GenAI tools (b = .43; p = .025; confidence interval [CI] = .05, .81). Specifically, attitude toward GenAI tools was more positive in the high mastery orientation group compared to the low mastery orientation group. The first mediation analysis showed that attitude towards GenAI tools positively influenced GenAI width of usage (b = .37; p < .001; CI = .19, .55). Furthermore, results show an indirect and positive effect of mastery orientation on GenAI width of usage through Attitude (IE = .16; 95% bootstrap CI = .02, .34), thus supporting H2a. The second mediation analysis showed that attitude towards GenAI tools negatively influenced the AI anxiety about job replacement (b = −.51; p = .001; CI = −.81, −.21). Furthermore, results show an indirect and negative effect of mastery orientation on AI anxiety about job replacement through Attitude (IE = -.22; 95% bootstrap CI = -.49, -.02), thus supporting H2b. Thus, respondents with higher mastery orientation exhibited more favorable attitudes toward GenAI tools, which in turn led to greater width of usage and AI anxiety about job replacement.

| Studies 1 and 2 | | | | | | |
|---|---|---|---|---|---|---|
| *Mediator variable model* | M–Attitude towards GenAI tools | | | | | |
| | b | SE | t | p | LLCI | ULCI |
| X–High vs. low mastery orientation | **.43** | **.19** | **2.27** | **.02** | **.05** | **.81** |
| **Study 1: Y–GenAI width of use** | | | | | | |
| *Outcome variable model* | Y–GenAI width of use ($R^2$ = .15) | | | | | |
| | b | SE | t | p | LLCI | ULCI |
| X–High vs. low mastery orientation | −.20 | .17 | −1.18 | .24 | −.55 | .14 |
| M–Attitude towards GenAI tools | **.37** | **.09** | **4.12** | **.00** | **.19** | **.55** |
| Direct effect of X on Y | Y–GenAI width of use | | | | | |
| | b | SE | t | p | LLCI | ULCI |
| | −.20 | .17 | −1.18 | .24 | −.55 | .14 |
| Indirect effect of X on Y | Y-GenAI width of use | | | | | |
| | Index | | Boot SE | LLCI | | ULCI |
| M– Attitude towards GenAI tools | **.16** | | **.08** | **.02** | | **.34** |
| **Study 2: Y–GenAI anxiety related to job replacement** | | | | | | |
| *Outcome variable model* | Y–GenAI anxiety related to job replacement ($R^2$ = .12) | | | | | |
| | b | SE | t | p | LLCI | ULCI |
| X–High vs. low mastery orientation | −.16 | .29 | −.59 | .56 | −.74 | .40 |
| M–Attitude towards GenAI tools | **−.51** | **.15** | **−3.37** | **.00** | **−.81** | **−.21** |
| Direct effect of X on Y | Y–GenAI anxiety related to job replacement | | | | | |
| | b | SE | t | p | LLCI | ULCI |
| | −.17 | .29 | −.59 | .56 | −.74 | .40 |
| Indirect effect of X on Y | Y–GenAI anxiety related to job replacement | | | | | |
| | Index | | Boot SE | LLCI | | ULCI |
| M– Attitude towards GenAI tools | **−.22** | | **.12** | **−.49** | | **−.02** |

**Table 1:** Studies 1 and 2: Results of the mediation process analyses[19]

## 5. Conclusions

In conclusion, this work contributes to the growing literature on GenAI adoption by highlighting the role of mastery orientation as an antecedent in shaping individuals' responses to GenAI tools. Specifically, the findings show that individuals with a high mastery orientation, who are motivated by learning and personal growth, and actively seek out challenging tasks to develop new skills and improve their competence, tend to have a more positive attitude towards GenAI tools. This, in turn, leads to broader use of GenAI tools and lower negative feelings of anxiety about them. This can be explained by the fact that individuals with high mastery orientation are more likely to see new technologies as learning opportunities and develop positive attitudes toward them. This inclines them to use these tools more extensively and feel less anxious about negative consequences, such as replacement. Conversely, those with low mastery orientation may avoid challenges and be less open to change, thus feel threatened by new technologies and experience more anxiety about them.

These results underscore the importance of individual differences in motivational orientation when adopting new technologies. From a practical standpoint, the findings suggest that organizations, institutions, and policymakers aiming to implement GenAI solutions may

[19] M = mediator; Y = dependent variable; X = independent variable (categorized as follows: 0 = low mastery orientation; 1 = high mastery orientation). LLCI = lower limit confidence interval; ULCI = upper limit confidence interval. Confidence interval = 95%. Significant effects are in bold.

benefit from supporting and developing mastery-oriented mindsets among employees, students, etc.—for instance, through training programs that emphasize learning, growth, and skill development. However, this is a preliminary study with limitations, including a relatively small and non-representative sample and a reliance on self-reported measures. Future research could further examine the robustness of these findings by testing alternative mediators or moderators (e.g., perceived usefulness or technological expertise – Faruk et al., 2023) and by employing longitudinal or experimental designs to better establish causality.

## Selected references


Dell'Acqua, F., McFowland III, E., Mollick, E. R., Lifshitz-Assaf, H., Kellogg, K., Rajendran, S., ... & Lakhani, K. R. (2023). Navigating the jagged technological frontier: Field experimental evidence of the effects of AI on knowledge worker productivity and quality. *Harvard Business School Technology & Operations Mgt. Unit Working Paper*, (24-013).

Faruk, L. I. D., Rohan, R., Ninrutsirikun, U., & Pal, D. (2023, December). University students' acceptance and usage of generative AI (ChatGPT) from a psycho-technical perspective. In *Proceedings of the 13th International Conference on Advances in Information Technology* (pp. 1-8).

Kumar, D., Upadhyay, Y., Yadav, R., & Goyal, A. K. (2022). Psychological capital and innovative work behaviour: The role of mastery orientation and creative self-efficacy. *International Journal of Hospitality Management*, *102*, 103157.

SimanTov-Nachlieli, I. (2025). More to lose: The adverse effect of high performance ranking on employees' preimplementation attitudes toward the integration of powerful AI aids. *Organization Science*, *36*(1), 1-20.

Stahl, B. C., & Eke, D. (2024). The ethics of ChatGPT–Exploring the ethical issues of an emerging technology. *International Journal of Information Management*, *74*.

Wang, Y. Y., &; Wang, Y. S. (2022). Development and validation of an artificial intelligence anxiety scale: An initial application in predicting motivated learning behavior. *Interactive Learning Environments*, 30(4), 619-634.

# Exploring User Profiles for Deadbot Adoption: A Cluster-Based Analysis

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## Abstract

This study explores the characteristics of potential users of "deadbots"—AI-based digital replicas of deceased individuals—among Italian Millennials and Generation Z. A structured questionnaire was administered online to a purposive sample of 415 individuals. Using constructs adapted from UTAUT2 and related literature, the survey measured performance expectancy, subjective norm, positive and negative anticipated emotions, moral norms, trust, and uncanniness toward using a deadbot. To identify distinct user profiles, a k-means cluster analysis was conducted, resulting in a two-cluster solution: Uncanny-averse (58%) and Thoughtfully curious (42%). These findings highlight two distinct user profiles with different levels of openness toward this type of technology. The study offers initial insights into the segmentation of emerging markets for grief tech and highlights the need for further modeling to predict behavioral intentions toward deadbot adoption.

*Keywords: Deadbots, UTAUT2, Cluster analysis, Italy.*

### 1. Summary of relevant literature

Deadbots are a type of chatbot built on large language models, which allow them to generate personalized responses to textual inputs in a flexible manner and to be trained to emulate the distinctive speech patterns, lexical choices, and conversational style of someone who is no longer living [1]. These digital entities replicate the beliefs, desires, and preferences of deceased individuals using comprehensive collections of digitally recorded information about a person and processed by an intelligent system capable of reproducing a person's personality [2]. Much of the literature focuses on the relationships individuals may form with a deadbot and the challenges that can arise when, instead of serving as a supportive tool to cope with the loss of a loved one, the deadbot becomes a barrier to acceptance, ultimately hindering a successful grieving process [1]. In managing emotions after a loss, a deadbot may take on a dysregulating role [3], fostering overreliance or even dependency in users and leaving them increasingly vulnerable to manipulative practices or deceptive communication by digital recreation service providers [4]. Thus, unlike passive acts of remembrance, deathbots simulate an ongoing presence, which can lead to emotional confusion or prolonged attachment, ultimately encouraging the formation of continuing pseudo-bonds [2], where "the virtual relationship with the dead becomes a chronic coping strategy of denial" [4, p. 475].

Given the psychological, emotional, and ethical complexities associated with deadbot use, it becomes crucial to investigate the profiles of potential adopters. Understanding the motivations that drive individuals to embrace such technology is essential for anticipating future consumer behavior and informing responsible innovation in this emerging field. Despite growing academic interest in deadbots, empirical studies focusing on user acceptance remain scarce, with existing research primarily concentrated in non-European contexts [6–7]. This study aims to fill that gap by exploring the characteristics, perceptions, and behavioral intentions of Italian consumers in relation to deadbots, offering initial insights into how this controversial technology might be received across different segments of the population.

## 2. Research design

This study employed a structured questionnaire administered via the Prolific platform to a purposive sample of Italian individuals in May 2025. Participants were required to be Italian and born between 1980 and 2007, corresponding to Millennials and adult members of Generation Z. A total of 417 completed questionnaires were collected. After data cleaning, 415 valid responses were retained for analysis.

Participants were first presented with a product concept description (deadbot) in line with concept testing methodology [8]. The following questionnaire comprised eight sections and 27 items, with measures developed based on a modified version of the UTAUT2 model [9]. Performance expectancy and subjective norm were adapted to the context of deadbot usage. Instead of hedonic motivation—which focuses on product use with a temporal frame oriented to the present or immediate future—the emotional dimension was assessed through anticipated affective reactions, both negative and positive. These represent the prefiguration of emotions expected to occur in the future by using the deadbot [10]. Following prior studies [e.g., 11], trust was included as a known significant predictor of behavioral intention, particularly in chatbot usage contexts. Given the ethically sensitive nature of "digitally resurrecting" a deceased loved one, personal moral norms were examined as well [12]. These norms reflect the ethical standards and principles that guide consumer behavior, expressing individuals' deeply held beliefs about what is right or wrong in consumption. Finally, the construct of uncanniness was assessed, referring to the psychological discomfort experienced when a human-like technology—such as AI agents—appears almost, but not quite, human [13]. All construct items were measured using a five-point Likert scale, ranging from 1 = totally disagree to 5 = totally agree, capturing participants' level of agreement with each statement. Lastly, participants were asked about their prior knowledge of deadbots and frequency of AI conversational agent use.

## 3. Results and discussion

From a sociodemographic perspective, the sample is composed of 50.1% males, 50.8% Millennials, and 42.7% students. Additionally, 53.5% are employed either fulltime or part-time, 16.1% are unemployed and job seeking, and 30.4% fall into another category (not in paid work, due to start a new job within the next month, etc.).

To identify distinct respondent profiles, we conducted a cluster analysis following a multi-step preprocess aimed at ensuring data quality and dimensional adequacy [14]. First, we assessed the presence of multicollinearity among items by examining inter-item correlations. Items exhibiting multicollinearity were removed. Next, for each construct, we computed mean scores by averaging the retained items, thereby reducing dimensionality while preserving the theoretical structure of the data. These composite variables were then z-standardized to prevent variables with larger variances from disproportionately influencing the clustering solution. We applied the k-means clustering algorithm, which partitions observations into mutually exclusive clusters based on proximity in multidimensional space.

To determine the optimal number of clusters, we evaluated solutions ranging from 2 to 4 clusters using the Silhouette index [15], an internal validity criterion that measures cohesion and separation. The two-cluster solution yielded the highest Silhouette coefficient, equal to 0.52, indicating a welldefined partition with satisfactory internal consistency and between-cluster separation. The larger cluster was labeled Uncanny-averse (UA) (N=242; 58%), and the other one Thoughtfully curious (TC) (N=173; 42%) (Table 1). From a sociodemographic perspective, the TC cluster includes a higher percentage of males and, behaviorally, is characterized by individuals who use AI-based conversational agents more frequently. These findings are not discussed in the present paper due to space limitations.

| **Variables** | **Means** | |
|---|---|---|
| | ***Thoughtfully curious*** | ***Uncanny-averse*** |
| Performance expectancy | 2.9 | 1.6 |
| Loneliness alleviation | 2.8 | 1.6 |
| Subjective norm | 2.7 | 1.7 |
| Positive emotions | 2.6 | 1.4 |
| Negative emotions | 3.0 | 3.9 |
| Trust | 2.9 | 1.9 |
| ***Personal moral norms*** | ***2.7*** | ***3.9*** |
| ***Uncanniness*** | ***3.5*** | ***4.6*** |
| Intention to use | 3.1 | 1.3 |
| Intention to create for own self | 2.9 | 1.3 |
| ***Curiosity to try*** | ***3.8*** | ***1.7*** |

**Table 1:** Cluster means

The results show that the scores of both intention to use the deadbot of a deceased loved one and intention to create one's own deadbot are modest. In the cluster labeled UA, both intentions are basically null, with a mean score of 1.3. Differently, the TC express a substantially neutral stance, with a mean of 3.1 for usage and 2.9 for selfcreation. However, the TC respondents expressed a strong curiosity in trying the deadbot if the opportunity arose, with a mean score of 3.8, compared to 1.7 among the UA. This finding is interesting, as the literature suggests that curiosity enhances consumers' openness to exploring and engaging with new technologies or unfamiliar products, which can often lead to stronger purchase intentions [16]. This dynamic appears to be well understood by companies commercializing deadbots, as their pricing strategies often follow a freemium model or start with a very low entry cost—around €10—for triggering trials and increase progressively as the deadbot's interaction quality improves, reaching prices of over €100,000 for avatars.

Similar perceptions—extremely negative among the UA and largely neutral among the TC—emerge regarding the expected performance of the deadbot, which encompasses both functional aspects (e.g., support in daily activities) and symbolic dimensions (e.g., assistance in grief processing and memory preservation) with means equal to 1.6 and 2.9 respectively, and the capacity of the deadbot to alleviate loneliness (1.6 vs. 2.8) anticipated positive emotions such as joy and happiness (1.4 vs. 2.6), negative emotions such as sadness and anxiety (3.9 vs. 3.0), and trust in the deadbot's sincerity, respect for privacy, and preservation of the deceased's dignity (1.9 vs. 2.9). The differences between the two clusters thus converge in outlining two distinct emotional–cognitive profiles: on one side, the UA express a markedly negative evaluation, dominated by distrust, negative emotional expectations, and a failure to recognize any potential benefit in using the deadbot; on the other, the TC show a largely neutral stance, characterized by moderate levels of expected performance, trust, and emotional involvement.

From a social perspective, the UA perceive strong disapproval from significant others regarding the potential use of a deadbot (M=1.7), whereas the TC once again exhibit a neutral perception, with a mean score of 2.7 on subjective norm. It is therefore plausible to hypothesize that one of the factors underlying low intention to use may be linked to the perceived social context—friends, relatives, partners, and so forth—which could discourage adoption.

Salient referents' disapproval toward the use of a deadbot may be linked to the significant ethical implications of digital immortalization, as it can be seen as an act that violates the dignity of the deceased and the traditional ways in which individuals are honored after death. Confirming the findings of previous studies that reveal widespread skepticism toward this technology—where most participants considered interacting with a digital replica of the dead to be disrespectful or even blasphemous [6]—the UAs show strong opposition based on their moral norms (M=3.9). Such opposition may be rooted in the Italian cultural context, where Catholic traditions strongly influence memorial practices and the veneration of the dead, preserving a spiritual divide between life and afterlife. Differently, a mean score of 2.7 among TCs regarding personal moral norms suggests that, for at least some individuals, deadbots are not in conflict with their value systems and ethical standards. This aligns with previous research which indicates that a post-secularization process is underway in Italy, leading to a shift in attitudes and practices surrounding death, particularly among younger generations [17].

Finally, deadbots are perceived as highly disturbing by the UA, showing a mean score of 4.6 with relation to uncanniness, while again a relatively neutral perception characterizes the TC (M=3.5). This finding is interesting when considering previous research that longitudinally examined the perception of uncanniness in interactions with the Facebook profiles of deceased individuals by their living "friends" [18]. Over a threeyear period, from 2015 to 2018, the perception of "creepiness" associated with reanimated Facebook profiles disappeared, giving way to a growing sense of familiarity with this type of posthumous interaction. To date, digital memorialization practices and interactions with the profiles of deceased individuals on social media platforms are widespread and largely regarded as normal [19]. It is therefore plausible to assume that, given the scalability and qualitative improvement of the technology, as well as changes in the socio-cultural characteristics of consumers, deadbots may also become widespread within few years, representing just another way to remember those who are no longer with us while maintaining healthy continuing bonds. In this regard, it is enough to consider that on Chinese e-commerce platforms, deadbots are available for as little as 10 yuan (around €1.30) [20].

## 4. Conclusion and future research

This study presents the results of an initial analysis aimed at exploring the characteristics of potential deadbot users within a sample of Italian consumers. The next steps of the research involve adopting more advanced statistical methods to test a conceptual model predicting the intention to use a deadbot, assessing if and to what extent the investigated variables influence behavioral intention.

## References


1. Chernavskaya, O. To the Problem of Digital Immortality. *Cogn Syst Res* 2024, *88*, 101303.

2. Fabry, R.E.; Alfano, M. The Affective Scaffolding of Grief in the Digital Age: The Case of Deathbots. *Topoi* 2024, *43*, 757–769.

3. Lindemann, N.F. The Ethics of 'Deathbots.' *Sci Eng Ethics* 2022, *28*.

4. Harbinja, E.; Edwards, L.; McVey, M. Governing Ghostbots. *Computer Law and Security Review* 2023, *48*, 105791.

5. Jiménez-Alonso, B.; Brescó de Luna, I. Griefbots. A New Way of Communicating with the Dead? *Integr Psychol Behav Sci* 2023, *57*, 466–481.

6. Morse, T. Digital Necromancy: Users' Perceptions of Digital Afterlife and Posthumous Communication Technologies. *Inf Commun Soc* 2024, *27*, 240–256.

7. Nakagawa, H.; Orita, A. Using Deceased People's Personal Data. *AI Soc* 2024.

8. Page, A.L.; Rosenbaum, H.F. Developing an Effective Concept Testing Program for Consumer Durables. *Journal of Product Innovation Management* 1992 *9*, 267–277.

9. Venkatesh, V.; Walton, S.M.; Thong, J.Y.L.; Xu, X. Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance Model and Use of Technology. *MIS Q* 2012, *36*, 157–178.

10. Bagozzi, R.P.; Belanche, D.; Casaló, L. V.; Flavián, C. The Role of Anticipated Emotions in Purchase Intentions. *Psychol Mark* 2016, *33*, 629–645.

11. Ltifi, M. Trust in the Chatbot: A Semi-Human Relationship. *Future Business Journal* 2023, *9*.

12. Schwartz, S.H. Moral Decision Making and Behavior. In Altruism and helping behavior; Macauley, M., Berkowitz, L., Eds.; Academic Press: New York, 1970; pp. 127–141.

13. Mori, M. Bukimi No Tani [The Uncanny Valley]. *Energy* 1970, *7*, 33–35.

14. Frades, I.; Matthiesen, R. Overview on Techniques in Cluster Analysis. *Methods Mol Biol* 2010, *593*, 81–107.

15. Rousseeuw, P.J. Silhouettes: A Graphical Aid to the Interpretation and Validation of Cluster Analysis. *J Comput Appl Math* 1987, *20*, 53–65.

16. Strzelecki, A.; Jaciow, M.; Wolny, R. Curiosity in Consumer Behavior: A Systematic Literature Review and Research Agenda. *Int J Consum Stud* 2024, *48*.

17. Nosi, C.; D'Agostino, A.; Ceccotti, F.; Sfodera, F. Green Funerals: Technological Innovations and Societal Shifts toward Sustainable Death Care Practices. *Technol Forecast Soc Change* 2024, *207*.

18. Bassett, D.J. Ctrl+Alt+Delete: The Changing Landscape of the Uncanny Valley and the Fear of Second Loss. *Current Psychology* 2021, *40*, 813–821.

19. Coppola, M.; Mangone, E. From Private to Public: The Experience of Mourning in Digital Society between Digital Obituary and Digital Gravestone. *Society Register* 2025.

20. Cheng, K.Y. The Law of Digital Afterlife: The Chinese Experience of AI "resurrection" and "Grief Tech." *International Journal of Law and Information Technology* 2025, *33*.

# Virtual Prestige and Tokenized Desire: The Influence of Luxury and Ownership on Consumer Reactions

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## Abstract

This study examines Non-Fungible Tokens' (NFTs) business potential in the luxury market as well as how they can impact luxury firms' advertising strategies. According to the results of an experiment with 168 participants, consumers' purchase intention is influenced by the possession level (high vs. low) conveyed by a communication message about a luxury product based on NFT, and this effect is mediated by the perception of brand luxury. Additionally, the results highlight the moderating influence of people's status orientation, demonstrating that the perception of luxury brands and status consumption orientation mediate the relationship between the NFT technology possession level and the willingness to purchase luxury goods.

*Keywords: Virtual ownership; Purchase intention; Non-Fungible Token; Digital luxury; Emerging technologies; New consumer behavior.*

### 1. Introduction and Literature Review

New technological innovations drives economic and social change (Perez, 2010), fostering growth through increased productivity (Vijselaar & Albers, 2004), improved design (Patrício et al., 2018), and enhanced business functions (Holland & Skarke, 2008). It also benefits society by promoting wellness and human potential (Roco & Bainbridge, 2013). The rise of Big Tech companies, i.e. Apple, Amazon, Microsoft, Google/Alphabet, and Facebook/Meta, illustrates this impact, with these firms reaching a combined market capitalization of US$6.4 trillion in 2022 (Birch & Bronson, 2022; Statista, 2023a). Conversely, the rise of virtual worlds, driven by rapid technological advancement, has opened new spaces for interaction and commerce, fostering the success of Non-Fungible Tokens (NFTs). NFTs are unique digital assets that represent tangible or intangible goods, differing from interchangeable (fungible) items (Sestino et al., 2022a; Popescu, 2021). These include digital art, music, and fashion, and are accessible only in virtual environments. NFT market growth has been explosive, with sales jumping from US$82 million in 2020 to US$17.6 billion in 2021 (Despotovic et al, 2022). They lower entry barriers in markets like art, democratizing access via public digital auctions and enhancing visibility for lesser-known artists (Wilson et al., 2022). Blockchain technology, that is the main enabling technologies activatingNFTs, typically is able to ensure veridicity, authenticity and security of the produced contents (Rehman et al., 2021; Sestino et al., 2022b). Luxury brands have embraced NFTs to both propose new unique value propositions, and to drive new consumptions patterns (see Sung

et al., 2023), e.g., by leveraging on its unicity strictly linked to the status symbols and exclusivity researched by luxury consumers (O'Cass & McEwen, 2004), providing both prestige and competitive advantage (Wilson et al., 2022). Many businesses now operate NFT initiatives via Decentralized Autonomous Organizations (DAOs), using smart contracts in place of traditional legal agreements (Chandra, 2022). The art and sports industries have benefited most, with Beeple's digital artwork selling for US$69.3 million (Riegelhaupt, 2021) and the NBA's Top Shot platform generating over US$944 million since 2020 (Kräussl & Tugnetti, 2022). The NFT market is expected to grow 22.82% annually, with U.S. revenues hitting over US$1 billion in 2023 (Statista, 2023b). OpenSea leads with 1.3 million users and 73% market share, though platforms like Blur are gaining ground (Forbes, 2022). This is where our effort comes into play: this work explores how NFTs create new business opportunities in the luxury industry, particularly in marketing and in particular it aims to highlight the strategic value of NFT communication and its implications for luxury brand marketing.

The art sector is of the most promising in advancing the use of NFT. In 2021, digital artist Mike Winkelmann, known as Beeple, sold his digital artwork titled "Everyday: The First 5000 Days" for a record sum of US$69.3 million (Riegelhaupt, 2021). The growth of NFTS, especially in the art sector, is driven by the potential of the blockchain technology.

Personal characteristics like materialism and ostentation (Audrin et al., 2017) as well as interpersonal aspects like an individuals'standing and consumption orientation (Zhang & Zhao, 2019) all have an impact on the behavior of luxury customers (Belk et al., 2022; Sestino et al., 2022a). According to O'Cass and McEwen (2004), the status consumption orientation refers to people's propensity to use luxury goods or services as a means of demonstrating their social standing. It is true that luxury buyers aim to improve their social standing by acquiring status-oriented items (Amatulli & Guido, 2012; Guido et al., 2020).

Purchase intention is positively influenced by the advancement of technology in the luxury market (Sestino et al.,2022a). In particular, the adoption of new technologies may foster the perception of the brand's luxury because consumers view these tactics as practical steps to raise the value of the intended customer experience (Iqbal & Campbell, 2021; Jain & De Schultz, 2019, Xu & Metha, 2022). Furthermore, luxury and technology have historically been opposed ideas, and their combination represents a significant literary novelty (Sestino et al., 2022a).

According to the literature, even though NFT can be a new means for forward-thinking customers to demonstrate and elevate their social standing, it is impossible to display this digital asset outside of a virtual setting (Sestino et al., 2022a). According to Wu et al. (2017), the NFT ecosystem is founded on a less ostentatious kind of consumerism that involves renouncing owning a luxury item and the widespread display of wealth through status symbols.

## 2. Research objectives

The objective of this work is to better understand how consumers may be influenced by the marketing communication when evaluating the purchase of NFTs in the art context. The primary goal of this paper is therefore to unveil if a communication focus in the marketing communication based on the possession ensured by the blockchain technology may incentivize the purchase behavior because of an increased evaluation of the luxuriousness of the NFT. The second goal is instead to evaluate how such perception of luxury determined by the possession level emphasized in the marketing communication may be better stimulated for those people exhibiting high levels of status consumption orientation.

## 3. Methodology

To test the impact of the NFTs communication focus on possession level (low vs. high) on customers' propensity to purchase, we ran a two-cell experiment.

A sample of 168 people, selected at random from online communities and specialized Facebook, Instagram, and LinkedIn fan pages that support luxury consumption and lifestyle, participated in the two-cell experiment based on two scenarios. Half of the participants were shown a scenario that suggested consuming an NFT with little emphasis on the level of possession that came with owning it (low communication focus on possession condition); the other half were shown a scenario that barely mentioned the possibility of being the sole owners of a particular NFT after it was purchased (high communication focus on possession condition).

The questionnaire will be administered to a random sample of Italian consumers. It will assess status consumption orientation through the five-items scale by O'Cass & McEwen (2004). In the second part, participants will be randomly assigned to two different conditions based on two manipulated levels of the communication focus. Then, in the third section, we will assess the willingness to buy, by using the scale proposed by Dodds et al. (1991), and finally the individuals' luxury perception by using a semantic differential measure composed of 13 items (e.g., "Very influential - Fairly influential"; "Very sophisticated - Fairly sophisticated"), developed by Kim & Johnson (2015).

## 4. Expected Contributions

With this study, we add a psychological perspective on the meaning attributed to the sense of uniqueness and ownership, opening the door to an interdisciplinary understanding of how individuals tend to psychologically assign meaning to products. Relatedly, about personality traits, future contributions could further explore the interpretation of these results by employing scientifically recognized personality models, such as the Big Five personality traits.

## References


Amatulli, C., & Guido, G. (2012). Externalized vs. Internalized Consumption of Luxury Goods: Propositions and Implications for Luxury Retail Marketing. The International Review of Retail, Distribution and Consumer Research, 22(2), 189-207.

Audrin, C., Brosch, T., Chanal, J., & Sander, D. (2017). When symbolism overtakes quality: Materialists consumers disregard product quality when faced with luxury brands. Journal of Economic Psychology, 61, 115-123.

Belk, R., Humayun, M., & Brouard, M. (2022). Money, possessions, and ownership in the Metaverse: NFTs, cryptocurrencies, Web3 and Wild Markets. Journal of Business Research, 153, 198-205.

Birch, K., & Bronson, K. (2022). Big tech. Science as Culture, 31(1), 1-14.

Chandra, Y. (2022). Non-fungible token-enabled entrepreneurship: A conceptual framework. Journal of Business Venturing Insights, 18(22), 1-9.

Despotovic, V., Bjelica, D., & Barać, D. (2022). Analysis of potential NFT applications. In E-business technologies conference proceedings, 2(1), 103-107.

Dodds, W. B., Monroe, K. B., & Grewal, D. (1991). Effects of price, brand, and store information on buyers' product evaluations. Journal of marketing research, 28(3), 307-319.

Forbes. (2022a). NFT 2022 Year-End Review from. Retrieved February 1, 2023, from https://www.forbes.com/sites/leeorshimron/2022/12/21/nft-2022-year-end-review/?sh=2af6f0f5c144

Forbes. (2022a). NFT 2022 Year-End Review from. Retrieved February 1, 2023, from https://www.forbes.com/sites/leeorshimron/2022/12/21/nft-2022-year-end-review/?sh=2af6f0f5c144

Guido, G., Amatulli, C., Peluso, A. M., De Matteis, C., Piper, L., & Pino, G. (2020). Measuring Internalized versus Externalized Luxury Consumption Motivations and Consumers' Segmentation. Italian Journal of Marketing, 4(1), 1-23

Holland, D., & Skarke, G. (2008). Business & IT Alignment: Then & now, a striking improvement. Strategic Finance, 89(10), 42.

Iqbal, M. Z., & Campbell, A. G. (2021). From luxury to necessity: Progress of touchless interaction technology. Technology in Society, 67, 101796.

Jain, V., & Schultz, D. E. (2019). How digital platforms influence luxury purchase behavior in India? Journal of Marketing Communications, 25(1), 41-64.

Kim, J., & Johnson, K. K. (2015). Brand luxury index: A reconsideration and revision. Journal of Fashion Marketing and Management, 19(4), 430-444.

Kräussl, R., & Tugnetti, A. (2022). Non-fungible tokens (NFTs): A review of pricing determinants, applications and opportunities. Applications and Opportunities, 1-29.

O'Cass, A., & McEwen, H. (2004). Exploring Consumer Status and Conspicuous Consumption. Journal of Consumer Behaviour, 4(1), 25-39.

Patrício, L., Gustafsson, A., & Fisk, R. (2018). Upframing service design and innovation for research impact. Journal of Service Research, 21(1), 3-16.

Perez, C. (2010). Technological revolutions and techno-economic paradigms. Cambridge Journal of Economics, 34(1), 185-202.

Popescu, A. (2021). Non-Fungible Tokens (NFT)-Innovation Beyond the Craze. In 5th International Conference on Innovation in Business, Economics and Marketing Research, 66, 26-30.

Rehman, W., Zainab, H., Imran, J., & Bawany, N. Z. (2021). NFTs: Applications and challenges. In 2021 22nd International Arab Conference on Information Technology (ACIT) (pp. 1-7). IEEE.

Riegelhaupt, R. (2021). Results: Beeple's purely digital NFT-based work of Art achieves $69.3 million at Christie's. Christie's, 11. Retrieved January 29, 2023, from https://www.christies.com/about-us/press-archive/details?PressReleaseID=9970&lid=1

Roco, M. C., & Bainbridge, W. S. (2013). The new world of discovery, invention, and innovation: convergence of knowledge, technology, and society. Journal of Nanoparticle Research, 15, 1-17.

Sestino, A., Giraldi, L., Cedrola, E., Zamani, S. Z., & Guido, G. (2022b). The business opportunity of blockchain value creation among the internet of value. Global Business Review, 09721509221115012.

Sestino, A., Guido, G., & Peluso, A. M. (2022a). Non-Fungible Tokens (NFTs): Examining the Impact on Consumers and Marketing Strategies. Springer Nature, 1-98.

Statista (2023a). Leading tech companies worldwide 2022, by market capitalization https://www.statista.com/statistics/1350976/leading-tech-companies-worldwide-by-market-cap/

Statista (2023b). NFT – Worldwide. Retrieved January 30, 2023, from https://www.statista.com/outlook/dmo/fintech/digital-assets/nft/worldwide

Sung, E., Kwon, O., & Sohn, K. (2023). NFT luxury brand marketing in the metaverse: Leveraging blockchain - certified NFTs to drive consumer behavior. Psychology & Marketing, 40(11), 2306-2325.

Vijselaar, F., & Albers, R. (2004). New technologies and productivity growth in the euro area. Empirical Economics, 29(3), 621-646.

Wilson, K. B., Karg, A., & Ghaderi, H. (2022). Prospecting non-fungible tokens in the digital economy: Stakeholders and ecosystem, risk and opportunity. Business Horizons, 65(5), 657-670.

Wu, T. Y., Tseng, Y. M., Huang, S. S., & Lai, Y. C. (2017). Non-Repudiable Provable Data Possession Scheme with Designated Verifier in Cloud Storage Systems. IEEE Access, 5, 19333-19341.

Xu, L., & Mehta, R. (2022). Technology devalues luxury. Exploring consumer responses to AI designed luxury products. Journal of the Academy of Marketing Science, 50, 1-18.

Zhang, L., & Zhao, H. (2019). Personal value vs. luxury value: What are Chinese luxury consumers shopping for when buying luxury fashion goods? Journal of Retailing and Consumer Services, 51, 62-71.

# Managing Knowledge in the Phygital Era: AI and Immersive Technologies for Innovation in Marketing

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## Abstract

This study explores how advanced digital technologies—such as AI, AR/VR, and the metaverse—are transforming knowledge creation and sharing practices in marketing-oriented organizations. By applying and extending the SECI model (Nonaka, Takeuchi, 1995) within technologically augmented and immersive contexts in marketing, it offers two main contributions: first, it introduces the concept of a "phygital SECI framework" that integrates physical and digital knowledge flows; second, it identifies the emergence of the "technological agent" as an autonomous enabler of knowledge management. Drawing on qualitative insights from 21 Italian companies, this work provides a nuanced perspective on how organizations can strategically leverage immersive technologies to foster marketing innovation. Within this scenario, knowledge management plays a strategic role in bridging marketing and innovation, impacting on new forms of customer engagement, market intelligence, and collaborative innovation and acting as a catalyst for renewing the company's value proposition (Nonaka et al., 1998; Di Vaio et al., 2021; Hock-Doepgen et al., 2021)

*Keywords: Knowledge Management, SECI Model, Digital Transformation, Phygital, Artificial Intelligence, Marketing*

## 1. Introduction: The Silent Revolution of Corporate Knowledge

Imagine walking into the offices of a modern Italian company: a marketing team is collaborating with colleagues from Tokyo through virtual avatars in a metaverse environment; upstairs, an artificial intelligence is coding in real-time the experience of a technical expert describing a complex procedure; while in the R&D laboratory, researchers use augmented reality visors to visualize three-dimensional data emerging from the intersection of heterogeneous databases. This is not science fiction, but the emerging reality of phygital knowledge management – a paradigm that merges physical and digital dimensions in organizational knowledge management. The current economic scenario is characterized by rapid technological development and profound socio-economic transformation that has generated a paradigmatic change in which innovation and marketing are involved in a process of joint evolution (Kaplan et al., 2024; Rauschnabel et al., 2022). This co-evolutionary phenomenon requires reflections on companies' ability to innovate the ways in which marketing is conceived and practiced to create value with increasingly personalized, engaging, immersive, and co-created products and experiences (Barrera & Shah, 2023). Latest-generation digital technologies are redefining business operational paradigms, enabling new learning models and driving the development of entirely new products and services (Al Mezawy et al., 2023; Harreis et al., 2023; Pawlowski & Bick, 2022). These technologies disrupt

the status quo, altering how people live and work (Kaplan et al., 2024). However, according to Deloitte's Global Human Capital Trends, 75% of interviewed organizations consider the creation and preservation of knowledge through evolving workforces as important or very important for their success, yet only 9% feel very prepared to address this trend (Deloitte, 2020). This study explores how advanced digital technologies—such as AI, AR/VR, and the metaverse—are transforming knowledge creation and sharing practices in marketing-oriented organizations. By applying and extending the SECI model within technologically augmented and immersive contexts, it offers two main contributions: first, it introduces the concept of a phygital SECI framework that integrates physical and digital knowledge flows; second, it identifies the emergence of the "technological agent" as an autonomous enabler of knowledge management. Drawing on qualitative insights from 21 Italian companies, this work provides a nuanced perspective on how organizations can strategically leverage immersive technologies to foster marketing innovation. Within this scenario, knowledge management plays a strategic role in bridging marketing and innovation, acting as a catalyst for renewing the company's value proposition (Nonaka et al., 1998; Di Vaio et al., 2021; Hock-Doepgen et al., 2021). The physical-digital convergence (phygital) marks a new frontier (Mele et al., 2023), where knowledge flows become increasingly distributed, context-aware, and technologically enhanced.

## 2. Theoretical Framework: The SECI Model in the Digital Era

The SECI model (Socialization, Externalization, Combination, Internalization) by Nonaka and Takeuchi (1995) represents one of the most influential frameworks for understanding organizational knowledge creation processes. This model identifies four modes of knowledge conversion that operate in a dynamic cycle: socialization (tacit-totacit), externalization (tacit-to-explicit), combination (explicit-to-explicit), and internalization (explicit-to-tacit). The advent of advanced digital technologies has opened new possibilities for the application and evolution of the SECI model. As illustrated in our research, Generative Artificial Intelligence supports externalization by codifying experts' tacit expertise through automatic transcription and structuring of processes (Matsumoto et al., 2024). Virtual and Augmented Reality technologies facilitate socialization and internalization by creating immersive environments for experiential learning and simulation-based decision-making (Ribiere, 2023). The Metaverse also plays a significant role in facilitating socialization and internalization. Blockchain enables new forms of combination through verifiable knowledge sharing, aggregating different sources into transparent systems, while predictive analytics supports the intersection of data from multiple sources (Jarrahi et al., 2023). These technological developments can adapt, enrich, and enhance the traditional SECI model, creating what we can define as an augmented or "phygital SECI".

## 3. Research Objective and Contribution

This study aims to investigate how advanced digital technologies (AI, VR, AR, metaverse, blockchain) enable new forms of knowledge creation and sharing in marketing-oriented organizations, extending the traditional SECI model to accommodate technologically augmented contexts. This research contributes to knowledge management literature by introducing the concept of a "phygital SECI framework" that integrates physical and digital knowledge flows, and by identifying the emergence of the "technological agent" as a fifth element in knowledge management systems. For practitioners, this work provides strategic insights on how organizations can leverage immersive technologies to foster marketing innovation, offering concrete examples of successful implementations and identifying key challenges and opportunities in the Italian business context.

In particular we address the following research questions: 1. How do advanced digital technologies (AI, AR/VR, metaverse) influence knowledge creation and sharing practices

within marketing-oriented organizations? 2. If knowledge management is seen as important, why are many organizations still not ready to adopt new technologies

— and how does this lack of readiness affect their ability to use phygital (physical + digital) marketing strategies? Table 1 presents our hypotetical technology-enhanced SECI framework mapping how different digital technologies may support each knowledge conversion mode.

| SECI Phase | Traditional Mode | Digital Technologies | Observed Applications |
|---|---|---|---|
| **Socialization** (Tacit → Tacit) | Face-to-face interaction, observation, shared experiences | VR/Metaverse platforms, AI conversational agents | Virtual shared environments, immersive team building, collaborative learning spaces |
| **Externalization** (Tacit → Explicit) | Dialogue, metaphors, analogies | Generative AI, AR capture tools | AI-assisted documentation, expert knowledge codification, process structuring |
| **Combination** (Explicit → Explicit) | Meetings, documents, databases | Blockchain, predictive analytics, BI platforms | Data aggregation, crossfunctional insights, verified knowledge sharing |
| **SECI Phase** | **Traditional Mode** | **Digital Technologies** | **Observed Applications** |
| **Internalization** (Explicit → Tacit) | Learning by doing, training | VR/AR simulations, adaptive AI | Experiential learning, safe practice environments, personalized training |

**Table 1:** Technology-Enhanced SECI Framework

## 4. Methodology

This study adopted a qualitative, exploratory, and phenomenon-driven approach, aimed at investigating an emerging context little studied in literature (Miller et al., 2014; Farnese et al., 2019). The research was based on semi-structured online interviews collected between April 2024 and May 2025 with executive managers in marketing and knowledge management (9 Executives and strategic decision makers e.g., CEOs, founders; 9 Managers in marketing and commercial operations; 3 Leaders in innovation and technology functions) following a thematic analysis methodology according to the Gioia's approach (Gioia et al., 2013).

Our ongoing research journey through the Italian business ecosystem has, to date, led us to collect 21 interviews from organizations that represent a microcosm of the ongoing digital transformation. The final sample includes 8 B2C and 13 B2B companies operating in diversified sectors: automotive, fast-moving consumer goods (FMCG), financial companies, innovation, technology/AR/VR, consulting and software companies, manufacturing companies; media, marketing/communication and digital marketing agencies, media companies, pharmaceuticals, wine and beverages, as represented in Table 2.

| **Sector** | **Firms** | **Key Functions** | **Interview Date** |
|---|---|---|---|
| FMCG | 1 | Chief e-Commerce & Customer Office | 29/04/2024 |
| Marketing/Communicat ion | 3 | Marketing Assistant,<br>Innovation<br>Director, Marketing Manager | 6/05/2024<br>24/05/2024 |
| Technology/AR/VR | 3 | Unity Developer, Project Manager, Head of Marketing | 31/10/2024<br>04/11/2024 |
| Consulting | 1 | Founder & CEO | 30/10/2024 |
| **Sector** | **Firms** | **Key Functions** | **Interview Date** |
| Media | 1 | CEO | 04/11/2024 |
| Automotive | 1 | Marketing and Communication Manager | 22/04/2025 |
| Wine/Beverages | 1 | President and Sales & Marketing<br>Director | 17/05/2025 |
| Finance | 1 | Marketing and Products Manager | 22/04/2025 |
| Digital Marketing | 1 | COO | 05/11/2024<br>23/04/2025 |
| Enterprise Software | 1 | CX Solution Advisor | 06/05/2025 |

| | | | |
|---|---|---|---|
| Others | 7 | Various executive roles | 24/05/2024<br>06/06/2024<br>27/05/2025 |

**Table 2:** Sample Distribution by Sector and Functions

Out of the 21 organizations, 10 authorized the disclosure of the company name while 11 requested anonimity, testifying to the strategic sensitivity of the topic. The protagonists of our interviews include senior and middlemanagement figures: Chief e-Commerce & Customer Office, CEOs and founders, Innovation Directors, Unity developers, Marketing and communication managers, and many other executive roles. Data collection was conducted through Google Forms allowing standardization of questions and facilitating comparative analysis of responses. The interviews specifically explored the use of advanced digital technologies (AI, VR, XR, MR, Metaverse, Blockchain) in knowledge management processes, with particular attention to the four SECI model modalities.

## 5. Main preliminary results

Our analysis reveals a more mature and multifaceted technology adoption landscape than initial expectations. Of the interviewed companies, 15 out of 21 declare active use of advanced digital technologies, while 3 companies are in a phase of partial or experimental use. Only 3 companies do not yet use these technologies, but even these ones recognize their future potential.

| **Adoption Status** | **Firms** | **Phases** |
|---|---|---|
| Active Use | 15 | Full integration in business processes |
| Partial/Experimental | 3 | Pilot projects and testing phases |
| No Current Use | 3 | Recognizing future potential |

**Table 3:** Technology Adoption Status

### 5.1 Socialization: Virtual Spaces for Tacit Knowledge Sharing in Marketing

In the socialization phase, immersive technologies, VR and Metaverse platforms, emerge as facilitators of socialization through the creation of shared virtual spaces. VR platforms enable global teams to collaborate in shared virtual spaces, creating new forms of tacit knowledge sharing that transcend geographical boundaries. Extended reality (XR) can create shared learning spaces where employees learn by observing expert colleague avatars in action simulating apprenticeship analogous to on-the-job training. AI plays a key role in externalization by capturing expert input during problem-solving and automatically transforming it into structured, shareable formats — one of the most advanced applications observed.

Our findings reveal innovative approaches to virtual collaboration:

*"The metaverse is useful for meetings or presentations, but also for moments of leisure and experimentation. [...] In companies, the metaverse is mostly used to "force" colleagues to try it out. Therefore, platforms like Workrooms or Spatial are used to hold meetings and share presentations."*

(Technology AR/VR B2B, Co-founder and Innovation strategist, 04/11/2024)

The potential for cross-functional knowledge transfer through virtual environments is particularly promising: *"Sharing experiences and knowledge in the metaverse would be an excellent idea to develop crossfunctional expertise. Having a 360° view of each role could make it possible to transfer this information more quickly to other functions or to employees who will take over in the future."*

(Food B2B, Marketing Assistant, 24/05/2024)

AI tools like Microsoft Copilot "*streamline internal processes and content creation are used*" (Nissan, Marketing and Communication Manager, 29/04/2024).

However, challenges remain in terms of user adoption and technological barriers:

*" Initial in-person meetings, but then we were able to manage meetings and updates remotely".*

(Technology AR/VR B2B, Project Manager, 31/10/2024)

### 5.2 Externalization: AI as Knowledge Codification Catalyst in Marketing and Communication

In externalization, AI-powered documentation systems capture expert knowledge during real-time problemsolving sessions, automatically structuring insights into accessible formats. This represents one of the most mature applications observed in our study. The automotive sector demonstrates remarkable AI integration success: *" We are already experimenting with streamlining internal processes supported by AI (for example, content creation and the use of company Microsoft tools, i.e., Copilot solutions)."*

(Nissan, Chief e-Commerce & Customer Office, 29/04/2024)

In the media sector, AI has revolutionized content creation processes:

*"In my small operational structure, everyone uses AI—from writing sales emails to creating graphics for social media. This approach allows us to optimize creative and communication processes, making our work faster and more efficient."*

(Technology AR/VR B2B, CEO, 04/11/2024)

The consulting industry shows particular enthusiasm for AI's knowledge externalization capabilities: *" AI is useful for brainstorming, finding inspiration, correcting emails, creating social media posts or drafting editorial plans, organizing work, analyzing data, and tracking KPIs."*

(Technology AR/VR B2B, Co-founder and innovation strategist, 04/11/2024)

Further, the metaverse is used not only for meetings and presentations, but also to encourage experimentation and informal interaction. Virtual environments can promote cross-functional learning by offering a 360° view of different roles and responsibilities. Despite the potential, user adoption and tech readiness remain challenges in fully replacing in-person interactions.

### 5.3 Combination: Data Aggregation and Cross-Functional Insights in Marketing and Communication

In combination, blockchain-verified knowledge repositories allow organizations to aggregate insights from multiple sources while maintaining data integrity and traceability. Predictive analytics supports the intersection of data from multiple sources, creating new knowledge combinations. The power of AI in data aggregation and analysis is evident: AI is instrumental in aggregating and analyzing data across platforms, monitoring market trends, social media and KPIs:

*"AI is very powerful for collecting and analyzing data. In particular, we use it to monitor social media data and KPIs, gather useful information and conduct research, and perform competitor and market analysis."*

(KIIAI Innovation Lab, Co-founder and innovation strategist, 04/11/2024)

Media companies are leveraging AI for content summarization and knowledge synthesis:

*"Our news service is based on AI-generated summarization, and our users seem to appreciate the result."*

(Minnovo, CEO, 04/11/2024)

Internal knowledge aggregation through AI chatbots is emerging as a key application:

*"AI certainly helps with this, as all the information can be aggregated and made accessible to everyone through an internal chatbot. Of course, there must be written procedures for the AI to learn from"*

(Minnovo, CEO, 04/11/2024)

### 5.4 Internalization: Experiential Learning Through Immersive Technologies in Marketing

In internalization, AR simulations provide safe environments for employees to practice real-world tasks and procedures in virtual environments, accelerating and supporting the shift from explicit instructions to tacit understanding. While adoption is still emerging, this area shows strong future potential.

The potential for simulation-based learning is recognized across sectors:

*" It could be useful to carry out simulations."*

(Eurospital/Piaceri Mediterranei, Marketing Assistant, 24/05/2024) Current applications remain limited but show promise:

*" Internally, it has been used very little for simulations or learning, except to understand how to navigate, explore, present, and simulate a real meeting or an art exhibition."*

(KIIAI Innovation Lab, Co-founder and innovation strategist, 04/11/2024)

The potential for tacit knowledge transfer through observation in virtual environments is particularly intriguing: *" For tacit knowledge, the metaverse could perhaps help, as being able to observe someone doing something would break down the learning barrier"*

(Technology AR/VR B2B, CEO, 04/11/2024)

### 5.5 Present Applications and Challenges

If knowledge management implement by new technologies in marketing and communication is seen as important, why are many organizations still not ready to adopt new technologies

— and how does this lack of readiness affect their ability to use phygital (physical + digital) marketing strategies? The main limits to expansion and implementation are: lack of basic digitalization an of sufficient education about AI, VR Metaverse tools; resistance to newness in organizations; lack of economic investment. Therefore, the analysis of future perspectives and market readiness (3-5 years) reveals a predominantly cautious but optimistic attitude. This suggests a phase of observation and evaluation rather than uncritical enthusiasm.

*"In my opinion, 3–5 years is still too soon to see mass adoption of the metaverse. The real game changer will be the accessibility of the devices—both in terms of cost and usability. They will need to be small and easy to handle in order to truly become part of daily life and revolutionize the way we interact with the virtual world."*

(Technology AR/VR B2B, CEO, 04/11/2024)

The long-term vision emphasizes hardware accessibility as a key factor:

*"The metaverse will become much more well-known and popular in the future as the hardware needed to access it becomes more affordable. This technological evolution will break down economic and technical barriers, allowing a wider audience to immerse themselves in engaging virtual experiences and transforming the metaverse into an integral part of everyday life."*

(Technology AR/VR B2B, CEO, 04/11/2024)

The main challenges identified include the complexity of integration with existing systems, the need for staff training, and managing innovation risk, particularly for startups that must overcome the "liability of newness" and high implementation costs. A critical challenge is market readiness:

*"To have an audience that is already prepared for this type of user experience. Unfortunately, the Italian market still has a very low level of basic digitalization, and this prevents the introduction of such innovative tools"*

(Pop Corn srl, CEO, 05/11/2024)

In Table 4, sectors, technologies and their implementations, and challenges are summarized.

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| **Sector** | **Primary Technologies** | **Applications** | **Key Challenges** |
|---|---|---|---|
| FMCG | AI (limited) | Consumer experience enhancement | Not current priority |
| Media, Marketing and Communication agencies | AI, limited Metaverse | Content creation, future planning | Hardware accessibility |
| Automotive | AI (GenAI) | Production, ERP, administration | Integration complexity |

| | | | |
|---|---|---|---|
| Wine and Beverages | AI, experimental VR | Social listening, content creation | Cost-benefit evaluation |
| **Sector** | **Primary Technologies** | **Applications** | **Key Challenges** |
| Financial Companies | AI | Behavioral prediction, risk analysis | Data privacy concerns |
| AR/VR/ Companies | AR, VR, Metaverse | Customer engagement, marketing | Market maturity |

**Table 4:** Technology Applications by Sector and Key Challenges

## 6. Theoretical Implications

Our research reveals the emergence of what we term the "technological agent" (Rahwan, I., Cebrian, M. et al. 2019; Luck, M., McBurney, Priest C., 2013; Chapman M, Gareth T., et al., 2013) as a fifth element in knowledge management systems even applied in marketing. This technological agent exhibits four key characteristics: Autonomy, AI systems can independently process and generate knowledge without direct human intervention, creating new knowledge combinations and insights; learning, machine learning algorithms continuously improve their knowledge processing capabilities, adapting to organizational contexts and user preferences; collaboration, AI agents work alongside human experts, creating hybrid human-machine knowledge creation processes that exceed the capabilities of either alone; adaptation: these systems dynamically adjust their knowledge management approaches based on contextual factors, user feedback, and environmental changes.

The technological agent doesn't replace human knowledge workers but rather augments their capabilities, creating new forms of human-machine collaboration that redefine the traditional SECI model boundaries.

## 7. Managerial Implications

This research reveals the emergence of a new paradigm in organizational knowledge management applied to marketing areas, where the traditional boundaries between physical and digital knowledge creation are dissolving. The SECI model, while maintaining its foundational relevance, is evolving to accommodate technological agents that act as autonomous knowledge partners rather than mere tools. Our findings demonstrate that successful phygital knowledge management requires more than technological implementation—it demands a fundamental rethinking of how organizations approach knowledge creation, sharing, and application, both to the internal and to external marketing and communication functions. Companies must develop new competencies in managing hybrid human-machine knowledge ecosystems while maintaining the human-centric elements that drive innovation and creativity. The strategic implications for marketing functions are particularly significant, as these technologies enable new forms of customer engagement, market intelligence, and collaborative innovation that can transform competitive advantage in the digital economy and acting as a catalyst also for renewing

companies' value proposition (Nonaka et al., 1998; Di Vaio et al., 2021; Hock-Doepgen et al., 2021).

## 8. Limits of the Research and Future Directions

The main limitations of this work are related to the number of companies that have been interviewed and the geographical areas covered, that limit the generalizability of the findings. Although the country's situation can be considered interesting in comparison to other country specific conditions, further and larger research must be conducted to realize such new investigation. Building on the above, future directions of studies could extend the investigation to a wider range of industries and geographies, adopting longitudinal approaches to monitor the rapid evolution of digital practices, combining qualitative insights with quantitative evidence to consolidate findings. Exploring the intersection between technological adoption and change management in marketing and communication, also includes the role of organizational culture, leadership in innovation and employee engagement in shaping the effective use of advanced tools.

## References


Al Mezawy, A., et al. (2023). Digital transformation and organizational learning capabilities. *Journal of Business Research*, 145, 123-135.

Barrera, K. G., & Shah, D. (2023). Marketing in the metaverse: Conceptual understanding, framework, and research agenda. *Journal of Business Research*, 155, 113420.

Chapman M., Gareth T., et al (2013). Social Networking and Information Diffusion in Automated Markets, in (David E., Kickintveld A., et al., Eds.), *Agent-Mediated Electronic Commerce*, Springer.

Deloitte. (2020). *Global Human Capital Trends 2020*. Deloitte Insights.

Di Vaio, A., et al. (2021). Artificial intelligence and business models in the sustainable development goals perspective: A systematic literature review. *Journal of Business Research*, 121, 283-314.

Farnese, M. L., et al. (2019). The role of inclusive leadership in stimulating team learning in work teams. *Leadership & Organization Development Journal*, 40(2), 193-204.

Gioia, D. A., et al. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods*, 16(1), 15-31.

Harreis, H., et al. (2023). *The economic potential of generative AI: The next productivity frontier*. McKinsey Global Institute.

Hock-Doepgen, M., et al. (2021). Knowledge management capabilities and organizational risk-taking for business model innovation in SMEs. *Journal of Business Research*, 130, 683-697.

Jarrahi, M. H., et al. (2023). Artificial intelligence and knowledge management: A partnership between human and AI. *Business Horizons*, 66(1), 87-99.

Kaplan, A., et al. (2024). Digital transformation and the future of marketing. *Journal of Marketing*, 88(1), 1-25. Luck, M., McBurney, P., & Priest C. (2003). *Agent Technology: Enabling Next Generation Computing. A Roadmap for Agent Based Computing*, Agentlink.

Matsumoto, K., et al. (2024). Generative AI in knowledge management: Applications and implications. *Knowledge Management Research & Practice*, 22(2), 145-162.

Mele, C., et al. (2023). Phygital customer experience: Bridging physical and digital touchpoints. *Journal of Service Management*, 34(2), 234-251.

Miller, C. C., et al. (2014). Qualitative research methods in strategic management. *Strategic Management Journal*, 35(8), 1173-1195.

Nonaka, I., & Takeuchi, H. (1995). *The Knowledge-Creating Company: How Japanese Companies Create the Dynamics of Innovation*. Oxford University Press.

Nonaka, I., et al. (1998). A theory of organizational knowledge creation: Understanding the dynamic process of creating knowledge. *Handbook of Organization Learning and Knowledge*, 491-517.

Pawlowski, J. M., & Bick, M. (2022). The global knowledge economy and digital transformation: A systematic literature review. *Computers & Education*, 178, 104-118.

Rahwan, I., & Cebrian, M. et al. (2019). Machine Behaviour, *Nature*, vol. 568, 25 April 2019

Rauschnabel, P. A., et al. (2022). What is XR? Towards a framework for augmented and virtual reality. *Computers in Human Behavior*, 133, 107289.

Ribiere, V. (2023). Virtual reality and knowledge management: New frontiers for organizational learning. *Knowledge Management Research & Practice*, 21(3), 287-301.

# The adoption of blockchain by small agri-food companies: An empirical investigation

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## Abstract

Blockchain Technology (BT) is increasingly used not only as a traceability tool that could enhance safety and transparency in food supply chains, but also as a strategic marketing lever. However, adoption of this technology among small and medium-sized enterprises (SMEs) remains low. To identify the factors underlying this phenomenon, this research focuses on knowledge of BT, uncertainty about its benefits, and privacy concerns, and assesses the influence of these variables on intention to adopt blockchain-based traceability systems through two empirical studies. Study 1 involved 86 SMEs located in Italy and demonstrates that BT knowledge increases the intention to adopt this technology through a reduction of SMEs' uncertainty about BT. Study 2 involved 109 managers of small agri-food companies located in the UK and demonstrates that BT knowledge has a positive impact on adoption intention, but only when privacy concerns are low. While limited by regional scope and sample size, these findings expand the literature on BT adoption barriers and provide practical guidance for enhancing BT adoption among agri-food SMEs. Policymakers aiming at boosting BT adoption among SMEs could focus on targeted education and reassurance about the security of this technology in order to reduce uncertainty and concerns over possible privacy infringements.

*Keywords: Blockchain Technology, small agri-food companies, knowledge, uncertainty, privacy concerns.*

## 1. Introduction

Recent investigations have underscored that consumers increasingly seek food products aligned with sustainability, health, and ethical sourcing, prioritizing transparency about ingredients, origin, and production methods (Hazley & Kearney, 2024). To meet these growing needs, Blockchain Technology (BT) has emerged as a promising innovation in the food sector. It can enhance traceability, improve safety, reduce fraud and food waste (Friedman & Ormiston, 2022), and strengthen consumer trust (Ma et al., 2022). Beyond operational efficiency, blockchain creates new value by signaling verified origin and transparency, thus functioning as a marketing lever that can improve brand positioning and possibly increase product sales (Mazzù et al., 2022).

However, many agri-food companies, especially the smaller ones, hesitate to adopt it for a variety of reasons, including their limited knowledge of BT (Bianchini and Kwon, 2020), regulatory uncertainty (Zkik et al., 2022), the fear of being controlled by blockchain operators (Mathivathanan et al., 2021), and privacy risks (Hackius et al., 2019). Recent studies have

noticed a dearth of research on the possible interplays of these adoption barriers and have, therefore, called for a more insightful understanding of the mechanisms behind BT adoption (Kouhizadeh et al., 2021). Moreover, the available studies have often devoted great attention to large enterprises (Lerman et al., 2022), while empirical studies on SMEs' adoption of BT are still very limited. To address these research gaps, this research investigates how BT knowledge affects SMEs' intention to adopt this technology. In particular, the research focuses on a possible mechanism activated by BT knowledge – i.e., the reduction of SMEs' uncertainty about BT benefits – and also tests whether the effect of BT knowledge on adoption intention is moderated by SMEs' privacy concerns.

## 2. Theoretical Background

### 2.1 Knowledge of BT, uncertainty, and adoption intention

Knowledge of a technology, distinct from mere awareness, has been shown to foster favorable perceptions about the technology's benefits (Rogers, 2010). Knowledge supports decision-making and encourages adoption of new products and innovations (Adu-Gyamfi et al., 2022). In the specific case of BT, knowledge can reduce potential adopters' uncertainty about some key aspects of this technology. The literature highlighted indeed that BT is not yet clearly regulated, and its benefits are still poorly understood (Mathivathanan et al., 2021). Moreover, many individuals tend to associate it with suspected Bitcoin operations and money laundering activities, which further increases the uncertainty about BT characteristics (Guo and Liang 2016). However, greater knowledge of BT may reduce such uncertainty about its benefits and usefulness, and this effect, in turn, might have positive reflections on the intention to adopt this technology. Hence, we formulated the following hypothesis:

H1. Knowledge of BT increases SMEs' intention to adopt this technology, through a reduction of uncertainty about BT features.

### 2.3 Moderating effect of privacy concerns over BT use

According to Protection Motivation Theory (PMT), organizations respond to perceived threats by adjusting their behaviors based on risk severity and coping ability (Maddux & Rogers, 1983). While BT promises transparency, concerns about data misuse and surveillance may reduce adoption intention (Oh et al., 2023). Such concerns might counterbalance the positive effect of knowledge on adoption intention. Therefore, it appears plausible to hypothesize the following moderating effect:

H2. Knowledge of BT increases small agri-food companies' intention to adopt this technology only when privacy concerns are low.

## 3. Empirical studies

This research employs a two-study design to empirically test the hypotheses illustrated above. Study 1, conducted with Italian SMEs, assessed whether knowledge of BT increases the intention to adopt this technology through a reduction of uncertainty about its characteristics. Study 2, conducted with UK small agri-food company managers, explores how knowledge of blockchain technology and privacy concerns interact to shape SMEs' intention to adopt blockchain-based traceability services.

### 3.1. Study 1

#### 3.1.1 Method

We contacted 86 SMEs located in Italy, which were randomly selected from the Bureau van Dijk's AIDA (Analisi Informatizzata delle Aziende Italiane) database. They completed an

online questionnaire that provided them with a brief description of BT and then asked them to rate their knowledge of BT (through a two-item scale drawn from Rocklage et al., 2021), uncertainty about BT benefits (through a four-item scale drawn from Mathivathanan et al., 2021), and their intention to adopt it (through a three-item scale adapted from Grewal et al., 1998).

### 3.1.2. Results

About 46% of the companies who participated in the study are based in Southern Italy and the vast majority of them (92%) employ a maximum of 60 workers. These companies rated their knowledge of BT as low (M = 3.45, SD = 1.98) and reported moderate levels of uncertainty (M = 4.33, SD = 1.28) and intention to adopt BT (M = 4.13, SD = 1.73). To test H1, we used Hayes' (2022) PROCESS macro and run a mediation analysis that assessed whether the influence of BT knowledge on adoption intention can be attributed to a reduction in the uncertainty about BT characteristics. The analysis returned a significant negative effect of knowledge on uncertainty (b = -.19, p = .006), indicating that knowledge of BT reduces SMEs' uncertainty about this technology. We also detected a significant negative effect of uncertainty on adoption intention (b = -.40, p = .001), and a significant indirect effect of knowledge on adoption intention (b = .08, 95% .02, .16), which confirmed H1.

## 3.2 Study 2

### 3.2.1 Method

We recruited 109 UK agri-food SME managers via Prolific Academic, using filters for industry, firm size (less than 250 employees), and decision-making roles. Only respondents from firms not using BT were included. Participants received a short description of BT and rated their adoption intention and BT knowledge using the same scales as in Study 1. They also rated their privacy concerns using a four-item scale drawn from Jaspers and Pearson (2022).

### 3.2.2 Results

47% of firms had less than 50 employees and 451% reported an annual income lower than £100,000. Reported BT knowledge was low (M = 2.87, SD = 1.57), adoption intention was low (M = 3.19), and privacy concerns were moderate (M = 4.24, SD = 1.64). To test H2, we used Hayes' (2022) PROCESS macro and ran a moderation analysis that assessed whether the influence of BT knowledge on adoption intention depends on privacy concerns. By regressing the intention to adopt BT on knowledge of BT, privacy concerns, and the interaction between these latter two variables, we found a significant positive effect of knowledge (b = .28, p < .007) on adoption intention. We also detected a significant negative interaction effect between knowledge of BT and privacy concerns (b = -.17, p = .032). By looking at the conditional effects of knowledge at different levels of privacy concerns, we found that knowledge significantly influences the intention to adopt BT when privacy concerns are low (M-1SD; b = .48, p < .001, Figure 2). However, we also found that the positive effect of knowledge disappears when privacy concerns are high (M+1SD; b = .07, p = .589).

## 4. Conclusion

This study investigated how BT knowledge, uncertainty about BT benefits and privacy concerns, affect SMEs' intention to adopt blockchain-based traceability systems. Through two empirical studies in different national contexts, we offer a view of the challenges and opportunities associated with BT adoption by agri-food SMEs. Study 1 demonstrated that

greater BT knowledge reduces these companies' uncertainty about BT characteristics and this, in turn, contribute to boost their intention to adopt BT-based traceability systems. Study 2 offers another interesting insight on the influence of knowledge on adoption intention by showing that this factor enhances SMEs' intention to adopt BT only when their concerns about possible privacy-related risks are low; when such concerns are high, the beneficial effect of knowledge vanishes. Theoretically, this research contributes to the literature on BT adoption by showing that knowledge of this technology is an important requisite for its adoption. Yet, factors such as uncertainty about the benefits of BT and privacy concerns weaken this effect and hinder BT adoption. Practically, our findings emphasize the need for targeted interventions to reduce SMEs' uncertainty: policymakers, industry bodies, and BT service providers are recommend to deliver clear and objective information in order to reduce SMEs' uncertainty and privacy concerns. They could promote BT as a risk-free innovation that not only supports compliance with traceability standards but also enables strategic differentiation in the food market.

## References


Adu-Gyamfi, G., Song, H., Asamoah, A. N., Li, L., Nketiah, E., Obuobi, B., Adjei, M., & Cudjoe, D. (2022). Towards sustainable vehicular transport: Empirical assessment of battery swap technology adoption in China. Technological Forecasting and Social Change, 184, 121995.

Bianchini, M., & Kwon, I. (2020). Blockchain for SMEs and entrepreneurs in Israel. OECD SME and Entrepreneurship Papers.

Friedman, N., & Ormiston, J. (2022). Blockchain as a sustainability-oriented innovation?: Opportunities for and resistance to Blockchain technology as a driver of sustainability in global food supply chains. Technological Forecasting and Social Change, 175, 121403.

Grewal, D., Monroe, K. B., & Krishnan, R. (1998). The effects of price-comparison advertising on buyers' perceptions of acquisition value, transaction value, and behavioral intentions. Journal of Marketing, 62(2), 46–59.

Guo, Y., & Liang, C. (2016). Blockchain application and outlook in the banking industry. Financial Innovation, 2(1), 24.

Hackius, N., Reimers, S., & Kersten, W. (2019). The privacy barrier for blockchain in logistics: first lessons from the port of Hamburg. Logistics Management: Strategies and Instruments for Digitalizing and Decarbonizing Supply Chains-Proceedings of the German Academic Association for Business Research, Halle, 2019, 45–61.

Hazley, D., & Kearney, J. M. (2024). Consumer perceptions of healthy and sustainable eating. Proceedings of the Nutrition Society, 83(4), 254–262.

Jaspers, E. D., & Pearson, E. (2022). Consumers' acceptance of domestic Internet-of-Things: The role of trust and privacy concerns. Journal of Business Research, 142, 255-265.

Kouhizadeh, M., Saberi, S., & Sarkis, J. (2021). Blockchain technology and the sustainable supply chain: Theoretically exploring adoption barriers. International Journal of Production Economics, 231, 107831.

Lerman, L. V, Benitez, G. B., Müller, J. M., de Sousa, P. R., & Frank, A. G. (2022). Smart green supply chain management: A configurational approach to enhance green performance through digital transformation. Supply Chain Management: An International Journal, 27(7), 147–176.

Ma, T., Wang, H., Wei, M., Lan, T., Wang, J., Bao, S., Ge, Q., Fang, Y., & Sun, X. (2022). Application of smart-phone use in rapid food detection, food traceability systems, and personalized diet guidance, making our diet more health. Food Research International, 152, 110918.

Maddux, J. E., & Rogers, R. W. (1983). Protection motivation and self-efficacy: A revised theory of fear appeals and attitude change. Journal of Experimental Social Psychology, 19(5), 469–479.

Mathivathanan, D., Mathiyazhagan, K., Rana, N. P., Khorana, S., & Dwivedi, Y. K. (2021). Barriers to the adoption of blockchain technology in business supply chains: a total interpretive structural modelling (TISM) approach. International Journal of Production Research, 59(11), 3338–3359.

Mazzù, M. F., Baccelloni, A., & Lavini, L. (2022). Injecting trust in consumer purchase intention through blockchain: evidences from the food supply chain. Italian Journal of Marketing, 2022(4), 459–482.

Oh, S. J., Xiao, S., Park, B. Il, & Roh, T. (2025). Coping or threat? Unraveling the mechanisms enabling user acceptance of blockchain technologies. Information Technology and Management, 26(2), 219–233.

Rocklage, M. D., Rucker, D. D., & Nordgren, L. F. (2021). Emotionally numb: Expertise dulls consumer experience. Journal of Consumer Research, 48(3), 355–373.

Rogers, E. M. (2010). Diffusion of Innovations, 4th Edition. Free Press.

Zkik, K., Belhadi, A., Rehman Khan, S. A., Kamble, S. S., Oudani, M., & Touriki, F. E. (2023). Exploration of barriers and enablers of blockchain adoption for sustainable performance: implications for e-enabled agriculture supply chains. International Journal of Logistics Research and Applications, 26(11), 1498–1535.

# Exploring the role of Artificial Intelligence in engaging with patients: a literature review on AI applications in the healthcare sector

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## Abstract

Artificial intelligence (AI) is making a deep change in the healthcare sector, providing new opportunities to improve efficiency, diagnosis and personalisation of treatment. In the field of healthcare management, several studies have focused on the adoption of AI by healthcare professionals, highlighting benefits in terms of decision support and optimisation of clinical processes. However, its impact on patient experience and involvement throughout the patient journey is still poorly explored.

The aim of this ongoing research is to offer a comprehensive literature review on AI adoptions in the healthcare sector, to identify the main patient-centred applications and highlight existing gaps.

Methodologically, this study combines bibliometric analysis and thematic content analysis to explore how AI is applied in healthcare, particularly in relation to patient engagement.

Based on the findings of the analysis, a strong prevalence of studies focusing on the clinical and organisational point of view emerges, while the patient-side implications in terms of engagement, empowerment and acceptance of technologies are still not much explored.

In conclusion, this study proposes a critical discussion on the need to integrate more participatory and patient-centred approaches in the study of AI in healthcare.

Future research should focus on the study of solutions that involve patient in the process of co-creating the healthcare services. Patient experience must be enriched by the adoption of AI solution, as this should be a driver to increase patient engagement and involvement.

*Keywords: Artificial Intelligence, healthcare, patient journey, patient experience, patient engagement, patient empowerment*

## 1. Introduction

Over the past few years, the adoption of AI has expanded rapidly across different economic sectors such as finance, logistics, retail and public administration (CyhanBowles, 2024). These new AI-supported systems are transforming business models and interactions, creating new challenges and opportunities in terms of efficiency, personalisation and innovation. (Giuggioli & Pellegrini, 2023; Mayer et al., 2024). In particular, the healthcare sector, due to its structural characteristics such as the high complexity of processes (WHO, 2024), the centrality of the human factor (Rathore et al., 2023) and the growing demand for personalisation of care (Maher et al., 2023) acts as a particularly fertile context for a vertical integration of AI tools (Zhang et al., 2022).

Furthermore, these new methodologies can help improve operational efficiency, support clinical decision-making and foster a more proactive and predictive management of the care pathway (Schiavone & Ferretti, 2021; Tursunbayeva & Renkema, 2023; WHO, 2024). However, the introduction of these technologies also raises relevant questions about the impact on the patient experience, active involvement and maintenance of the doctor-patient relationship, which are key elements in personcentred healthcare models (Kannelønning, 2023; Rathore et al., 2023).

Mapping and identifying the patient journey is a complex issue. However, it is an essential process for identifying critical areas, improving the quality of care and customising services (McCarthy et al., 2016). It refers to all the experiences, interactions and processes that an individual goes through during their care pathway, spanning from prevention to diagnosis as well as treatment and follow-up (Davies et al., 2023). This non-linear journey includes interdependent activities across diverse actors, technologies and contexts.

The aim of this short paper is to explore how AI is applied throughout the patient journey to identify from a marketing perspective the most critical touchpoints. This enables targeted improvements in engagement and perceived service quality (Cronin Jr. et al., 2000), without delving into clinical or diagnostic areas. This approach could be particularly relevant for non-urgent conditions, where patient experience can influence treatment adherence, satisfaction and trust.

Subsequently, the study focuses on the role of AI in patient engagement to analyse how this aspect is addressed in the literature. For example, the adoption of AI-systems for administrative tasks such as appointment scheduling, patient communication or medical history data collection can simplify access to services, reduce waiting times and improve the overall experience (Rathore et al., 2023). Automation tools can handle repetitive activities such as filling out forms or managing diaries, freeing up staff for more value-added and relational activities (Youn et al., 2022). Moreover, logistical activities such as dynamic bed management (Landa et al., 2018), intervention planning and resource allocation (Chuang et al., 2018) can benefit from this approach. The use of predictive algorithms to anticipate peaks in demand or optimise the allocation of resources helps improving overall patient journey.

Literature focuses on service design and diagnostic accuracy often considering patient engagement as a secondary positive side effect (Rathore et al., 2023). There is a lack of structured marketing perspective in the patient journey, where AI can add value through engagement, empowerment and quality of experience. (Dai & Tayur, 2022). This paper takes a broader perspective focusing on administrative and logistical touchpoints rather than clinical or diagnostic processes.

## 2. Review methodology

This study combines bibliometric (Broadus, 1987; Paul et al., 2021) and content analysis in the form of thematic analysis (Lim et al., 2022) to explore the applications of AI in the healthcare sector, with reference to patient engagement.

### *2.1 Data collection method and procedure*

The data were collected through the Scopus database. It included articles published from the earliest possible date until March 2025. The search query was designed to identify studies that addressed together the topics of AI, patient and engagement. The keyword search was conducted in the items title, abstract or keywords. This was done to answer the next research question: What are the research directions on AI in healthcare and to what extent do patients and their involvement feature in them? In particular, the following search string was used: *( TITLE-ABS-KEY ( "patient" OR "patient journey" ) AND TITLE-ABS-KEY ( "engag" OR "involv" ) AND TITLE-ABSKEY ( "artificial intelligence" OR "AI" OR "machine learning" OR "deep learning" ) ) AND ( LIMIT-TO ( SUBJAREA , "BUSI" ) ).*

The search returned 225 papers from 154 sources. While most items are classified as articles (91) and conference papers (68), a significant portion also includes book chapters (48), while the remaining items (18) comprise books, reviews, editorials, and other formats. Although the topic is widely discussed, it remains under-explored from a marketing and management perspective. For this reason, no rigorous checks have been made on ANVUR or ABS rankings to avoid excluding relevant contributions published in sector-specific journals. Items with mistakes or with missing themes were removed and 222 items survived. The bibliometric part of the review included the keyword co-occurrences analysis, which was conducted over all 222 articles in VOSViewer. The content analysis in the form of thematic analysis was the second methodological step.

## 3. Findings

### 3.1 The results of keyword co-occurrence analysis

The co-occurrence analysis resulted in the identification of five clusters (see Table 1). The aim of this phase was to recognise the existing research fronts on AI in the healthcare sector. For clusters 1–5, the study identified the key nodes in VOSviewer and based on these, it attributes a theme name to each cluster.

Moreover, to support the selection of articles, an automatic classification algorithm was developed in VBA language and directly integrated into the Excel file containing the bibliographic references. Keywords, organised by cluster, are compared with the text of the articles. The classification is based on the number of matches, applying decreasing thresholds to ensure a balance between accuracy and non-classification of the articles. If no threshold is reached during the first analysis, which only takes place on keywords, the algorithm analyses the abstract. This approach was done in the first phase to reduce subjectivity of the classification. Subsequently, a content analysis was carried out in the form of thematic analysis, following the methodological framework by Braun & Clarke (2006).

Clusters 2 and 3 emerged as the most consistent with the research question and showed significant semantic and conceptual overlap. Specifically, cluster 2 shows an orientation towards the use of AI to optimise the management of data and clinical processes. However, a distinctive element is the presence of the theme of patient engagement. On the other hand, cluster 3 focuses on the operational integration of AI in healthcare processes, with a focus on decision support tools, patient monitoring and automated interaction through chatbots.

This cluster reflects a more technological and application-oriented approach. Thus, the choice to analyse both clusters is driven by their thematic complementarity.

| Cluster | Main topic | Main keywords (listed based on the number of occurrences) | Main contributors to this cluster |
|---|---|---|---|
| **1** | AI for diagnosis and treatment | deep learning, diagnosis, convolutional neural networks, medical imaging, diabetic retinopathy, breast cancer, image processing | Loh E. (2018); Liu X., Zhang B., Susarla A., Padman R. (2020); Gourisaria M.K., Das S., Sharma R., Rautaray S.S., Pandey M. (2020); Sharma S., Guleria K., Kumar S., Tiwari S. (2023) |
| **2** | AI for clinical decision support and personalized healthcare | healthcare, electronic health record, patient engagement, personalized medicine, clinical decision support, predictive analytics, medical informatics | Kamel Boulos M.N., Wilson J.T., Clauson K.A. (2018); Tursunbayeva A., Renkema M. (2023); Zovko K., Šerić L., Perković T., Belani H., Šolić P. (2023); Youn S., Geismar H.N., Pinedo M. (2022) |
| **3** | AI for intelligent healthcare systems and process optimization | artificial intelligence, decision support systems, internet of things, patient monitoring, data privacy, behavioral research, chatbots | Jussupow E., Spohrer K., Heinzl A., Gawlitza J. (2021); Panigutti C., Perotti A., Pedreschi D. (2020); Osei-Frimpong K., Wilson A., Lemke F. (2018); Agarwal P., Swami S., Malhotra S.K. (2024) |
| **4** | AI for predictive modelling and classification | machine learning, classification, decision trees, support vector machines, prediction, heart disease, data mining | Desai F., Chowdhury D., Kaur R., Peeters M., Arya R.C., Wander G.S., Gill S.S., Buyya R. (2022); Mumtaz W., Vuong P.L., Xia L., Malik A.S., Rashid R.B.A. (2016); Chen Y., Lee J.-Y., Sridhar S., Mittal V., McCallister K., Singal A.G. (2020); Chuang M.-T., Hu Y.-H., Lo C.-L. (2018) |
| **5** | AI for covid19 | covid-19, pandemic, data analytics | Davazdahemami B., Zolbanin H.M., Delen D. (2022); Sharma S., Tripathi M.M., Mishra V.M. (2022) |

**Table 1:** Keyword co-occurrence analysis results

## 3.2 The results of content analysis in the form of thematic analysis

This preliminary analysis is based on eight scientific articles. Five belong to cluster 2, which emphasises the importance of personalisation and patient engagement (Dai &

Tayur, 2022; Maher et al., 2023; Mele et al., 2022; Rathore et al., 2023; Tursunbayeva & Renkema, 2023). The remaining ones are part of cluster 3, which delves into the technological solutions that enable their implementation (Basharat & Shahid, 2024; Osei-Frimpong et al., 2018; Swan et al., 2024). The choice to include a limited number of contributions is intentional. The aim is to prioritise quality and theoretical relevance to specifically address a complex topic. While these contributions represent significant technical and organizational advances, they often overlook the relational and participatory role of the patient, treating it as secondary.

Dai and Tayur (2022) propose a useful model for understanding the necessary conditions for an effective AI-integration by identifying four key elements (4Ps):

physician involvement, patient acceptance, provider investment and funder support.

Engagement is often seen as a side effect of technology adoption, rather than something that could be designed preventively. Some contributions have a more relational approach, particularly towards patients with fragile conditions (Mele et al., 2022). Furthermore, digital access to information has been shown to be a potential lever for increasing patient awareness while enhancing active participation and improving patient trust and satisfaction (Osei-Frimpong et al., 2018).

The analysis identifies four main areas for AI intervention along the patient journey: early diagnosis and prediction, remote monitoring, personalization of care and communication. Among these, interaction mediated by chatbots and virtual assistants

(Basharat & Shahid, 2024) are areas particularly relevant to the content of this study. However, perceived reliability of these tools is critical to successful patient acceptance.

There is still little integration between the different phases and still a segmented view of the patient journey. Few studies consider the care continuum from prevention to follow-up as a space of co-creation enabled by AI tools (Osei-Frimpong et al., 2018; Rathore et al., 2023). Furthermore, personalisation and remote monitoring methodologies are promising but their use is limited by the absence of a clear regulatory framework (Maher et al., 2023).

## 4. Conclusions and future research perspectives

The ongoing work shows the need for a framework that links human-centered AI with co-creation models of service marketing. It is crucial to adopt a relational perspective in which value comes from the interaction between actors, technologies and contexts. Within this approach, AI can help transform healthcare by enabling more participatory, predictive and personalized solutions.

Given these considerations, future research perspectives are outlined. Firstly, it is recommended to develop qualitative studies focusing on the patient and citizen perspective through interviews, focus groups or even ethnographic techniques aimed at an in-depth understanding of the dynamics of acceptance, trust and participation in AIdriven technologies. Secondly, it is suggested to promote the co-creation of AI-driven services from a multidisciplinary perspective, integrating expertise from engineering, medicine, marketing and service design.

Finally, the Italian context allows to explore how different regional digital infrastructures and multi-level governance can support AI-based services. It is possible to identify specific areas where participatory AI solutions are most effective by actively involving citizens in the design and evaluation of services. Subsequently, a comparison between different contexts can help leverage local experiences, identify best practices and develop adaptable and shared models.

This can foster integrated solutions and reduce the gap between technological innovation and patient-centred care.

## References

References are available upon request.

# GenAI as a Product: An Empirical Perspective on Productisation's Key Dimensions

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## Abstract

Given the transformative impact of Generative AI (GenAI) on contemporary society, the objective of this paper is to illuminate the implications of GenAI as a product, underscoring the necessity for a re-evaluation of the concept of productisation. The present study analyses a single case study of a software firm specialised in legal technology aiming to unveiling the key dimensions of productisation when an innovative GenAI product is developed and commercialised. The study provides a novel perspective on the key dimensions of productisation, demonstrating how these can be viewed from a twofold perspective, the customer and the seller. The study also suggests that the process of productisation can be viewed in two distinct ways: either as a high or low degree of productisation. These key dimensions entail the capacity to influence the future offerings of the firm. The study provides a novel perspective on productisation and the development of GenAI innovations literature. It contributes to the enhancement of management understanding of how to effectively leverage GenAI technologies, which are characterised by their boundless and shapeless nature.

*Keywords: GenAI, product development; innovation; productization; servitisation.*

## 1. Introduction

The advent of artificial intelligence, and more specifically, GenAI, is having a profound effect on the world in which we live. GenAI and its associated technologies is poised to unfold a paradigm shift in our daily lives. Cooper (2025) further asserts that artificial intelligence will have an unprecedent impact on the economy. It is anticipated that the contribution of AI to the global economy will exceed 15.7 trillion dollars by 2030, while the AI market is predicted to reach 100 billion dollars. The compound annual growth rate (CAGR) of the AI market is estimated to be approximately 40%, and it is projected to generate more than 100 million jobs worldwide, thereby contributing to the rapid growth of the AI industry (MIT Education, n.d.). The advent of GenAI technologies engenders a series of novel challenges for the management and marketing of professional services, particularly with regard to operational management and the communication, promotion, and pricing of services (Jaakkola, 2011).

GenAI is a major field of research in the present era, and nonetheless the most dominant technological paradigm. Consequently, both the technological and business communities are paying increasing attention to GenAI: a form of AI that has the capacity to drive innovation through new product discovery and development (Mariani and Dwivedi, 2024). As a shapeless and amorphous technology, GenAI has the potential to transform various software, services and technologies. These technologies, in turn, are poised to become future

products. In order to facilitate the sale of these products, it is essential to enhance the offering's clarity, both internally within a company and externally towards customers (Harkonen et al., 2015). Consequently, the notion of productization could witness a resurgence among both scholars and practitioners. Furthermore, the productisation area of study is traditionally overlooked and neglected (Lahy et al., 2017; Li et al., 2023; Dubois et al., 2025; Leoni, 2015; Harkonen, 2021; Wirtz et al., 2021; Wirtz, 2021), while a stronger focus has been usually placed on the concept of servitisation (Vandermerwe and Rada, 1988; Kohtamäki et al., 2019; Gebauer et al., 2021). Productisation is a pertinent concept when considering the context of the heterogeneity of services, which is inherent to the nature of services. Subsequent to the findings of Gronroos (2020), it is acknowledged that services should be regarded as concrete objects in order to enhance marketing and sales performance. Indeed, customers frequently encounter difficulties in comprehending the value of boundaryless services such as software and new technologies (Wirtz et al., 2021; Jaakkola, 2011). Despite the assertion by Leoni (2015) that productization and servitisation are antithetical, the extant literature continues to demonstrate a paucity of clarity with regard to the conceptualisation of productization. However, the manner in which this concept is currently positioned within the field of service, and its role in relation to service offering and processes, remains somewhat unclear (Harkonen et al., 2017).

The notion of productisation is becoming increasingly pertinent in the context of GenAI technologies and the associated services. Thus far, the focus of service delivery has been oriented towards the competencies of employees. However, what implications might ensue if the provision of services were to be entrusted to GenAI (Shamsuzzoha et al., 2024)?

Indeed, GenAI offers services that are not inherently consistent with service "anatomy": GenAI services are not subject to expiration and are not "perishable", are ubiquitous, scalable, and standardized, and are not strongly influenced by customer co-creation (Shamsuzzoha et al., 2024). It is imperative to acknowledge the notion that, despite their intangibility, the services facilitated by emerging technologies must be regarded as tangible entities, akin to those offered by physical commodities (Shamsuzzoha et al., 2024). Extant studies has thus far demonstrated that, in order to produce a service that is fit for purpose, it is necessary to specify it (i.e. to formalise and standardise its value proposition), brand it (i.e. to assign it a name, term, symbol or design that is externally identifiable), and price it (i.e. to clearly state and communicate its pricing) (Wirtz et al., 2021). However, the present study contends that the advent of GenAI opens up further key dimensions to be addressed when observing the productisation of GenAI technologies (Mariani and Dwivedi, 2024), claiming that GenAI-enabled product innovation is calling for new contributions. In this section, the research also addressed the suggestion of Jaakkola (2011) to further examine the use of the productization discourse as a translation mechanism; in this case deployed to enact new GenAI technologies.

The present study employs a single-case study qualitative methodology, analysing the case of a firm developing a GenAI chatbot for courts. The objective of this initiative is to facilitate the processes involved in the auctioning of real estate and other types of registered goods, with a particular emphasis on user and citizen assistance. The present case study focuses on the development of the GenAI chatbot product and the subsequent support provided for its commercialisation.

The objective of this study is to provide a novel perspective on the concept of productization in the post-GenAI technological era. Indeed, the utilisation of GenAI in the domain of new product development and commercialisation has hitherto been underappreciated. The predominant studies on GenAI and innovative products concentrate on the development processes of new products (Cooper, 2023, 2024, 2025). In order to comprehend the process

of productisation in the context of GenAI, it is necessary to draw upon the findings of extant studies and to consider the case of a novel GenAI product for legal services. The objective of the study is to ascertain which variables/dimensions can be managed during the productisation of GenAI technology. The objective of this study is to address the following research question:

RQ: *What dimensions characterise the productisation of GenAI technology?*

The present study provides a framework with the key dimensions that emerge from the case study for GenAI productisation, thus contributing to both theory and practice. The study has particularly enriched the concept of productisation and has created the possibility for further research in this field.

## 2. Literature Background

### 2.1 Conceptualising productization

In the extant literature on productisation, two major streams can be identified. The first of these streams focuses on a process in which relevant elements are combined to form product-like objects. The second stream is concerned with a reverse approach to servitisation (Harkonen, 2021).

To date, the concept of productization has been regarded as a:

- strategy to adding tangible products to a service offering (Lahy et al., 2017)
- related to the development of Product-service systems (Lahy et al., 2017)
- related to service development in service-based companies (Shamsuzzoha et al., 2024)
- service-based organisations develop and add physical products to their service offerings or bundle their services with physical products (Li et al., 2023).

The concept of productization is still underdeveloped. A common conceptualization is still missing. Few authors specialise and developed relevant studies in this field (Harkonen et al., 2015; 2017; Harkonen, 2021; Wirtz, 2021; Wirtz et al., 2021). The researchers who undertook the development of the research on the concept frequently encountered a range of conceptualisations, from a close relationship with service to a more precise conceptualisation. The prevailing conceptualisations identified in the extant literature are as follows:

- "The productisation of professional services means service definition, design, development, and description to maximise the benefit for the customer and achieve the set objectives concerned with the firm's performance" (Shamsuzzoha et al., 2024, p. 1154)

- "Productisation is the process of analysing a need, defining and combining suitable elements, tangible and intangible, into a product-like object, which is standardised, repeatable and comprehendible. Productisation activities cover those for a product to be ready commercially, so it can be produced, delivered, sold, purchased and used" (Harkonen et al., 2015, pp. 70-71)

- "the process of transforming a service company offering by adding tangible products or by decomposing service components into combinable modules. Moreover, productization and servitisation need to be considered as "two faces of the same coin", which acting reversely lead to considering the existence of a new company type: the solution provider" (Leoni, 2015, p. 1)

- "productizing a service helps to transform it into a more concrete albeit still virtual product. With a productized service, consumers can better grasp what the service comprises (e.g. what are its key elements), how it is created (e.g. what are the main phases of the process and experience, and what will happen when) and what value they will receive (e.g. what is delivered, what is the experience and outcome, why it works and what is so special about it). Productization goes beyond making services more tangible, more standardized and improved quality. Specifically, productization of service translates an abstract service and its creation into concrete products and controllable processes" (Wirtz, 2021, p. 266)

Productization can be defined as the process of standardising services in order to create a product for sale. Consequently, the present manuscript draws from extant literature focusing on the processes by which customized offerings become product-like (Dubois et al., 2025, pp. 122): "productization a multistep process that implies analyzing customers' needs, combining tangible and intangible elements into a product-like offering, and codifying knowledge related to its delivery. It describes a shift from customized offerings to commoditised goods and has been investigated in a range of sectors, including services and software".

The concept of productisation has also been applied to the domains of software and technological development. Software productization can be defined as the process of creating a software product, which consists of computer programs, procedures, and associated documentation and data intended for delivery to users. The concept of productization has been employed in relation to technological frontiers and the development of technologies that are currently underdeveloped (Harkonen et al., 2015).

Research on productisation has already been conducted, and this has revealed both the advantages and disadvantages of the process. In particular, when dealing with the benefits, these have been identified from the perspectives of both the 'seller firm' and the 'users/customers'. The following section presents a summary of the benefits derived from the extant studies (Shamsuzzoha et al., 2024; Harkonen et al., 2015; Harkonen, 2021).

- Benefit for the firm
    - Consistency with customer needs
    - Pricing, more transparent and understandable
    - Communication
    - Customer service
    - Scalable and commercialisable
    - At the frontier of technological knowledge
    - Higher profitability and competitiveness
    - Internal understanding and effectiveness
    - Reducing dependency on single employees

- Benefit for the customers/users
    - Better understanding
    - Value perception
    - Pricing perception e willingness to pay

With regard to the disadvantages observed, these have been collectively examined in the study by Harkonen (2021).

- Customer being neglected since the product is standardized

- Lower value perception due to itemization
- Since the company sells a standardized product there is less emphasis and care on customer care and understanding

Productisation has also been conceptualised as a process. In this respect, scholars have identified four principal stages (Dubois et al., 2025): analysis, specification, delivery and marketing.

In addressing the fundamental dimensions of the phenomenon, the study by Wirtz et al. (2021) identified over 30 key dimensions of productization. However, it should be noted that these are not related to GenAI products but rather emerge from their analysis addressing the hotel and hospitality sectors. The following are some examples of key dimensions: pricing, branding, standardisation, packaging, customer needs, replicability, family of services, knowledge transfer and specification. As asserted by Wirtz et al. (2021), the notion of productisation can be conceptualised as a continuum, wherein the extent of productisation within the service sector is contingent upon the shifting of key dimensions from a state of minimal to a state of maximal productisation. These dimensions, which were previously mentioned, encompass variability in delivery and the presence of a brand, along with a clearly indicated price.

### 2.1 Brief notes on GenAI product

GenAI is frequently regarded as a technology comprised of models (e.g. Large Language models, LLMs). Nevertheless, it is important to note that a model cannot be regarded as a product, and in most cases, it is not. It is posited that the model may be regarded as the 'back-end' of a product that utilises GenAI. Consequently, the product is the result of the utilisation of GenAI. However, a GenAI product is predicated on the utilisation of GenAI as its core technological mechanism. The identification of a "GenAI product" is predicated on the capacity for the product to execute tasks in a manner analogous to that of a human. The process should be customisable in order to develop capabilities, as opposed to utilising a predetermined set of information. Furthermore, the decisions should be made by AI rather than by a predetermined scheme of rules (Enterprise Project, 2022).

Indeed, as posited by the foundational delineation of AI, the concept pertains to the manifestation of human intelligence by machines (Cooper, 2023; Mariani and Dwivedi, 2024). Moreover, the capacity to learn and adapt distinguishes GenAI from traditional algorithms. Indeed, traditional algorithms are typically rule-based and require explicit programming for each scenario (Cooper, 2023, 2024, 2025). However, the extant corpus of knowledge presents several research studies on how GenAI is shaping the new product development process (Cooper, 2023, 2024, 2025). Nevertheless, these studies do not provide sufficient insight into how new products emerge from the adoption of this technology.

## 3. Methodology

### 3.1 Case study and case context

The present study employs a qualitative approach (Yin, 2014) by means of a single case study. As posited by Shamsuzzoha et al. (2024), the industry of legal services may be subject to the repercussions of productisation. The study identified a software house specialising in the development of Generative AI-based legal applications. The company is headquartered in the northern Italian region, with a workforce of 50 individuals and an annual revenue of approximately 12 million euros.

The company was founded in Italy in 1995 and operates within the legal tech sector, providing specialised digital services to support the modernisation of the judicial system. It plays a pivotal role in the management of online judicial auctions, legal advertising and digital enforcement and insolvency proceedings. It has been observed that, over time, the organisation has come to be regarded as one of the most prominent entities within the nation, distinguished by its proficiency in integrating legal acumen with technological innovation.

The organisation's primary activities are centred on the operation of a government-sanctioned online platform that facilitates the publication and administration of court-mandated auctions. This platform has facilitated transactions amounting to billions of euros and is directly integrated with the judicial system, thereby ensuring secure, transparent and traceable transactions. In addition to providing auction services, the company offers legal advertising for official court notices and develops software that is utilised by law firms, courts and legal professionals for the management of complex legal procedures in a more efficient manner.

By operating in collaboration with over 80 Italian courts and serving a network of more than 40,000 professionals, the company has helped to standardise and digitise traditionally paper-based processes. The company has invested in emerging technologies such as blockchain, artificial intelligence, and augmented reality with a view to making legal procedures more reliable and accessible. These innovations are a response to the growing public and institutional demand for transparency, speed and efficiency in judicial sales and related processes.

Situated at the intersection of law and technology, the company has become a pivotal entity in an era where the digitisation of justice is not merely an option, but an imperative.

### 3.2 Data collection

The data presented herein has been collected through a series of meetings with the company to discuss the new product, from the technology to the customers and how it will be sold. The company's involvement commenced at the close of 2024, with the relationship gradually evolving through a series of meetings. To date, the development of more than 10 meetings has been accomplished. These meetings facilitated interaction with the entrepreneur, the CEO, the marketing manager, the sales manager, the IT manager and the GenAI developers of the firm. The evolution of these meetings, which can be categorised as participant observation, has yielded documentation in the form of notes and meeting reports. These records serve as the foundation for the present research (Yin, 2014; Cheong et al., 2023). Moreover, the authors have been granted privileged access to confidential and public documentation developed by the firm, including strategic documents, brochures, websites, offers, and customer communications (Yin, 2014). The technology's inherent characteristics and the manner in which it interacts with the firm do not permit the implementation of more structured data collection methodologies. The authors concede that this constitutes one of the primary limitations of the study, as has been previously highlighted.

### 3.3 Data analysis procedure

The data has undergone abductive analysis (Dubois & Gadde, 2002; Thompson, 2022). The present study drew parallels between the case study data collected and extant literature on the subject. The analysis procedure was focused on the identification of the key dimensions that are managed by the firm in order to create a product from the GenAI technology developed. The study thus identified a list of seven key dimensions from two sides (e.g. customer and seller sides) as suggested by the literature. In the context of the extant literature, a comparison has been made of these key dimensions according to a high or low level of

productisation. The results of the data analysis procedure are illustrated in Figure 1 below, which systematises the seven key dimensions for both sides.

## 4. Findings description

Statista (2025) asserts that the primary objectives of GenAI implementation within legal firms encompass documentary summary (19%), document analysis (17%), drafting (17%), translation (17%), and search functionality (13%). The same research suggests that the greatest barrier is related to limited knowledge and skills. Conversely, the impact of these law firms on increased productivity and margins has been demonstrated.

The case company software house is among the Italian leaders in the creation of solutions for courts regarding the sale of houses at auction and the execution of court cases in this field. The company's extensive network, which encompasses over 80 courts in Italy, has facilitated the acquisition of substantial expertise in enforcement procedures and the operational dynamics of the judicial system.

Concurrently with an emphasis on pioneering technologies, the company has developed a GenAI software, with the specific features of a RAG (Retrieval Augmented Generation). The software will be complemented by a chatbot, which will be accessible to citizens and court users. It is worth noting that the product lying on a robust knowledge base of regulations, judgments and court documents collected over more than 30 years that allows the firm to create a uniquely specialized product for the professional legal community.

A further aspect that emerges is the relationship between the firm, the court and the final users. The firm has a direct relationship with the court, which is the buyer of the software. But the users of the software have a direct relationship with the court, and never met with the software house. Hence, the court is in charge of the choice and the collaboration with the software house to create and deploy the GenAI technology, but the users are the citizens that need the court's services information. The firm suggests that the courts are slightly involved in the development of the product since they are not scarcely knowledgeable about the technology.

In this sense, it appears crucial to understand that the key decision-maker for the court is the magistrate. It is not difficult to imagine that the magistrate is usually a person whose background, skills and temperament are not close to innovations or new technologies. It is important to note that the utilisation of a technology like GenAI could potentially result in a significant discrepancy in language, jargon and skill sets. This discrepancy could be so substantial that it would render the introduction of such technology within the court's context almost virtually impossible.

Consequently, the company orchestrated a series of initiatives to facilitate the manufacturability of the new technology. The brand was conceived for the Rag/Chatbot technology, a space was created for the product within the existing portfolio of products and services offered to the courts, a pricing logic consistent with the addition of the service in question was developed, and finally, a whole series of "standard" communication aids to support the sales network in promoting the new product was created.

As was discussed with the company, this approach enabled the promotion of a technology that would otherwise have been very difficult to understand. Concurrently, it facilitated the work of the sales staff and sales network in proposing the new technology to these customers.

The product under discussion is an AI RAG technology that aims to assist users in obtaining information about the website. The product under discussion adopts the form of a chatbot. The hypothesis is that this product will enhance customer interaction with the platform,

thereby increasing customer satisfaction and the conversion rate of users from advertising campaigns. The hypothesis is that the technology will enhance the interaction with customers and users by providing rapid and precise responses. The product employs artificial intelligence to interpret natural language, thereby providing precise responses and facilitating navigation of the website. Furthermore, this facilitates the court's capacity to provide enhanced assistance to users on a 24/7 basis, thereby augmenting the level of service provided. Consequently, the court stands to benefit from enhanced interactions with customers, thereby acquiring a substantial amount of information from them and, ultimately, expanding the range of services offered through the provision of enhanced customer support.

## 5. Discussion of the Findings

The firm hypothesised that the productisation of the technology resulted in enhanced clarity with regard to its value proposition and offering. Indeed, prior to the commercialisation of the technology, custom projects are typically initiated with specific and selected customers. It is evident that this approach was effective when dealing with customers who possessed a certain level of technological expertise and familiarity with its application. Consequently, from a customer perspective, a productised approach facilitates reduced knowledge and involvement requirements for utilisation and comprehension. In the context of GenAI RAG technology integrated within a chatbot, the involvement of the buyer is not a requisite component of the process, as the development of this technology is undertaken by the technology provider. In conclusion, the process of productisation has been shown to engender an increase in price sensitivity among consumers. This is attributable to the fact that customers are now able to consider a product and its cost in a clearer way.

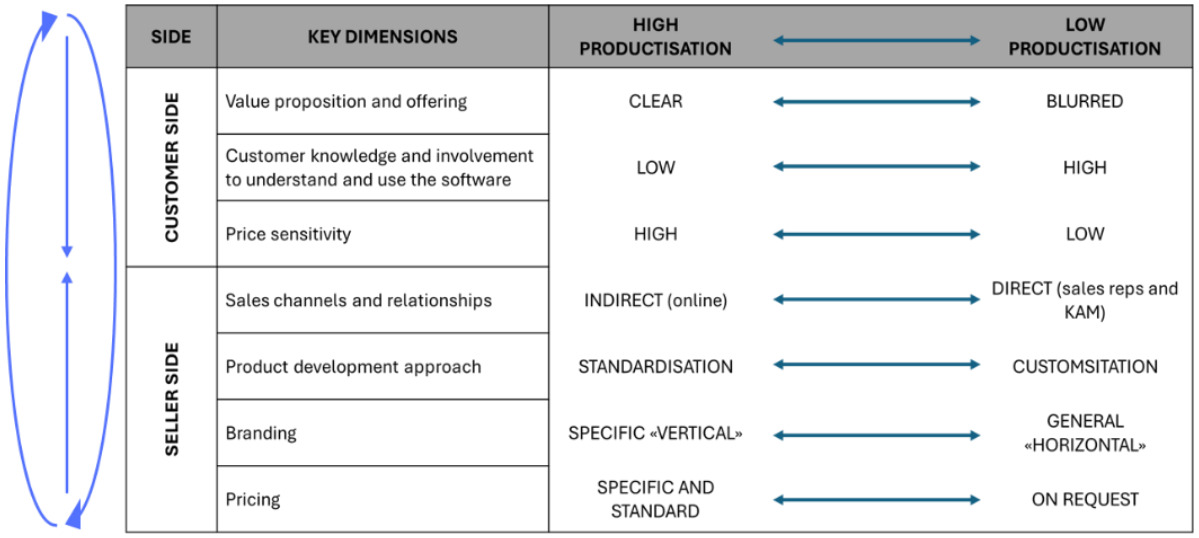



**Figure 1:** Key dimensions of GenAI productization (our elaboration)

From a seller-side perspective, the adoption of technology has the potential to enhance the efficacy of sales processes and facilitate the establishment of business partnerships. Furthermore, the endeavours undertaken for the purpose of product development diverge from the preceding methodology. Prior to the present moment, the firm cultivated a bespoke approach for each individual buyer, meticulously engineering the technology that was specifically demanded by that particular buyer. The development of a product incorporating

this technology has now been achieved. Consequently, there was a transition from the brand of the firm as a software house to the creation of a specific brand of the product. It is important to note that the pricing strategy also underwent modification. The initial approach, which involved the implementation of a price on request when developing custom software, was substituted with the creation of a specific pricing list. The pricing list has been meticulously designed to facilitate the sale of the new product. Below, a table has been developed to summarise the discussion of the findings (See Figure 1 above).

The findings suggest that the key dimensions evolve simultaneously and reciprocally (see the blue arrows in Figure 1 above), creating a recursive mechanism that allows the firm to develop both customer- and seller-side key dimensions. However, the research suggests that the firm should prioritise developing a comprehensive understanding of the customer dimension. This ensures that new technologies are developed to align with customer preferences, avoiding the creation of unsuitable technologies. Furthermore, the study found that the firm had previously demonstrated an understanding of customer, user, and decision-maker preferences through an examination of technological developments and investments. Understanding customers is also crucial for the commercialisation of new products.

## 5. Theoretical and Managerial Implications

### 5.1 Implications for theory

The present paper serves to reinforce the positioning of productization in the innovation and new product development literature (Harkonen et al., 2017). The research suggests that the concept of productization, which has historically been overlooked, should be reconsidered in the context of the emergence of GenAI. The paper discusses the theoretical and managerial implications of generative AI (genAI), emphasising its potential for productisation and the vast array of opportunities this presents given its unique, boundless and formless nature. These opportunities are also relevant to any similarly flexible technology. This novel approach to productisation has been developed through the utilisation of a case study that presents the output of a GenAI RAG Chatbot developed for legal and juridical institutions, such as courts (Lahy et al., 2017; Li et al., 2023; Dubois et al., 2025; Leoni, 2015; Harkonen, 2021; Wirtz et al., 2021; Wirtz, 2021). The paper also extends the meaning of productization, which should not be limited to an opposite meaning of servitization (Leoni, 2015) but addressed as the process of creating a product from a shapeless and boundaryless technology such as GenAI. The study also provides a novel perspective on the buyer involvement in the development of the GenAI product. Differently from the previous perspective where GenAI technology is seen as co-created, in line with previous studies of Sabatini et al. (2023) the gap in technological understanding between the firm and its buyer demand the firm in proceed alone in the development of the product.

The objective of the research was to ascertain the primary dimensions through which GenAI can be productised. The extant literature provided a plethora of dimensions, while the main were identified in the creation of a distinct brand, pricing and value proposition (Wirtz, 2021; Wirtz et al., 2021). Consequently, the present study provides a concise overview of the pivotal dimensions of productisation with respect to GenAI products (Wirtz, 2021; Wirtz et al., 2021). The present study unfolds how productization can be addressed according to two perspectives, the buyer and the seller. Consequently, the dimensions identified in the study are revealed. The study thus identified three dimensions on the customer side and four dimensions on the seller side. The customer-side dimensions are as follows: "value proposition and offering", "customer knowledge and involvement to understand and use the software", and "price sensitivity". Moreover, the study identified four dimensions on the 'seller side', namely: the “sales channels and relationships”; the “product development approach”; the “branding”; and the “pricing” (see Figure 1 above). Consequently, the buyer

and seller perspective is original for the productization literature, since productization is often viewed from the seller side (Cfr. Wirtz et al., 2021). The study posits that customer-side key dimensions should be addressed and defined prior to the seller-side dimensions.

The research introduces a further dimension of productisation, in addition to the "hardly to highly productised" scale developed from Wirtz et al. (2021). The study introduced a scale of productisation ranging from a low to a high degree, with the low degree of productisation corresponding to a product with not well-defined boundaries, and the high degree of productisation corresponding to a product with clearly defined boundaries and shape. This scale emerged from the case study when considering the firm's transition from the provision of custom-made software to GenAI products. In the context of customer-side value proposition and offering, this transitioned from being indistinct to being unambiguous. Indeed, the value proposition of a software house is characterised by its blurred and centred focus on firm capabilities, in contrast to the value proposition of a GenAI product, which is characterised by its clarity and focus on the product features or solution offered to the customers/users' needs (Cfr. Harkonen et al., 2017). The same principle applies to the aspect of 'Customer knowledge and involvement to understand and use the software'. This shifted from a high level of involvement, knowledge and effort to use a custom-made software to a very low level of knowledge and involvement in the use of a single app, a chatbot, in the context of this study. The study revealed that price sensitivity is reduced when negotiating the purchase of custom-made software, in comparison to the higher levels observed during the procurement of a tangible product. This phenomenon can be attributed to the delineated boundaries that characterise custom-made software, which facilitate a more precise understanding and easier comparison with other alternatives. Consequently, this reduced price sensitivity has a direct impact on the impact of supplier relational capabilities. From a seller-side perspective, the provision of a product necessitates the extension of sales channels and business relationships by leveraging online indirect sales channels extensively. This is because the focus is on increasing sales volume rather than on the development of a small number of large custom-made projects. In terms of product development approach, the firm transitioned from a "customisation" approach in the custom-made projects to the necessity of high standardisation in the case of productisation. In terms of branding, the study aligns with prior research (Wirtz, 2021; Wirtz et al., 2021) by proposing that, in the context of productisation, a distinct "vertical" brand should be developed for the new product, as opposed to utilising a more general "horizontal" brand, such as that of the software house. In conclusion, the present study corroborates extant literature on the subject of pricing (Wirtz, 2021; Wirtz et al., 2021; Shamsuzzoha et al., 2024; Dubois et al., 2025; Harkonen et al., 2017). It demonstrates that, in the process of developing a product, a firm must formulate a distinct and standardised pricing strategy and pricing list, as evidenced by the case study. Furthermore, it is important to consider that not all dimensions need to be on a high level of productisation to have a productised GenAI software. Finally, the study suggests that the key dimensions of productisation should be prioritised in accordance with those on the customer side, followed by those on the seller side. It is important to recognise that this is not a linear process, but rather a recursive one that continues until the key dimensions reach a mature stage that is validated by commercialisation. The study also has theoretical implications for research into GenAI. The study under discussion highlights how GenAI becomes the subject of innovation and new product development rather than a facilitator, booster or tool (Cooper, 2023; 2024; 2025). The enhancement of the role of GenAI in innovation and product development management has the potential to reveal further theoretical avenues that should be investigated (Mariani and Dwivedi, 2024). The study also posits that GenAI is a technology that can be productised by managing the key dimensions identified in the present study. In addition, the study suggests that GenAI productization should be considered as dynamic and evolutive. Even if the product has clear boundaries,

thanks to the continuous evolution of the underlying technology and knowledge base (e.g. new norms, new judgments) it evolves and update continuously over time.

### 5.2 Implications for managers

The study also presents implications for managers and entrepreneurs. Firstly, the study posits the notion that the utilisation of GenAI technology should be pursued through productisation, with the objective of comprehending the advantages inherent in this process. Secondly, the study proposes the commercialisation of the technology through its development on the key dimensions previously outlined and presented in Figure 1. The calibration of these pivotal parameters may vary from instance to instance; nevertheless, they can indubitably serve as a pragmatic approach to orientate management endeavours. Thirdly, in order to understand how to commercialise GenAI technology, it is first necessary for managers to gain an understanding of customer preferences. Following the effective definition of customer-side preferences, the subsequent development of seller-side key dimensions is possible. From a managerial perspective, the key dimensions initiate a process of recursive productisation, necessitating a constant oscillation between the perspectives of the customer and the seller. The question arises as to whether these dimensions can be calibrated in a manner analogous to a gauge, with a view to identifying the optimal equilibrium between high and low levels of productisation. The manner in which each gauge is calibrated is contingent upon business strategy, business model, sales and marketing strategy, and other strategic elements of the firm that should direct the entire process.

## 6. Conclusion

The objective of the present study was to provide novel insights into the relationship between GenAI and productization. The study elucidates the manner in which the domain of GenAI is enhanced by the adoption of a productisation approach, thereby augmenting the capacity to generate and commercialise new products that are underpinned by GenAI. This perspective is novel insofar as the majority of extant studies have focused on GenAI as an enhancer of NPD processes. In order to furnish this innovative perspective, the study adopted a case study of a software house specialising in the legal and court sector that was developing a new product for courts. The objective of the present study was to ascertain the fundamental dimensions of GenAI productization.

The study's findings, derived from the responses to the research question, identified seven key dimensions characterised by a dual perspective, namely that of the customer and the seller. The study posits that, in the context of productising GenAI, the prioritisation of the customer experience over that of the seller should be a paramount consideration. The study revealed three dimensions from the customer perspective. The following factors were identified as being of particular importance: "value proposition and offering", "customer knowledge and involvement to understand and use the software", and "price sensitivity". The study identified four dimensions from the perspective of the seller. The following are to be considered: “sales channels and relationships”, “product development approach”, “branding” and “pricing”. The study posits that a certain degree of productization is present, ranging from minimal to substantial. The study posits that these dimensions can be managed in order to achieve the optimal productisation of the GenAI subsequent product. The study ultimately determined that in order to produce GenAI, it is not necessary for all the dimensions to be on a "high productisation degree".

## 7. Limitations and future research opportunities

The present study is not without its limitations. Firstly, it should be noted that the study is still ongoing, and the collection of data is still in progress. Therefore, the results presented

are somewhat partial and incomplete. Secondly, the study adopts a single case study that is bounded in time and context, thus limiting the explication of phenomena that cannot be seen in the selected case. Thirdly, the study employs an unstructured analytical approach despite adopting a systematic combining methodology. It is recommended that further efforts be made to strengthen the data analysis procedure with a view to reinforcing the validity of the results obtained.

Nevertheless, the study offers several avenues for further research. Firstly, the study suggests opening to further studies on productization within the software field, and in particular on GenAI, to verify whether the results presented are confirmed. Secondly, the study suggests that the present study can be complemented by a customer-side analysis of productization. Thirdly, the study posits that future research opportunities lie in the understanding of the implications of the productization approach on business model innovation when deploying innovative GenAI software products. Fourthly, the study posits the notion that productisation might benefit from the execution of specific marketing studies pertaining to branding, pricing and sales channels, in accordance with the key dimensions identified by the present study.

## References


Cheong, H.I., Lyons, A., Houghton, R. and Majumdar, A. (2023), "Secondary qualitative research methodology using online data within the context of social sciences", International Journal of Qualitative Methods, Vol. 22, doi: 10.1177/16094069231180160.

Cooper, R. G. (2023). The artificial intelligence revolution in new-product development. *IEEE Engineering Management Review*, *52*(1), 195-211.

Cooper, R. G. (2025). SMEs' use of AI for new product development: Adoption rates by application and readiness-to-adopt. *Industrial Marketing Management*, *126*, 159-167.

Dubois, A. and Gadde, L.E. (2002), "Systematic combining: an abductive approach to case research", Journal of Business Research, Vol. 55 No. 7, pp. 553-560.

Dubois, L. E., Pine II, B. J., & Harkonen, J. (2025). Beyond the ephemeral: Scaling experiences through productization. Business Horizons, 68(1), 121-128.

Enterprisers Project. (2022, April). Artificial intelligence: What AI product ... Retrieved June 23, 2025, from https://enterprisersproject.com/article/2022/4/artificial-intelligence-what-ai-product

Gebauer, H., Paiola, M., Saccani, N., & Rapaccini, M. (2021). Digital servitization: Crossing the perspectives of digitization and servitization. *Industrial Marketing Management*, *93*, 382-388.

Harkonen, J. (2021). Exploring the benefits of service productisation: support for business processes. Business Process Management Journal, 27(8), 85-105.

Harkonen, J., Haapasalo, H., & Hanninen, K. (2015). Productisation: A review and research agenda. International Journal of Production Economics, 164, 65-82.

Harkonen, J., Tolonen, A., & Haapasalo, H. (2017). Service productisation: systematising and defining an offering. Journal of Service management, 28(5), 936-971.

Jaakkola, E. (2011). Unraveling the practices of "productization" in professional service firms. Scandinavian journal of management, 27(2), 221-230.

Kohtamäki, M., Parida, V., Oghazi, P., Gebauer, H., & Baines, T. (2019). Digital servitization business models in ecosystems: A theory of the firm. *Journal of business research*, *104*, 380-392.

Lahy, A., Li, A. Q., Found, P., Syntetos, A., Wilson, M., & Ayiomamitou, N. (2018). Developing a product–service system through a productisation strategy: a case from the 3PL industry. *International Journal of Production Research*, *56*(6), 2233-2249.

Leoni, L. (2015). *Servitization and Productization: two faces of the same coin? Conference RESER 2015*.

Li, A. Q., Lahy, A., Found, P., Kumar, M., & Claes, B. (2023). Developing PSS business ecosystems in the digital era. Industrial Marketing Management, 109, 121-134.

Mariani, M., & Dwivedi, Y. K. (2024). Generative artificial intelligence in innovation management: A preview of future research developments. *Journal of Business Research*, *175*, 114542.

MIT Education (n.d.). Designing and building AI products and services. MIT xPRO. Retrieved June 20, 2025, from https://executive-ed.xpro.mit.edu/designing-building-ai-products-services

Robert G. Cooper & Tammy McCausland (2024) AI and New Product Development, Research-Technology Management, 67:1, 70-75, DOI: 10.1080/08956308.2024.2280485

Sabatini, A., Pascucci, F., & Gregori, G. L. (2023). Customer involvement in technological development of smart products: empirical evidence from a coffee-machine producer. *Journal of Business & Industrial Marketing*, *38*(6), 1345-1361.

Shamsuzzoha, A., Blomqvist, H., & Takala, J. (2024). Service productisation through standardisation and modularisation: An exploratory case study. *International Journal of Sustainable Engineering*, *17*(1), 1154-1172.

Statista Research Department. (2025) *AI usage in the legal services industry worldwide*. Statista. Retrieved June 20, 2025, from https://www.statista.com/study/165201/ai-usage-in-the-legal-services-industry-worldwide/

Thompson, J. (2022), "A guide to abductive thematic analysis", The Qualitative Report, Vol. 27 No. 5, pp. 1410-1421.

Vandermerwe, S., & Rada, J. (1988). Servitization of business: Adding value by adding services. *European management journal*, *6*(4), 314-324.

Wirtz, J. (2021). Service products, development of service knowledge and our community's target audience. Journal of Services Marketing, 35(3), 265-270.

Wirtz, J., Fritze, M. P., Jaakkola, E., Gelbrich, K., & Hartley, N. (2021). Service products and productization. Journal of Business Research, 137, 411-421.

Yin, R.K. (2014), Case Study Research: Design and Methods, 5th ed. Sage, Thousand Oaks.

# Trust in the metaverse: a literature review

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## Abstract

The metaverse represents an immersive and interactive virtual environment capable of redefining numerous industries, from retail to tourism. In this context, trust emerges as a key element to foster consumer adoption and use of metaverse platforms. However, the scientific literature on the topic of trust in the metaverse is still fragmented and in an emerging stage. Therefore, this study proposes a systematic literature review aimed at mapping the state of the art on the topic by identifying the main research strands through an analysis of keyword co-occurrences in papers tracked on the Scopus scientific database. The co-occurrence analysis, carried out using the VOSviewer software, led to the identification of four thematic clusters: (1) the role of trust in human relationships within the metaverse; (2) trust in consumption behaviors and virtual shopping experiences; (3) trust related to the security provided by technologies such as blockchain and NFT; and (4) trust in the adoption of new technologies, with a specific focus on the tourism sector. The results highlight how trust building depends on multiple factors, including privacy protection, platform usability, perceived credibility of brands, and the quality of virtual interactions. Finally, theoretical and managerial implications are discussed to outline potential areas for future research to build experiences in the metaverse that are increasingly trustworthy and secure.

*Keywords: trust, metaverse, systematic literature review, keyword co-occurrence*

## 1. Introduction

The metaverse is a virtual world that has attracted increasing attention for its social implications and potential development (Dionisio *et al.,*2013; Maden & Yücenur, 2024; Riva & Wiederhold, 2022). This is a phenomenon that can revolutionize multiple industries, such as retail, fashion, tourism, and healthcare (Parker & Saker, 2020). More specifically, it is a three-dimensional space in which users can interact and collaborate using their avatars, developing new opportunities for value creation through immersive and engaging experiences (Mystakidis, 2022).

Within this virtual environment, trust is a crucial factor to explore to understand the public's perceived trustworthiness in adopting and using these technology platforms (Gupta *et al.,* 2023; Lee *et al.,* 2021). Building and managing trust in online shopping platforms based on the Internet, social media, virtual reality, and augmented reality can be a critical challenge (Choi, 2019; Haumer *et al.,* 2020; Plotkina *et al.,* 2022; Tan & Saraniemi, 2023; Wongkitrungrueng & Assarut, 2020; Zhou *et al.,* 2018). In particular, in the metaverse, trust becomes an important aspect to explore because of the multiple risks that can arise such as, for example, identity theft (Qamar *et al.,* 2023), cyber attacks (Kuo *et al.,* 2023), and various inappropriate behaviors (Zytkoand & Chan, 2023).

Despite the wide and growing attention on the topic, the role of trust in the adoption and use of the metaverse still remains underexplored (Lee *et al.*, 2024; Pragha *et al.,* 2024), highlighting the need to achieve a comprehensive understanding of the role of trust in the metaverse. To fill this gap, a review of the literature on the topic was conducted by exploring publications in the Scopus scientific database, analyzing bibliographic data through a keyword co-occurrence analysis using VOSviewer software, which led to the definition of four main research strands.

## 2. Literature Review

The metaverse can be described as an immersive environment resulting from the combination of multiple enabling technologies, such as virtual reality (VR) and augmented reality (AR) (Nasongkhla & Sujiva, 2023), as well as physical components (Cheah & Shimul, 2023).

Due to the profound uncertainty that dominates the online world, trust becomes increasingly important in the digital context (Luhman, 1979; McKnight *et al.,* 1998; Mishra, 1996). In a digital environment, trust can be defined as the confidence people place in technology and, therefore, the level of trustworthiness a user attributes to a given technology and the comfort associated with using certain digital channels online (Hassan & Iqbal, 2020).

Trust can be observed in the personal perspective from a personality trait perspective, that is, whether a person is more or less likely to trust someone or something (Patent & Searle, 2019), rather than being observed dynamically, depending on experience and situation (Gefen, 2002). This second perspective includes trust toward organizations, governments, and entities.

Therefore, trust greatly influences technology adoption, especially in environments where sensitive information is involved, such as that related to consumers' payment methods or health (Hatane *et al.,* 2023; Alkhowaiter, 2022). As perceived trust is a key determinant of acceptance of new technologies (Lin *et al.,* 2011), consumers need to trust the metaverse platform and online payments to reinforce their intention to adopt transactions in the metaverse (Pragha *et al.,*2024). When users perceive a metaverse platform as trustworthy due to consistent positive experiences, clear governance, and transparent transactions, they are more likely to extend this trust to activities such as buying, selling, and trading in the metaverse (Lee *et al.,* 2024). The platform's reputation for trustworthiness and its ability to provide a safe environment for digital interactions foster a sense of familiarity and comfort among users, reinforcing the safety and legitimacy of transactions on this platform (Jim, 2023).

## 3. Methodology

In order to explore the role of trust in the metaverse, a literature review was conducted through the Scopus scientific database, using the following search query: (TITLE-ABS-KEY ("metaverse") AND TITLE-ABS-KEY (trust)). From a total of 225 papers, using filters for the subject areas (Business Administration, Management and Accounting; Decision Sciences; Social Sciences; Economics, Econometrics and Finance; and Psychology), a sample of 106 papers was extracted. On these papers, excluding only 11 irrelevant or untraceable papers, an analysis based on bibliographic data, particularly keyword co-occurrence, was performed using VOSviewer software (Figure 1). From this analysis, four potential clusters were identified around the theme of metaverse and trust: 1) Cluster 1 (blue); 2) Cluster 2 (red); 3) Cluster 3 (yellow); 4) Cluster 4 (green):

- Cluster 1 (blue): The role of trust in the metaverse in human relationships
- Cluster 2 (red): Confidence in consumer behaviours
- Cluster 3 (yellow): Trust in security provided by blockchain
- Cluster 4 (green): Trust in new developments in the tourism industry

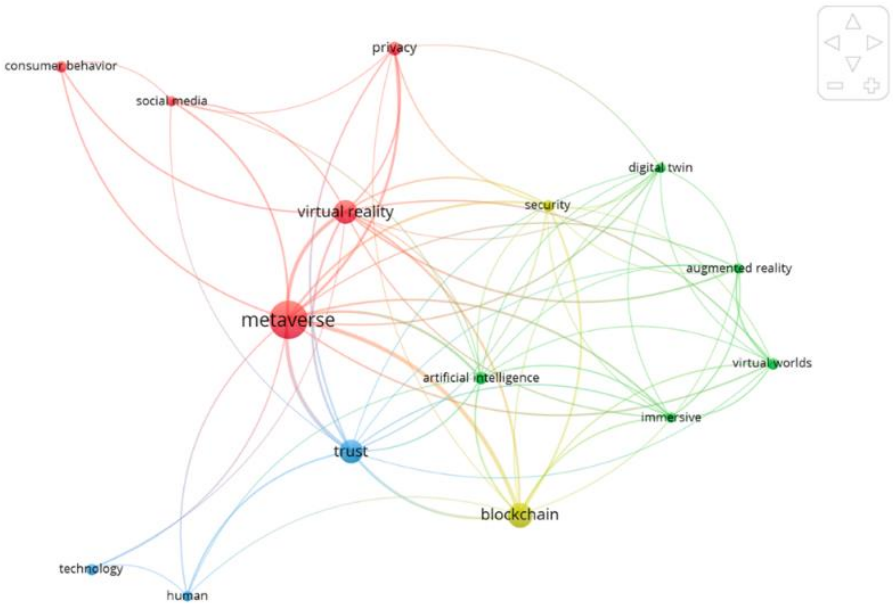



**Figure 1:** Keywords Co-occurrence Analysis on VOSviewer (Authors' Elaboration)

## 4. Findings and Discussion

### Cluster 1 (blue): The role of trust in the metaverse in human relationships

The metaverse is affecting multiple domains and in particular the interaction between individuals as the boundary between reality and virtuality tends to be increasingly blurred (Jahankhani *et al.*, 2023), shaping a virtual world in which the human experience is enriched (Riva *et al.*, 2024). The metaverse not only facilitates communication between humans (Oppermann *et al.*, 2024) but also offers unprecedented opportunities in terms of interaction, requiring the need to introduce security measures (Al-Kfairy *et al.*, 2023). Individuals perceive the value of the metaverse when it offers them fun and entertainment as well as safety (Pragha *et al.*, 2025). However, to maximize the true potential of this technology, it is necessary to ensure security and privacy by overcoming numerous public concerns (Chaudhuri & Anand, 2023) and openly communicating security protocols to nurture trust (Pragha *et al.*, 2025). Among the means of fostering the trust-building process and influencing brand evangelism, perceived avatar anthropomorphism, likeness, intelligence, likability, and attractiveness have been highlighted all of which can reduce co concerns (Gulan *et al.*, 2025; Khan *et al.*, 2025; Huang & Yu, 2023; Tang & Bahir, 2023).

### Cluster 2 (red): Confidence in consumer behaviors

The metaverse has profoundly redefined the world of shopping and the way consumers can navigate virtual environments with their avatars (Kim, 2021). The atmosphere associated with the virtual store and the in-store experience can influence consumers' brand perceptions

(Basu *et al.,* 2022; Kumar & Polonsky, 2019) and generate different effects on shopping behavior (Tan *et al.,* 2023). These virtual browsing experiences enable a more engaging and immersive encounter between the consumer and the product and between the consumer and the context, which is particularly difficult to achieve in the physical world (Alcan~iz *et al.*, 2019). Aspects that affect not only customers' cognitive trust, but also their emotional and sensory trust (Kumar & Polonsky, 2019). Therefore, trust plays a key role in building customer relationships, influencing many behavioral factors, including purchase intention (Gefen *et al.*, 2003) and satisfaction level (Punyatoya, 2019). According to Qalati *et al.* (2021), in fact, online trust is a crucial aspect of corporate strategy suitable for reducing perceived risk and promoting positive word of mouth. Brand trust is defined as customers' confidence that the brand will act in a certain way (Ha & Perks, 2005; Gefen, 2000) and comes from positive interactions between the brand and customers (Akrout & Nagy, 2018; Garbarino & Johnson, 1999; Morgan & Hunt, 1994). Customer experiences and interaction with the brand community in the metaverse can lead to the creation and nurturing of brand trust (Zhang *et al.,*2023; Flavian *et al.,* 2006; Park *et al.,* 2002; Sashi, 2012). Thus, trust is a particularly valuable resource to protect in the metaverse, an environment that is particularly vulnerable and subject to multiple privacy and security risks (Barth *et al.,*2022; Fernandez & Hui, 2022; Jeon & Lee, 2022; Lata & Singh, 2022; Schomakers *et al.,* 2021; Soumelidou & Tsohou, 2021).

### Cluster 3 (yellow): Trust in security provided by blockchain

In the metaverse, thanks to various technologies, it is possible to monitor and collect multiple pieces of information about users' behavior and thus collect very personal and sensitive information compared to traditional systems, easily and quickly putting users' privacy and security at risk (Fineman & Lewis, 2018). Therefore, it becomes critical to protect users' privacy and security by establishing appropriate rules for handling such information (Zhang *et al.,* 2022). To this end, blockchain technology can make exchanges between parties more secure and fuel users' trust in the metaverse platform on which the transaction takes place (Ali *et al.,* 2023). Blockchain technology appears particularly relevant for increasing security, resilience, and multiplying relationships within supply chains. Therefore, it is particularly important to maintain expectations related to the metaverse platform and digital payment methods (Kulviwat *et al.,* 2009) with the use of, for example, NFTs to ensure the ownership and authenticity of goods exchanged on various platforms such as Decentraland, Roblox, and SecondLife (Scheiding, 2022).

### Cluster 4 (green): Trust in new developments in the tourism industry

Trust is a crucial factor to consider regarding public acceptance processes of a new technology (Gefen, 2000; Pavlou, 2003; Pavlou & Gefen, 2004; Schierz *et al.,* 2010). Individual attitudes toward the metaverse and trust in metaverse technologies significantly influence the intention to use the metaverse itself (Chakraborty *et al.*, 2025). Individuals who develop trust toward these platforms will be more likely to use metaverse technologies (Arpaci *et al.,* 2022) for a variety of different activities, such as those related to the world of hospitality, e.g., virtual tours, online booking, and immersive experiences (Slevitch *et al.,* 2022). Trust is a crucial resource especially in transactions governed by risk, a typical situation in the purchase of online tourism services and products (Wen, 2009). In such situations, the ability to observe a destination through a virtual representation can provide the audience with a realistic experience that can contain fears and concerns (Chan *et al.,* 2023). Thus, the integration of technology can foster travellers' confidence, especially in the pre-trip stage when the tourist still knows little about the destination and the facility. The metaverse allows users to preview an accommodation and choose a facility after navigating with their avatars within digital spaces (Buhalis *et al.,*2023a). Users have the opportunity to evaluate in advance aspects such as room views, location, hotel services, staff expertise and

availability, and the quality of goods and services offered (Dwivedi *et al.,* 2022), greatly reducing uncertainty and risk related to the transaction. Thus, new technologies can help in solving long-standing problems in the tourism industry, such as the need to establish trust with certain actors (e.g., travel agents), ambiguity in decision-making, and time spent searching for information about a particular destination in addition to fostering new opportunities such as increased accessibility even for people with physical disabilities.

## 5. Conclusions and Implications

In conclusion, the results note the importance of designing experiences in the metaverse that are perceived as safe, authentic, and trustworthy, i.e., capable of nurturing trust. Trust becomes a real strategic lever to foster engagement and stimulate purchase behavior or interaction between users on platforms. Trust can enable the alleviation of uncertainty and increase the sense of security, fostering positive behavioral intentions in the metaverse (Luna-Nevarez & McGovern, 2021). Brands, with careful design of their interactive, immersive, and co-creative experience, can foster the creation of virtual communities around certain brands, also stimulating brand advocacy in the metaverse. Once trust is created, customers will more easily and actively participate in all experiences developed by brands in the metaverse, fueling the number of interactions (Bhandari & Rodgers, 2020). In addition to this, the multiple security and privacy concerns dictated by this technology need to be carefully considered. Therefore, there is a need to appropriately manage this technology to minimize negative effects and try to strike the right balance by enhancing consumer trust and emphasizing consumer protection (AlShehhi & Otoum, 2023).

**References available upon request.**

# The Role of Start-ups as Enablers of the Circular Economy in Smart Cities

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## Abstract

This study investigates how startups contribute to implementing circular economy strategies in the context of smart cities. Existing literature has largely emphasised technological infrastructures and policy frameworks. This paper fills a gap by focusing on startups as operational agents of change that help implement circular principles in real-world urban contexts. The research uses a synthetic approach, integrating secondary data, insights from the IMD Smart City Index 2025, and a custom-designed 10-question survey. The survey was administered to 12 synthetic personas, composite stakeholder profiles representing startup founders, urban planners, and sustainability experts. Each persona provided Likert-scale responses (1–5) and qualitative comments, enabling a comparative analysis across roles and perspectives. Results were synthesised into a matrix highlighting convergences and divergences (e.g., technology use and policy perceptions). Findings confirm a broad consensus on the strategic value of startups in enabling clever circular transitions, primarily through the use of 4.0 technologies and reuse-based business models. High alignment was observed on technological potential and sectoral relevance, while divergences emerged around public-private collaboration effectiveness, inclusivity, and the perceived adequacy of public policy support. Open data access was seen as a promising but unevenly implemented enabler. The paper contributes a structured, stakeholder-based analysis of how circular-oriented startups are perceived and positioned in the innovative city ecosystem. It offers actionable insights for designing more inclusive, adaptive, and innovation-friendly urban policies.

*Keywords: Startups, Circular Economy, Smart Cities, Urban Sustainability*

## 1. Introduction

In recent years, the urbanisation process and the parallel rise of ecological and digital imperatives have contributed to redefining the vision of smart cities as integrated ecosystems oriented toward sustainable innovation (Dizdaroglu & Yigitcanlar, 2016; Komninos & Mora, 2018). Traditionally centered on technological infrastructure and operational efficiency (Harrison et al., 2010; Silva et al., 2018), the smart city paradigm is now increasingly intertwined with the goals of environmental sustainability, social inclusion, and adaptive governance (Giffinger & Gudrun, 2010; Bonab et al., 2023). Within this evolving framework, the circular economy (CE) has emerged as a key model to address resource scarcity and climate challenges through systemic approaches based on reuse, regeneration, and collaborative innovation (Beretta, 2018; Macarthur et al., 2019; Carlos et al., 2024). While scholarly attention has widely focused on technological infrastructure and top-down urban planning, less emphasis has been placed on the entrepreneurial dimension of the circular

transition, particularly the role of startups as active enablers within innovative city ecosystems. This oversight constitutes a significant research gap, as startups increasingly demonstrate the capacity to operationalize circular economy principles through agile, tech-driven, and impactoriented business models (Roshan et al., 2024; Petri et al., 2025). Their contribution ranges from developing smart mobility solutions and digital sharing platforms to innovations in waste, energy, and data-driven urban services (Mattoni et al., 2015; Appio et al., 2019; Mylonas et al., 2024). Several recent studies emphasize the potential of startups to accelerate the integration of circularity in cities by leveraging digital technologies and engaging in co-designed governance processes (Kristoffersen et al., 2020; Amoako et al., 2023). Startups act not only as adopters of innovation but also as key connectors within digital entrepreneurial ecosystems (Langley et al., 2023), often collaborating with public institutions, citizens, and corporations to develop inclusive and resilient urban solutions (Grossi et al., 2024; Kuzior et al., 2025). Despite this growing relevance, the academic literature still lacks a systematic and comparative understanding of how different urban actors perceive how diverse stakeholders perceive the role of startups in advancing CE within smart cities. This paper addresses that gap by adopting a synthetic and theory-informed methodology to map such perceptions across a diverse stakeholder landscape. Building on the structured method of MacInnes (2011), the research integrates theoretical analysis, literature synthesis, and empirical simulation through personas. The IMD Smart City Index 2025 insights were also incorporated to anchor the investigation in current strategic priorities. Based on this foundation, a structured questionnaire developed, comprising 10 questions aligned with key themes such as technological integration, data openness, reuse practices, cogovernance, and enabling policies. The instrument was applied to 12 synthetic personas representing archetypal stakeholders within the smart circular city ecosystem, including startup founders, planners, sustainability advisors, corporate innovation managers, and academic experts. Each persona was asked to respond using a Likert scale (1–5) and provide short qualitative motivations. This dual-level approach allowed for identifies areas of strong convergence, particularly regarding the enabling role of 4.0 technologies and the strategic relevance of startups in core urban sectors, as well as divergences around inclusivity, open data, and public-private collaboration. By combining theoretical and simulated data, the study contributes a novel lens for understanding how circular-oriented startups are positioned, valued, and potentially empowered within smart urban transitions.

## 2. Methodology

This study adopts a synthetic methodology, articulated in several phases, aimed at systematically understanding the contribution of startups to the circular transition strategies in smart cities. The approach combines theoretical analysis, deductive development of operational implications, and data collection through simulation with personas. The first phase involved an in-depth analysis of the scientific literature and the most relevant international reports on smart cities, circular economy, and innovative entrepreneurship. The analysis was conducted following the structured method proposed by MacInnes (2011), which supports the structured synthesis of secondary sources. The main insights from the Smart City Index Report 2025, created by IMD (International Institute for Management Development), were also included, with particular attention to the technological and strategic components of the urban transition. Starting from the selected literature, a table of key implications related to the role of startups in circular-oriented smart city contexts towards circularity was constructed. The implications identified concern aspects such as technological integration, social inclusion, co-design, data openness, reuse models, public-private partnerships, urban resilience, and enabling policies. The content of Table 1 was developed through a structured synthesis of the literature, following the approach of MacInnes (2011). This involved identifying recurring themes and implications across the reviewed academic and institutional sources related to smart cities, circular economy, and entrepreneurial

ecosystems. Each implication was derived by clustering and cross-referencing concepts that appeared consistently in the literature. The table aggregates these implications and links them to key references that support their relevance and theoretical foundation. Based on the implications, a structured questionnaire was developed, consisting of 10 questions, each directly linked to a specific implication identified in the previous phase, in a dual-response format:

- A Likert scale from 1 to 5 (1 = strongly disagree, 5 = strongly agree), aimed at measuring the intensity of the perception concerning the implication;
- An open field for a short comment or motivation, to collect qualitative insights, examples, or motivations supporting the numerical response.

The questionnaire was applied to 12 personas representing key roles within the circular and innovative urban ecosystem (e.g., Circular Economy Startup Founder, Urban Policy Innovator, Smart Waste Tech CEO, etc.). These synthetic personas were developed based on current literature and plausible urban actor profiles to ensure internal coherence and role-specific validity. Responses were generated through synthetic data to reflect the plausible strategic visions of each archetype. This design enables controlled comparisons between stakeholder perspectives. The collected data were synthesised in a comparative matrix capturing quantitative (Likert scale) and qualitative (commentary) responses across personas. This enabled the identification of recurrent patterns, significant divergences, and potential policy or innovation levers to strengthen the integration between startups and smart cities oriented towards resilience and circular sustainability. To ensure a robust and representative simulation, the 12 synthetic personas were developed through a literature-based typology of strategic urban actors. The selection process ensured representativeness across key domains— such as entrepreneurship, innovation policy, urban planning, and sustainability— by drawing on academic classifications and institutional frameworks describing the smart city ecosystem. While not based on a specific geographic location, the profiles were designed to reflect roles applicable in both large and mid-sized cities across different national contexts. The approach aimed to simulate generalizable stakeholder perspectives, while remaining grounded in plausible role-based behavior as defined in recent literature.

## 3. Background

### 3.1 Smart Cities

The COVID-19 pandemic has accelerated awareness of the need for a double transformation in cities: digital and sustainable (Mahadevia et al.,2025). This need highlights how cities must evolve through innovative technologies and sustainable urban development models that integrate social, environmental, and economic aspects (Dizdaroglu & Yigitcanlar, 2016). The smart city concept was born as a response to these challenges, configuring itself as a dynamic and complex process that requires harmonizing efficient use of resources, technological investments, institutional innovation, and participatory governance. However, scholars often focus mainly on technological aspects, neglecting an explicit treatment of sustainability (Bonab et al., 2023). Despite numerous government interventions and projects to develop smart cities and sustainable urban environments, there is still no universally shared definition of "smart city" in the scientific and institutional literature (Gil-Garcia et al., 2015; Yigitcanlar et al., 2019). Some scholars emphasize the role of infrastructures in smart cities, in particular their ability to ensure efficient and accessible transport, stable energy, and water supplies, and widespread use of ICT (Harrison et al., 2010; Toppeta, 2010; Silva et al., 2018; Abu-Rayash & Dincer, 2021). Other authors instead highlight smart cities' innovative and entrepreneurial potential, considering them spaces capable of attracting human capital and promoting cultural and creative activities, emphasising the active participation of

communities (Kummitha, 2018; Mittal & Sethi, 2018). This has stimulated a broad debate on the fundamental dimensions of smart cities, the basis for an integrated conceptualisation of the phenomenon. According to Giffinger and Gudrun (2010), among the six distinctive characteristics of a smart city, there is environmental sustainability, a goal that can be achieved through the development of low-impact infrastructures and the rational use of resources. In addition to this aspect, the dimensions most frequently considered in the literature include: Smart Economy, Smart Governance, Smart Environment, Smart Mobility, Smart People, and Smart Living. Most of the contributions highlight that to build a sustainable smart city, it is necessary to integrate all these dimensions, avoiding sectoral approaches and promoting a synergic action between technology, governance, and social participation (Komninos, 2018). This variety of definitions leads to considering the smart city as a network of attributes aimed at stimulating sustainable economic growth and the birth of a competitive business environment, while promoting the quality of life and inclusion of citizens (Komninos & Mora, 2018; Antonov et al., 2021). In contemporary urban literature, however, several challenges related to sustainability emerge, such as eco-cities or green cities, which emphasize the importance of carefully integrating natural regions and environmental resources into urban planning (Bonab et al., 2023). Therefore, the urban environment is conceived as an integrated ecosystem of innovative resources and services, oriented towards the co-creation of value, long-term sustainability and continuous transformation (Enquist et al., 2016). Implies the systemic capacity of the city to proactively adapt to complex challenges through collaborative governance, experimentation (e.g. Urban Living Labs) and active participation of citizens. A fundamental element is the capacity of cities to provide efficient and effective public services, especially in a context of growing and accelerated urbanization (Wataya et al., 2019). Smart cities employ technologies such as the Internet of Things (IoT) and Big Data to monitor and optimize the use of urban resources: from energy management to water distribution, mobility planning, and noise pollution control (Bonomi et al., 2016). Therefore, sustainable smart cities integrate the technological dimension with sustainability, recognizing that urban development must combine three fundamental pillars: economic, social, and environmental (Elgazzar et al., 2017). The main objectives are to improve the quality of life, promote a dynamic local economy with job opportunities, ensure social well-being, responsibly manage natural resources, build efficient and resilient infrastructures, and implement equitable and inclusive governance mechanisms (Elgazzar et al., 2017). This paradigm has influenced urban planning for an efficient, technologically advanced, ecological, and socially inclusive city (Yigitcanlar, 2016). Although many smart cities were born from technological and operational optimization drives, today it is recognized that achieving sustainability requires a more profound change, which also involves organizational and institutional innovation, capable of transforming not only products and services, but also governance models and social practices (Tura et al., 2022; Adams et al., 2016). These sustainability-oriented innovations include interventions to improve energy management, promote low-carbon economies, and promote ecological solutions for pollution control and waste management (Beretta, 2018; Angelidou et al., 2018; Akbarpour et al., 2021). The role of stakeholders is fundamental. Collaboration between local governments, universities, businesses, citizens, non-profit organizations, and other actors is essential for the success of these initiatives (Amoako et al., 2023). Participatory and inclusive management ensures that solutions are sustainable and respond to community needs, strengthening urban resilience and adaptive capacity.

### 3.2 Circular Economy in Smart Cities

The Circular Economy (CE) concept is gaining growing relevance in strategic, operations, and technology management (Macarthur, 2013). It calls for companies to rethink and redesign their business models, encompassing value networks, relationships with supply chain partners, and value propositions, around a new sustainable development paradigm to

minimize resource consumption (Carlos et al., 2024). The circular economy is becoming an increasingly relevant pillar in innovative city strategies, aiming at production and consumption models based on reuse, recycling, remanufacturing, refurbishment, sharing and waste reduction (Macarthur et al., 2019; Möslinger et al., 2023). Urban policies oriented towards circularity translate into initiatives for the reuse of materials, the creation of digital sharing platforms, and the sustainable management of resources (European Commission, 2020). The convergence between smart cities and the circular economy is now central. According to Mylonas et al. (2024), combining digital solutions and circular principles generates "smart and circular cities", reducing operating costs and maximizing resource efficiency. Smart cities are characterised by a growing demand for resources and services, which often exceeds the available environmental limits, making adopting innovative urban management and planning practices necessary. In this context, the circular economy model is proposed as a strategic response to promote a more efficient use of resources, reduce waste, and promote environmental, economic, and social sustainability (Beretta, 2018). The adoption of sustainability-oriented innovations is essential to transform urban systems. These innovations include strategies for energy management and the transition to a low-carbon economy, as well as advanced solutions for waste management and pollution control (Angelidou et al., 2018; Akbarpour et al., 2021). Creating smart infrastructures, such as efficient energy networks and sustainable water systems, is key for more innovative and resilient urban environments (Tura et al., 2022).

The role of digital technologies and ICT is central in monitoring and integrated management of resources, optimizing efficiency, and promoting sustainable practices with measurable positive impacts on the urban environment and quality of life (Bibri & Krogstie, 2017; Appio et al., 2019; Bencsik et al., 2023). In this context, the Digital Entrepreneurial Ecosystem (DEE) concept becomes increasingly relevant, especially considering how digital infrastructures and technologies foster circular startups and innovation. Existing literature has explored key components of DEE, such as digital infrastructure (Langley et al., 2023), the use of digital technology by local communities and digital citizenship, digital sharing platforms (Schwanholz & Leipold, 2020), and the adaptation and absorption of emerging digital technologies (Kristoffersen et al., 2020). These are recognized as distinct drivers of circular entrepreneurship and the emergence of circular startups (Roshan et al., 2024). Circular economy startups are newly established businesses that adhere to CE principles, including reuse, refurbishment, remanufacturing, repair, recycling, and regeneration (Linder & Williander, 2017; Roshan et al., 2024). These ventures exemplify how entrepreneurship, supported by digital enablers, is transformative in implementing circularity within urban and economic systems.

### 3.3 The Role of Startups in Sustainable Urban Processes

As cities increasingly adopt innovative technologies and seek to foster innovationdriven economies, it is vital to understand how innovative city development relates to the strength of local startup ecosystems (Kuzior et al., 2025). Startups emerge as key actors in the transition towards urban sustainability and circularity (WEF, 2023; OECD, 2024). Compared to established companies, they show greater innovation and rapid adaptation capacity, developing creative solutions for waste management, sustainable mobility, circular logistics, and local energy production (Petri et al., 2025). The academic community has widely debated the interplay between innovative city development and the growth of startup ecosystems. Some scholars argue that smart cities foster entrepreneurship by providing technological infrastructure and policy incentives, while others highlight institutional and regulatory barriers that may inhibit startup growth (Kuzior et al., 2025). The literature has focused more on startups' circular business models (Petri et al., 2025), without delving into their specific role within smart cities. This represents a relevant gap, which this study aims to fill, analyzing

how startups can act as key enablers of the circular economy in smart cities. Thanks to their flexibility and innovative capacity, startups play a key role in cities' technological development and sustainable transition. They contribute to ICT, energy, transport and healthcare innovations, create jobs and promote urban economic growth, particularly through green and circular initiatives. They foster the automation and efficiency of urban infrastructure, supporting climate neutrality through digital solutions, advanced energy technologies, waste management systems and responsible consumption models. In this way, they favor the transition towards circular urban models, based on the reuse and regeneration of resources. In a context characterized by complexity and the need for continuous innovation, startups offer advanced technological solutions, flexible business models, and a capacity for experimentation that makes them essential for implementing smart cities (Amoako et al., 2023). Collaboration between startups, local governments, universities, and other stakeholders is crucial to favour the diffusion of innovative technologies and develop more sustainable and efficient urban systems. Startups integrate economic, social, and environmental sustainability into their business models, ensuring the ability to attract investments and ensure their resilience in the long term (Cricelli & Strazzullo, 2021). Several studies suggest smart cities catalyze startup growth, offering a conducive technological innovation and business expansion environment. Integrating digital infrastructure, open data policies, and innovative governance frameworks enhances business opportunities and facilitates collaboration between governments, corporations, and startups (Kuzior et al., 2025). The adoption of circular business models by startups allows them to develop solutions that reduce waste, promote reuse and regeneration of resources, facilitating the transition to a low-carbon economy in cities. This role is enhanced by the ability of startups to exploit digital technologies to create innovative services and connect different actors within the urban ecosystem, favoring an integrated and participatory approach to the governance of smart cities (Mattoni et al., 2015). Startups can foster the circular economy in smart cities in various ways. First, they develop innovative digital technologies and platforms for sharing resources and data, creating new business models based on sustainability. Secondly, they collaborate with local governments and ICT companies to create customized solutions for the urban context. These dynamics lead to circular entrepreneurial ecosystems integrating startups, public bodies, and citizens, favoring co-design and participatory governance practices (Grossi et al., 2024; Mylonas et al., 2024). However, the enabling role of startups in the urban circular transition remains little explored in academic literature; hence, there is a need to formulate theoretical propositions that fill this gap and guide future research. Urban startups are characterized by their ability to innovate in the product or service and business models. Adopting circular models, which emphasize regeneration, reuse, and sharing, responds to cities' environmental and social sustainability needs (Petri et al., 2025). The literature distinguishes between technological innovations (new devices, software, systems) and process or organizational innovations (new forms of collaboration, governance models, partnerships) (Adams et al., 2016; Tura et al., 2022). These innovations are essential for startups to create shared value, improve resilience, and respond quickly to complex urban dynamics (Cricelli & Strazzullo, 2021). Startups also develop entrepreneurial ecosystems that connect different actors (universities, research centers, local governments, businesses), favoring innovative technologies and circular strategies (Grossi et al., 2024). These ecosystems help overcome regulatory and cultural barriers, facilitating the integration of startups into urban processes and strategic planning. Startups' digital technologies allow real-time environmental and social performance monitoring, improving transparency and citizen participation in decisions (Appio et al., 2019; Bencsik et al., 2023).

### 3.4 The role of startups as key enablers of the circular economy in smart cities

The lack of a univocal and universally accepted definition of smart city (Gil-Garcia et al., 2015; Yigitcanlar et al., 2019) opens the space to reinterpret this concept in the light of

collaborative governance and sustainability, offering a flexible framework in which circular startups can be integrated as strategic actors. The critical analysis of the imaginative city literature highlights implications that can guide future theoretical and applicative developments, especially about the potential of startups as key enablers of the circular economy in smart cities.

| Implications | Key Authors |
|---|---|
| **Startups can enable circular economy models in smart cities, integrating technological innovation and sustainability.** | McLaren & Agyeman (2015); Cohen et al. (2016); Komninos & Mora (2018); Kummitha (2019); Gorelova et al. (2021); Antonov et al. (2021); Silva et al., (2022); Hnedina, Soroka & Mazur (2023); Sabiha e Saida (2024); Roshan et al., (2024). |
| **Human dimensions (creativity, inclusion, knowledge) are levers that startups can activate for a circular transition in smart cities.** | Nam & Pardo (2011); Gil-Garcia et al. (2015); Kummitha (2018); Trencher (2019); (Schwanholz & Leipold, 2020); Närvänen et al. (2021); (Langley et al., 2023); Van Opstal & Borms (2023); Roshan et al., (2024). |
| **Smart cities involving circular-oriented startups as strategic partners and public-private collaborations improve urban life efficiency and quality.** | Hoskisson et al. (2011); Paroutis et al. (2014); Oberg & Graham (2016); Munoz & Cohen (2016); Almirall et al. (2016); Trencher (2019); Yun & Lee (2019); Kummitha (2019); Pozdnyakova (2019); Gorelova et al. (2021); Mazur et al. (2023); Hnedina, Soroka & Mazur (2023); Sabiha & Saida (2024). |
| **Startups can play a key role in implementing circular economy principles in smart cities by integrating 4.0 technologies and emerging circular strategies.** | Silva & Sehnem (2022); Silva et al., (2022); Van Opstal & Borms (2023); Mazzetto et al., (2024); Kruhlov et al. (2024); Grossi et al. (2024); Sabiha & Saida (2024). Roshan et al. (2024), Alqassimi (2025). |
| **Integrating startups into urban decisionmaking processes (co-design, participatory governance) contributes to more effective and flexible circular solutions.** | Gil-Garcia et al. (2015); Yigitcanlar et al. (2019); Kandt et al. (2021); Grossi et al. (2024); Mazzetto et al., (2024); Roshan et al., (2024). |
| **Circular-focused startups promote business models based on sharing and reuse, which help tackle urban challenges.** | Lazaroiu et al. (2012); De Mattos & De Albuquerque (2018); Ejdys et al. (2020); United Nations DESA (2022); Van Opstal & Borms (2023); Mazzetto et al., (2024); Roshan et al., (2024). |
| **The opening of data in smart cities fosters the creation of innovative companies with social impact, as the data collected by smart infrastructures offers new opportunities to develop digital services applicable to citizens and communities.** | Berrone et al. (2016); Cohen et al. (2016); Snow et al. (2016); Kummitha (2019); Schwanholz & Leipold (2020); Langley et al. (2023); Roshan et al. (2024). |
| **Thanks to their ability to introduce innovative solutions in strategic urban sectors, startups are key players in developing smart cities.** | Pozdnyakova (2019); Hnedina, Soroka & Mazur (2023). |
| **Startups facilitate the creation of inclusive smart cities, improving accessibility and responding to social needs for urban resilience, developing technologies for the prevention and management of natural disasters.** | Silva et al., (2022); Hnedina, S. & Mazur (2023) |
| **Targeted public policies (fiscal, regulatory, training) are essential to break down barriers and incentivize innovative and circular entrepreneurship.** | Carvalho (2015); Henry et al. (2020); Kummitha (2019); Toxopeus et al. (2021); Silva et al., (2022); Van Opstal & Borms (2023); Sabiha & Saida (2024); Alqassimi, (2025); Kuzior et al., 2025). |

**Table 1:** Implications revealed by the analysis of the articles (Source: Authors' processing)

### 1) Startups can enable circular economy models in smart cities, integrating technological innovation and sustainability

Startups can combine adopting advanced technologies with developing sustainable and inclusive business models (Gorelova et al.,2021). While some literature does not explicitly address the circular economy, it underscores the foundational role of entrepreneurship in fostering urban innovation (Komninos & Mora, 2018; Antonov et al., 2021). This suggests that startups, especially those oriented towards circular models, can actively contribute to creating more resilient and environmentally efficient cities. Some authors highlight how many startups have developed business models based on the sharing economy and solutions that respond to local problems, thereby generating localized socio-economic impact aligned with sustainability goals. (McLaren & Agyeman, 2015; Cohen et al., 2016; Silva et al., 2022; Roshan et al., 2024). This reinforces the idea that smart cities improve urban management and foster new forms of entrepreneurship that integrate technology, economy, and society (Kummitha et al., 2019). According to Hnedina, Soroka, and Mazur (2023), startups represent a key driver for the progress of smart cities, thanks to their flexibility, rapid adaptation, and vocation for experimentation. Furthermore, the study by Sabiha and Saida (2024) shows that startups play a crucial role in developing smart cities, thanks to their dynamic, technologically advanced, and innovation-oriented nature. Their distinctive characteristics, such as rapid growth, adaptability, and high technological content, make them effective urban transformation agents.

### 2) Human dimensions (creativity, inclusion, knowledge) are levers that startups can activate for a circular transition in smart cities

Several authors have highlighted the importance of human factors within the smart city (Nam & Pardo, 2011; Gil-Garcia et al., 2015). Recent literature proposes a "peoplecentric" vision in which technology is at the service of people and not vice versa (Trencher, 2019; Kummitha, 2018). In this context, startups often act as intermediaries, translating digital solutions into socially inclusive services, especially in underserved urban communities. Furthermore, literature suggests that startups can integrate practices of participation, inclusion, and co-design (Närvänen et al., 2021). The latest evidence emphasizes that the digital dimension can significantly enhance these human factors: the Digital Entrepreneurial Ecosystem and digital infrastructures (Langley et al., 2023; Schwanholz & Leipold, 2020) play a crucial role in amplifying the creativity and inclusion potential of circular startups (Roshan et al., 2024). This implies that urban innovation ecosystems should valorize circular startups as tools of active inclusion, promoting collaborative spaces and co-design networks, especially in less-represented neighborhoods or communities (Van Opstal & Borms, 2023).

### 3) Smart cities involving circular-oriented startups as strategic partners and public-private collaborations improve urban life efficiency and quality

The most recent theoretical models (e.g., Smart City 2.0 and 4.0) propose a decentralized, participatory, and entrepreneurially oriented vision of the smart city (Trencher, 2019; Yun & Lee, 2019), in which entrepreneurial initiatives not only stimulate economic development but can also support social and environmental innovation. The virtuous interaction between public policies and private initiative, represented by the action of startups, can thus constitute a fundamental engine to accelerate the transition towards sustainable and smart cities (Gorelova et al., 2021). All the actors involved, from large companies to individual citizens, must work together to develop innovative technologies and solutions that respond to the real needs of the territory (Munoz & Cohen, 2016; Almirall et al., 2016). This also implies the creation of urban ecosystems capable of supporting corporate entrepreneurship, i.e., large

companies, and civic entrepreneurship, represented by small businesses and start-ups that arise from the bottom up (Oberg & Graham, 2016; Kummitha & Crutzen, 2019). Synergies between these private and public sector allow sharing resources, skills, and know-how, favoring the emergence of scalable and sustainable solutions (Pozdnyakova, 2019; Mazur et al., 2023). The impact of startups is also evident in optimizing essential urban services: mobility, energy, waste management, and resources. Digital solutions implemented by startups improve the efficiency of urban systems, reducing costs and increasing citizens' quality of life (Hnedina, Soroka & Mazur, 2023). One of the key points of startups' contribution concerns their collaboration with the public sector. The agility and ability to innovate quickly of startups prove particularly effective when supported by adequate public policies and governance attentive to digital transformation. This public-private partnership is considered strategic to accelerate urban progress, favoring the creation of an ecosystem favorable to experimentation and scalability (Sabiha & Saida, 2024). Public-private partnerships emerge as practical tools to create synergies between different sectors, thus favoring urban innovation (Kummitha, 2019; Almirall et al., 2016). This approach is in countries where smart cities are seen as a strategy to attract investments and improve quality of life (Paroutis et al., 2014; Hoskisson et al., 2011).

### 4) Startups can play a key role in implementing circular economy principles in smart cities by integrating 4.0 technologies and emerging circular strategies

Literature highlights the contribution of ICT companies to developing smart cities (Mazzetto et al., 2024), especially in providing technological solutions for urban efficiency (Kruhlov et al., 2024). Digital startups can overcome the passive role of large technological companies, developing solutions oriented to the circular economy, for the efficient use of resources, waste management, shared mobility, and renewable energy. In this sense, startups become active agents of urban transformation, in line with the principles of smart city 3.0 and digital transformation (Grossi et al., 2024). Startups have demonstrated a greater ability to integrate Industry 4.0 technologies (such as additive manufacturing and digital traceability) with the principles of the circular economy (Silva & Sehnem, 2022; Roshan et al.,2024; Alqassimi, 2025). Urban innovation policies should incentivize hybrid experiments, in which circular startups can co-develop solutions with public bodies and research centers, reducing technological and regulatory barriers (Van Opstal & Borms, 2023). Such interventions strengthen cities' environmental and social sustainability, making smart cities more inclusive, accessible, and efficient (Sabiha & Saida, 2024).

### 5) Integrating startups into urban decision-making processes (co-design, participatory governance) contributes to more effective and flexible circular solutions

The contemporary approach to urban management focuses on participatory models to create new types of interaction between stakeholders (Kandt et al., 2021). Startups are ideal for being involved in co-design and collaborative governance processes allows for the co-creation of urban solutions that align with the needs of citizens and the territory, generating more effective circular and sustainable responses (Mazzetto et al., 2024). Such involvement can foster integrative and adaptive urban solutions when formalised within participatory governance frameworks. (Grossi et al., 2024; Roshan et al.,2024) Moreover, help reduce the gap between innovation and inclusiveness. The lack of a univocal and universally accepted definition of smart city (Gil-Garcia et al., 2015; Yigitcanlar et al., 2019) opens the space to reinterpret this concept in the light of collaborative governance and sustainability, offering a flexible framework in which circular startups can be integrated as strategic actors. This lack of consensus favors a greater openness towards multidimensional and participatory approaches, in which entrepreneurial initiatives can influence urban governance models. The

model proposed by Gil-Garcia et al. (2015) comprises four main elements: technology and data, physical environment, society, and government.

### 6) Circular-oriented startups promote business models based on sharing and reuse, which help address urban challenges

With increasing urban density and environmental pressures expected by 2050, urban contexts must develop alternative consumption and production strategies (Mazzetto, 2024). Circular startups can respond to these challenges by implementing models based on the sharing economy, reuse, open data, and regenerative design. According to the literature, an integrated and digitalized urban management of resources, from mobility to waste (Lazaroiu et al., 2012; Ejdys et al., 2020), is essential to ensure sustainability and quality of life. The ability of startups to adopt circular strategies from the early stages makes them privileged actors in the urban transformation towards regenerative and sustainable models (De Mattos & De Albuquerque, 2018; Roshan et al., 2024). The study by Van Opstal and Borms, (2023) confirms that many startups perceive sustainability as a competitive advantage and adopt "inner circle" strategies such as using renewable materials and maintenance

### 7) The opening of data in smart cities fosters the creation of innovative businesses with a social impact, as data collected by smart infrastructures offers new opportunities to develop digital services that are useful to citizens and communities

Kummitha's article (2019) highlights how smart cities represent a fertile ground for entrepreneurship development, thanks to the large amount of data generated by technological infrastructures. While public agencies utilize open data for service optimization, startups leverage these datasets to design citizen-centric solutions with economic and social value. (Berrone et al., 2016; Snow et al., 2016). In this sense, city administrations' opening of data is essential to stimulate a dynamic and inclusive entrepreneurial ecosystem (Cohen et al., 2016). The literature emphasizes that datadriven innovation is a key factor for circular entrepreneurship as well, enabling circular startups to create services and platforms that combine economic and social value (Langley et al., 2023; Schwanholz & Leipold, 2020; Roshan et al., 2024).

### 8) Startups are key players in developing smart cities thanks to their ability to introduce innovative solutions in strategic urban sectors

One of the most relevant aspects concerns the contribution of startups to environmental sustainability. They develop low-emission technologies and green solutions that reduce the environmental impact of cities, contributing to the construction of a low-emission and climate-neutral future (Hnedina, Soroka & Mazur, 2023). Through projects aimed at accessibility and responding to the needs of the most vulnerable segments of the population, they contribute to ensuring greater social equity within urban spaces (Hnedina, Soroka & Mazur, 2023). To ensure the continuity and stability of these interventions, startups must be able to evolve into scaleups, growing companies with sustainable development models. Scaleups represent a strategic option for cities, as they provide long-term solutions, reducing the risks related to the fragility of the early stages of startups' life (Hnedina, Soroka & Mazur, 2023). They develop technologies for the prevention, monitoring, and management of natural disasters, improving the capacity of cities to react to extreme events (Hnedina, Soroka & Mazur, 2023). In parallel, smart cities represent a concrete opportunity for developing green jobs. Startups can be protagonists in creating new professional figures in renewable energy, energy efficiency, sustainable construction, and waste management (Hnedina, Soroka & Mazur, 2023). However, it is essential to create incentives for innovation and overcome the regulatory barriers that often hinder the experimentation and adoption of new technologies (Hnedina, Soroka & Mazur, 2023). Only through a favorable regulatory

framework and innovation-oriented public policies will it be possible to create innovative, sustainable, and inclusive cities. This vision is also shared by Pozdnyakova (2019), who highlights the pioneering role of startups in driving digital urban transformation processes.

### 9) Startups facilitate the creation of inclusive smart cities, improving accessibility and responding to social needs for urban resilience, developing technologies for preventing and managing natural disasters

Startups ensure greater social equity within urban spaces (Hnedina, Soroka & Mazur, 2023). In this sense, technological innovation also becomes a tool for social justice. Another area in which startups play a decisive role is urban resilience. They develop technologies for the prevention, monitoring, and management of natural disasters, improving the capacity of cities to react to extreme events, as demonstrated by numerous international examples, including Japan (Hnedina, Soroka & Mazur, 2023). These solutions, often based on artificial intelligence, the Internet of Things, and big data analytics, allow timely interventions and effective adaptation strategies. By adopting 4.0 technologies and aligning them with circular economy principles, startups represent key actors in addressing resource scarcity and enhancing resilience during emergencies (e.g. pandemics, climate change to economic crises and natural disasters) (Silva et al., 2022).

### 10) Targeted public policies (fiscal, regulatory, training) are essential to break down barriers and incentivize innovative and circular entrepreneurship:

Circular startups face complex barriers: lack of access to finance, shortage of circular skills, and unfavorable regulations (Toxopeus et al., 2021; Van Opstal & Borms, 2023; Kuzior et al., 2025). Evidence shows low uptake of circular skills training and high demand for innovation and liquidity support. This suggests the need for integrated and multi-level policy interventions, combining: (1) easier access to finance and guarantees, (2) training programs for technical and entrepreneurial skills, and (3) regulatory simplification for emerging strategies such as sharing and waste recovery. The study by Van Opstal and Borms indicates that founders with a migrant background show greater optimism in building a profitable circular business (Van Opstal & Borms, 2023). The results of the study confirm the heterogeneity of circular startup profiles and strategies adopted, excluding the possibility of a single model ("no such thing as 'the' circular startup") (Van Opstal & Borms, 2023). This is also reflected in recent literature, which proposes a taxonomy of circular startups (Henry et al., 2020). Public policies play a crucial role in incentivizing the adoption of innovative technologies through tax benefits and investments in dedicated infrastructures (Carvalho, 2015; Kummitha, 2019; Silva et al., 2022). Finally, Sabiha and Saida (2024) recommend a series of strategic interventions to maximize the potential of startups. These include: regulatory simplification, targeted economic support, adequate infrastructure for entrepreneurship (such as incubators and technology hubs), and policies to attract investors and innovative entrepreneurs. Recent research highlights three strategic policy priorities to further strengthen the circular startup ecosystem. First, sector-specific support programs should be developed, particularly in operationally complex logistics and ecommerce sectors where circular startups face distinct challenges (Alqassimi, 2025). Second, regulatory frameworks should be simplified and tailored to reduce entry barriers and encourage innovation in high-impact circular economy sectors. Third, policymakers should actively promote collaboration and innovation networks, encouraging synergies between startups, large enterprises, and research institutions to facilitate knowledge transfer and resource pooling (Alqassimi, 2025).

## 4. Discussion

Based on the theoretical implications, a 10-item questionnaire was developed to evaluate the perceived role of startups in the circular transition of smart cities. To test these implications systematically, a persona-based methodology was adopted, through the definition of 12 synthetic profiles representing strategic actors in the urban ecosystem and sustainable innovation: 1. Circular Economy Startup Founder; 2. Innovative Mobility Entrepreneur; 3. Urban Policy Innovator; 4. Innovation Hub Director; 5. Circular Sharing Economy Platform Founder; 6. Smart Waste Tech CEO; 7. Circular Energy Strategist; 8. Sustainable Urban Planner; 9. Sustainable Investment Advisor; 10. Academic in Smart Circular Systems; 11. Corporate Innovation Manager;

12. Urban Sustainability Advisor. Each persona received the same structured questionnaire. The profiles represent strategic actors across urban and sustainability ecosystems. The questionnaire was divided into two response levels:

- A 5-point Likert scale, measuring the degree of agreement with the proposed statement, with the following values: 1 = Strongly Disagree; 2 = Slightly Agree; 3 = Fairly Agree; 4 = Strongly Agree; 5 = Fully Agree.

- An open qualitative comment is helpful to motivate or contextualize the numerical response through examples, experiences, or subjective considerations. Synthetic responses were created based on plausible priorities and viewpoints of each persona, allowing exploratory comparison while maintaining methodological control. The objective of this phase is to explore comparatively how the different actors interpret the opportunities, levers, and critical issues related to the circular transition in the urban context. The results obtained were subsequently summarized in a comparative table, useful to highlight convergences, divergences, and potential areas of collaboration between the different actors involved. The questions are as follows:

***1.*** *To what extent do you think startups are key players in transitioning to a circular and smart urban model?*

***2.*** *How important do you think levers such as creativity, inclusion, and knowledge sharing are in promoting an urban circular transition through startups?*

***3.*** *To what extent have the public-private collaborations you have participated in improved the efficiency or quality of urban life circularly?*

***4.*** *How relevant are 4.0 technologies in your business to implement circular economy principles in smart cities?*

***5.*** *How effective do you think the involvement of startups in co-design or urban governance processes is in developing circular solutions?*

***6.*** *How much is your business model based on sharing and reuse practices to address urban challenges?*

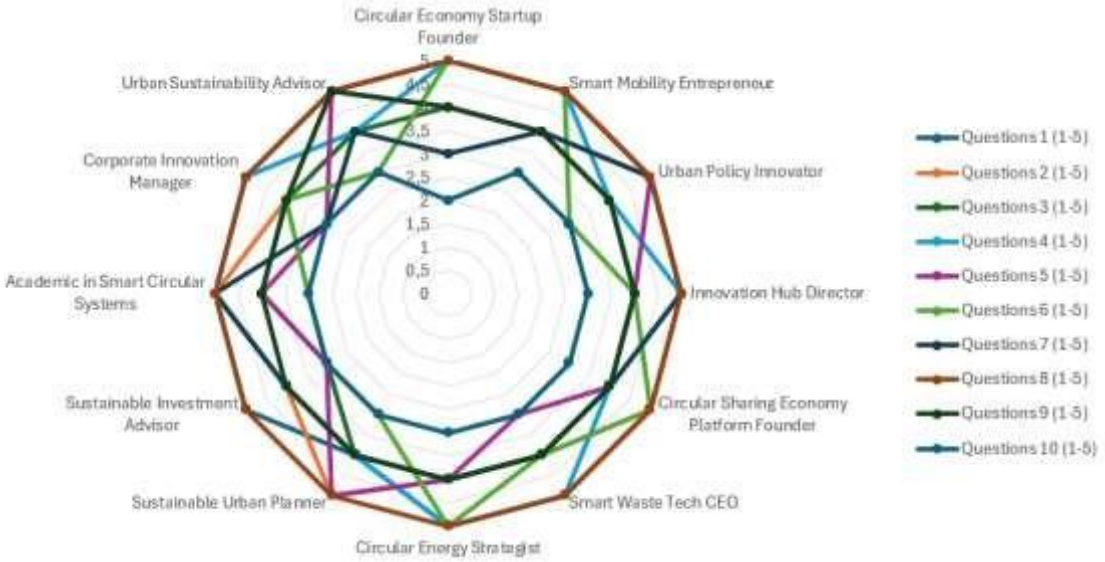
***7.*** *How much do you think that access to open urban data favors creating entrepreneurial solutions with social impact?*

***8.*** *How much do you think startups are protagonists in the development of innovative solutions in strategic sectors of smart cities?*

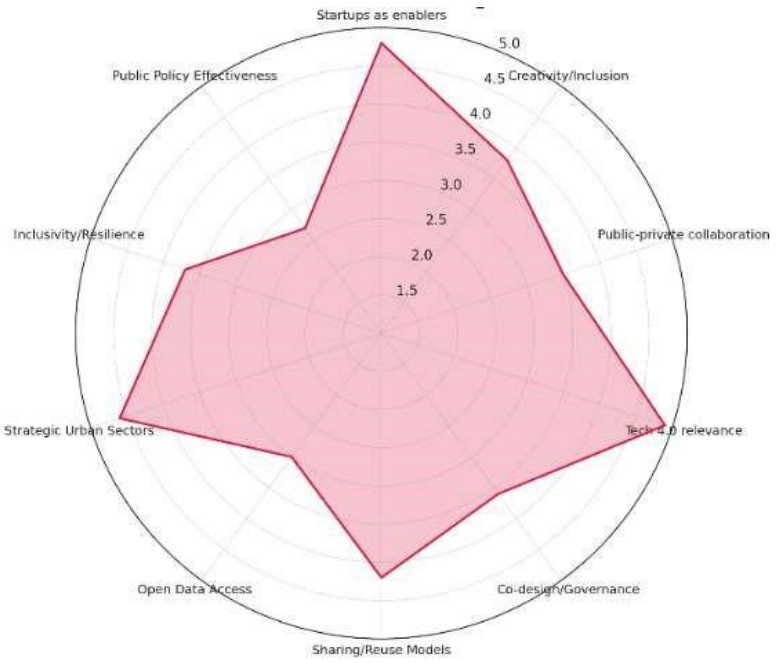
***9.*** *How much does your initiative contribute to making the city more inclusive and resilient from a social and environmental point of view?*

***10.*** *How effective do you think public policies (fiscal, regulatory, training) are today in supporting circular and smart entrepreneurship?*

The comparative analysis of the simulated answers reveals both significant convergences and marked divergences among the ten key dimensions investigated. A clear consensus emerges on the strategic role of startups in the urban circular transition: in all profiles, their capacity for experimentation, agility in implementing solutions, and alignment with emerging urban needs are recognized as enabling factors. Were elaborated two summary graphs to allow a visual compression of the results of the synthetic data processed.




**Graph 1:** Summary of Likert scale responses (Source: Authors' processing)




**Graph 2:** Common themes and divergences highlighted from comments (Source: Authors' processing)

The transformative potential of 4.0 technologies is also unanimously acknowledged—particularly AI, IoT, and blockchain—although some urban planners and advisors point to infrastructural limitations and uneven adoption across territories. Conversely, softer dimensions such as creativity, inclusion, and knowledge sharing reveal a more fragmented picture: academic, planning, and advisory personas value these as central levers for systemic change, while several CEOs and entrepreneurs perceive them as supportive but not core to their operational priorities. Public-private collaboration received a heterogeneous evaluation, with institutional actors describing structured partnerships as key enablers. At the same time, startup founders often report obstacles such as bureaucratic inertia and limited follow-up in co-designed initiatives. Similar divergence emerges regarding participatory governance processes: although broadly supported in principle, many profiles express skepticism toward their concrete impact on decision-making. Regarding business models, actors operating circular platforms or waste tech solutions report having embedded sharing and reuse practices at the core of their value proposition, whereas investors or corporate managers tend to view them as promising yet not fully scaled. Open urban data remains a highly debated issue: while some respondents highlight successful cases of data-enabled services, others denounce the lack of standardized, updated, and accessible datasets. The role of startups in key strategic urban sectors, such as energy, mobility, and waste, is widely affirmed, emphasizing their contribution to optimization, decentralization, and lifecycle innovation. However, a divergence is evident when addressing inclusivity and resilience: socially oriented profiles consider these as guiding principles, whereas more product-driven actors tend to frame them as indirect effects of innovation. Lastly, public policies are the most critically assessed area: across the board, respondents cite regulatory rigidity, lack of incentive alignment, and fragmented training infrastructures as significant barriers to developing circular and innovative entrepreneurship. These findings confirm strong consensus on the transition's technological and entrepreneurial drivers, while exposing persistent tensions regarding socio-institutional dimensions and enabling conditions. These findings confirm that startups are widely recognized as strategic enablers of circular innovation in smart cities, particularly for their capacity to rapidly deploy digital solutions, experiment with disruptive models, and respond to sector-specific challenges. However, while technological and entrepreneurial drivers enjoy broad consensus, the results reveal enduring tensions around socio-institutional dimensions, such as inclusivity, participatory governance, and public policy alignment, which remain unevenly integrated into startup strategies and urban innovation frame.

## 5. Conclusions and Implications

This study confirms the strategic contribution of startups to advancing circular economy principles within smart city contexts, adopting a synthetic methodology that combines theoretical implications, synthetic personas, and a structured questionnaire. It is important to emphasise that the interviews and responses analysed in this study derive from simulated interactions, not from real individuals. All data were generated through the ChatGPT-4 model based on carefully constructed prompts and role-based scenarios. The method represents an exploratory phase and a solid basis for future field validations. The personas were designed to reflect plausible stakeholder profiles grounded in the literature, and the questionnaire aimed to elicit differentiated perspectives across domains. The comparative analysis of responses highlights a strong convergence across stakeholders regarding the technological and entrepreneurial potential of startups, particularly their ability to experiment rapidly, adapt to emerging urban challenges, and implement circular solutions through 4.0 technologies such as AI, IoT, and blockchain (Silva et al., 2022; Van Opstal & Borms, 2023). However, the study also uncovers persistent tensions in how various actors perceive and

operationalise softer dimensions such as creativity, inclusion, and knowledge sharing (Kummitha, 2018; Langley et al., 2023). These aspects are highly valued by academic, planning, and advisory profiles, but are often regarded as supportive rather than central by startup founders and corporate actors. Divergences also emerge around participatory governance and co-design processes, which are widely endorsed in principle (GilGarcia et al., 2015; Grossi et al., 2024), yet perceived as challenging to implement due to institutional inertia and limited follow-through. Open data is another area of contrast: while some personas refer to its potential to enable innovation, others stress barriers such as limited accessibility and lack of standardisation (Schwanholz & Leipold, 2020). Public policy is consistently rated as the most problematic dimension, with obstacles including regulatory rigidity, poor alignment of incentives, and fragmented support structures (Carvalho, 2015; Toxopeus et al., 2021). It must be reiterated that these findings, while aligned with academic discourse and grounded in literature, are derived from a digitally simulated environment. The insights presented result from an indirect investigation conducted through ChatGPT-4 and should therefore be considered hypothetical and exploratory. Overall, the findings confirm the essential role of startups in advancing smart and circular cities, but also call for more cohesive policy, governance, and infrastructural conditions to unleash their full potential. The study reinforces the view that smart cities should be interpreted as technological environments and socio-technical systems in which startups act as co-drivers of transformation (Gil-Garcia et al., 2015; Komninos & Mora, 2018). Future investigations could explore hybrid models where entrepreneurial, institutional, and civic actors co-evolve circular solutions. To fully harness the transformative potential of circular startups in smart cities, participatory governance mechanisms should evolve from symbolic involvement to forms of structural integration, ensuring continuity and actual decision-making capacity. At the same time, digital infrastructures require consolidation to support scalable innovation processes. Public policies must also become more targeted, flexible, and aligned with the specific needs of circular entrepreneurship. These dimensions should be core pillars of smart urban strategies, a call that future city planning and entrepreneurship policy must consider. From this perspective, concrete urban policy tools (e.g. innovation vouchers for circular experimentation, regulatory sandboxes, and urban data trust platforms) could play a decisive role in supporting early-stage ventures and accelerating deployment. From a managerial standpoint, startups should prioritise developing adaptive capabilities for engaging with institutional complexity, leveraging open data, and integrating participatory design approaches. Such strategies would greatly benefit from validation. The next step in this research should involve field-based research and direct engagement with real-world stakeholders, paving the way for more grounded and empirically validated insights.

## References


Abu-Rayash, A., & Dincer, I. (2021). Development of integrated sustainability performance indicators for better management of smart cities. Sustainable Cities and Society, 67, 102704.

Adams, R., Jeanrenaud, S., Bessant, J., Denyer, D., & Overy, P. (2016). Sustainabilityoriented innovation: A systematic review. International Journal of Management Reviews, 18(2), 180-205.

Akbarpour, N., Salehi-Amiri, A., Hajiaghaei-Keshteli, M., & Oliva, D. (2021). An innovative waste management system in a smart city under stochastic optimization using vehicle routing problem. Soft Computing, 25, 6707-6727.

Almirall, E., Wareham, J., Ratti, C., Conesa, P., Bria, F., Gaviria, A., & Edmondson, A. (2016). Smart cities at the crossroads: New tensions in city transformation. California Management Review, 59(1), 141-152.

Alqassimi, O. (2025). Innovative Pathways to Net-Zero: The Role of Startups in Accelerating Circular Economy Transitions. International Review of Management and Marketing, 15(3), 266.

Amoako, G. K., Obuobisa-Darko, T., Dartey-Baah, K., & Sedalo, G. (2023). A conceptual framework on finding the nexus between sustainability and desired outcomes for smart cities–the moderating role of green leadership. International Journal of Tourism Cities, 9(3), 617-635.

Angelidou, M., Psaltoglou, A., Komninos, N., Kakderi, C., Tsarchopoulos, P., & Panori, A. (2018). Enhancing sustainable urban development through smart city applications. Journal of Science and Technology Policy Management, 9(2), 146-169.

Antonov, V., Petrenko, E., & Kuptsova, E. (2020, March). The Development of Smart Entrepreneurship as a Driver of the Smart Economy. In Institute of Scientific Communications Conference (pp. 1754-1760). Springer International Publishing.

Appio, F. P., Lima, M., & Paroutis, S. (2019). Understanding Smart Cities: Innovation ecosystems, technological advancements, and societal challenges. Technological Forecasting and Social Change, 142, 1-14.

Bencsik, B., Palmié, M., Parida, V., Wincent, J., & Gassmann, O. (2023). Business models for digital sustainability: Framework, microfoundations of value capture, and empirical evidence from 130 smart city services. Journal of Business Research.

Beretta, I. (2018). The social effects of eco-innovations in Italian smart cities. Cities. Berrone, P., Ricart, J. E., & Carrasco, C. (2016). The open kimono: Toward a general framework for open data initiatives in cities. California Management Review, 59(1).

Bibri, S. E., & Krogstie, J. (2017). Smart sustainable cities of the future: An extensive interdisciplinary literature review. Sustainable cities and society, 31, 183-212.

Bonab, A. B., Bellini, F., & Rudko, I. (2023). Theoretical and analytical assessment of smart green cities. Journal of Cleaner Production, 410, 137315.

Bonomi, F., Milito, R., Natarajan, P., & Zhu, J. (2014). Fog computing: A platform for internet of things and analytics. Big data and internet of things: A roadmap for smart environments, 169-186.

Carlos, R. L., de Souza, E. B., & Mattos, C. A. (2024). Enhancing circular economy practices through the adoption of digital technologies. Business Strategy & Development, 7(1), e330.

Carvalho, L. (2015). Smart cities from scratch? A socio-technical perspective. Cambridge Journal of Regions, Economy and Society, 8(1), 43-60.

Cohen, B., Almirall, E., & Chesbrough, H. (2016). The city as a lab: Open innovation meets the collaborative economy. California Management Review, 59(1), 5-13. Cricelli, L., & Strazzullo, S. (2021). The economic aspect of digital sustainability: A systematic review. Sustainability, 13(15), 8241.

De Mattos, C. A., & De Albuquerque, T. L. M. (2018). Enabling factors and strategies for the transition toward a circular economy (CE). Sustainability, 10(12), 4628.

Dizdaroglu, D., & Yigitcanlar, T. (2016). Integrating urban ecosystem sustainability assessment into policy-making: Insights from the Gold Coast City. Journal of Environmental Planning and Management, 59(11), 1982-2006.

Ejdys, J., & Gulc, A. (2020). Trust in courier services and its antecedents as a determinant of perceived service quality and future intention to use courier service. Sustainability, 12(21), 9088.

Elgazzar, R. F., & El-Gazzar, R. (2017). Smart cities, sustainable cities, or both. In A Critical Review and Synthesis of Success and Failure Factors. In Proceedings of the 6th International Conference on Smart Cities and Green ICT Systems, (pp. 22-24).

Enquist, B. (2016). Kollektivtrafik som transformativ för levande och hållbara städer. Giffinger, R., & Gudrun, H. (2010). Smart cities ranking: an effective instrument for the positioning of the cities?. ACE: architecture, city and environment, 4(12), 7-26.

Gil-Garcia, J. R., Pardo, T. A., & Nam, T. (2015). What makes a city smart? Identifying core components and proposing an integrative and comprehensive conceptualization. Information Polity, 20(1), 61-87.

Gorelova, I., Dmitrieva, D., Dedova, M., & Savastano, M. (2021). Antecedents and consequences of digital entrepreneurial ecosystems in the interaction process with smart city development. Administrative Sciences, 11(3), 94.

Grossi, G., & Welinder, O. (2024). Smart cities at the intersection of public governance paradigms for sustainability. Urban Studies, 61(10), 2011-2023.

Harrison, C., Eckman, B., Hamilton, R., Hartswick, P., Kalagnanam, J., Paraszczak, J., & Williams, P. (2010). Foundations for smarter cities. IBM Journal of research and development, 54(4), 1-16.

Henry, M., Bauwens, T., Hekkert, M., & Kirchherr, J. (2020). A typology of circular start-ups: An Analysis of 128 circular business models. Journal of cleaner production.

Hnedina, K., Soroka, A., & Mazur, S. (2023). Startups as Drivers of Development of Smart Cities. Economy and Society, (57).

Hoskisson, R. E., Covin, J., Volberda, H. W., & Johnson, R. A. (2011). Revitalizing entrepreneurship: The search for new research opportunities. Journal of Management Studies, 48(6), 1141-1168.

Kandt, J., & Batty, M. (2021). Smart cities, big data and urban policy: Towards urban analytics for the long run. Cities, 109, 102992.

Komninos, N., & Mora, L. (2018). Exploring the big picture of smart city research. Scienze Regionali, 17(1), 15-38.

Kristoffersen, E., Blomsma, F., Mikalef, P., & Li, J. (2020). The smart circular economy: A digital-enabled circular strategies framework for manufacturing companies. Journal of business research, 120, 241-261.

Kruhlov, V., Dvorak, J., Moroz, V., & Tereshchenko, D. (2024). Revitalizing ukrainian cities: the role of public-private partnerships in smart urban development. Cent. Eur. Pub. Admin. Rev., 22, 85.

Kummitha, R. K. R. (2018). Entrepreneurial urbanism and technological panacea: Why Smart City planning needs to go beyond corporate visioning?. Technological Forecasting and Social Change, 137, 330-339.

Kummitha, R. K. R. (2019). Smart cities and entrepreneurship: An agenda for future research. Technological Forecasting and Social Change, 149, 119763.

Kummitha, R. K. R., & Crutzen, N. (2019). Smart cities and the citizen-driven internet of things: A qualitative inquiry into an emerging smart city. Technological Forecasting and Social Change, 140, 44-53.

Kuzior, A., Marhasova, V., Zozuľaková, V., Kočnerová, M., Koibichuk, V., Ryabushka, L., & Vasylieva, T. (2025). Smart city rankings and startup ecosystems: an empirical analysis of inverse correlation across 77 smart cities.

Langley, D. J., Rosca, E., Angelopoulos, M., Kamminga, O., & Hooijer, C. (2023). Orchestrating a smart circular economy: Guiding principles for digital product passports. Journal of Business Research, 169, 114259.

Lazaroiu, G. C., & Roscia, M. (2012). Definition methodology for the smart cities model. Energy, 47(1), 326-332.

Linder, M., & Williander, M. (2017). Circular business model innovation: inherent uncertainties. Business strategy and the environment, 26(2), 182-196.

Macarthur, E. L. L. E. N., & Heading, H. E. A. D. I. N. G. (2019). How the circular economy tackles climate change. Ellen MacArthur Found, 1, 1-71.

Mattoni, B., Gugliermetti, F., & Bisegna, F. (2015). A multilevel method to assess and design the renovation and integration of Smart Cities. Sustainable Cities and Society.

Mahadevia, D., Delgado-Ramos, G. C., Barnes, J., Fitzgerald, J., Kamei, M., Lanza, K., ... & Rosenzweig, C. (2025). Learning from COVID-19 for Climate-Ready Urban Transformation. *Elements in Climate Change and Cities*.

Mazur, S. O., & Hnedina, K. V. (2023). Startups as drivers of green reconstruction of Ukraine.

Mazzetto, S. (2024). A Review of Urban Digital Twins Integration, Challenges, and Future Directions in Smart City Development. Sustainability, 16(19), 8337.

McLaren, D., & Agyeman, J. (2015). Sharing cities: a case for truly smart and sustainable cities 735.

Mittal, S., & Sethi, M. (2018). Smart and livable cities: Opportunities to enhance quality of life and realize multiple co-benefits. Mainstreaming climate co-benefits in Indian cities: Post-habitat III innovations and reforms, 245-263.

Möslinger, M., Ulpiani, G., & Vetters, N. (2023). Circular economy and waste management to empower a climate-neutral urban future. Journal of Cleaner Production.

Muñoz, P., & Cohen, B. (2016). The making of the urban entrepreneur. California Management Review, 59(1), 71-91.

Mylonas, G., Kalogeras, A., Petersen, S. A., Muñoz, L., & Chatzigiannakis, I. (2024). When Circular Economy Meets the Smart City Ecosystem: Defining the Smart and Circular City. arXiv preprint arXiv:2410.22012.

Nam, T., & Pardo, T. A. (2011, June). Conceptualizing smart city with dimensions of technology, people, and institutions. In Proceedings of international digital government research conference: digital government innovation in challenging times (pp. 282-291).

Närvänen, E., Mattila, M., & Mesiranta, N. (2021). Institutional work in food waste reduction: Start-ups' role in moving towards a circular economy.

Oberg, C., & Graham, G. (2016). How smart cities will change supply chain management: a technical viewpoint. Production Planning & Control, 27(6), 529-538.

Paroutis, S., Bennett, M., & Heracleous, L. (2014). A strategic view on smart city technology: The case of IBM Smarter Cities during a recession. Technological Forecasting and Social Change, 89, 262-272.

Petri, J. M., de Francisco, A. C., Martins de Souza, A., de Lima, J. D., & Trojan, F. (2025). How Do Start-Ups Develop Circular Business Models? A Systematic Literature Review. Sustainability (2071-1050), 17(3).

Pozdnyakova A.M. (2019). Implementation of the concept of smart sustainable cities in Ukraine: features and recommendations. Development of productive forces and regional economy. Issue 2 (70). P. 49–57.

Roshan, R., Balodi, K. C., Datta, S., Kumar, A., & Upadhyay, A. (2024). Circular economy startups and digital entrepreneurial ecosystems. Business Strategy and the Environment, 33(5), 4843-4860.

Sabiha, T., & Saida, S. (2024). The role of startups in promoting the development of smart cities–dubai as a model. International Journal of Professional Business Review: Int. J. Prof. Bus. Rev., 9(5), 7.

Schwanholz, J., & Leipold, S. (2020). Sharing for a circular economy? An analysis of digital sharing platforms' principles and business models. Journal of Cleaner Production, 269, 122327.

Silva, B. N., Khan, M., & Han, K. (2018). Towards sustainable smart cities: A review of trends, architectures, components, and open challenges in smart cities. Sustainable cities and society, 38, 697-713.

Silva, T. H., & Sehnem, S. (2022). Industry 4.0 and the circular economy: Integration opportunities generated by startups. Logistics, 6(1), 14.

Snow, C. C., Håkonsson, D. D., & Obel, B. (2016). A smart city is a collaborative community: Lessons from smart Aarhus. California Management Review, 92-108.

Toppeta, D. (2010). The smart city vision: how innovation and ICT can build smart,"livable", sustainable cities. The innovation knowledge foundation, 5, 1-9.

Toxopeus, H., Achterberg, E., & Polzin, F. (2021). How can firms access bank finance for circular business model innovation?. Business Strategy and the Environment, 30(6).

Trencher, G. (2019). Towards the smart city 2.0: Empirical evidence of using smartness as a tool for tackling social challenges. Technological Forecasting and Social Change.

Tura, N., & Ojanen, V. (2022). Sustainability-oriented innovations in smart cities: A systematic review and emerging themes. Cities, 126, 103716.

Van Opstal, W., & Borms, L. (2023). Startups and circular economy strategies: Profile differences, barriers and enablers. Journal of Cleaner Production, 396, 136510.

Yigitcanlar, T. (2016). Technology and the city: Systems, applications and implications.

Yun, Y., & Lee, M. (2019). Smart city 4.0 from the perspective of open innovation. Journal of Open Innovation: Technology, Market, and Complexity, 5(4), 92.

# Patient First: An Explorative Analysis of AI-Driven Customer-Centric Healthcare Models

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## Abstract

The technological advancements of the Fourth Industrial Revolution are disruptive, altering the market dynamics within healthcare and influencing adjacent markets. In particular, the ongoing technology revolution is swiftly transforming the healthcare industry landscape and reshaping how customers interact with it. Today's customers are more informed and educated, enjoying the freedom to choose the most suitable digital solutions for their needs. Healthcare industries are compelled to align with these changing dynamics by meeting customer demands, satisfying their expectations, and empowering them with decision-making authority and control over their care. As concerns the healthcare sector, there has been a recent paradigm shift towards prioritising patientcentric approaches, to meet patients' needs and improve care quality. In this research, we conducted a qualitative analysis through multiple case studies, focusing on four industrial cases that prioritise the centrality of patients through Artificial Intelligence solutions. The goal of this research is to identify the pillars upon which industries must build their business models to improve an effective customer-centric approach to enhance patients' lives through innovative solutions which prioritise their needs and well-being. This study introduces fresh management perspectives by emphasising the importance of examining digitisation from the patient's viewpoint. It highlights innovations as catalysts for social change and offers insights for policymakers, advocating the adoption of advanced clinical technologies, improved information processes, and enhanced communication coordination among stakeholders. Lastly, it recommends the formulation of regional and national policies to facilitate the integration of digital health practices.

*Keywords: Artificial Intelligence; Healthcare; Customer-centricity; Multiple case study; Explorative analysis.*

## 1. Introduction

The challenges posed by the pandemic have intensified the existing critical issues within the healthcare system, placing additional strain on the health system.

The healthcare industry has changed the way of manages its business model for two reasons. The first one is to extend life expectancy, while the second is the increasing number of people affected by chronic diseases.

The traditional model of care is undergoing radical transformations to face current challenges (Schiavone and Ferretti, 2021; Durrani, 2016). In this context, the emerging paradigm of

healthcare delivery will be underpinned by technological disruptors equipped with extensive data and profound insights into the behaviours of patients, now viewed as consumers. These disruptors will play a pivotal role in the consumerization of healthcare (Schiavone and Ferretti, 2021). Indeed, the patient is progressively being likened to a consumer, and the robust technological tools of the industrial revolution are poised to facilitate this transition toward a consumer-centric model (Castro, Van Regenmortel, Vanhaecht, Sermeus, and Van Hecke, 2016).

Patients actively contribute as co-producers of health services and co-creators of value in the healthcare system (Palumbo, 2016). The pivotal focus of this transformation lies in the adoption of Value-Based Healthcare (VBHC) (Porter, 2013), where the patientcentricity prioritises the value and outcome. The European Commission characterizes Value-Based Healthcare (VBHC) as a multidimensional concept rooted in providing tailored care to fulfil patients' objectives (Personal value), attaining optimal outcomes considering resource constraints (Technical value), equitably allocating resources across all patients (Allocative value), and promoting social participation and connectedness (Social value) (Toni et al., 2023).

The foundation of the customer-centric paradigm relies on a diverse range of enabling technologies, including the Internet of Things, Additive Manufacturing, Big Data, Artificial Intelligence, Cloud Computing, Augmented and Virtual Reality, and Blockchain (Rindfleisch, O'Hern, & Sachdev, 2017). AI has the potential to enhance efficiency, accuracy, and decision-making in healthcare, ultimately leading to improved patient care and outcomes (Ahmed, Z., et al. 2020). Examples of AI applications in healthcare include image analysis for medical imaging, natural language processing for extracting information from clinical notes, predictive analytics for identifying at-risk patients, and virtual health assistants for patient engagement. Recently, the concept of "One Health" has been introduced, signifying a collaborative, interdisciplinary approach that acknowledges the interconnectedness of human health, animal health, and environmental well-being. It advocates for a unified strategy to address health challenges that span humans, animals, and ecosystems, recognising the close link between human health, animal health, and the shared environment.

The "One Health" approach highlights the importance of collaborative research and extensive disease monitoring, integrating data from various sources to attain a more comprehensive understanding of the dynamics of global health.

AI stands as a critical pillar in the construction of a resilient and secure healthcare ecosystem (Vishwakarma et al., 2023). Its capabilities extend to delivering invaluable insights, conducting intricate data analysis, and offering decision support through mechanisms such as Decision Support (DS), Continuous Monitoring (CM), and Communication and Awareness (CA) (Božič & Dimovski, 2019). By harnessing AI's power, healthcare systems can enhance their efficiency, make informed decisions, and establish a proactive approach to continuous health monitoring, ultimately fostering a safer and more effective healthcare environment. Furthermore, AI plays a crucial role in offering emotional support and enhancing the mental well-being of patients (Inkster et al. 2018). It provides continuous and accessible assistance by offering information and encouragement. Additionally, AI monitors behavioural patterns to identify early indications of mental health issues, facilitating timely interventions (Luxton et al., 2015).

This background forms the basis for our motivation to explore the topic of this paper, namely, how a customer-centric approach oriented to customer-centricity contributes to co-creating value at different levels, particularly by health service enterprises using AI. Our research question is *"How does AI foster the adoption of a customer-centric approach in healthcare?"*. To answer this question, an explorative analysis of apps based on AI development in

healthcare was conducted by using a multiple case study of Medisafe, Easeydoctor, Patchai and Buoy Health that offer services and help to patients.

The paper is organised as follows. Section 2 reviews the relevant literature on Digital technologies in healthcare and a paradigm shift in healthcare: from hospitals to patients. Section 3 describes the research methodology, including the multiple case study analysed and the research setting. Section 4 presents the study results. The final section discusses the findings and the implications of our study. Limitations and future research are analysed in the conclusion.

## 2. Theoretical Background

### 2.1 Digital technologies in healthcare

Digital transformation (DT) is the engine of change in 21st century society because of its massive impact on business processes (Li et al., 2016; Verhoef et al., 2021) and, more in general, on individuals and organizations and the several ways through which they are now able to interact and operate (Vial, 2019; Verhoef et al., 2021; Balta et al., 2021). Indeed, the heart of DT is the profound revolution that the use of digital technologies is leading in society persistently (Agarwal et al., 2010; Vial, 2019). According to Verhoef et al. (2021), DT encompasses three phases which are digitization, digitalization, and digital transformation; this perspective is also widely supported by literature (e.g. Loebbecke & Picot, 2015; Matt, Hess, & Benlian, 2015; Parviainen, Tihinen, Kääriäinen, & Teppola, 2017). However, even though *digitization* is "the action to convert analog information into digital information" (Ritter & Pedersen, 2020; Verhoef et al., 2021) and digitalization, through the application of digital technologies, optimizes existing business processes and creates additional customer value through enhancing user experiences (Pagani & Pardo, 2017; Verhoef et al., 2021), DT still is something greater. In fact, it is something that has to do with the deep change of business models of companies because of the implementation of digital technologies (Iansiti & Lakhani, 2014; Verhoef et al., 2021) and that goes beyond transforming the whole firm system from the operational level (e.g. Ramaswamy and Ozcan, 2016) to the strategic one (e.g. Nambisan et al. 2019; Baptista et al., 2020; Morton et al., 2020; Balta et al., 2021). Hence, it is not hard to find the reasons why all the industries are somehow affected by this phenomenon, even though there could be several differences between them. One thing is sure: the main goal of digital solutions is to reduce the complexity of real-life processes. It is not a case, thus, that the healthcare system, which is highly complex because of the large amount of data, actors and tasks involved in it (Laurenza et al., 2018), is one of the sectors mostly impacted and helped by DT (Agarwal et al., 2010; Laurenza et al., 2018; Marques & Ferreira, 2020). According to Balta et al. (2021), digital health (DH) "made the lives of patients and healthcare providers easier, safer, longer, and efficient". In line with what was previously mentioned, Kostkova (2015) defined DH as "the use of information and communications technologies to improve human health, healthcare services, and wellness for individuals and across population" which is also evidently confirmed by the fact that, since the middle of 20th century, ICT are increasingly and constantly becoming part of the HC sector (Ford et al., 2017; Kraus, Schiavone et al., 2021). In this regard, it can be possible to affirm that some radical innovations over the years are changing the HC sector deeply thanks to "disruptive technologies such as blockchain, big data, Internet of things, artificial intelligence, autonomous vehicles, remote sensing (satellite imagery and drones), wearables, robotics, genome editing, augmented reality (AR), 3D printing and biotechnologies" (Sharma & Kshetri,2020) which refer to the Fourth Industrial Revolution (4IR). This is way more understandable if contextualised within Marques and Ferreira's (2020) review, through which they analysed the literature about DT in HC. They identified, indeed, seven potential categories of perspectives to adopt in this specific area: Integrated Management of

Information Technology in Health; Medical Images; Electronic Medical Records; Information

Technology and Portable Devices in Health; Access to E-Health; Telemedicine and Privacy of Medical Data (Marques & Ferreira, 2020; Kraus, Schiavone et al., 2021). More specifically, in the last years, it has been given particular attention to Artificial Intelligence (AI) and to all the solutions that can be provided in the healthcare field using it. AI is significantly shaping the HC system, being a digital tool used as an augmented intelligence that does not replace professionals but expands their capabilities (Chen, M., & Decary, M., 2020) so that AI platforms, products, and services support and enhance DH across the world. In this regard, lately, the number of companies that design AI healthcare applications is increasing, and this type of solution can be categorised into four areas: patient-facing, doctor-facing, research, and telehealth (Chen, M., & Decary, M., 2020). Moreover, AI supports the great revolution of DT: the systematic change of roles within the specific sector digitalised (Parviainen et al., 2017; Kraus, Schiavone et al., 2021). Essentially, the effects of it in the HC sector are the heart of the present work. In fact, as concerns the HC structure, the main actor who has been most empowered by this change is the patient, with all their needs and expectations. It can be stated, indeed, that DH enables and facilitates the implementation of the customer-centric approach in HC organisations using AI applications.

### 2.2 A paradigm shift in healthcare: from hospital to the patients

In our market context, there has been a significant shift where the user has been placed at the centre of decision-making across all industries for many reasons, including cultural changes and the enhancement of technologies.

Currently, has gained relevance the customer centricity which is a business approach that prioritises creating a positive customer experience and aligning business processes with the needs and preferences of customers (Witell, et al. 2020). This business approach involves placing the customer at the centre of decision-making and focusing on building strong, long-term relationships with them (Fader, 2020).

Businesses, through a customer-centric approach, aim to satisfy and exceed customer expectations. This involves actively anticipating and addressing customer desires, fostering loyalty beyond individual transactions. The goal is to create an environment where customers not only find what they need but also experience high engagement and satisfaction, building lasting relationships (Khan, 2023).

This commitment to customer-centricity is viewed as crucial for long-term success, recognising that a delighted and loyal customer base is a fundamental driver of business growth and sustainability in today's dynamic markets (Di Ruscio, 2021).

The approach of centrality has also assumed value in the health sector, indeed in the 21st century, healthcare has undergone a paradigm shift, aligning with the ideas presented by Thomas Kuhn in his 1962 classic, "The Structure of Scientific Revolutions" (Kuhn, 1962).

In the past, in the health field, practitioners thought only of reducing the cost and time and not of focusing on the patient (Buse & Hawkes, 2015).

For centuries, the prevailing belief has been that patients cannot actively contribute to their care, particularly in making medical decisions related to their condition (Meskó & deBronkart, 2022).

The concept of patient empowerment has undergone an evolution over the decades, but it has experienced significant growth in the 21st century, largely propelled by increased

information availability and widespread access to technology (Meskó, B., & deBronkart, D., 2022).

Providing healthcare that is centred around the needs and preferences of the patient is widely recognised as a fundamental aspect of ensuring high-quality care (Ismail *et al.*, 2014).

Cultural digital transformation in the health field has aided this paradigm shift and currently fuels the development of patient-centricity (Mäenpää, 2023). AminololamaShakeri and Lopez (Aminololama-Shakeri & López, 2019) argue that AI is the next step toward a more patient-centred care system in breast imaging.

The doctor-patient relationship is founded on trust (Chin, 2001) and the use of IA can enhance the trust in their relationship. Many practitioners argue that artificial intelligence could lead to a more productive doctor-patient relationship by increasing the transparency of the decision-making process (Edison, 2023).

Patients now use artificial intelligence to access health-related information, leveraging this advanced technology to deepen their understanding of their specific medical conditions and gain a complete view of their overall well-being (Sujith *et al.* 2022). To improve interactions between the many players in the healthcare ecosystem, moving to a "patient-centred" perspective is necessary. This will ensure the exchange of knowledge and experiences in real-time. The patient experience, a crucial idea in the new digital health ecosystems, may thus be revolutionised using digital advances (Buccoliero, 2010).

In patient-centric healthcare, the focus extends beyond merely providing information and assisting individuals in managing their health; it also encompasses the availability and delivery of tangible healthcare services (HIN 2016).

The transition from a hospital-centric to a patient-centric model in healthcare represents a profound paradigm shift, signifying a transformative approach that aspires to reshape the entire landscape of medical services. This transformative paradigm extends beyond a mere reconfiguration of service delivery, encompassing a fundamental redefinition of the relationships between healthcare providers and recipients. The pivotal components of this paradigmatic evolution include an intensified focus on mental health, the implementation of Data-driven personalisation strategies, the integration of Remote and Home-Based Care, and the prioritisation of Preventive and Proactive Care.

This paradigm shift finds its theoretical underpinnings in a rich tapestry of key frameworks, each contributing to the holistic restructuring of traditional healthcare practices. As we traverse this evolutionary path, the goal is not merely to adapt but to strategically bridge the gap between established healthcare norms and the untapped potential offered by advancements in AI (Khan et al. 2023). By weaving together these theoretical foundations, healthcare professionals aim to navigate the complexities of this transformation, ensuring that patient-centricity is a guiding principle shaping a healthcare landscape that is responsive to medical needs and attuned to individuals' holistic well-being (Toni & Mattia 2022).

Patients desire increased reliability and visibility in their healthcare, along with enhanced interaction with their referring physicians. This fosters a sense of involvement, making them active participants in the decision-making process.

## 3. Method

To tackle the research question, we conducted an exploratory analysis using the multiple case study approach (Eisenhardt, 1989; Yin, 2017). The main focus was to explore how integrating AI technologies facilitates adopting a customer-centric approach within the healthcare sector.

Adopting a multiple case study approach allows for more precision in examining phenomena within the society (Eisenhardt, 1989; Saunders et al., 2007). To triangulate data, we relied on primary and secondary sources (Yin, 2017). Particularly, data were gathered from: (1) public declarations, (2) online documentation and (3) archival data. The data were analysed using an inductive thematic analysis approach (Braun & Clark, 2006). The following sections detail the case studies' descriptions, the data collection and the analysis process.

### 3.1 Case studies description

The study delves into the realm of AI technology within the healthcare sector. Artificial Intelligence systems are increasingly being implemented in the healthcare sector to improve the quality of care while optimising costs. Consider the electronic health record, which gathers all patients' clinical information in digital format and creates a true database. The ability of such technologies to process a vast amount of data enables healthcare professionals to develop personalised care paths that consider patients' specific needs, surpassing any geographical distance. Furthermore, the application of AI in diagnostics enhances the accuracy of diagnoses and even enables the prediction of possible patient health scenarios. One of the most widespread manifestations of AI in healthcare is the development of apps and chatbots designed to provide constant support to patients, thereby increasing their engagement. Many companies have made the development of healthcare applications their core business to support the optimisation of patient care pathways. Our research aims to analyse digital solutions based on the use of Artificial Intelligence to support healthcare organisations, physicians, and patients. Particularly, we aim to analyse digital tools oriented to foster patient-centric approach adoption. We selected four digital tools as case studies: (1) Medisafe, (2) Easydoctor, (3) Patchai, and (4) Buoy Health. The following paragraphs describe the selected cases and their main characteristics.

#### 3.1.1 Medisafe

Medisafe, created by an American IT firm, is a mobile application designed to improve patient care experiences by offering prompts for taking medication, tracking doses, and overseeing drug interactions. Its additional goals include providing comprehensive drug information and enabling patients to monitor their health progress. The app allows for personalised customisation according to individual user requirements, such as tailoring reminders to specific medication schedules. Furthermore, it ensures careful monitoring of doses taken to minimise the potential dangers linked to drug interactions. These attributes play a crucial role in empowering patients, encouraging better treatment adherence, and amplifying the efficacy of prescribed treatments.

#### 3.1.2 Easydoctor

Established in 2021, Easydoctor stands as a secure, adaptable, and versatile Digital Patient Engagement platform dedicated to aiding healthcare institutions in guiding individuals through their health journeys. It facilitates effortless and efficient data collection while nurturing enhanced communication between doctors and patients. Tailored for both physicians and patients, the application offers the potential to create secure, user-friendly, and personalised digital interfaces. It aligns with the Value-Based Health Care model, striving to maximise value for patients, elevate clinical outcomes, and optimise care efficiency. A standout attribute of this platform is its incorporation of a patient-centric chatbot, ensuring a seamless and immediate communication experience. This enhances the efficacy of information dissemination and bolsters patient involvement with the healthcare facility. Patients can effortlessly and intuitively engage with their physicians and healthcare providers, resulting in an overall enhancement of interaction quality.

### 3.1.3 Patchai

Founded in 2018, Patchai is an Italian-based digital health technology firm specializing in smart solutions for engaging and empowering patients in both clinical research and care processes. Their offerings facilitate enhanced self-management of health conditions, bolster adherence to study protocols and care plans, and simplify care provision for healthcare providers through robust, up-to-the-minute data. At its core, Patchai has created an intelligent platform dedicated to fostering patient engagement and capturing real-time data, specifically tailored for decentralised clinical research and standard care settings. This innovation aims to humanize, interconnect, and streamline both clinical research practices and routine clinical procedures. Through Patchai's virtual assistant, patients benefit from personalized experiences, ensuring high satisfaction and retention within decentralized clinical trials.

### 3.1.4 Buoy Health

Developed by a team of doctors and data scientists at the Harvard Innovation Labs, Buoy Health guides individuals through the healthcare system, providing scalable triage and connecting them with appropriate care options based on their self-reported symptoms. It provides an AI-driven virtual assistant that assists users in evaluating their symptoms and making well-informed health decisions. By asking specific questions to comprehend a patient's symptoms, the app utilizes artificial intelligence to deliver a tailored assessment and guidance on managing those symptoms. Buoy combines symptom checking with up-to-date medical knowledge to furnish personalized insights into potential causes and treatments for illnesses or health issues. Additionally, it provides proactive recommendations for seeking care, resembling a conversation with a doctor without the associated judgment, wait times, or expenses.

## 3.2 Data collection and data analysis

To address the research query, we explored the implementation of AI technologies to promote adopting a customer-centric approach in healthcare services through an investigative qualitative analysis (Eisenhardt, 1989; Yin, 2017). We established an exploratory research methodology (Yin, 2017), employing multiple sources of evidence to triangulate our data (Yin, 2017; Eisenhardt, 1989). Our data collection involved various sources such as public declarations, archival records, and online documentation. Our research focuses on the impact of AI on adopting a customercentric approach in healthcare. We collected and analyzed several reports and documents from official company websites for archival records. Additionally, we utilized online documentation, analysing statistical data, public declarations, and specialised online trade press sources. According to Hox and Boeije (2005), collecting secondary data involved three key stages: (1) Selecting secondary sources aligned with research objectives, particularly focusing on AI, healthcare, and a customer-centric approach. (2) Obtaining data directly from official websites. (3) Giving priority to evaluating information quality to ensure the reliability of the secondary sources. The data were transcribed and analysed by conducting a content analysis using the NVivo software (Krippendorff, 2018). Thus, we classified the sentences into three categories:

(1) *AI to improve patient engagement*, (2) *AI to foster innovation development* and (3) *AI to improve quality of care from an economic perspective.*

## 4. Findings

As mentioned before, authors practised an inductive thematic analysis to highlight the potential impact of AI in boosting customer-centric approach adoption. Particularly, the

analysis revealed that AI act as a catalyst of: *1) patient engagement, 2) innovation development, and 3) quality of care from an economic perspective.*

### 4.1 AI to Improve Patient Engagement

All the selected case studies are based on AI solutions designed to improve patient engagement. Indeed, Medisafe's Digital Companion, supports patients and caregivers throughout their entire treatment journey by driving interventions to keep patients engaged, adherent, and persistent, as we can see in the declaration: "*Omri elaborates on how Medisafe sits at major junctions throughout the patient's continuum of care. In what ways does the company combine the tech, the AI, big data, etc., with the behavioural aspects of the patient's needs*". Moreover, the patients declare that: "*Medisafe has been a huge part of my story and what I've done to help me manage things on a day-to-day basis. And it's just made my life better and easier. I couldn't imagine my life without medisafe".* Hence, this app improves the satisfaction of the patient's needs and gives them freedom and a better quality of health.

This emerges also within the case named Easydoctor "*At Easy Health, we believe that through a Data-Driven and Evidence-Based approach we can best support health professionals in managing patients, their health and their quality of life*". The goal of Patchai is to engage patients in a complex journey; indeed in the declarations it is stated: "*The added value lies in the fusion of personalization, empathetic conversation and understanding of patient engagement through the "engagement score", crucial for therapy adherence. This score, derived from questionnaires and diaries, helps researchers anticipate patient compliance during the clinical trial.*".

In the end, Buoy is a Boston-based digital health company that provides personalized clinical guidance the moment an individual has a health concern and matches covered care options. Indeed, said Andrew Le, MD, CEO and Cofounder of Buoy in the declaration: "*At Buoy, we're creating an experience for consumers that is pushing the boundaries of choice and access in digital health,*". Indeed, *"Eric's background in value-based care and assisting Medicare seniors will be instrumental as we advance our vision of a patient-centric marketplace.*"

### 4.2 AI to foster innovation development

AI enhances the development of innovation. In particular, it may enhance and accelerate the process of innovation within various domains. In Easydoctor: "*Here the data becomes useful, saves us time and leads us to better diagnoses… and the data becomes shared knowledge, useful for research to identify patterns and correlations that can prove fundamental for the development of better therapies*". AI driving innovation also in Medisafe, indeed: "*Medisafe's Connected Health Platform, delivers meaningful data-driven insights on patient behavior and brand performance*", sending the alarm to the patient in order to remind them to take the medicine.

Buoyhealth has developed a chatbot that collects information of patients' symptoms that returns to researchers to have more details on the development of the disease and its symptoms.

Moreover, in the declarations reported in the case of Patchai: "The pandemic underscored the necessity for patient empathy, emphasizing the importance of not just digitization but intelligent digitization. Our innovation, the virtual assistant utilizing the GoPro method, effectively bridged this gap". Hence through the AI Patchai assists the patients with the virtual tools.

### 4.3 AI to improve quality of care from an economic perspective

In the sources of Medisafe we found the enhancement of the economic aspect and the quality of care, indeed in the declarations: *"The analysis showed an average annual cost reduction of $6,280*

*per MS patient and $4,600 per epilepsy patient using Medisafe to manage their therapeutic regimen. These cost reductions – which represent significant savings for patients and reduction in burden on the entire healthcare system – derived from reduced utilization of costly care services as a result of better medication management*".

Also, in the case of Buoy Health, in declarations we see that: "*Buoy Health is a healthfocused chatbot that helps people interpret their symptoms and suggests the level of care they should seek. The development team then worked to add coronavirus symptoms and provide information to combat people's fear. Individuals can tap into Buoy's AI-driven symptom checker for guidance on the state of their health, as well as discover care options on their own through Buoy's vast library of articles on symptoms, conditions, and treatments".* Hence, this approach allows Buoy to costeffectively provide solutions that serve historically underserved groups, conditions, or populations, such as women's health.

In Easydoctor AI helps to reduce costs by improving the diagnosis and right care, indeed the following declaration reports: "*Here is the data that becomes useful, saves us time and leads us to better diagnoses and not only that: once digitized and shared - in the right ways and with respect for privacy - the data becomes shared knowledge*". Finally, Patchai improves the entire patient experience, leading to better health outcomes and reducing trial times and costs through the support of patients enrolled in the clinical experiments of drugs.

## 5. Discussion, Implications and Conclusions

The global economic systems have been significantly altered by the Fourth Industrial Revolution (Verhoef et al., 2021; Kraus et al., 2021; Horváth & Szabó, 2019). Businesses worldwide are increasingly concentrating on adjusting their business models to comply with new market demands brought about by the integration of advanced and digital technologies (Horváth & Szabó, 2019). This trend is transforming the business landscape.

Healthcare has long been a prominent sector embracing Digital Transformation (Marques & Ferreira, 2020). This evolution has unlocked new opportunities for care delivery and value creation (Elton & O'Riordan, 2016). Healthcare institutions need to adopt innovative approaches to address evolving patient needs in an increasingly digitised and technologically advanced world. The entire healthcare ecosystem necessitates a significant shift in perspective that prioritises patients and their requirements as digitisation continues to expand. Digital technologies like blockchain and Artificial Intelligence enable the implementation of technical, organisational, procedural, and governance modifications within the healthcare ecosystem. A crucial idea in the digital industrial scenario is the concept of digital health, which may thus revolutionise care provision (Moro Visconti & Morea, 2020; Schiavone, 2020; Buccoliero, 2010). In this context, it is necessary to embrace a significant change in perspective to address the evolving requirements of patients. Healthcare organisations shift from a hospital-centric approach to a patient-centric one, putting individuals at the center of the decision-making process.

This paper demonstrates that implementing an Artificial Intelligence-based solution can help in this revolutionary care approach. Indeed, as shown in the conceptual framework (Figure 1), using Artificial Intelligence improves the adoption of a customer-centric approach in the healthcare ecosystem. New technologies present numerous opportunities for enhancing patient care procedures. Specifically, the integration of AIdriven solutions strengthens patient engagement. Patients actively participate in their care processes, assuming the role of value co-creators. For instance, virtual assistants actively engage patients, fostering a sense of belonging within the healthcare service. This shift implies the development of increasingly tailored care paths based on individual characteristics. Consequently, healthcare professionals can anticipate potential health scenarios, facilitating the implementation of high-quality predictive medicine. The vast data furnished by these new digital systems enables physicians

to continuously monitor their patients' metrics in real-time and adapt their interventions accordingly.

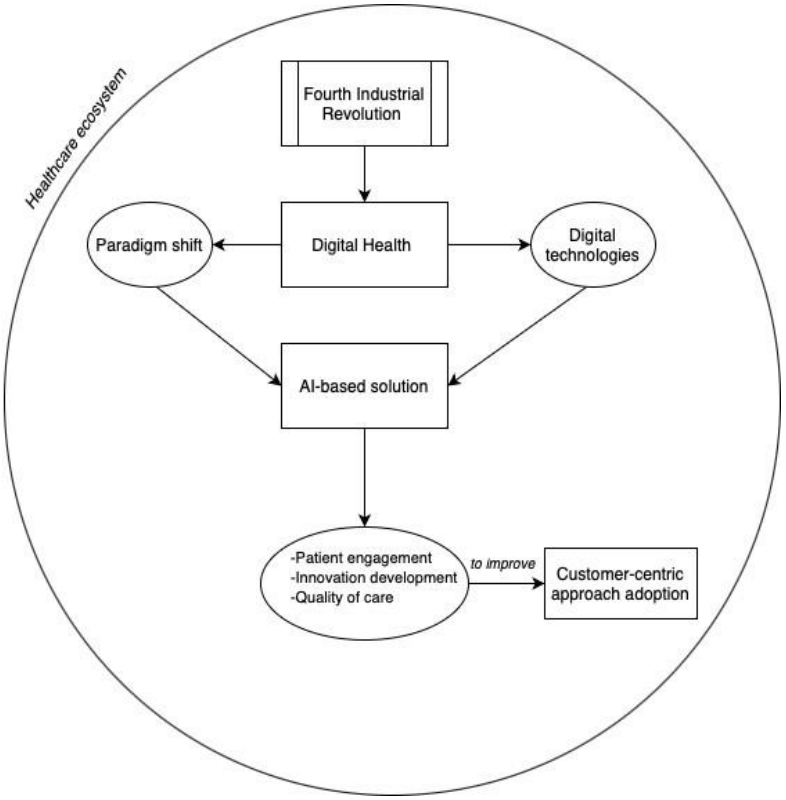



**Figure 1:** AI's role in driving the customer-centric approach's adoption.
Source(s): Authors' research

A further example is provided by the application of AI to imaging. Ingenious diagnosis and imaging will utilise DNA, nanobots and Artificial Intelligence (AI) to speed up diagnosis, imaging and, importantly, subsequent care decisions (Van den Heuvel et al., 2018). Already, Google is working on using deep learning, a branch of AI, to recognise patterns in many digital representations of images to detect signs of cancer in breast cancer biopsies. The technology is still in its nascent stage of R&D, but it has the potential to make a significant impact on the imaging segment. Through tools like biostamps and smart inhalers, medicine administration and patient monitoring will be personalised and less intrusive. The ongoing advancement of innovation drives the widespread adoption of these technologies in the healthcare industry, compelling organisations to embrace patient-centred approaches that prioritise and cater to their needs.

The economic benefits of emerging technologies are evident. AI-based solutions enable the optimisation of resources throughout the different stages of the care delivery process, leading to reduced costs.

The findings yield numerous theoretical, managerial, and policy implications. In terms of theory, the research provides fresh perspectives that could be valuable for scholars in the field of management. The papers highlight the need to analyse digitalization from a patient perspective. Looking at it from a managerial angle, the findings suggest that healthcare managers must prioritize investment in technological innovations while considering their

potential to enhance the patient experience and the quality of care. These technological advancements should be regarded as catalysts for social innovation. Additionally, this paper offers food for thought for policymakers. As digitalization becomes more widespread, there is an opportunity to adopt state-of-theart clinical technologies, enhance information processes, and enhance coordination and communication among various stakeholders. Furthermore, this sets the stage for developing regional and national policies that facilitate the integration of digital health practices.

## References


Ahmed, Z., Mohamed, K., Zeeshan, S., & Dong, X. (2020). Artificial intelligence with multi-functional machine learning platform development for better healthcare and precision medicine. Database, 2020, baaa010.

Agarwal, R., Gao, G., DesRoches, C., & Jha, A. K. (2010). Research commentary— The digital transformation of healthcare: Current status and the road ahead. Information systems research, 21(4), 796-809.

Aminololama-Shakeri S, López JE. The Doctor-Patient Relationship With Artificial Intelligence. AJR Am J Roentgenol. 2019;212(2):308.

Balta, M., Valsecchi, R., Papadopoulos, T., & Bourne, D. J. (2021). Digitalization and co-creation of healthcare value: A case study in Occupational Health. Technological Forecasting and Social Change, 168, 120785.

Baptista, J., Stein, M. K., Klein, S., Watson-Manheim, M. B., & Lee, J. (2020). Digital work and organisational transformation: Emergent Digital/Human work configurations in modern organisations. The Journal of Strategic Information Systems, 29(2), 101618.

Božič, K., & Dimovski, V. (2019). Business intelligence and analytics for value creation: The role of absorptive capacity. International journal of information management, 46, 93-103.

Buccoliero L. (2010). E-health 2.0. Tecnologie per il patient empowerment. Mondo Digitale, 4: 3- 17.

Buse, K., & Hawkes, S. (2015). Health in the sustainable development goals: ready for a paradigm shift?. Globalization and health, 11(1), 1-8.

Castro, E. M., Van Regenmortel, T., Vanhaecht, K., Sermeus, W., & Van Hecke, A. (2016). Patient empowerment, patient participation and patient-centeredness in hospital care: A concept analysis based on a literature review. Patient education and counseling, 99(12), 1923-1939.

Chen, M., & Decary, M. (2020, January). Artificial intelligence in healthcare: An essential guide for health leaders. In Healthcare management forum (Vol. 33, No. 1, pp. 10-18). Sage CA: Los Angeles, CA: SAGE Publications.

Chin JJ. Doctor-patient relationship: a covenant of trust. Singapore Med J. 2001;42(12):579.

Di Ruscio, S. (2021). Customer Centricity as synonym of future competitiveness: implications in the management of customer satisfaction-Esprinet Case Study.

Durrani, H. (2016). Healthcare and healthcare systems: inspiring progress and future prospects. Mhealth, 2.

Edison, G. (2023). The Integration of AI in the Doctor's Toolkit: Enhancing Medical Decision-making. BULLET: Jurnal Multidisiplin Ilmu, 2(3), 604-613.

Fader, P. (2020). Customer centricity: Focus on the right customers for strategic advantage. University of Pennsylvania Press.

Health Innovation Network South London, 2016. What is person-centred care and why is it important, The Health Foundation < http://personcentredcare.health.org. uk/resources/what-person-centred-care-and-why-it-important > (accessed

8.08.07.).

Iansiti, M., & Lakhani, K. R. (2014). Digital ubiquity:: How connections, sensors, and data are revolutionizing business. Harvard business review, 92(11), 19.

Inkster, B., Sarda, S., & Subramanian, V. (2018). An empathy-driven, conversational artificial intelligence agent (Wysa) for digital mental well-being: real-world data evaluation mixed-methods study. JMIR mHealth and uHealth, 6(11), e12106.

Ismail, B., Tuba, B. and Burcu, E. (2014), "The impact of total quality service (TQS) on healthcare and patient satisfaction: an empirical study of Turkish private and public hospitals", International Journal of Health Planning and Management, Vol. 29, pp. 292-315.

Khan, S. D. (2023). A Systematic Approach on Customer Relationship Management Practices in Non-banking Companies. Journal of Informatics Education and Research, 3(2).

Kraus, S., Schiavone, F., Pluzhnikova, A., & Invernizzi, A. C. (2021). Digital transformation in healthcare: Analyzing the current state-of-research. Journal of Business Research, 123, 557-567.

Kostkova, P. (2015). Grand challenges in digital health. Frontiers in public health, 3, 134.

Kuhn T. The Structure of Scientific Revolutions. Chicago, IL: University of Chicago Press; 1962.

Laurenza, E., Quintano, M., Schiavone, F., & Vrontis, D. (2018). The effect of digital technologies adoption in healthcare industry: a case based analysis. Business process management journal, 24(5), 1124-1144.

Li, F., Nucciarelli, A., Roden, S., & Graham, G. (2016). How smart cities transform operations models: A new research agenda for operations management in the digital economy. Production Planning & Control, 27(6), 514-528.

Loebbecke, C., & Picot, A. (2015). Reflections on societal and business model transformation arising from digitization and big data analytics: A research agenda. The Journal of Strategic Information Systems, 24(3), 149-157.

Luxton, D. D., June, J. D., Sano, A., & Bickmore, T. (2015). Intelligent mobile, wearable, and ambient technologies for behavioral health care. Artificial intelligence in behavioral and mental health care, 137.

Mäenpää, K. (2023). Towards digitalized patient-centered integrated healthcare in Finland–Examining the future of digitalized healthcare.

Marques, I. C., & Ferreira, J. J. (2020). Digital transformation in the area of health:

systematic review of 45 years of evolution. Health and Technology, 10(3), 575586.

Matt, C., Hess, T., & Benlian, A. (2015). Digital transformation strategies. Business & information systems engineering, 57, 339-343.

Meskó, B., & deBronkart, D. (2022). Patient design: the importance of including patients in designing health care. Journal of Medical Internet Research, 24(8), e39178.

Morton, J., Wilson, A. D., & Cooke, L. (2020). The digital work of strategists: Using open strategy for organizational transformation. The Journal of Strategic Information Systems, 29(2), 101613.

Nambisan, S., Wright, M., & Feldman, M. (2019). The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes. Research policy, 48(8), 103773.

Pagani, M., & Pardo, C. (2017). The impact of digital technology on relationships in a business network. Industrial Marketing Management, 67, 185-192.

Palumbo, R. (2015). Value co-creation and value co-destruction in the patient-provider relationship. The contribution of the "Health Literacy" perspective. In Innovation, Entrepreneurship and Sustainable Value Chain in a Dynamic Environment (pp. 1266-1279). EuroMed Press.

Parviainen, P., Tihinen, M., Kääriäinen, J., & Teppola, S. (2017). Tackling the digitalization challenge: how to benefit from digitalization in practice. International journal of information systems and project management, 5(1), 6377.

Porter, M. E. (2013, November). Value-based health care: from idea to reality. In International Consortium for Health Outcomes Measurement (ICHOM) annual conference.

Ramaswamy, V., & Ozcan, K. (2016). Brand value co-creation in a digitalized world: An integrative framework and research implications. International Journal of Research in Marketing, 33(1), 93-106.

Rindfleisch, A., O'Hern, M., & Sachdev, V. (2017). The digital revolution, 3D printing, and innovation as data. Journal of Product Innovation Management, 34(5), 681690.

Ritter, T., & Pedersen, C. L. (2020). Digitization capability and the digitalization of business models in business-to-business firms: Past, present, and future. Industrial Marketing Management, 86, 180-190.

Schiavone, F., & Ferretti, M. (2021). The FutureS of healthcare. Futures, 134, 102849.

Sharma, R., & Kshetri, N. (2020). Digital healthcare: Historical development, applications, and future research directions. International Journal of Information Management, 53, 102105.

Sujith, A. V. L. N., Sajja, G. S., Mahalakshmi, V., Nuhmani, S., & Prasanalakshmi, B. (2022). Systematic review of smart health monitoring using deep learning and Artificial intelligence. Neuroscience Informatics, 2(3), 100028.

Toni, M., & Mattia, G. (2022). The Digital Healthcare Revolution: Towards Patient Centricity with Digitization, Service Innovation and Value Co-creation. Springer Nature.

Toni, M., Mattia, G., & Pratesi, C. A. (2023). What's next in the Healthcare system? The contribution of digital innovation in achieving Patient-centricity. Futures, 103304.

Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. Journal of business research, 122, 889-901.

Vial, G. (2021). Understanding digital transformation: A review and a research agenda. Managing digital transformation, 13-66.

Vishwakarma, L. P., Singh, R. K., Mishra, R., & Kumari, A. (2023). Application of artificial intelligence for resilient and sustainable healthcare system: Systematic literature review and future research directions. International Journal of Production Research, 1-23.

Wang, Y., Kung, L., & Byrd, T. A. (2018). Big data analytics: Understanding its capabilities and potential benefits for healthcare organizations. Technological forecasting and social change, 126, 3-13.

Witell, L., Kowalkowski, C., Perks, H., Raddats, C., Schwabe, M., Benedettini, O., & Burton, J. (2020). Characterizing customer experience management in business markets. Journal of Business Research, 116, 420-430.

Eisenhardt, K. M. (1989). Building theories from case study research. *Academy of management review*, 14(4), 532-550.

Yin, R.K. (2017). *Case Study Research and Applications: Design and Methods*, Sage publications, Thousand Oaks.

Saunders, M., Lewis, P., & Thornhill, A. (2007). Research Methods for Business Students Fourth Edition.

Krippendorff, K. (2018). *Content analysis: An introduction to its methodology*. Sage publications.

Hox, J. J., & Boeije, H. R. (2005). Data collection, primary versus secondary.

Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Dong, J. Q., Fabian, N., & Haenlein, M. (2021). Digital transformation: A multidisciplinary reflection and research agenda. *Journal of Business Research*, 122, 889-901.

Kraus, S., Schiavone, F., Pluzhnikova, A., & Invernizzi, A. C. (2021). Digital transformation in healthcare: Analyzing the current state-of-research. *Journal of Business Research,* 123, 557-567.

Horváth, D., & Szabó, R. Z. (2019). Driving forces and barriers of Industry 4.0: Do multinational and small and medium-sized companies have equal opportunities?. *Technological forecasting and social change*, 146, 119-132.

Marques, I. C., & Ferreira, J. J. (2020). Digital transformation in the area of health: Systematic review of 45 years of evolution. Health and Technology, 10, 575–586.

Elton, J., & O'Riordan, A. (2016). Healthcare disrupted: Next generation business models and strategies. John Wiley & Sons.

Moro Visconti, R., & Morea, D. (2020). Healthcare digitalization and pay-forperformance incentives in smart hospital project financing. International journal of environmental research and public health, 17(7), 2318.

Schiavone, F. (2020). User innovation in healthcare: How patients and caregivers react creatively to illness. Springer Nature.

Van den Heuvel, R., Kapadia, A., Stirling, C., & Zhou, J. (2018). Medical devices 2030. KPMG International.

# Track 8
# Digital Marketing

Coordinators: Carmen Donato & Stefania Farace

L'emergente economia digitale pone una sfida al marketing contemporaneo i cui confini ed ambiti applicativi sono in continua evoluzione. Il digital marketing - inteso quale integrazione di tecnologie e paradigmi digitali con il marketing - è in grado di fornire agli attori economici la capacità di raggiungere i clienti attraverso la formulazione di approcci innovativi che rispondono in questo modo alle nuove esigenze del mercato. Le imprese sempre di più sono consapevoli dell'importanza di creare una relazione digitale ed omnicanale con il cliente; in effetti le tecnologie digitali, i device ed i touchpoints - come ad esempio smartphone, smart products, IoT, Intelligenza artificiale e deep learning - pongono le basi per significative trasformazioni nella vita dei clienti (business e consumer) in un prossimo futuro.

Obiettivo di questa sezione tematica è quello di comprendere come gli sviluppi nella tecnologia digitale stiano ridisegnando il processo e le strategie di marketing, unitamente a tutte le implicazioni che questa trasformazione comporta sia per le imprese sia per i consumatori. La sezione è pertanto dedicata agli studi teorici ed empirici connessi alla digitalizzazione del marketing sotto il profilo dell'offerta e della domanda con particolare attenzione alle dinamiche di relazione ed integrazione tra i due profili.

Dal punto di vista dell'offerta, sono accolti i contributi volti ad un'analisi scientificamente rigorosa dell'utilizzo delle tecnologie e device digitali per il perseguimento degli obiettivi di marketing, unitamente ai vantaggi che un approccio al marketing digitale è in grado di apportare rispetto ad un'ottica di marketing tradizionale. Dal lato della domanda, si invita la comunità dei ricercatori a contribuire con l'approfondimento dell'impatto delle tecnologie digitali sulle percezioni, le attitudini, la propensione all'utilizzo e relative resistenze e i comportamenti dei consumatori a livello individuale e sociale.

L'attività di questa sezione tematica è aperta agli accademici e ai professionisti che, grazie ad un'analisi in profondità di questi aspetti, contribuiscano a stimolare un ricco dibattito sulle implicazioni teoriche e manageriali derivanti dai risultati della ricerca.

The digital economy is redefining the boundaries of marketing. Digital marketing—integrating digital technologies into marketing activities—allows firms to reach customers through innovative, omnichannel approaches supported by tools such as smartphones, smart products, IoT, AI, and deep learning. The section aims to explore how these technologies transform marketing processes and strategies, and what this means for firms and consumers. It welcomes theoretical and empirical studies on the digitalization of marketing, examining both how companies use digital tools to achieve marketing goals and how such technologies influence consumer perceptions, attitudes, adoption, and behaviors. The section invites academics and practitioners to contribute analyses that enrich the discussion on the theoretical and managerial implications of digital transformation.

# Designing Smarter Nudges: Cognitive Load Theory in Sustainable Checkout Choices

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## Abstract

E-commerce's exploding "last-mile" deliveries already emit millions of tons of $CO_2$, yet checkout interfaces still treat home drop-off as the default. While sustaina- bility nudges can redirect orders to lower-carbon pickup points, designers lack evidence on how much information such prompts should convey—a critical gap, given shoppers' limited cognitive bandwidth. Grounded in Cognitive Load Theory, the author predicts an Inverted-U link: moderate message complexity maximizes click-and-collect uptake, but richer detail overloads working memory and backfires. A first empirical test—re- analyzing a public field experiment with 980 observations—supports this curve. Two additional studies (a lab and a field experiment) are planned to confirm causality, trace the mediating role of cognitive load, and probe age and internet-literacy boundaries. The work pinpoints a lean "sweet spot" for green checkout cues and offers an adaptive, skill-aware blueprint for cutting last-mile emissions.

*Keywords: Last mile delivery; Click & Collect; Online shopping; Digital Nudging*

### 1. Introduction and research aim

E-commerce keeps booming, but each "home-drop" parcel still adds ≈164–883 g $CO_2$ in the "last-mile" and already generates ≈19 Mt per year—a figure projected to rise another 32 % by 2030 (Coppola, 2023; Niemeijer & Buijs, 2023). While cleaner vans and e-cargo bikes help, changing checkout behaviour is cheaper and immediately scal- able. Digital nudges—small interface tweaks that steer choices without limiting free- dom—have been shown to shift orders toward pickup points, potentially cutting sector- wide emissions by one-third if adopted at scale.

Nevertheless, nudges come in many shapes. Informational variants range froma single green-leaf icon to dense numeric data, demanding different levels of mental effort. Mar- keting research recognizes that online shoppers already face information overload; ac- cording to Cognitive Load Theory, excessive detail can exhaust working memory and backfire (Plass et al., 2010). Few prior field experiments have compared "lean" versus "rich" messages, but they have stopped short of testing whether effectiveness rises and then falls as complexity increases (Nijssen et al., 2023). Moreover, early evidence hints that older consumers—who form the fastest-growing online segment—react differ- ently, partly because lower internet literacy magnifies cognitive strain.

The author addresses these gaps by proposing and empirically examining an inverted U-shaped relationship between the informational complexity of a sustainability nudge and the likelihood that shoppers opt for click-and-collect. The author theorizes that this effect operates through the shopper's experienced Cognitive Load Degree (CLD) and is contingent on demographic skills: ageing heightens overload, while internet literacy buffers it. Figure 1 visualizes the conceptual model.

## 2. Hypotheses Development

*Informational complexity and sustainable choice.* Moderate detail can aid evaluation, but beyond a threshold, added cues overwhelmworking memory and trigger avoidance. Therefore: **H1**. The relationship between a nudge's informational complexity and the probability of choosing click and collect presents an inverted U-shaped curve.

*Cognitive load as the explanatory mechanism.* Higher complexity consumes more at- tentional resources, raising CLD, which in turn pushes consumers toward the cogni- tively simpler default (often home delivery). Hence: **H2**. Cognitive Load Degree me- diates the curvilinear effect of informational complexity on the choice of click and collect.

*Age as a boundary condition.* Normal cognitive ageing reduces processing capacity;

thus, the same complexity level should feel more taxing to older adults. **H3**. Age posi- tively moderates the path from informational complexity to CLD: the overload effect is stronger for older consumers.

*Internet literacy as a chained mediator.* Ageing often coincides with weaker digital skills, which themselves raise CLD during online checkout. **H4**. Internet literacy medi- ates the relationship between Age and CLD.

By integrating cognitive-load principles with demographic contingencies, our study advances digital-nudge scholarship and offers actionable guidance for designing lean, age-sensitive interventions that maximize sustainable last-mile choices.

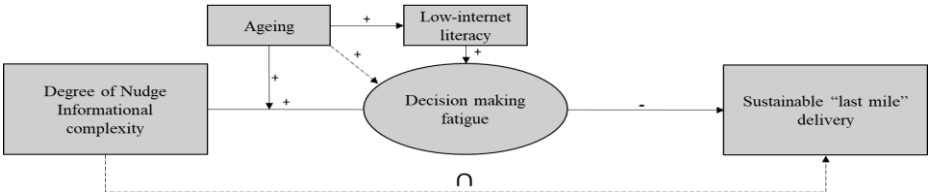



**Figure 1:** Proposed framework

## 3. Methodology

### 3.1 Study 1 – Re-analysis of an open RCT dataset

*Data & sample.* The author re-examined the publicly available dataset released by Nijs- sen et al. (2023)[20]. After excluding the default-nudge arm, 980 observations remained, distributed

[20] https://osf.io/q3t5r/

across three informational-nudge variants and one no-nudge control. The independent variable, Informational Complexity, was already coded on a 1–4 scale (higher = richer message). The delivery choice was recorded as 1 for 'click & collect' and 0 for 'home-delivery options'.

*Measurements.* To keep the model parsimonious and readily reproducible, the author focused on a core set of demographic and behavioural covariates that were consistently labelled in English: age, gender, education, self-reported financial situation, online pur- chase frequency, number of online purchases in the past year, and social concern ori- entation.

*Analysis.* A single-equation path model was estimated in SMARTPLS 4 with bias-cor-rected bootstrapping (5,000 subsamples). Informational Complexity entered both as a linear term and its squared value to test the proposed curvature; the dependent variable was treated as reflective.

*Preliminary Findings.* Table 1 reports the bootstrapped coefficients (Std. β) for all paths. The positive linear term(+0.026, p = .015) and negative quadratic term(–0.030, p = .022) support an inverted-U effect. Online-purchase frequency (–0.040, p = .001) and social concerns (+0.036, p = .002) were also significant, whereas the remaining controls and the Age × Treatment interaction were not. The model explains 4.1 % of the variance in delivery choice ($R^2 = 0.041$), a modest yet acceptable figure for an in- tentionally simple, preliminary test that isolates the focal relationship.

| Variables | Std.Beta | Std.Dev | T-value | P-value |
|---|---|---|---|---|
| Informational Nudging | 0.026 | 0.011 | 2.435 | 0.015 |
| (QE) Informational Nudging | -0.030 | 0.013 | 2.287 | 0.022 |
| Online purchase last year | -0.017 | 0.076 | 0.225 | 0.822 |
| Online purchase frequency | -0.040 | 0.012 | 3.429 | 0.001 |
| Social concerns | 0.036 | 0.012 | 3.063 | 0.002 |
| Gender | 0.034 | 0.022 | 1.535 | 0.125 |
| Financial_situation | 0.016 | 0.011 | 1.376 | 0.169 |
| Education | 0.019 | 0.012 | 1.539 | 0.124 |
| Age x Treatment | -0.000 | 0.010 | 0.046 | 0.963 |
| Age | 0.007 | 0.012 | 0.630 | 0.529 |

*Note: QE = Quadratic effect*

**Table 1:** Analyses with SmartPLS4

### 3.2 Study 2 – Scenario-basedexperiment (in preparation)

*Design.* A 4-cell between-subjects experiment will be administered on Qualtrics[21], sim- ulating the checkout of an online store selling children's sports jerseys. Participants (anticipated N

[21] Preview link: https://vuamsterdam.eu.qualtrics.com/jfe/preview/previewId/6f8a97_f1-7189-41_fc-905_f-ab4c8ef4bcd8/SV_6msLXRfMEXkGJhA?Q_CHL=preview&Q_SurveyVersionID=current

≈ 400) will randomly encounter one of three informational-nudge con- ditions: icon only (low complexity), percentage $CO_2$ reduction (medium), and com- bined icon + text (high). Figure 2 shows the checkout simulations in Qualtrics.

*Measurements*. After selecting a jersey, respondents choose a delivery mode and then complete: Cognitive Load Degree (CLD) – assessed with established mental-demand items drawn from the cognitive-load literature (e.g., NASA-TLX adaptations); manip- ulation checks for perceived nudge complexity and sustainability salience; the same demographic and behavioral controls used in Study 1, plus a 3-item Internet-Literacy scale. Qualtrics' timing function records the latency frompage load to delivery choice, providing an unobtrusive behavioral proxy for CLD.

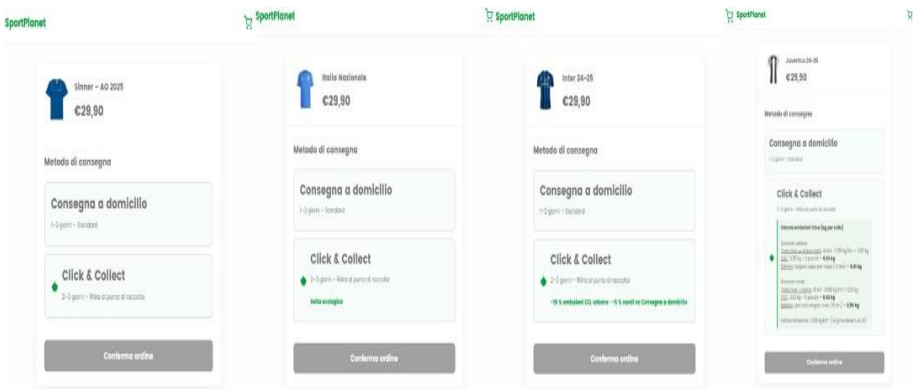



**Figure 2:** Manipulations on Qualtrics

### 3.3 Study 3 – Field A/B test with e-tailers (planned)

Context. Partner e-commerce retailers will embed the same four informational nudges in their live checkouts. Randomallocation occurs server-side and remains active until each nudge condition accumulates at least 5,000 completed checkouts, limiting both exposure time and seasonal bias.

*Measurements*. The binary outcome is the adoption of real click & collect. Basket value, product category, and delivery fee act as covariates. Moreover, the Physiological CLD capture will be performed through checkout pages that incorporate Morphcast Emo- tion-AI, which analyses facial micro-expressions locally in the browser and streams anonymized affective metrics (attention, fatigue) in real-time. Aggregated fatigue scores acrossthe decision window yield an objective CLD index that complements be- havioral data.

## 4. Expected findings (Studies 2 & 3)

Using the same logistic-regression framework with linear and squared terms for infor- mational complexity and bootstrapped tests of mediation, the author expects both the online scenario (Study 2) and the live A/B test (Study 3) to replicate the Inverted-U pattern. In both settings, higher informational complexity is anticipated to increase Cognitive-Load Degree, which in turn lowers the likelihood of choosing click-and-col- lect, yielding a significant indirect (mediated) effect. Age is expected to amplify this load, making the downturn on the right side of the curve steeper for older shoppers, while better Internet literacy should buffer

the effect. The author anticipates the same qualitative pattern in Study 3, albeit with smaller effect sizes, as real-purchase contexts introduce price sensitivities and habitual behaviour. Nevertheless, the physiological fa- tigue index(Morphcast) should still confirmthe mediating role of cognitive load.

## 5. Discussion and Expected Contributions

Our multi-method research is poised to show that the persuasive power of an informa- tional nudge is not monotonic but inverted-U shaped, with the inflexion driven by the consumer's cognitive load. In Study 1, the curve emerged after basic controls, suggest- ing a robust behavioral regularity. Study 2 should replicate the pattern under contro led conditions and reveal that self-reported load—and its latency proxy—transmits the ef- fect; importantly, older participants are expected to tip into overload sooner, unless their internet skills are high. Study 3 will test whether these mechanisms survive in a high-stakes, real-money context, using facial-expression analytics to capture cognitive strain unobtrusively. Should the live A/B test confirm even attenuated versions of the indirect and age-contingent effects, the evidence would jointly imply that what matters is not environmental concern per se but the mental effort required to process the mes- sage. This constraint becomes salient in segments with lower digital fluency.

### 5.1 Theoretical contributions

Extending Cognitive Load Theory to Digital Sustainability Nudges. Prior work has treated load mainly as a cost of learning; The author positions it as the central mecha- nismgoverning eco-friendly checkout choices, thereby linking educational psychology with behavioral sustainability.

Clarifying the roleofmessage complexity. Whereas earlier studies (e.g., Nijssen et al., 2023) compared "simple" versus "rich" cues, the author demonstrates a curvilinear re- sponse and isolates the turning point, refining design prescriptions for choice architec- ture research.

Integrating demographic skills into nudgetheory. By demonstrating that age influences load through lower internet literacy, the author introduces a skill-based pathway to the literature on demographic moderators, complementing explanations based on values or motivation.

### 5.2 Managerial and policy implications

Designing leaner, age-sensitive nudges. E-tailers should favour moderately rich mes- sages—e.g., a single icon plus percentage $CO_2$ reduction—and avoid dense numeric data for older or low-literacy users. A brief digital-skills check or device-type heuristic can trigger adaptive message formats in real time.

Monitoring cognitive strain in the wild. Tools like Morphcast enable retailers to con- tinuously audit nudges, replacing guesswork with objective load metrics and allowing A/B tests that respect user privacy while fine-tuning complexity levels.

Regulatory guidance. Consumer-protection bodies advocating for sustainability prompts can set maximum information thresholds rather than minimum disclosure rules, ensuring that well-intentioned messages do not backfire among vulnerable groups.

Taken together, our findings promise a more nuanced, evidence-based playbook for reducing last-mile emissions: steer shoppers with just enough information, calibrate for skill gaps, and verify cognitive comfort.

## References

Coppola, D. (2023). U.S. Amazon shoppers by generation 2022. Statista. https://www-statista-com.bibliopass.unito.it/statistics/1278936/amazon-shoppers-by- generation-united-states/

Niemeijer, R., & Buijs, P. (2023). A greener last mile: Analyzing the carbon emission

impact of pickup points in last-mile parcel delivery. Renewable and Sustainable En- ergy Reviews, 186, 113630. https://doi.org/10.1016/j.rser.2023.113630

Nijssen, S. R. R., Pijs, M., Van Ewijk, A., & Müller, B. C. N. (2023). Towards more sustainable online consumption: The impact of default and informational nudging on consumers' choice of delivery mode. Cleaner and Responsible Consumption, 11, 100135. https://doi.org/10.1016/j.clrc.2023.100135

Plass, J. L., Moreno, R., & Brünken, R. (2010). Cognitive Load Theory. Cambridge University Press.

# AI-Generated Review Summaries and Consumer Decision-Making: Testing the Information Acceptance Model on Gen Z Online Shoppers

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## Abstract

In the digital age, online customer reviews have become a critical source of information guiding consumer purchase decisions. As the volume of user-generated reviews increases, e-commerce platforms have begun to implement generative AI (GenAI) to synthesize these reviews into concise summaries. This study investigates how consumers perceive and adopt AI-generated review summaries and whether such adoption influences their purchase intention. Drawing on the Information Acceptance Model (IACM), the study examines the predictive role of information-related variables and consumer attitudes in the context of AI-mediated electronic word of mouth (eWOM). A quantitative survey of 153 Gen Z online shoppers was conducted and analyzed through structural equation modeling (SEM). The results indicate that, contrary to prior assumptions, information quality and credibility do not exhibit a significant influence on perceived usefulness. Instead, informational needs and consumers' attitudes toward the information emerge as the primary drivers of perceived usefulness in the context of AI-generated review summaries. Moreover, perceived information usefulness emerges as a strong predictor of information adoption, which subsequently exerts a significant positive influence on purchase intention. These findings suggest that AI-generated summaries may trigger heuristic rather than systematic information processing, highlighting a shift in the determinants of eWOM effectiveness in AI-mediated environments.

*Keywords: eWOM; Digital marketing; Generative Artificial Intelligence; Purchase Intention; Information Acceptance Model*

## 1. Introduction

The current market offers consumers multiple offline and online channels for better product familiarity and eventual purchasing (Verma & Yadav, 2021). In this context, the Internet has evolved into a participatory environment where individuals actively collaborate and share information, effectively becoming "the media" themselves (Li & Wang, 2011). This transformation is evident across a wide range of user-accessible platforms and websites—including blogs, review sites, e-commerce platforms,

and social media networks—where users continuously generate and exchange content (Cheung & Thadani, 2012; Erkan & Evans, 2016). Hence, customer feedback on products and services has become increasingly important when potential consumers seek information to evaluate their purchase decisions. Within this evolving digital landscape, electronic word of mouth (eWOM) has emerged over the past decade as a prominent topic of investigation in disciplines such as information systems and marketing. It is broadly defined as any positive or negative statement regarding a firm or product that is publicly shared online by potential, current, or former consumers (Hennig-Thurau, 2004; Dwivedi et al., 2021). Indeed, what differentiates eWOM from traditional word of mouth (WOM) is the diversity, quantity, and scalability of information (Cheung & Thadani, 2012), being accessible by anyone without any time or place restriction (Ismagilova et al., 2017; King et al., 2014; Verma et al., 2023). Within this status quo, other people's opinion on the Internet has become so crucial that consumers now perceive eWOM as more trustworthy and valuable than commercial advertising (Pihlaja et al., 2017; Verma et al., 2023). As a result, eWOM has become a critical component in consumer decision-making and has led to firms and actual eWOM platforms asking their consumers to share their opinion (Burtch et al., 2018; Liu et al., 2016; Verma et al., 2023). On the other hand, people choose to provide eWOM communications for different reasons (Ismagilova et al., 2020), such as altruism (Tong et al., 2013; Zhang & Lee, 2012), self-enhancement (Wang et al. 2014; Yap et al. 2013), venting feelings (Yen and Tang 2015), social benefits (Munzel et al. 2014), and economic incentives (Ahrens et al. 2013). As a result, Tripadvisor, one of the leading platforms for travel reviews and bookings, has already surpassed 1 billion reviews, covering nearly 8 million businesses (Tripadvisor). At the same time, Amazon states that in 2023, more than 100 million customers provided one or more reviews on the platform (Amazon).

As previously mentioned, the growing relevance of eWOM for both customers and firms has led to an enormous and still increasing volume of online information. As noted by Erkan and Evans (2016) in the context of eWOM on social media platforms, the overwhelming volume of available information complicates its potential influence on consumers' purchase intentions, as individuals must first assess and filter the messages they encounter before deeming them reliable or actionable. This same argument could be valid for any other context or platform where eWOM's value has highly permeated, creating what could be considered an overload of information that consumers may struggle to process. This exponential growth in online content can lead to information overload, making it difficult for consumers to extract meaningful insights. Generative Artificial Intelligence (GenAI) emerges as a potential solution, helping to synthesize vast amounts of user feedback into concise and structured summaries. Similar to the functioning of Google AI Overviews—which synthesizes content from multiple sources to deliver concise and informative summaries (Google Search Central)—GenAI is increasingly being integrated into various platforms, such as Amazon and Tripadvisor, to distill large volumes of online reviews into accessible and easily interpretable summaries (Paypal Editorial Staff). For example, Amazon has introduced a section on product pages featuring AI-generated summaries and curated highlights of the most relevant product characteristics from hundreds, sometimes thousands, of user-generated reviews. This way, customers can make informed purchase decisions without scrolling through large quantities of online reviews.

The purpose of these AI-based solutions may seem straightforward, such as providing advantages in terms of reduced consumer uncertainty and cognitive effort when buying. However, there is a lack of knowledge about how such AI-generated content is truly perceived and adopted, as well as the way it impacts people's decisions. Numerous literature reviews have emphasized the significance of eWOM adoption by examining its key antecedents, associated consumer behaviors, and underlying behavioral intentions within the broader body of eWOM research (Akbari et al., 2022; Ismagilova et al., 2020;

Moradi & Zihagh, 2022; Verma & Yadav, 2021). More specifically, the Information Adoption Model (IAM) developed by Sussman and Siegal (2003) proposes that information adoption occurs via two distinct cognitive pathways: a central route, which involves careful consideration of the core message, and a peripheral route, which is influenced by cues not directly related to the message content (Cheung et al., 2008; Erkan & Evans, 2016; Petty & Cacioppo, 1986). While this perspective has been widely adopted over the years, the advent of AI may reshape many contexts dealing with eWOM. Consumer behavior, sales dynamics, and, by extension, eWOM are continuously evolving in response to the increasing complexity and fluidity of today's marketplace, i.e. an environment that is itself being profoundly reshaped by the rapid advancement of artificial intelligence (Akbari et al., 2022). Hence, this scenario implies testing whether previous findings remain valid when AI comes into play. More specifically, this research aims to unfold the elements predicting the adoption of AI-processed online reviews and whether such impacts purchase intention. The following research questions can summarize the purpose of the paper:

- **RQ1:** *Which variables predict the adoption of AI-generated online review summaries?*
- **RQ2:** *Does the adoption of AI-generated online review summaries influence purchase intention, and in what way?*

While AI-generated summaries have the potential to improve decision-making by reducing information overload, it remains unclear how consumers perceive and adopt such tools. To address this gap, the present study applies the Information Acceptance Model (IACM), an extension of the original IAM in the context of eWOM in social media. Compared to the traditional IAM, the IACM provides a more refined framework by incorporating constructs such as information credibility and attitude towards information, which are especially pertinent in AI-mediated environments (Erkan & Evans, 2016).

The study reveals that, unlike traditional eWOM contexts, perceived information quality and credibility do not significantly predict information usefulness, whereas consumers' informational needs and attitudes toward information play a more prominent role. These findings suggest that AI-generated summaries may foster heuristic rather than systematic processing of information. The paper is structured as follows: Section 2 presents the literature review and research hypotheses; Section 3 outlines the methodological approach; Section 4 reports the empirical findings; Section 5 discusses key insights, highlighting the shift in eWOM processing dynamics in AI-mediated environments and its implications for theory and practice; finally, Section 6 concludes with a discussion of limitations and avenues for future research.

## 2. Literature Review & Hypotheses Development

### 2.1 EWOM and AI eWOM

eWOM, which emerged with the rise of Web 2.0, refers to any user-generated statement—positive or negative—shared online about products or services (Hennig-Thurau et al., 2004). However, the concept has since expanded to include not only customers but also other actors from those platforms where eWOM occurs, such as media personalities and social media influencers (Daniel et al., 2018; Thorson & Rodgers, 2006). Compared to traditional WOM, eWOM presents several advantages, such as more diverse, abundant, and scalable information (Cheung & Tadhani, 2012), as well as being more dynamic and easily accessible from anywhere at any time (Ismagilova et al., 2017; King et al., 2014; Verma et al., 2023; Xun & Reynolds, 2010). Across the different types of websites and platforms,

eWOM can take place in the form of likes, comments, ratings, reviews, video testimonials, tweets, or blog posts (Babic Rosario et al., 2016; Donthu et al., 2021; Nam et al., 2020) and has acquired higher credibility than traditional media (Cheung & Tadhani, 2012). More specifically, opinions shared online by people who have already purchased a product or experienced a service, known as online consumer reviews (OCRs) (Dwivedi et al., 2021), represent a form of eWOM that has become particularly prominent in online shopping contexts. Hereafter, we will refer to OCRs as online or customer reviews for simplicity reasons. E-commerce platforms like Amazon and online review websites like Tripadvisor allow consumers to share their experiences with past purchases, helping others assess products and services they are considering and make informed buying decisions. As a result, consumers heavily rely on online reviews when shopping on websites, as they help reduce search efforts and risks (Fernandes et al., 2022).

On the other hand, the growing popularity of eWOM has caused a significant increase in the volume of online information. In terms of online reviews, customers may stumble upon hundreds or even thousands of opinions for a single product, making it more challenging to process all the available information and identify the most relevant elements to support purchase decisions. To tackle this issue, some firms such as Amazon, Tripadvisor, and Etsy have started implementing AI within their platforms to help consumers make better decisions. By capitalizing on one of AI's core capabilities, i.e. text summarization, these solutions distill extensive collections of online reviews related to a product or service into concise, easily interpretable summaries. Furthermore, they can categorize customer opinions and identify, for instance, the product attributes most liked or disliked by customers (Koo et al., 2025). Based on the leading online shopping websites that provide such feature, most AI-generated online review summaries include combinations of the following elements: a label serving as a section header, a disclaimer about the content being AI-generated, a summary of all online reviews, and a list of the most mentioned themes across all reviews. This configuration supposedly allows to quickly grasp the overall sentiment and key points without reading many reviews. Nevertheless, it is essential to highlight that these AI-generated summaries work as a supplement and do not replace the real reviews made by consumers, which continue to be entirely available for users to consult.

Given the novelty of such feature, open questions about its effectiveness and reception arise. While these summaries are derived from original customer reviews, an established form of eWOM, it remains unclear whether consumers positively receive synthesis through AI and whether it can impact their decision making. To the best of the authors' knowledge, there is currently no concrete empirical research addressing these issues, likely because of the novelty of such tools. Furthermore, dynamics linked to trust in AI, which can be determined by different variables, including, for instance, socio-ethical and specific individual elements (Bach et al., 2024), may influence the reception and adoption of AI-generated online review summaries. Although related and highly relevant concerns, they fall outside the scope of this specific study, which focuses on the core aspects linked to information characteristics and consumers' behavior towards information.

### 2.2 Information Adoption Model & Information Acceptance Model

This study builds upon the Information Acceptance Model (IACM) proposed by Erkan and Evans (2016), which extends the Information Adoption Model (IAM) developed by Sussman and Siegal (2003) by incorporating elements from the Theory of Reasoned Action (TRA) formulated by Fishbein and Ajzen (1975). More specifically, while the IAM only includes characteristics related to the eWOM information, the IACM expands it by adding variables concerning the individual consumer and their behavior towards information (Erkan & Evans, 2016).

### 2.2.1 Information Adoption Model

The IAM was developed based on the integration of the Technology Acceptance Model (TAM) by Davis (1989) and the Elaboration Likelihood Model by Petty & Cacioppo (1986). On one hand, the TAM explains the acceptance of information systems and technology by including concepts such as "perceived usefulness" (Erkan & Evans, 2016; Wang, 2016). However, it neglects the social processes involved in information development and implementation (Riffai et al., 2012). To overcome this limitation, the Elaboration Likelihood Model (ELM) (Petty & Cacioppo, 1986) explains how individuals are affected by the information within the message through a dual process. More specifically, it posits that informational influence occurs in the central and peripheral routes. While the central route concerns the core of the message, the peripheral one represents those issues indirectly related to the core of the message (Cheung et al., 2008; Erkan & Evans, 2016; Petty & Cacioppo, 1986). With these premises, the IAM is composed of four constructs, namely argument quality, source credibility, information usefulness and information adoption, as shown in Figure 1 (Fig. 1). Over time, this model has revealed to effectively fit eWOM studies, being conceived to observe information on computer-mediated communication platforms (Erkan & Evans, 2016). Over time, the IAM has been used in different eWOM contexts, from online customer communities (Cheung et al., 2008) to online reviews (Leung, 2020; Tapanainen et al., 2021).

On the other hand, the IAM presents one limit. Indeed, it only considers characteristics of the information itself, namely quality, credibility, and usefulness. To make up for this flaw, Erkan and Evans (2016) have developed the IACM, which merges the original IAM with elements from the TRA, adding variables related to consumer behavior towards eWOM information.

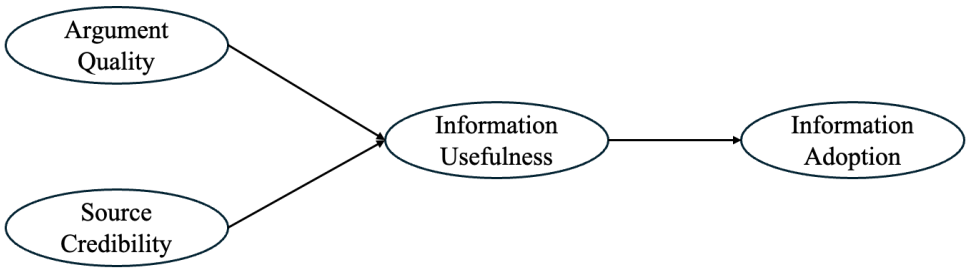



**Figure 1:** Information Adoption Model (Source: Sussman & Siegal, 2003)

### 2.2.2 Information Acceptance Model

Based on Erkan and Evans' argument (2016), the characteristics of eWOM information are not enough to explain how eWOM influences consumers' purchase intention. Hence, the behavior of consumers towards eWOM information is an essential element that should be included. Drawing on Fishbein and Ajzen's (1975) Theory of Reasoned Action, the IACM also includes attitude and behavioral intention. Indeed, the IACM extends the IAM to purchase intention and adds attitude as one of its predictors, which is in line with the TRA. Hence, while the components from the IAM concern the characteristics of eWOM information, the TRA variables are related to consumers' attitude towards information. The original IACM from Erkan and Evans (2016) is composed of the following variables: information

quality, information credibility, needs of information, attitude towards information, information usefulness, information adoption, and purchase intention (Fig. 2).

In its original study (Erkan and Evans, 2016), the IACM was tested to observe the determinants of eWOM information influencing purchase intention in social media. While it has been known for a long time that eWOM can indeed have an influence on the purchase intention of consumers (Chan & Ngai, 2011; See-To & Ho, 2014), the results have further shown that in social media, both characteristics of eWOM information and consumers' behaviours towards eWOM information have a positive impact on purchase intention, except for the relationship between attitude towards information and information usefulness. Over the years, the model has been tested in different contexts and with proper extensions (e.g., Ngarmwongnoi et al, 2020; Park, 2020; Singh et al., 2025). Cuong (2024), for instance, tested the IACM for eWOM on e-commerce websites, concluding that information usefulness is influenced both by information characteristics and behavior towards information.

With the advent of a new form of eWOM, originating from consumer reviews but generated by AI, new questions arise regarding how this information will be received and eventually adopted by consumers (Akbari et al., 2022). For this study, the IACM will be tested to assess which variables of AI-generated online review summaries can impact information adoption and purchase intention. The choice of the IACM is motivated by the fact that it considers multiple dimensions related to information adoption, specifically characteristics of the information and individual's behaviour towards information. This dual perspective may prove to be relevant in the AI context. Indeed, since AI has synthesized the information, credibility and usefulness may be evaluated differently and may have a different impact on information usefulness and consequently, adoption and purchase intention. Furthermore, the response to AI-generated online review summaries may also vary depending on an individual's attitude towards eWOM information.

## 2.3 Hypotheses

### 2.3.1 Information Quality and Information Credibility

In traditional eWOM contexts, given that any user is free to generate eWOM information online, the quality and credibility of information becomes highly important (Erkan & Evans, 2016; Xu, 2014). On one hand, information quality measures the efficiency of an informative communication's message (Cuong, 2024) and represents the perceived value of the information, judged by other users (Yeap et al., 2014). Furthermore, it was found that consumers approach a product or service more eagerly when their information demands are satisfied (Olshavsky, 1985). Hence, it involves the way the information may influence the consumer's purchase intention (Ismagilova et al., 2020). Previous research has indeed shown that the information quality of online reviews has a positive effect on the usefulness (Peres & Silva, 2021; Sànchez Torres et al., 2018) and consumers' purchase intention (Lee & Shin, 2014; Park et al., 2007; Reddy et al., 2022). The IACM states that eWOM information quality is positively related to information usefulness (Erkan & Evans, 2016). Regarding the object of this study, specifically AI-generated online review summaries, the authors aim at testing the same hypotheses from the original IACM model within this new context, presuming that the same implications of traditional eWOM are also valid for AI-generated forms of eWOM. Therefore, the first hypothesis states that:

*H1: The information quality is positively related to the information usefulness in AI-generated online review summaries.*

On the other hand, credibility of information, which refers to its dependability and trustworthiness perceived by a person, is considered crucial in the initial stages of persuasion (Ismagilova et al., 2020;

Wathen & Burkel, 2002). Research has shown that information credibility is linked to purchase intention and information adoption (Nabi & Hendriks, 2003; Prendergast et al., 2010), along with information usefulness according to the IAM (Erkan & Evans, 2016). Thus, following the IACM:

H2: *The information credibility is positively related to the information usefulness in AI-generated online review summaries.*

### 2.3.2 Needs of Information & Attitude towards Information

Needs of information and attitude towards information represent the customer behaviour of consumers towards eWOM information (Erkan & Evans, 2016). Need for information drives seeking guidance (Hennig-Thurau et al., 2004), as buyers may look for comments or opinions about products, for instance, before purchasing (Leong et al., 2021; Peres & Silva, 2021). Indeed, clients are more likely to make online purchases when actively searching for product information (Tjongirin et al., 2020). Erkan & Evans (2016) added needs of information into the IACM arguing that people seeking information - in their case in social media – have a higher chance of finding useful information that would lead them to purchase. In AI-generated online review summaries, such information needs may be more easily satisfied when AI supports information retrieval by summarizing the vast quantity of online reviews published. Hence:

*H3: Needs of Information positively influences Information Usefulness in AI-generated online review summaries.*

Attitude towards eWOM information, on the other hand, draws on the TRA (Fishbein & Ajzen, 1975), referring to a consumer's predisposition to use eWOM information for a purchasing behaviour. According to Erkan & Evans' IACM (2016), attitude towards information is linked to the information usefulness and purchase intent. Moreover, further theories, namely the Theory of Planned Behavior (Ajzen, 1991) and the TAM (Davis, 1989), support the relationship between attitude and behavioural intention. Therefore:

*H4: Attitude towards Information positively influences Information Usefulness in AI-generated online review summaries.*

*H5: Attitude towards Information positively influences Purchase Intention in AI-generated online review summaries.*

### 2.3.3 Information Usefulness

As individuals look for information perceived as useful to them (Cuong, 2024), information usefulness represents consumers' perception that using the information will boost their performance (Cheung et al., 2008). Hence, the adoption of information is more likely to occur if other users' opinions are considered valuable (Cuong, 2024; Erkan & Evans, 2016; Leong et al., 2021). AI-generated online review summaries aim to help consumers by creating digestible summaries of large quantities of online reviews and sorting out the main product dimensions discussed. With these considerations:

*H6: Information Usefulness positively influences Information Adoption in AI-generated online review summaries.*

### 2.3.4 Information Adoption & Purchase Intention

In the eWOM domain, information adoption pertains to the process of providing consumers with helpful information to be used as a resource for future purchases (Hussain et al., 2017; Moradi & Zihagh, 2022; Shen et al., 2016). As posited by H6, when information is perceived as useful, this may result in adopting such information. Thus, if AI-generated online review summaries provide valuable insights in the eyes of consumers, this information is more likely to be accepted and used to evaluate

an online purchase. Indeed, adopting eWOM information has resulted in higher chances of buying intentions (Sànchez Torres et al., 2018). Moreover, Erkan & Evans (2018), following their study on social media platforms (2016), found that anonymous reviews on shopping websites have an even greater impact on purchase intention than opinions posted by acquaintances on social media. With these premises, and since AI-generated online review summaries draw on this type of eWOM, the following hypothesis is posited:

*H7: Information Adoption positively influences Purchase Intention in AI-generated online review summaries.*

The final model tested in this study is shown in Figure 2 (Fig. 2).

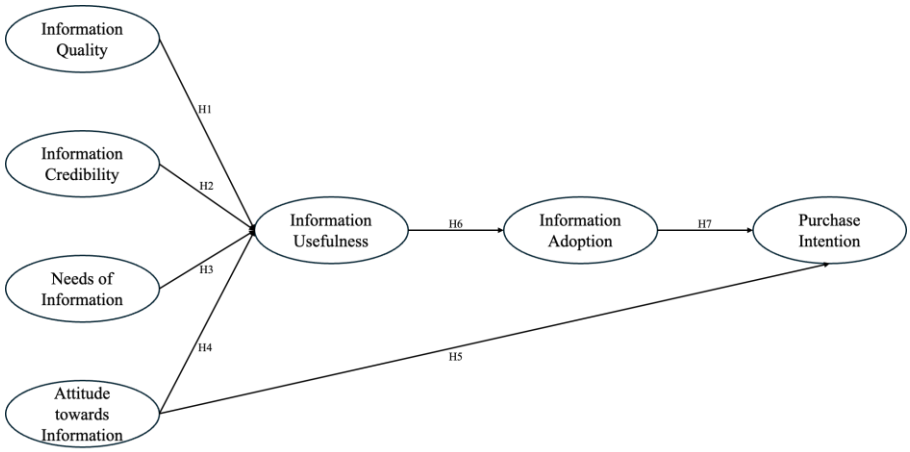



**Figure 2:** Information Acceptance Model

## 3. Methodology

The study aims to understand which variables of AI-generated online review summaries influence information adoption and consumers' purchase intentions by testing the IACM.

Data was collected using a web-based questionnaire administered via social media to online shoppers belonging to Gen Z. Gen Z online shoppers are digital natives, who are characterized by a deep integration with technology, constant online connectivity and by a search for authenticity and sustainability in their shopping journey (Francis & Hoefel, 2018; Priporas et al., 2017; Turner, 2015). Moreover, previous studies show that Gen Z is more optimistic and inclined to accept AI (Babu et al., 2024; Chan et al., 2023). Therefore, this study focuses on Gen Z online shoppers as a suitable sample for assessing the impact of AI-based eWOM on customer purchase intention.

The questionnaire, in which respondents self-reported their answers, was developed and divided into two sections. The first section was dedicated to the study constructs, while the second part was dedicated to the respondents' demographic characteristics.

From May to June 2025, 153 questionnaires were returned in a completed form.

The study uses a five-point Likert scale to measure all the constructs' items. Based on the research of Park et al. (2007), the study adapts and measures Information Quality and Attitude towards

Information using a three-item scale for each. By adapting the scale proposed by Prendergast et al. (2010), the study investigates Information Credibility using a four-item scale. Drawing from Chu and Kim (2011), the study adapts and measures Needs of Information using a two-item scale. Moreover, the study adapts and uses three-item scales to measure Information Usefulness (Bailey and Pearson, 1983; Cheung et al., 2008; Erkan and Evans, 2018; Gökerik et al., 2018) and Information Adoption (Cheung et al., 2009). Finally, the study uses a four-item scale to measure purchase intention by adapting the scale proposed by Coyle and Thorson (2001).

The structural equation modeling (SEM) technique was performed using LISREL 8.80 to empirically test the proposed conceptual model.

## 4. Results

### 4.1 Measurement model

To assess the reliability, convergent validity, and discriminant validity of each construct, the study checks for Cronbach's alphas (CA) and confirmatory factor analysis (CFA) by using SPSS and LISREL 8.80 (Anderson and Gerbing, 1988; Jöreskog and Sörbom, 2006).

All the Cronbach's α values are greater than 0.70, suggesting acceptable reliability of each of the study's constructs (Bagozzi and Yi, 1988; Nunnally and Bernstein, 1994).

Furthermore, the convergent and the discriminant validity of each of the study's constructs are supported. All item loadings are greater than the recommended threshold of 0.50 (Hair *et al.*, 2013), all the composite reliability values (CR) are higher than the minimum threshold of 0.70 (Bagozzi and Yi, 1988; Nunnally and Bernstein, 1994), and all the average variance extracted values (AVE) exceed the recommended threshold of 0.50 (Fornell and Larcker, 1981), except for information credibility. The AVE value of the information credibility construct is 0.487, which, according to Fornell and Larcker (1981), still corresponds to acceptable convergent validity. Table 1 shows reliability and CFA results.

| **Constructs** | **α** | **CR** | **AVE** |
|---|---|---|---|
| Information Quality | 0.803 | 0.816 | 0.598 |
| Information Credibility | 0.786 | 0.789 | 0.487 |
| Needs of Information | 0.774 | 0.787 | 0.651 |
| Attitude towards Information | 0.835 | 0.845 | 0.647 |
| Information Usefulness | 0.853 | 0.838 | 0.633 |
| Information Adoption | 0.851 | 0.855 | 0.664 |
| Purchase Intention | 0.827 | 0.821 | 0.536 |

**Table 1:** CFA – Reliability, convergent, and discriminant validity examinations

### 4.2 Structural model

The structural model's fit is acceptable, with $\chi 2$ 361.479; degrees of freedom 196; $\chi 2/df$ 1,844; root mean square error of approximation 0.0699; comparative fit index 0.962; standardized RMR (SMRM) 0.082; and all items loading significantly on their assigned latent constructs.

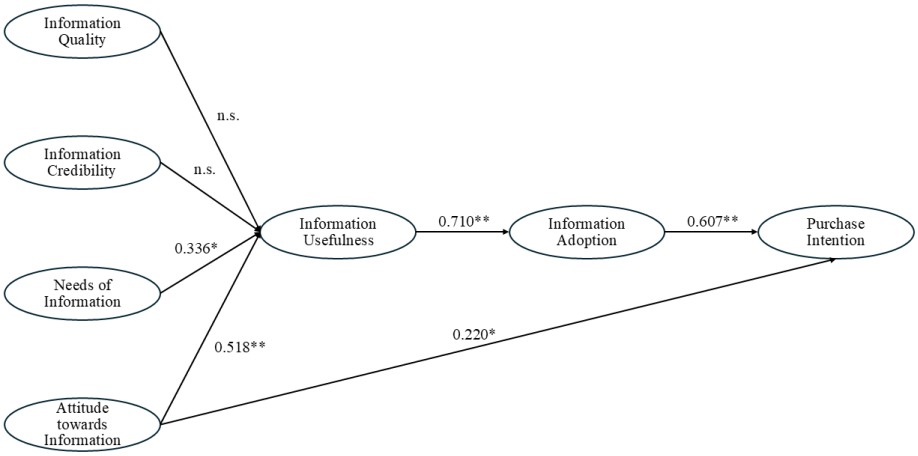
The study's findings reveal that information quality and information credibility seem not to directly affect information usefulness ($\gamma = 0.214$, $t = 0.814$; $\gamma = 0.060$, $t = 0.278$), rejecting H1 and H2. The relationships between the need for information and information usefulness and between attitude toward information and information usefulness are positive and significant ($\gamma = 0.336$, $t = 2.453$, $p < 0.05$; $\gamma = 0.518$, $t = 5.826$, $p < 0.01$), supporting H3 and H4. Furthermore, information usefulness exhibits a positive and significant influence on information adoption ($\beta = 0.710$, $t = 7.935$, $p < 0.01$), supporting H6. About purchase intention, both information adoption and attitude toward information positively and significantly affect purchase intention ($\beta = 0.607$, $t = 6.337$, $p < 0.01$; $\gamma = 0.220$, $t = 2.550$, $p < 0.05$), supporting H7 and H5.

Table 2 shows the results from the SEM analysis, namely the relationships among constructs, overall explanatory power, completely standardized coefficients, and t-values.

Finally, the structural model explains 66.3% of the variance in information usefulness (R2 = 0.663), 50.5% in information adoption (R2 = 0.505), and 53.1% in purchase intention (R2 = 0.531) (Figure 3).

| **Path** | **Completely std β and γ** | **t value** | **Hypotheses test** |
|---|---|---|---|
| *H1:* Information Quality → Information Usefulness | 0.214 | 0.814 | Not Supported |
| *H2:* Information Credibility → Information Usefulness | 0.060 | 0.278 | Not Supported |
| *H3:* Needs of Information → Information Usefulness | 0.336 | 2.453* | Supported |
| *H4:* Attitude towards Information → Information Usefulness | 0.518 | 5.826** | Supported |
| *H5:* Attitude towards Information → Purchase intention | 0.220 | 2.550* | Supported |
| *H6:* Information Usefulness → Information Adoption | 0.710 | 7.935** | Supported |
| *H7:* Information Adoption → Purchase intention | 0.607 | 6.337** | Supported |

**Table 2:** Structural relationships and hypothesis testing
(Source: authors' elaboration. Notes: * $p < 0.05$; ** $p < 0.01$)




* p < 0.05; ** p < 0.01

**Figure 3:** Structural Model

## 5. Discussion

Based on the results from the IACM structural model, information quality and information credibility surprisingly do not significantly influence information usefulness. As these elements represent the variables related to the characteristics of the information itself, such result are not in line with the expectations and previous findings on eWOM's impact on adoption and purchase intention (e.g. Cuong, 2024; Erkan & Evans, 2016; Sànchez Torres et al., 2018). This implies new avenues for eWOM research within the context of AI's advent as a future key actor in consumer decision making. Although further studies and validation are needed, these results may be related to the nature of GenAI as a supporting tool for consumers. Indeed, the advantage of this technology lies in aiding decision making through reduced cognitive cost/effort (Zhang et al., 2024), as it tries to understand consumers' needs and provide alternative ways to sort information (Gupta & Mukherjee, 2025). Hence, the usefulness and subsequent adoption of information from AI-generated review summaries may stem from needs different from traditional eWOM, more specifically, online reviews. Traditional anonymous online reviews shared on shopping websites are appreciated for several reasons, such as quantity of information, detailed information, as well as dedicated information (Erkan & Evans, 2018). These mentioned aspects may relate to the quality and credibility of the received information, at the cost of scrolling through a large quantity of online reviews and higher cognitive effort. In this regard, the aim of AI-generated online review summaries significantly reduces cognitive effort. Chaiken & Ledgerwood (2012) propose two types of information thinking: systematic and heuristic. The first type occurs when an individual can and wants to devote a certain amount of attention to an issue, to understand lots of information through deep thinking, effort, and intensive reasoning, as may be the case of a consumer spending some time to know more about an item through online reviews. On the other hand, heuristic processing is less demanding in cognitive effort and depends less on the ability and motivation to think about information carefully. Its judgment focuses on heuristics, intuitive and straightforward rules that function as shortcuts to decrease thinking. In this sense, AI-generated online review summaries reduce the need for information elaboration, offering speed and convenience,

favoring heuristics-based judgement rather than intense cognitive effort. Hence, AI-generated online review summaries may act as an enabler of heuristic processing, as consumers' attention shifts from the content itself to the way their information need is efficiently met.

Furthermore, needs of information show to positively influence information usefulness, in line with previous research on other traditional eWOM types (Cuong, 2024; Erkan & Evans, 2016; Sànchez Torres et al., 2018). Indeed, the greater the need for information, the more the information will be perceived as useful in the eyes of a consumer (Cuong, 2024). Moreover, attitude towards information also reveals a positive relation with information usefulness, contrary to Erkan & Evans' findings (2016). However, context may influence this relation, as the mentioned study's setting was social media. For instance, Cuong (2024) examined online reviews on e-commerce platforms and found that attitude towards information does indeed have a positive influence on information usefulness. Furthermore, the arguments regarding AI-generated online review summaries triggering heuristic processing may support these results, suggesting that consumers may engage with such feature primarily for practical and goal-oriented reasons, rather than to analyze information in depth. Attitude towards information also positively influences purchase intention, which is in line with previous findings (Cuong, 2024; Erkan & Evans, 2016; Sànchez Torres et al., 2018).

Finally, information usefulness positively impacts information adoption, which in turn has a positive influence on purchase intention. Hence, as confirmed by previous findings, information adoption is favored when the information from others' opinion is considered useful and valuable (Cuong, 2024; Erkan & Evans, 2016; Leong et al., 2021), also in the case of summarization by GenAI. Consequently, when information is acknowledged, consumers will have more knowledge, which can be used as a resource for an eventual purchase (Hussain et al., 2017; Moradi & Zihagh, 2022; Shen et al., 2016). Hence, adopting useful eWOM helps consumers develop an opinion about a specific product, which impacts their purchase intention (Bae et al., 2017; Tien et al., 2018).

To sum up, while the IACM remains a valid framework for evaluating eWOM adoption and purchase intention dynamics, the relevance of its components is reshaped when AI is involved as a facilitator of information retrieval and processing. In AI-generated online review summaries, consumer behaviour towards information appears to prevail in determining information usefulness, adoption, and purchase intention, compared to the properties of the information message itself. These insights may suggest that AI-generated online review summaries are processed more heuristically than systematically, which could be caused by prioritizing efficiency and accessibility over message scrutiny. Thus, information quality and credibility may become less influential in this new context.

## 6. Conclusions

This study sought to investigate the drivers of eWOM information adoption and purchase intention in the context of AI-generated online review summaries, using the IACM as the guiding framework. The findings contribute to the literature on how AI may reshape eWOM dynamics and consumer decision making in digital environments.

The results reveal a significant shift from traditional predictors of information usefulness — such as quality and credibility — toward behavioral and attitudinal factors, particularly information needs and attitudes toward eWOM. Indeed**,** while prior literature has consistently highlighted information quality and credibility as key drivers of eWOM adoption and purchase intention (Cuong, 2024; Erkan & Evans, 2016; Ismagilova et al., 2020; Verma et al., 2023), the findings of this study indicate that, within AI-mediated contexts, the predictive influence of these variables may be not significant. On the other

hand, aspects linked to consumers' behavior towards information, specifically needs of information and attitude towards information, emerge as more significant predictors of perceived usefulness and the subsequent behavioral outcomes of information adoption and purchase intention. This shift can be interpreted through the lens of heuristic information processing (Chaiken & Ledgerwood, 2012), suggesting that the adoption of AI-generated online review summaries may be driven by consumers' preference for efficiency and convenience over systematic evaluation. These findings underline the need to revisit and adapt the current theory about eWOM to reflect the new implications of AI-generated content consumption.

These results have important implications for both researchers and practitioners. Theoretically, they challenge existing models of eWOM by calling for an update that accounts for AI's role in shaping information reception and consumers cognitive processing. Managerially, the findings suggest that firms implementing AI-based summaries should focus on user experience and the perceived utility of synthesized information rather than merely emphasizing the credibility of original reviews.

As AI becomes increasingly embedded throughout the customer experience, future research should further investigate how technological design can be aligned with users' expectations, while also accounting for the contextual factors that shape interactions between AI systems and consumers. In this sense, the current findings provide a helpful starting point for new research endeavors. For instance, other consumer groups may be considered. Moreover, the generalizability of the results may be limited by the fact that this study did not account for contextual factors that could influence the way information from AI-generated online review summaries is processed. Indeed, variables such as product type (Wien & Peluso, 2021) or users' trust in AI (Bach et al., 2024) may influence information adoption and purchase intention processes in AI-mediated contexts.

## References


Ahrens, J., Coyle, J. R., & Strahilevitz, M. A. (2013). Electronic word of mouth: The effects of incentives on e-referrals by senders and receivers. European Journal of Marketing, 47(7), 1034–1051.

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179–211.

Akbari, M., Foroudi, P., Fashami, R. Z., Mahavarpour, N., & Khodayari, M. (2022). Let us talk about something: The evolution of e-WOM from the past to the future. Journal of Business Research, 149, 663–689.

Amazon. (2024). Behind the scenes: How Amazon maintains a trusted review experience. Trustworthy Shopping at Amazon. Retrieved June 3, 2025, from https://trustworthyshopping.aboutamazon.com/how-amazon-maintains-a-trusted-review-experience

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. Psychological Bulletin, 103(3), 411.

Babić Rosario, A., Sotgiu, F., De Valck, K., & Bijmolt, T. H. (2016). The effect of electronic word of mouth on sales: A meta-analytic review of platform, product, and metric factors. Journal of Marketing Research, 53(3), 297–318.

Babu, M. A., Yusuf, K. M., Eni, L. N., Jaman, S. M. S., & Sharmin, M. R. (2024). ChatGPT and generation 'Z': A study on the usage rates of ChatGPT. Social Sciences & Humanities Open, 10, 101163.

Bach, T. A., Khan, A., Hallock, H., Beltrão, G., & Sousa, S. (2024). A systematic literature review of user trust in AI-enabled systems: An HCI perspective. International Journal of Human–Computer Interaction, 40(5), 1251–1266.

Bae, S. J., Lee, H., Suh, E. K., & Suh, K. S. (2017). Shared experience in pretrip and experience sharing in posttrip: A survey of Airbnb users. Information & Management, 54(6), 714–727.

Bagozzi, R. P., & Yi, Y. (1988). On the evaluation of structural equation models. Journal of the Academy of Marketing Science, 16, 74–94.

Bailey, J. E., & Pearson, S. W. (1983). Development of a tool for measuring and analyzing computer user satisfaction. Management Science, 29(5), 530–545.

Burtch, G., Hong, Y., Bapna, R., & Griskevicius, V. (2018). Stimulating online reviews by combining financial incentives and social norms. Management Science, 64(5), 2065–2082.

Chaiken, S., & Ledgerwood, A. (2012). A theory of heuristic and systematic information processing. In Handbook of theories of social psychology (Vol. 1, pp. 246–266).

Chan, C. K. Y., & Lee, K. K. (2023). The AI generation gap: Are Gen Z students more interested in adopting generative AI such as ChatGPT in teaching and learning than their Gen X and millennial generation teachers? Smart Learning Environments, 10(1), 60.

Chan, Y. Y., & Ngai, E. W. (2011). Conceptualising electronic word of mouth activity: An input–process–output perspective. Marketing Intelligence & Planning, 29(5), 488–516.

Cheung, C. M. K., Lee, M. K. O., & Rabjohn, N. (2008). The impact of electronic word-of-mouth: The adoption of online opinions in online customer communities. Internet Research, 18(3), 229–247.

Cheung, C. M., & Thadani, D. R. (2012). The impact of electronic word-of-mouth communication: A literature analysis and integrative model. Decision Support Systems, 54(1), 461–470.

Cheung, M. Y., Luo, C., Sia, C. L., & Chen, H. (2009). Credibility of electronic word-of-mouth: Informational and normative determinants of online consumer recommendations. International Journal of Electronic Commerce, 13(4), 9–38.

Chu, S. C., & Kim, Y. (2011). Determinants of consumer engagement in electronic word-of-mouth (eWOM) in social networking sites. International Journal of Advertising, 30(1), 47–75.

Cuong, D. T. (2024). Examining how electronic word-of-mouth information influences customers' purchase intention: The moderating effect of perceived risk on e-commerce platforms. SAGE Open, 14(4), 21582440241309408.

Daniel Jr, E. S., Crawford Jackson, E. C., & Westerman, D. K. (2018). The influence of social media influencers. Journal of Interactive Advertising, 18(2), 96–109.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. MIS Quarterly, 319–340.

Dwivedi, Y. K. et al. (2021). Setting the future of digital and social media marketing research. International Journal of Information Management, 59, 102168.

Erkan, I., & Evans, C. (2016). The influence of eWOM on consumers' purchase intentions. Computers in Human Behavior, 61, 47–55.

Erkan, I., & Evans, C. (2018). Social media or shopping websites? Journal of Marketing Communications, 24(6), 617–632.

Fernandes, S., Panda, R., Venkatesh, V. G., Swar, B. N., & Shi, Y. (2022). Measuring the impact of online reviews on consumer purchase decisions. Journal of Retailing and Consumer Services, 68, 103066.

Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention and behaviour. Addison-Wesley.

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models. Journal of Marketing Research, 18(1), 39–50.

Francis, T., & Hoefel, F. (2018). 'True Gen': Generation Z and its implications for companies. McKinsey & Company.

Google Search Central. (2025). AI Overviews and your website. Retrieved June 3, 2025.

Gupta, A. S., & Mukherjee, J. (2025). Framework for adoption of generative AI. International Journal of Retail & Distribution Management, 53(2), 165–181.

Hennig-Thurau, T., Gwinner, K. P., Walsh, G., & Gremler, D. D. (2004). Electronic word-of-mouth via consumer-opinion platforms. Journal of Interactive Marketing, 18(1), 38–52.

Hussain, S., Ahmed, W., Jafar, R. M. S., Rabnawaz, A., & Jianzhou, Y. (2017). eWOM source credibility. Computers in Human Behavior, 66, 96–102.

Ismagilova, E., Dwivedi, Y. K., Slade, E., & Williams, M. D. (2017). Electronic word of mouth (eWOM) in the marketing context. Springer.

Ismagilova, E., Slade, E. L., Rana, N. P., & Dwivedi, Y. K. (2020). The effect of eWOM on intention to buy. Information Systems Frontiers, 22, 1203–1226.

Jöreskog, K. G., & Sörbom, D. (2006). LISREL 8.80. Scientific Software International.

King, R. A., Racherla, P., & Bush, V. D. (2014). Online word-of-mouth. Journal of Interactive Marketing, 28(3), 167–183.

Koo, W. W., Pu, J., & Gao, N. (2025). AI review summary, customer ratings, and performance entrenchment.

Lee, E. J., & Shin, S. Y. (2014). When do consumers buy online product reviews? Computers in Human Behavior, 31, 356–366.

Leong, C. M., Loi, A. M. W., & Woon, S. (2021). Social media eWOM information. Journal of Marketing Analytics, 10(2), 145.

Leung, D. (2020). Interplay of review valence and platform. International Journal of Hospitality & Tourism Administration.

Li, X., & Wang, Y. (2011). China through travel blogs. Journal of Travel & Tourism Marketing, 28(7), 689–719.

Liu, L., Cheung, C. M., & Lee, M. K. (2016). Information sharing in social commerce. International Journal of Information Management, 36(5), 686–699.

Moradi, M., & Zihagh, F. (2022). ELM in eWOM literature. International Journal of Consumer Studies, 46(5), 1900–1918.

Munzel, A., Kunz, H., & W. (2014). Creators, multipliers, and lurkers. Journal of Service Management, 25(1), 49–74.

Nabi, R. L., & Hendriks, A. (2003). Persuasive effect of reaction shots. Journal of Communication, 53(3), 527–543.

Nam, K., Baker, J., Ahmad, N., & Goo, J. (2020). Determinants of positive and negative eWOM. Decision Support Systems, 129, 113168.

Ngarmwongnoi, C., Oliveira, J. S., AbedRabbo, M., & Mousavi, S. (2020). eWOM and the customer journey. Journal of Consumer Marketing, 37(7), 749–759.

Nunnally, J. C., & Bernstein, I. H. (1994). Psychometric theory (3rd ed.). McGraw-Hill.

Olshavsky, R. W. (1985). Perceived quality. In J. Jacoby & J. C. Olson (Eds.), Perceived quality (pp. 3–29). Lexington Books.

Park, D. H., Lee, J., & Han, I. (2007). Online reviews and involvement. International Journal of Electronic Commerce, 11(4), 125–148.

Park, T. (2020). Information acceptance model and customer loyalty. The Bottom Line, 33(1), 60–73.

PayPal Editorial Staff. (2024). Why big brands are using AI to summarize product reviews. Retrieved June 6, 2025.

Peres, R., & Silva, M. (2021). Micro-influencers in hospitality. European Journal of Tourism, Hospitality and Recreation, 11(1), 102–112.

Petty, R. E., & Cacioppo, J. T. (1986). Communication and persuasion. Springer.

Pihlaja, J., Saarijärvi, H., Spence, M. T., & Yrjölä, M. (2017). From eWOM to social eWOM. Journal of Marketing Theory and Practice, 25(4), 340–356.

Prendergast, G., Ko, D., & Siu Yin, V. Y. (2010). Online word of mouth and purchase intentions. International Journal of Advertising, 29(5), 687–708.

Priporas, C. V., Stylos, N., & Fotiadis, A. K. (2017). Generation Z in smart retailing. Computers in Human Behavior, 77, 374–381.

Reddy, P. R., Pandey, M. K., & Gulati, S. (2022). eWOM and electric vehicles. International Journal of Health Sciences, 6(S8), 3056–3068.

Riffai, M. M. M. A., Grant, K., & Edgar, D. (2012). Big TAM in Oman. International Journal of Information Management, 32(3), 239–250.

Sánchez Torres, J. A., Solé-Moro, M. L., & Argila-Irurita, A. (2018). Gender and eWOM acceptance. Contaduría y Administración, 63(4), 1–15.

See-To, E. W., & Ho, K. K. (2014). Value co-creation and purchase intention. Computers in Human Behavior, 31, 182–189.

Shen, X. L., Zhang, K. Z., & Zhao, S. J. (2016). Herd behavior in adoption of online reviews. Journal of the Association for Information Science and Technology, 67(11), 2754–2765.

Singh, A., Patel, A. K., & Parayitam, S. (2025). Luxury fashion and IAM. Journal of Marketing Communications, 31(4), 467–490.

Sussman, S. W., & Siegal, W. S. (2003). Informational influence in organizations. Information Systems Research, 14(1), 47–65.

Tapanainen, T., Dao, T. K., & Nguyen, T. T. H. (2021). eWOM and destination choice. Computers in Human Behavior, 116, 106656.

Thorson, K. S., & Rodgers, S. (2006). Blogs as eWOM. Journal of Interactive Advertising, 6(2), 5–44.

Tien, D. H., Amaya Rivas, A. A., & Liao, Y.-K. (2018). C2C eWOM on social networking sites. Asia Pacific Management Review, 24(3), 238–249.

Tjongirin, R., Gianto, M., & Sihombing, S. (2020). IAM and purchase intention. Jurnal Manajemen dan Pemasaran Jasa, 13(2), 263–280.

Tong, Y., Wang, X., Tan, C. H., & Teo, H. H. (2013). Information contribution in online feedback systems. Information & Management, 50(7), 562–570.

Tripadvisor. (2022). The power of reviews. Retrieved June 3, 2025.

Turner, A. (2015). Generation Z: Technology and social interest. The Journal of Individual Psychology, 71(2), 103–117.

Verma, D., Dewani, P. P., Behl, A., & Dwivedi, Y. K. (2023). eWOM and IAM: Meta-analytic SEM. Computers in Human Behavior, 143, 107710.

Verma, S., & Yadav, N. (2021). Past, present, and future of eWOM. Journal of Interactive Marketing, 53(1), 111–128.

Wang, C. C., Yang, Y. Y. H., & Wang, P. (2014). Self-construal and WOM sharing. In PACIS Proceedings (pp. 24–28).

Wang, Y. (2016). Information adoption model: A review. Journal of Economics, Business and Management, 4(11), 618–622.

Wathen, C. N., & Burkell, J. (2002). Factors influencing credibility on the Web. Journal of the American Society for Information Science and Technology, 53(2), 134–144.

Wien, A. H., & Peluso, A. M. (2021). Human vs. AI recommenders. Journal of Business Research, 137, 13–27.

Xu, Q. (2014). Reviewer profile characteristics and eWOM credibility. Computers in Human Behavior, 33, 136–144.

Xun, J., & Reynolds, J. (2010). Applying netnography to market research. Journal of Targeting, Measurement and Analysis for Marketing, 18, 17–31.

Yap, K. B., Soetarto, B., & Sweeney, J. C. (2013). eWOM motivations and message characteristics. Australasian Marketing Journal, 21(1), 66–74.

Yeap, J. A., Ignatius, J., & Ramayah, T. (2014). eWOM platform preference for movie reviews. Computers in Human Behavior, 31, 250–258.

Yen, C. L. A., & Tang, C. H. H. (2015). Hotel attribute performance and eWOM motivations. International Journal of Hospitality Management, 46, 79–88.

Zhang, C., Pan, S., & Zhao, Y. (2024). Information overload and livestream sales. Journal of Retailing and Consumer Services, 77, 103651.

Zhang, J., & Lee, W. N. (2012). Cultural value orientations and eWOM motivations. Journal of Internet Commerce, 11(2), 117–138.

# More than a pretty picture: Exploring instagrammability in firm-generated content

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## Abstract

Instagrammability has emerged as a buzzword in digital marketing, yet its meaning often remains superficial and tied to aesthetic appeal alone. This exploratory study reframes Instagrammability as a multidimensional lens through which social media managers design and evaluate firm-generated content (FGC) on Instagram. Drawing on twelve in-depth interviews with professionals across industries, the study reveals that Instagrammability functions as a context-sensitive decision filter, balancing platform logics, brand identity, and audience resonance. Rather than equating to virality, Instagrammability shapes content that is technically optimized while fostering meaningful, brand-aligned connections within the scroll-intensive Instagram environment. By unpacking the operational compromises and creative strategies behind Instagrammable content, this study advances theoretical clarity on the construct. It offers insights for practitioners seeking to design successful and instagrammable social media content.

*Keywords: instagrammability; social media management; digital marketing; exploratory study; qualitative research.*

### 1. Introduction and overview of literature

Instagram is the third most popular social media platform worldwide, with over 1.6 billion users (Data Reportal, 2025). In terms of usage, one in two active users reports using the platform to discover new brands (IPSOS, 2021). This figure becomes particularly significant when considering that, especially among individuals aged 16 to 34, Instagram is a primary source of brand awareness (Data Reportal, 2025).

Nevertheless, delivering effective marketing communications on Instagram remains a considerable challenge for brands. The platform hosts over 40 billion photos and videos, with approximately 95 million new pieces of content uploaded daily (Lister, 2024), including both user-generated content (UGC) -i.e., content spontaneously created by users - and firm-generated content (FGC) - i.e., product-oriented messages disseminated by companies through their official social media channels (Kumar et al., 2016). Thus, firms are called to develop and implement their ability to craft compelling FGC that captures users' attention, which is crucial for firms seeking to leverage the platform's potential regarding visibility and brand awareness (de Vries et al., 2012).

A growing body of research (e.g., Ballester et al., 2021; Kwon et al., 2022; Pozharliev et al., 2025) has explored the factors that enhance the efficacy of FGC on Instagram. For instance, Pozharliev et al. (2025) demonstrate that incorporating multiple arguments into utilitarian product-related FGC can reduce users' perceived psychological risk, increasing engagement and purchase intention. Similarly, Kwon et al. (2022) examine the role of color, showing that cool tones elicit more positive comments and stimulate a favorable word-of-mouth toward the brand. Ballester et al. (2021) further highlight how if a FGC is perceived as original and entertaining, it can trigger affective engagement, ultimately encouraging positive behavioral responses toward the brand.

Against this backdrop, the notion of Instagrammability has recently gained traction. According to Miguel et al. (2024, p. 1543), instagrammability is "an umbrella term which implies the likelihood of successful engagement levels of any content posted specifically on Instagram, encompassing the characteristics of successful content on the platform, most notably the tailoring of content to suit features and algorithms specific to the Instagram platform, to appeal to a given audience that is active on Instagram, the overall quality of media presented and the acknowledgment of qualities specific to a particular online community."

Prior studies have examined what makes content Instagrammable, analyzing its features in specific domains such as food (e.g., Miguel et al., 2024), leisure (e.g., Arts et al., 2022), and tourism and hospitality (e.g., Dragin-Jensen et al., 2024; Liu & Li, 2021). These investigations highlight key attributes, such as environmental styling (Campbell et al., 2022), aesthetic appeal (Liu & Li, 2021), and perceived authenticity (Arts et al., 2022), as drivers of Instagrammability.

However, three main limitations emerge from the existing literature on Instagrammability. First, most studies focus on engagement dynamics and users' responses to content viewing. In this regard, Instagrammability may conceptually overlap with the notion of virality. According to Mills (2012, p. 163), viral marketing refers to "the strategic release or seeding of branded content into the socially networked online consumer ecosystem, followed by the potentially multiplicative spread of the content through the ecosystem as hosts (consumers) receive the content and are motivated to share the branded content with other consumers". The author identifies four key drivers of virality: (a) spreadability, or the content's likability and shareability; (b) propagativity, or the ease of dissemination; (c) integration, or amplification through multi-platform strategies; and (d) nexus, or the progressive reinforcement of a campaign via a sequence of viral content. These overlapping features blur the boundaries of Instagrammability, weakening its theoretical precision.

Second, prior studies (e.g., Dragin-Jensen et al., 2024; Liu & Li, 2021; Miguel et al., 2024) examine Instagrammability considering UGC or influencers-generated content - third-party actors who have cultivated extensive relevance among organizational stakeholders through content creation, distribution, interaction, and online visibility (Enke & Borchers, 2021). Consequently, the findings may not be generalizable to FGC, which is typically constrained by brand guidelines and strategic consistency yet still aims to engage audiences effectively.

Third, existing studies are essentially context-specific. As acknowledged by various authors (e.g., Miguel et al., 2024), prevailing explanations related to Instagrammability are often confined to narrow domains, such as food, leisure, or tourism, thereby limiting the theoretical generalizability of the concept.

In response to these limitations, the present study aims to redefine the concept of Instagrammability, specifically about FGC, by identifying its distinctive features and clarifying its boundaries vis-à-vis

related constructs, such as virality. Moreover, this research aims to identify the core characteristics that make FGC instagrammable, regardless of specific industry sectors, thereby providing a broader and more theoretically robust conceptualization.

The central research question guiding this study is: How is the concept of Instagrammability constructed and interpreted in firm-generated content posted on Instagram, regardless of the relevant product sector? By addressing this question, the study contributes to advancing theoretical understanding of FGC effectiveness on social media platforms, particularly within the distinctive affordances of the Instagram ecosystem.

## 2. Methodology

Given the exploratory focus of this research and the limited prior investigation of the topic, a qualitative approach was deemed most suitable (Creswell, 2009), providing an effective means for generating new insights (Eisenhardt, 1989). To conceptualize Instagrammability, the authors conducted semi-structured interviews with social media managers, primarily recruited through the National Association of Social Media Managers (ANSMM), between May and June 2025. This ensured access to professionals actively creating and managing Instagram content across various industries. Before the interviews, participants were asked to share examples of content they considered Instagrammable. These examples served as discussion prompts during the interviews, enabling participants to reflect on concrete practices and interpretations of Instagrammability.

Interviews were conducted via Zoom, recorded with participants' consent, and transcribed verbatim. Each session lasted between 30 and 75 minutes, allowing participants to elaborate on their perspectives while ensuring a comprehensive exploration of key themes. Anonymity and confidentiality were guaranteed, with participants informed that anonymized excerpts might be used in academic publications. Data saturation was reached after the twelfth interview, as no new themes or significant insights emerged in the final sessions (Braun & Clarke, 2021).

The authors employed a reflexive thematic analysis for data analysis (Braun & Clarke, 2006). After reading all transcripts multiple times to facilitate familiarity with the data, each researcher independently and inductively generated initial codes and refined them collaboratively through iterative discussions to ensure consistency and a shared understanding of emerging patterns. Investigator triangulation was applied to enhance the credibility of the analysis and mitigate individual bias. Through this process, the authors identified core themes reflecting how social media managers interpret and apply the concept of Instagrammability when designing and evaluating FGC.

## 3. Preliminary results and discussion

The findings indicate that Instagrammability, as defined by the social media managers interviewed, is not regarded as an inherent property of FGC or the level of engagement it will stimulate (Miguel et al., 2024), nor as a merely aesthetic or technical attribute tied to the product or its digital representation. Instead, it seems to be a "strategic process" of FGC encoding, intentionally activated by an organization (or its intermediaries), aimed at conveying a message aligned with the brand and enhancing its value within the specific logic of the Instagram platform and its audience, as well as that of the brand itself.

From this perspective, Instagrammability emerges as a multidimensional concept that guides the design of digital FGC. Far from being a singular or rigidly defined category, it functions as a mobile evaluative

lens that social media managers employ to make effective communicative decisions in an environment marked by intense symbolic and visual competition.

Based on the qualitative analysis, five core dimensions through which Instagrammability is constructed and enacted within the context of FGC can be identified:

Decision filter: Instagrammability operates as a pre-publication evaluative framework. In other words, it is suggested to be a form of design thinking that informs decisions about what to post, how to post it, and when to post it. Social media managers use it to anticipate how content will be received, assessing its alignment with audience expectations and the platform's algorithmic logics.

Compositional assemblage: Instagrammable FGC is not defined by a single trait (e.g., visual appeal) already identified in the literature (e.g., Arts et al., 2022; Liu & Li, 2021) but instead emerges from the coherent assemblage of multiple elements (visual, textual, auditory, and emotional). Its effectiveness is measured by the ability to create an integrated and recognizable experience for the user engaging with the FGC.

Situated practice: Instagrammability is suggested to be a context-dependent practice, and what "works" varies by sector, audience type, and the specific characteristics of a given Instagram channel (Miguel et al., 2024). In addition, the results seem to suggest that this practice is related to the "hic et nunc": the FGC's ability to capture a moment that resonates meaningfully with individuals. Therefore, the same image may be highly Instagrammable in one context and time and entirely ineffective in another.

Brand performativity: FGC deemed Instagrammable should also effectively present the brand's identity in a clear, coherent, and compelling manner. Instagrammability, thus, becomes a semiotic tool for reinforcing the brand's positioning, values, and recognizability within users' feeds.

Operational compromise: Decisions regarding Instagrammability seem to arise from ongoing negotiations between creative intent and organizational constraints. External pressures, time limitations, resource scarcity, and bureaucratic rigidity within the organization all significantly influence what social media managers can produce and publish.

Therefore, in this exploratory research, Instagrammability emerges as a complex and situated construct, enabling professionals to strike a dynamic balance between what technically performs on the platform and what resonates socially with the brand's target audience. Thus, Instagrammability does not equate to virality, but instead represents a necessary, though not sufficient, starting point for broader processes of FGC diffusion. However, this final dimension warrants further investigation.

Within this context, social media managers seem not to evaluate the success of Instagrammable content based on absolute metrics such as virality or views. Instead, they assess it in relation to the organization's strategic objectives: brand awareness, sales, engagement, education, and relationship-building.

## 4. Conclusion and future research

This exploratory study suggests that the concept of Instagrammability may not be directly linked to engagement performance on social media platforms. By contrast, this concept appears to represent a multi-level construct that enables the creation of FGC-capable content, within specific contexts of time and space, that engages users by fostering novel and original consumption experiences of such content.

The study, which is still ongoing, presents certain limitations, including the nationality of the respondents (Italian) and their professional role (limited to social media managers). However, these limitations highlight potential gaps that future research could address—for instance, by incorporating social media, marketing, and brand managers from non-Italian companies. Moreover, this study may offer practitioners valuable insights into designing Instagrammable FGCs to achieve their business outcomes. However, to achieve this, further analysis and in-depth examination of the data are essential.

## Key references (complete list available on request)


Arts, I., Fischer, A., Duckett, D., & Van Der Wal, R. (2021). The Instagrammable outdoors – Investigating the sharing of nature experiences through visual social media. People and Nature, 3(6), 1244–1256. https://doi.org/10.1002/pan3.10239

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative Research in Psychology, 3(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Creswell, J. W. (2009). Research design: Qualitative, quantitative, and mixed methods approaches (3. ed., [Nachdr.]). SAGE Publ.

Data Reportal. (2025, aprile). Global social media statistics. DataReportal – Global Digital Insights. https://datareportal.com/social-media-users

De Vries, L., Gensler, S., & Leeflang, P. S. H. (2012). Popularity of brand posts on brand fan pages: An investigation of the effects of social media marketing. Journal of Interactive Marketing, 26(2), 83–91. https://doi.org/10.1016/j.intmar.2012.01.003

Eisenhardt, K. M. (1989). Building theories from case study research. The Academy of Management Review, 14(4), 532. https://doi.org/10.2307/258557

IPSOS. (2021). People Globally View Personalized Ads as a Valuable Tool for Finding Relevant Goods and Services. https://www.ipsos.com/en-us/news-polls/ipsos-consumer-online-survey

Kumar, A., Bezawada, R., Rishika, R., Janakiraman, R., & Kannan, P. K. (2016). From social to sale: The effects of firm-generated content in social media on customer behavior. Journal of Marketing, 80(1), 7–25. https://doi.org/10.1509/jm.14.0249

Liu, H., & Li, X. (Robert). (2021). How travel earns us bragging rights: A qualitative inquiry and conceptualization of travel bragging rights. Journal of Travel Research, 60(8), 1635–1653. https://doi.org/10.1177/0047287520964599

Miguel, C., Clare, C., Ashworth, C. J., & Hoang, D. (2024). Self-branding and content creation strategies on Instagram: A case study of foodie influencers. Information, Communication & Society, 27(8), 1530–1550. https://doi.org/10.1080/1369118X.2023.2246524

Mills, A. J. (2012). Virality in social media: The SPIN Framework. Journal of Public Affairs, 12(2), 162–169. https://doi.org/10.1002/pa.1418

Pozharliev, R., De Angelis, M., & Cascio Rizzo, G. L. (2025). How argument numerosity shapes firm-generated content effectiveness. Psychology & Marketing, 42(6), 1437–1455. https://doi.org/10.1002/mar.22185

# Segmenting the Online Grocery Shopper: A Cross-National Cluster Analysis of Italian and U.S. Consumers

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## Abstract

This study explores consumer preferences for services provided by online grocery shopping (OGS) platforms, aiming to uncover cross-cultural similarities and differences between Italian and U.S. users. Drawing on a quantitative survey conducted in both countries, the analysis applies multivariate statistical techniques to segment consumers according to key sociodemographic and behavioral factors. The results reveal how cultural and usage patterns influence service expectations and priorities in digital grocery environments. By adopting a comparative and segmentation-driven approach, this research contributes to the e-grocery literature and offers practical guidance for tailoring personalized service strategies across diverse international markets.

*Keywords: online grocery shopping, consumer preferences, cluster analysis, segmentation*

### 1. Introduction

The global Food & Grocery (F&G) e-commerce market showed a substantial growth of 22.8 per cent in 2024, attaining a value in excess of $680 million. F&G e-commerce penetration in the European market is consistent with that of the global market, with per capita spending reaching over $359 million (Netcomm, 2024). It is projected to undergo considerable growth during the five-year period 2025-2029, with forecasts indicating a surge to over $491 million.

This positive trend can be attributed to changes in the lifestyle and consumption patterns of the population, which now recognizes a number of advantages in online shopping: the possibility to compare numerous products, which are not always available in physical shops, to shop at any time of the day and receive them directly at home, and the associated, potential savings in time and money (Shankar et al., 2003; Chu et al., 2010). The extant literature has highlighted how cultural, socio-demographic, regulatory and technological differences between countries significantly influence consumers' perceptions of the usefulness, risk and value associated with online grocery shopping (OGS) services, as well as the related shopping attitudes and behavior (Hood et al., 2020; Jiang et al., 2024; Olumekor et al., 2024).

However, despite the increasing focus on the role of context, there remains a paucity of in-depth comparative studies between culturally and digitally heterogeneous markets. Authors have so far paid

little attention to the integration of consumption preferences and socio-demographic variables from a cross-national perspective.

This evidence underscores the necessity to conduct investigations that extend beyond the analysis of individual markets, thereby facilitating a more profound comprehension of the moderating influence of geographical context on behavioral patterns associated with the use of OGS services.

In view of the aforementioned considerations, this study aims to analyze the distribution of preferences of users of OGS services in relation to frequency of use, gender, age group, educational qualification and professional status, comparing Italian consumers with US consumers.

In Italy, the online F&G market was valued EUR 4.6 billion in 2024, experiencing a 6.2% increase compared to the previous year. This growth accelerated in the two-year period 2020-2022, when the share of buyers increased by 32%, partly due to the driving effect of the pandemic (Netcomm, 2023; 2024).

In contrast, the United States market is projected to exceed USD 257 billion in estimated revenues for 2024, with a growth forecast that is expected to reach over USD 422 billion by 2028. This is supported by a base of approximately 138 million active consumers (ExportUSA, 2025).

The comparison between the two countries is particularly relevant as they represent markets characterized by different levels of digital maturity, food e-commerce penetration and online shopping habits. This diversity offers a valuable opportunity to explore the similarities and differences in OGS-related shopping behavior.

The objective of this study is twofold: firstly, to contribute theoretically to the understanding of the factors influencing OGS adoption in different geographical contexts; secondly, to offer practical insights that are useful for more accurate market segmentation and greater customization of the offer. It is imperative for companies to comprehend the variances in attitudes, values and expectations that exist among different generations and geographical locations. This profound understanding enables them to refine their strategic approaches, thereby facilitating more targeted customer journeys.

From a methodological perspective, this study adopts a quantitative and exploratory design, which combines descriptive statistics, exploratory factor analysis, and clustering to segment consumers based on their attitudes and preferences toward online grocery platforms.

## 2. Theoretical Background

Concurrently with the rapid growth of OFD, there has been a marked increase in the academic community's interest in the phenomenon (Khalek et al., 2024; Wolniak et al., 2024; Monoarfa et al., 2024). The extant literature has focused particularly on product and seller characteristics that influence purchase intention (Chu et al., 2010; Sheehan et al., 2019). According to several authors the primary attributes which determine customer satisfaction in the context of online food shopping are as follows: the ease of use of the e-commerce platform (Tomar, 2023); the completeness and clarity of product information (Prastito & Wardi, 2024); the convenience of the offer (Eriksson & Stenius, 2023); the breadth of the assortment (Eriksson & Stenius, 2023; Maltese et al., 2021); delivery flexibility (Eriksson & Stenius, 2023); site design (Daffodil & De Rose, 2023); and customer service quality (Singh & Söderlund, 2020). As Daffodil and De Rose (2023) contend, the integration of an intuitive interface, expeditious web loading, the existence of reviews and ratings, the presence of high-quality images and detailed descriptions serve to construct a personalised shopping experience. This, in turn, has the

capacity to engender heightened customer engagement, which consequently results in an increase in sales.

In addition to this, the extant literature on consumer behaviour in OGS has investigated the impact of situational conditions on online purchasing behaviour (Hand et al., 2009). In recent years, an increasing number of studies have highlighted how cultural, socio- demographic, geographical and infrastructural differences profoundly affect the perception of utility, risk and value associated with OGS services, significantly influencing consumer attitudes and behaviour. The geographical dimension, in particular, has been identified as a crucial factor in several contexts. In Great Britain, Hood et al. (2020) emphasize the role of location and spatial infrastructures in shaping the utilization of services, noting distinctions in adoption between home delivery and click & collect models that are contingent on population density and spatial characteristics. A similar phenomenon is observed in Belgium, where Beckers et al. (2022) demonstrate that the adoption of e-commerce exhibits significant variations between urban and rural regions. This finding underscores the pivotal role of spatial dynamics in the propagation of the online channel.

These aspects are closely intertwined with socio-economic dimensions. Research conducted in the United States (Olumekor et al., 2024) and in Italy (Dominici et al., 2023) highlights the influence of factors such as income, age, household composition, Internet access and familiarity with digital technologies in determining online purchasing choices. In this sense, digital infrastructure and level of digital literacy not only enable or constrain access to services but also contribute to outlining highly heterogeneous adoption profiles even within the same country.

Variability also assumes a cultural dimension. Through a comparison of Chinese and Korean consumers, Jiang et al. (2024) demonstrate how cultural values, expectations and priorities profoundly shape perceptions of the value of OGS and, consequently, purchase preferences. Conversely, in emerging markets, factors such as trust in the system, available supply, and local social norms may act as barriers or catalysts for adoption (Al Nawayseh & Balachandran, 2023).

The extant literature indicates that the adoption of OGS is neither uniform nor universally replicable but rather is deeply situated in the specific contexts in which it occurs. The differences observed at territorial, social and cultural levels therefore suggest the need for analytical and strategic approaches that can intercept the specificities of the target markets and promote more accurate consumer segmentation.

## 3. Methodology

This study investigates cross-cultural differences in consumer preferences for OGS services between Italian and American users. The research design is structured to identify preference patterns, sociodemographic influences, and emergent consumer segments using quantitative and unsupervised learning techniques.

The questionnaire was distributed online via Prolific to individuals residing in Italy and the United States who had used an OGS service at least once. A total of 489 valid responses were collected, evenly split between the two countries (199 each). Each participant evaluated the importance of 21 distinct OGS service features on a Likert scale from 1 (not important) to 9 (extremely important). In addition, respondents provided sociodemographic information including age, gender, education level, occupation, and frequency of OGS platform usage.

The 21 features included in the questionnaire (labeled S1–S21) were identified through a prior content analysis of 20 widely used OGS platforms in the international market (Table 1). Features that appeared in at least 11 of these services were retained, resulting in a robust and representative list spanning traditional (e.g., customer support, delivery speed), functional (e.g., privacy, payment methods), and emerging digital services (e.g., 3D avatars, live chat) (cf. Dholakia et al., 2010; Huang & Oppewal, 2006).

| | |
|---|---|
| S1 | Personal area for product and order management |
| S2 | Pre- and post-sales customer support service |
| S3 | Virtual assistance service with operator or chatbot |
| S4 | Toll-free number |
| S5 | App to manage purchases |
| S6 | Ability to make purchases without registering on the website |
| S7 | Delivery tracking |
| S8 | In-store pick-up for groceries |
| S9 | Delivery benefits for certain customer categories |
| S10 | Publication of customer reviews |
| S11 | Technology for comparing products within the same category |
| S12 | Automatic replacement of unavailable products |
| S13 | Purchase suggestions based on previous experiences |
| S14 | Secure privacy and personal data protection system |
| S15 | Availability of various payment methods |
| S16 | Customized promotional offers |
| S17 | In-depth product information |
| S18 | 3D avatar sales assistant |
| S19 | Chat to interact with other customers |
| S20 | Customer care via a mobile instant messaging app |
| S21 | Fast delivery |

**Table 1:** OGS services (Source: Authors' own creation)

To explore consumer typologies, the data were first standardized and subjected to Principal Component Analysis (PCA) to reduce dimensionality. Subsequently, a KMeans clustering algorithm (MacQueen, 1967) was applied to identify groups of respondents with similar patterns of service preference. Visual inspection of the PCA- cluster map and within-cluster variance informed the selection of three clusters. The analysis was performed using Python (v3.10) and the scikit-learn library.

## 4. Results

A heatmap was generated to visualize average ratings for each service feature by country (Figure 1). The following heatmap shows the average rating of each service feature as evaluated by Italian and US respondents. Color intensity reflects the importance attributed to each feature. Distinct patterns are visible, particularly concerning preferences for personalization, privacy, and technological features.

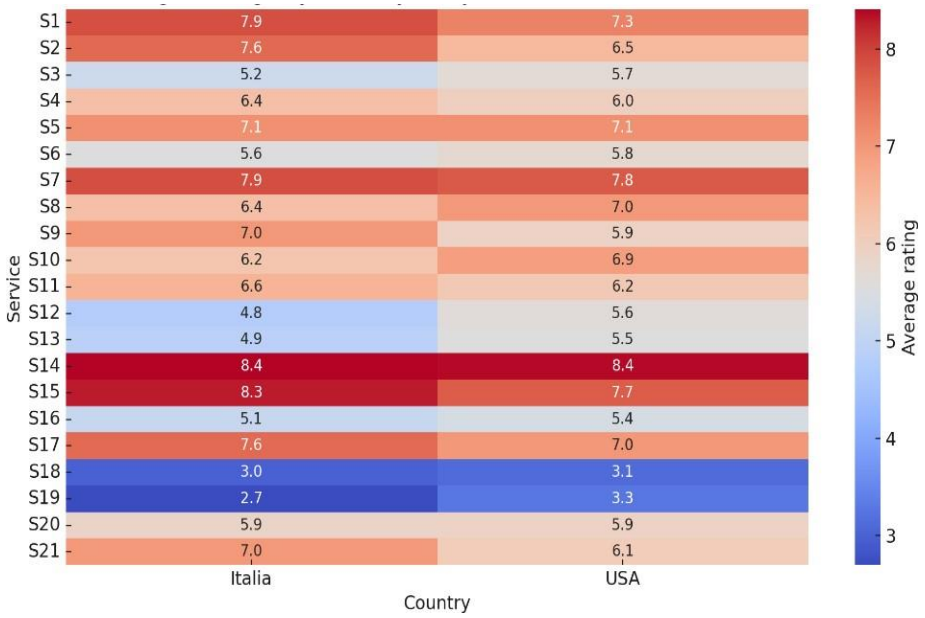



**Figure 1:** OGS Average ratings by Country (Italy vs USA) – Services S1-S21 (Source: Authors' own creation)

Italian respondents attributed higher importance to services ensuring reliability and privacy, such as punctual delivery (S1), order tracking (S3), and data protection (S14). In contrast, American participants displayed stronger preferences for digital interaction and personalization, particularly customer reviews (S10), personalized promotions (S16), and support via mobile messaging (S20). These results align with prior studies indicating greater digital readiness and innovation receptivity among U.S. consumers (Andrews & Bianchi, 2013).

Consumers were segmented into clusters using Principal Component Analysis (PCA) and KMeans clustering based on their responses to the 21 service features. The Figure 2 shows the cluster

membership in 2D PCA space, with colors representing different clusters and shapes distinguishing nationalities.

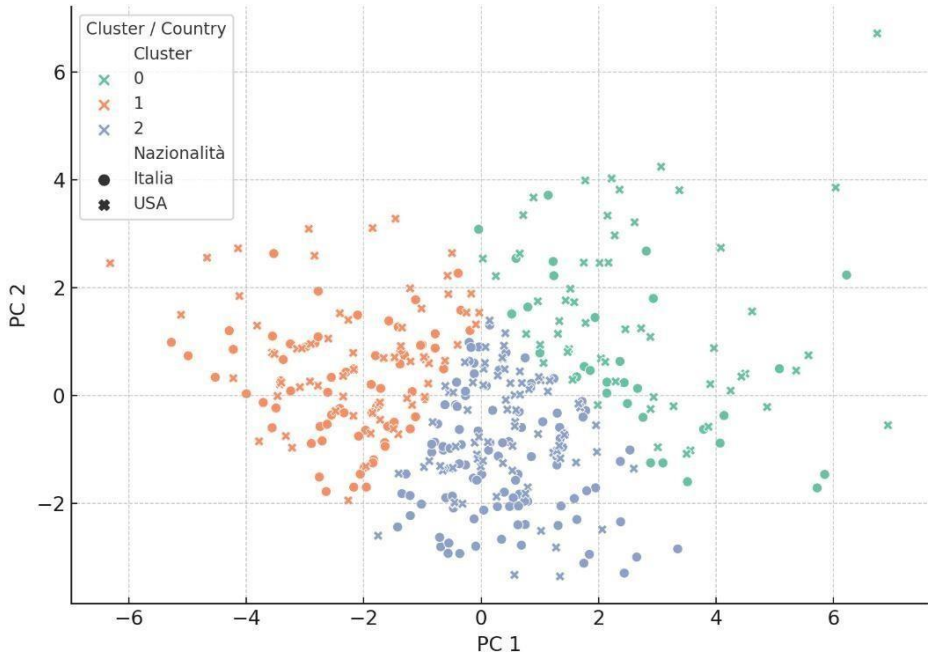



**Figure 2:** Consumer clustering (PCA 2D) – Including Services S1 – S21 (Source: Authors' own creation)

Three distinct consumer profiles emerged:

- *Cluster 0 – Efficient Traditionalists* - This cluster prioritizes core services: reliable delivery (S1), order transparency (S3), and privacy (S14), while expressing limited interest in digital or social interaction tools. The cluster is predominantly composed of Italian consumers (70%), particularly women aged 31–50 with mid-level education (high school or bachelor's degree). Their online grocery usage is occasional. These findings suggest a cultural preference for utility and security, reflecting Italy's more conservative e-commerce landscape (Statista, 2023).

- *Cluster 1 – Digital Innovators* – This cluster is characterized by high enthusiasm for interactive and customized features, this cluster values user-generated content (S10), dynamic promotions (S16), and immersive technologies such as avatars (S18) and live chat (S19). It includes mostly U.S. respondents (65%), younger males (25–30), with high education levels (master's or above), and frequent OGS users. Their profile reflects broader trends in digital adoption and social commerce within the U.S. market (Kumar & Reinartz, 2016).

- *Cluster 2 – Practical Utilitarians* - Members of this cluster express pragmatic preferences centered on product range (S6), discounts (S9), and flexible payments (S13, S15). While open to innovation, their emphasis is on features that directly enhance efficiency and cost-

effectiveness. The group is cross-national, balanced by gender, aged 25–50, and largely composed of employed professionals. Their behavior suggests convergence in functional expectations across markets, consistent with findings on globalization of consumer behavior (Hofstede, 2001). Key cultural distinctions emerged among the two samples. Italians tend to favor simplicity, security, and essential features, while Americans embrace personalization, innovation, and interactivity. The identified clusters provide actionable insights for e- grocery platforms aiming to tailor services across culturally diverse markets.

## 5. Conclusions and implications

This study provides empirical insights into how consumers in Italy and the United States prioritize different service features when engaging in OGS. The findings reveal some national differences in preferences, such as the greater emphasis on reliability and data protection among Italians, and the stronger demand for personalization and digital interaction among Americans, but also commonalities that transcend national borders, particularly among more pragmatically oriented users.

The identification of three distinct consumer clusters (Efficient Traditionalists, Digital Innovators, and Practical Utilitarians) demonstrates the heterogeneity within and across countries. These clusters differ not only in the types of services they value but also in their sociodemographic composition, frequency of use, and openness to digital innovation. Such segmentation confirms that cultural and technological contexts continue to shape how consumers engage with e-grocery platforms.

Furthermore, the emergence of a mixed-nationality, functionally driven cluster suggests that digital transformation is fostering a partial convergence in consumer expectations globally, especially around price sensitivity, service breadth, and convenience. From a practical point of view, this study suggests that e-grocery platforms operating internationally should tailor their service design to cultural preferences. For example, in the Italian market, platforms should emphasize trust-building elements such as transparent order tracking, secure payment methods, and data protection assurances. In contrast, U.S.-focused services may benefit more from offering highly interactive features like customer reviews, chatbot assistance, and AI-driven recommendations. Given the heterogeneity of consumer needs, platforms should consider allowing interface personalization—enabling users to prioritize or hide features according to their preferences. For instance, Practical Utilitarians may prefer a streamlined interface focused on promotions, product comparisons, and payment flexibility.

Moreover, businesses expanding across borders must avoid assuming homogeneity in digital readiness or expectations. Localization efforts should include not only language adaptation but also a reconfiguration of feature offerings in line with culturally specific consumer values.

Finally, the cluster profiles identified in this study could serve as training input for machine learning models used in adaptive recommendation systems. Dynamic segmentation would allow platforms to update user categories based on evolving behavior, thereby improving personalization without intrusive data collection.

## References

Al Nawayseh, M., & Balachandran, W. (2012). Online Grocery Shopping in Developing Countries: Jordanian Consumers as Case Study. International Journal of Social Ecology and Sustainable Development, 3(3), 1–14

Andrews, L., & Bianchi, C. (2013). Consumer internet purchasing behavior in Chile and the United States: An exploratory study. Journal of Business Research, 66(3),

324–330. https://doi.org/10.1016/j.jbusres.2011.08.017

Beckers, J., Cárdenas, I., & Verhetsel, A. (2018). Identifying the geography of online shopping adoption in Belgium. Journal of Retailing and Consumer Services, 45, 33– 41.

Chu, J., Arce-Uriza, M., Cebollada-Calvo, J.-J., & Pradeep, K. C. (2010). An empirical analysis of shopping behavior across online and offline channels for grocery products: The moderating effects of household and product characteristics. Journal of Interactive Marketing, 24(4), 251–268.

Daffodil, I. K. N., & De Rose, J. L. (2023). A study on the impact of website design on customer satisfaction in online grocery shopping. Journal of Research Administration, 5(2), 4226–4237.

Dholakia, R. R., Zhao, M., Dholakia, N., & Fortin, D. R. (2010). Multichannel retailing:

A case study of early experiences. Journal of Interactive Marketing, 24(2), 209–

221. https://doi.org/10.1016/j.intmar.2010.02.001

Dominici, A., Boncinelli, F., Gerini, F., & Marone, E. (2021). Determinants of online food purchasing: The impact of socio-demographic and situational factors. Journal of Retailing and Consumer Services, 60, 102473.

Eriksson, N., & Stenius, M. (2023). What do regular online grocery shoppers want from online grocers going forward? Suggestions for service quality improvements. Procedia Computer Science, 219, 201–210.

ExportUSA (2025). Trend e-commerce settore food USA. https://www.exportusa.us/ecommerce-alimentare-america.php

Hand, C., Dall'Olmo Riley, F., Harris, P., Singh, J., & Rettie, R. (2009). Online grocery shopping: The influence of situational factors. European Journal of Marketing, 43(9), 1205–1219.

Hood, N., Urquhart, R., Newing, A., & Heppenstall, A. (2020). Sociodemographic and spatial disaggregation of e-commerce channel use in the grocery market in Great Britain. Journal of Retailing and Consumer Services 55, 102076.

Hofstede, G. (2001). Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations (2nd ed.). Sage Publications.

Huang, Y., & Oppewal, H. (2006). Why consumers hesitate to shop online: An experimental choice analysis of grocery shopping and the role of delivery fees. International Journal of Retail & Distribution Management, 34(4/5), 334–353. https://doi.org/10.1108/09590550610660260

Jiang, X., Im, H. B., & Lee, M. A. (2024). Exploring the customer perceived value of online grocery shopping: A cross-sectional study of Korean and Chinese consumers using Means–End Chain theory. Korean Journal of Community Nutrition, 29(4), 318–335.

Khalek, S. A., Samanta, T., & Behera, C. K. (2024). Online grocery services evolution and trends: A bibliometric approach. International Journal of Retail & Distribution Management, 52(12), 1142–1171.

Kumar, V., & Reinartz, W. (2016). Creating Enduring Customer Value. Journal of Marketing, 80(6), 36–68. https://doi.org/10.1509/jm.15.0414

MacQueen, J. (1967). Some methods for classification and analysis of multivariate observations. In L. M. Le Cam & J. Neyman (Eds.), Proceedings of the Fifth Berkeley Symposium on Mathematical Statistics and Probability, Volume 1: Statistics (pp. 281–297). University of California Press.

Maltese, I., Le Pira, M., Marcucci, E., Gatta, V., & Evangelinos, C. (2021). Grocery or@ grocery: A stated preference investigation in Rome and Milan. Research in Transportation Economics, 87, 101096. https://doi.org/10.1016/j.retrec.2021.101096

Monoarfa, T. A., Sumarwan, U., Suroso, A. I., & Wulandari, R. (2024). Uncover the trends, gaps, and main topics on online grocery shopping: Bibliometric analysis. Heliyon, 10, e25857.

Netcomm. (2023). Multicanale e sostenibile: Le sfide 2023 della trasformazione digitale nel food & grocery.

Netcomm. (2024). Netretail 2024: Focus Food & Grocery.

Olumekor, M., Singh, H. P., & Alhamad, I. A. (2024). Online Grocery Shopping: Exploring the Influence of Income, Internet Access, and Food Prices. Sustainability, 16(4), 1545.

Prastito, B. H., & Wardi, Y. (2024). Systematic literature review: Online food delivery purchasing decisions in Indonesia. Journal of Social Research, 3(2), 497-507.

Shankar, V., Smith, A. K., & Rangaswamy, A. (2003). Customer satisfaction and loyalty in online and offline environments. International Journal of Market Research, 20(2), 153–175.

Sheehan, D., Hardesty, D. M., Ziegler, A. H., & Chen, H. A. (2019). Consumer reactions to price discounts across online shopping experiences. Journal of Retailing and Consumer Services, 51, 129–138.

Singh, R., & Söderlund, M. (2020). Extending the experience construct: An examination of online grocery shopping. European Journal of Marketing, 54(10), 2419–2446. https://doi.org/10.1108/EJM-06-2019-0536

Statista. (2023). E-commerce in Italy – statistics & facts. Retrieved from https://www.statista.com/topics/3768/e-commerce-in-italy/

Tomar, S. S. (2024). Factors affecting customer satisfaction in online grocery shopping: An empirical analysis. Journal of Innovation and Management, 2(1), 63–81.

Wolniak, R., Stecula, K., & Aydin, B. (2024). Digital transformation of grocery in- store shopping—Scanners, artificial intelligence, augmented reality and beyond: A review. Foods, 13, 2948. https://doi.org/10.3390/foods13122948

# Green Consumption or Underconsumption: The Effect of De-Influencing in Consumers' Decisions

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## Abstract

Greenfluencers, regarded as significant promoters of sustainable behaviors and eco-friendly consumption, have begun to adopt a dual and, in some respects, controversial approach. They simultaneously encourage the purchase of green products while advocating for reduced consumption (de-influencing), raising questions about the effectiveness and direction of their influence in fostering sustainable consumption. This study investigates the antecedents of consumers' intention to follow the advice of greenfluencers and examines which type of advice - temperance oriented behavior or green purchase behavior - consumers are more likely to adopt.

Using an online survey with 500 Italian consumers who follow greenfluencers, we tested a structural model assessing the influence of trust and similarity on intention to follow the advice, and the subsequent impact of this intention on temperance-oriented behavior and green purchasing behavior. The results support all the research hypotheses, demonstrating how greenfluencers are able to influence followers' decision-making patterns in a two-fold way: encouraging both green purchasing behaviors and underconsumption behaviors.

Theoretically, findings extend the literature by introducing similarity as a key antecedent of behavioral intention in the greenfluencer context and highlighting de-influencing as an important area for further research. Managerially, the study suggests that greenfluencers, brands, and content creators should emphasize temperance oriented communication strategies to more effectively promote sustainable consumption.

*Keywords: Greenfluencers, De-influencing, Sustainable Behavior, Temperance, Underconsumption*

## 1. Introduction

Greenfluencers, also known as eco-influencers (Pittman & Abell, 2021; Bentley et al., 2021), represent a type of social media influencer who has a significant role on promoting sustainable behaviors and eco-friendly choices (Olbermann et al., 2024; Ballestar et al., 2022; Kapoor et al., 2023).

Despite their commitment to sustainability, greenfluencers have recently faced criticism (See Gerrath et al., 2024) because the consumption model they endorse, although centered around the promotion of green products, still reproduces consumerist patterns leading to the consumption of unnecessary goods (Pellegrino & Shannon, 2021; Pellegrino et al., 2022; Townsend, 2024). This raises important

questions regarding the actual effectiveness of greenfluencers' marketing in mitigating unsustainable consumption behaviors (Hudders & Lou, 2023). These contradictions have led some greenfluencers to reassess their communication strategies, adopting de-influencing techniques as part of a more critical and conscious approach to consumption. De-influencing promotes a shift in consumption habits, encouraging followers to critically reflect on their purchasing choices and discouraging the impulsive acquisition of unnecessary goods (Ekvall & Mellberg, 2023). This practice, also called "underconsumption core", is becoming increasingly popular among online users all over the world, who proudly display their commitment to more moderate consumption. By combining de-influencing with green products promotion strategies, greenfluencers exhibit a dual behavior: on one hand, they encourage a more temperate consumption (Gupta & Sheth, 2024) and, on the other, they still promote consumption (Pellegrino et al., 2022).

This study aims to deepen understanding of the dual role played by greenfluencers in driving responsible purchasing or non-purchasing behaviors. Previous research in greenfluencer marketing has largely focused on purchase intention as dependent variable, investigating possible antecedents such as audience engagement (König & Maier, 2024), relationship with influencers (Johnstone & Lindh, 2022), and trust (Pittman & Abell, 2021). However, no study has gone beyond intention, nor has the dual role of greenfluencers, who often both promote and discourage consumption, been thoroughly explored. This is especially relevant in the context of emerging trends like "de-influencing" which challenges traditional influencer dynamics and may reshape the impact of sustainability advocacy online contributing to the *bright side* of influencer marketing (Hudders & Lou, 2023).

Therefore, the aim of the present study is twofold: (a) expand the understanding of the factors that strengthen consumers' intention to follow the advice of greenfluencers, and (b) investigate the type of advice that consumers tend to follow: are they influenced in both purchasing eco-friendly products and adopting more moderate purchasing behaviors? If so, which behavior is most encouraged?

## 2. Hypotheses Development

The proposed conceptual model builds on a path of causal relationships including four key dimensions of the user-influencer interaction: similarity, trust, intention to follow the advice, and behavioural intentions. Similarity refers to the perception that the consumer shares characteristics, values, or experiences with the influencer (Kim & Park, 2011). This element increases the effectiveness of communication, as consumers tend to be more receptive when they perceive that the endorser they interact with has traits similar to their own (Lou & Yuan, 2019) and are more likely to intent to purchase the products they promote (Schouten et al., 2021). In light of this evidence, the perceived similarity with greenfluencers could further strengthen intention to follow the advice (H1).

In the context of marketing and exchange, Moorman et al. (1993) described Trust as "a willingness to rely on an exchange partner in whom one has confidence". With reference to the user-influencer relationship, trust in the source is a fundamental element as, without it, the message is unlikely to be internalized and, most importantly, applied by the audience (Pittman & Abell, 2021). Therefore, it is hypothesized that trust may be a significant antecedent of intention to follow the advice of greeninfluencer (H2).

As described, greenfluencers exhibit a dual behavior. On the one hand, they promote consumption of green products. On the other hand, they promote underconsumption through de-influencing. These two actions can, therefore, translate into two different approaches to consumption by individuals, which can jointly contribute positively to changing purchasing habits and that have been

operationalized as green purchase behavior and Temperance oriented behavior. In the literature, temperance is considered "the virtue of moderation and control over excess" (Gupta & Sheth, 2024). For this reason, it is considered a variable capable of capturing the de-influencing enacted by greenfluencers and the corresponding underconsumption behavior. Green purchase behavior refers to consumer behaviors motivated by sustainable development values, where individuals choose products or services that reduce environmental impact, such as reducing resource consumption or pollution (Roman et al., 2015). The Theory of Planned Behavior (TPB) suggests that intention is one of the main indicators of future behavior, and it often directly leads to the adoption of the desired behavior (Ajzen, 1991). In the context of the present research, the intention to follow the greenfluencer advice could directly lead to sustainable behaviors, such as purchasing green products (H3) or having a more temperate oriented behavior (H4).

## 3. Methodology

To test the research model, an online survey with a sample of Italian participants has been conducted. Convenience sampling was adopted to recruit participants online through the most widely used social media platforms (Facebook, Instagram, WhatsApp). To avoid biases due to common method bias, preliminary measures were taken during the design phase (Podsakoff et al., 2024). In total, 500 useful questionnaires were retained for analysis, which far exceeds the 200 observations recommended by Hair et al. (2006) for Structural Equation Modeling (SEM).

The theoretical constructs were measured using scales that have been well validated in the academic literature. Similarity was measured using a four-item scale developed by Chang (2011). Trust was evaluated through a four-point scale proposed by Kennedy et al. (2001). Intention to follow the advice was operationalized with a four-point scale by McKnight et al. (2002). Temperance was measured with by Gupta and Sheth's (2024) scale. Finally, green purchase behavior was measured using a three-item scale proposed by Han (2020). Both convergent and discriminant validity have been achieved for all the measurement scales.

## 4. Results

### 4.1 Sample characteristics

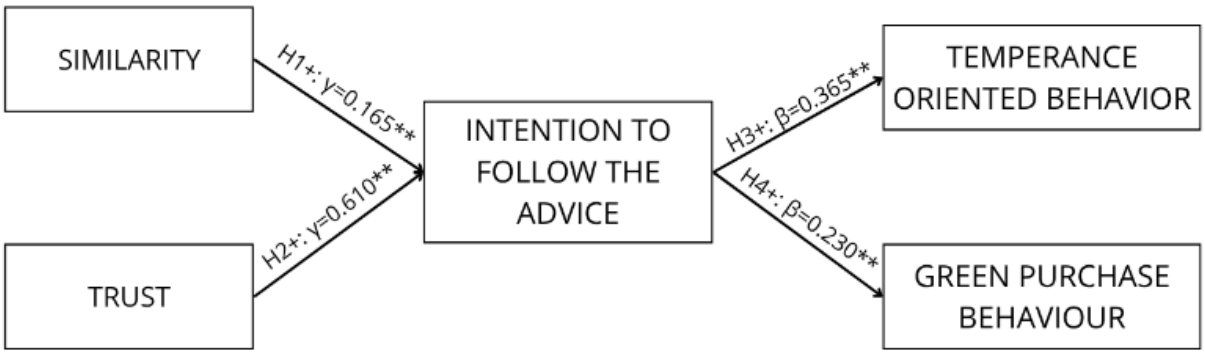
The initial sample consisted of 753 respondents. Following a thorough data cleaning process, participants were excluded if they (1) did not follow any greenfluencer or (2) failed the attention check included in the questionnaire. Based on these criteria, 500 valid questionnaires remained (92% Females, 2% Males, 1% non-binary, 2% nd; mean age = 35 years, min = 18 max = 69).

A large majority of participants followed greenfluencers who focused on sustainable lifestyles (89%) and creative recycling or zero waste practices (82%). Other popular topics included sustainable fashion (63%), environmental scientific dissemination and natural cuisine (60%), organic or biological food (59%) and natural cosmetics (43%). Interest in sustainable tourism was more marginal (22%).

### 4.2 Test of structural model

The results indicated an acceptable fit for the proposed model: $\chi^2 = 414.05$, df = 130, $p = 0.000$, CFI = 0.968, RMSEA = 0.071, GFI = 0.907, SRMR = 0.098. Examination of the path coefficients and t-values showed that both similarity and trust had a positive influence on intention to follow the advice

of a greenfluencer (β = 0.165, $p < 0.01$; β = 0.610, $p < 0.01$), thus supporting H1 and H2. In turn, intention to follow the advice had a significant effect on both temperance oriented behavior and green purchase behavior (β = 0.365, $p < 0.01$; β = 0.230, $p < 0.01$), supporting H3 and H4. Figure 1 visually illustrates the relationships among the constructs in the structural model.




$^{**}p < 0.01$

**Figure 1:** Research model and standard coefficients

## 5. Discussion

The present study aimed to enrich the literature on users' engagement with greenfluencers and explore the antecedents and consequences of the intention to follow their advice (McKnight et al., 2002). Moreover, starting from the dual influential role of greenfluencers, the interest was focused on the different types of advice consumers are more likely to follow: underconsumption (temperance) or purchasing green products.

First, the results showed that trust emerged as the most influential factor in shaping consumers' intention to follow the advice of greenfluencers, followed by similarity. Second, the intention to follow the advice positively and significantly affects both temperance oriented behavior and green purchase behavior. In particular, users are more likely to be influenced by de-influencing practices (underconsumption behavior) compared to the promotion of green purchasing. These results are highly relevant from both a theoretical and managerial perspective. From a theoretical standpoint, the study first confirms the importance of trust as an antecedent of the intention to follow greenfluencers' advice, thereby extending the existing literature (Pittman & Abell, 2021). Moreover, it introduces the role of perceived similarity as an additional antecedent of intention in greenfluencer context. Finally, the phenomenon of de-influencing, defined as the encouragement to reduce consumption to what is strictly necessary, emerges as a relevant and underexplored area warranting further investigation within consumer behavior and influencer marketing research (Ekvall & Mellberg, 2023).

From a managerial perspective, the study offers valuable insights for brands, content creators, and greenfluencers on how to optimize their communication and marketing strategies. Notably, promoting temperance oriented behaviors (i.e., consumption moderation) appears to be as relevant as promoting

green purchasing behaviors. This suggests that recent trends in online communication, such as de-influencing, can address consumers' growing sensitivity towards sustainable practices aimed at underconsumption. Therefore, green product promotion techniques can be effectively combined with de-influencing activities that should be an equally appropriate strategic lever for positively influencing sustainable consumption behaviors. Depending on the situation and the behavior to be encouraged, influencers and brands should closely monitor and adapt their strategies to this dual dynamic.

In synthesis, trust and perceived similarity are key to creating a bond with greenfluencers and encouraging users to rely on their advice. This can result in dual behavior: making responsible purchasing choices and exercising self-control to avoid unnecessary purchases. Despite the initial evidence produced, longitudinal studies may be useful to gain a better understanding of how this phenomenon evolves and its impact over time. Furthermore, focusing the analysis on specific sectors (e.g. clothing, cosmetics and food) could highlight differences in purchasing behavior patterns more effectively.

## References


Ajzen, I. (1991). The Theory of planned behavior. *Organizational Behavior and Human Decision Processes*.

Ballestar, M. T., Martín-Llaguno, M., & Sainz, J. (2022). An artificial intelligence analysis of climate-change influencers' marketing on Twitter. *Psychology & Marketing*, *39*(12), 2273-2283.

Bentley, K., Chu, C., Nistor, C., Pehlivan, E., & Yalcin, T. (2021). Social media engagement for global influencers. *Journal of Global Marketing*, *34*(3), 205-219.

Chang, C. (2011). Opinions from others like you: The role of perceived source similarity. *Media Psychology*, 14(4), 415-441.

Ekvall, M., & Mellberg, E. (2023). This is crap'Consumers' experience of de-influencing on TikTok. Interaction, 12(68)

Gerrath, M. H., Olya, H., Shah, Z., & Li, H. (2024). Virtual influencers and pro-environmental causes: the roles of message warmth and trust in experts. Journal of Business Research, 175, 114520.

Gupta, S., & Sheth, J. (2024). Mindful consumption: Its conception, measurement, and implications. Journal of the Academy of Marketing Science, 52(5), 1531-1549.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). Multivariate data analysis. Prentice Hall Upper.

Han, H. (2020). Theory of green purchase behavior (TGPB): A new theory for sustainable consumption of green hotel and green restaurant products. *Business strategy and the environment*, 29(6), 2815-2828.

Hudders, L., & Lou, C. (2023). The rosy world of influencer marketing? Its bright and dark sides, and future research recommendations. *International Journal of Advertising*, *42*(1), 151-161.

Johnstone, L., & Lindh, C. (2022). Sustainably sustaining (online) fashion consumption: Using influencers to promote sustainable (un) planned behaviour in Europe's millennials. *Journal of Retailing and Consumer Services*, 64, 102775.

Kapoor, P. S., Balaji, M. S., & Jiang, Y. (2023). Greenfluencers as agents of social change: The effectiveness of sponsored messages in driving sustainable consumption. *European Journal of Marketing*, 57(2), 533-561.

Kennedy, M. S., Ferrell, L. K., & LeClair, D. T. (2001). Consumers' trust of salesperson and manufacturer: an empirical study. *Journal of Business research*, 51(1), 73-86.

Kim, D. Y., & Kim, H. Y. (2021). Trust me, trust me not: A nuanced view of influencer marketing on social media. *Journal of Business Research*, 134, 223-232.

Kim, J., & Park, H. S. (2011). The effect of uniform virtual appearance on conformity intention: Social identity model of deindividuation effects and optimal distinctiveness theory. *Computers in Human Behavior*, *27*(3), 1223-1230.

König, S., & Maier, E. (2024). The effect of green influencer message characteristics: Framing, construal, and timing. *Psychology & Marketing*.

Lou, C., & Yuan, S. (2019). Influencer marketing: How message value and credibility affect consumer trust of branded content on social media. *Journal of interactive advertising*, *19*(1), 58-73.

McKnight, D. H., Choudhury, V., & Kacmar, C. (2002). The impact of initial consumer trust on intentions to transact with a web site: a trust building model. The journal of strategic information systems, 11(3-4), 297-323.

Moorman, C., Deshpande, R., & Zaltman, G. (1993). Factors affecting trust in market research relationships. *Journal of marketing*, *57*(1), 81-101.

Olbermann, Z., Mayer, F., & Schramm, H. (2024). Greenfluencing Through the Power of Emotions? Impact of Message Frames and Emotionally Matching Background Music on the Effectiveness of Influencers' Environmental Communication. *Social Media+ Society*, 10(2), 20563051241254381.

Pellegrino, A., & Shannon, R. (2021). Materialism's Influence on Unsustainable Consumption Across Social Networking Sites: A Systematic Review. *International Journal of Business and Economics Research*, *10*(4), 125.

Pellegrino, A., Abe, M., & Shannon, R. (2022). The dark side of social media: content effects on the relationship between materialism and consumption behaviors. *Frontiers in psychology*, *13*, 870614.

Pittman, M., & Abell, A. (2021). More trust in fewer followers: Diverging effects of popularity metrics and green orientation social media influencers. *Journal of Interactive Marketing*, 56(1), 70-82.

Roman, T., Bostan, I., Manolică, A., and Mitrica, I. (2015). Profile of green Consumers in Romania in Light of Sustainability Challenges and Opportunities. *Sustainability* 7 (6), 6394–6411.

Schouten, A. P., Janssen, L., & Verspaget, M. (2021). Celebrity vs. Influencer endorsements in advertising: the role of identification, credibility, and Product-Endorser fit. In *Leveraged marketing communications* (pp. 208-231). Routledge.

Townsend, S. (2024, February 25). The 'de-influencing' trend tackles overconsumption and its harm on the environment [Interview by S. Detrow]. *NPR*. Retrieved January 23, 2025, from The 'de-influencing' trend tackles overconsumption and its harm on the environment : NPR

# Growing Up Online: How Adultification Impacts the Engagement of Child Influencers on Social Media

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## Abstract

Child influencers are an increasingly prominent presence on social media, attracting millions of followers and forming partnerships with global brands from an early age. While their popularity raises ethical questions, their content remains highly engaging.

Drawing on the concept of *adultification* – the attribution of adult aesthetics to children – this study examines the engagement outcomes of such portrayals among top child influencers on Instagram. Using a large-scale dataset of 14,341 posts, manually annotated for adultification cues, we find that adultified portrayals (i.e., mature clothing, makeup, or adult-like poses) are associated with significantly higher engagement. However, this effect disappears when the post also includes more explicit signs of exploitation, such as the presence of brand sponsorships or adults. These findings contribute to ongoing conversations in influencer marketing and childhood online representations, revealing a troubling tension: while adultification may boost engagement metrics, it raises concerns about the commodification of childhood in digital spaces.

*Keywords: child influencers, adultification, social media engagement*

## 1. Context And Purpose

In the past decade, influencer marketing has transformed the landscape of digital communication, reshaping how consumers engage with brands and how firms generate revenues from their online presence (Beichert et al., 2024). While much of the scholarly focus has centred on adult influencers, recent years have witnessed the emergence of *child influencers*. They are defined as "children who have large followings on social media platforms which can come from a social media page for the child themself or the child's family" (Masterson, 2021). Despite platform policies technically prohibit users under 13, recent studies show that 40% of children in this age group are already active on Instagram (Business Insider, 2021). Moreover, social media platforms generate over $11 billion in annual advertising revenue from underage users (Raffoul et al., 2023). The growing presence of child-centred content has led to increasing concern about the ethical implications of exposing children to influencer culture. For instance, a research on parent influencers from Sarvan et al. (2025) revealed that posts

featuring children receive nearly twice as many likes as those without, highlighting their potential exploitation and the need to protect their privacy. Further validating this trend, survey data show that a majority of adults in the United States believe child influencers are being exploited by their guardians or commercial stakeholders (Statista, 2024).

A key issue in this debate relates to how children are visually portrayed online. Previous research in childhood studies has examined the phenomenon of *adultification*, a process through which children are presented in ways that mimic adult appearances, often involving mature clothing, makeup, hairstyle, and confident posing (e.g., Firinci Orman, 2020). These portrayals blur the line between childhood and adulthood, contributing to what scholars such as Postman (1982) and Tirocchi (2014) have described as the "disappearance of childhood".

While adultification has been examined in traditional media formats (e.g., Valtorta et al., 2023), its presence and implications in the influencer marketing landscape remain underexplored. In particular, little is known about whether such portrayals affect the social media performance of child influencers, and under what conditions. The present study aims to fill this gap by investigating how adultification influences engagement on Instagram, and how this relationship is moderated by contextual cues such as presence of promotional activities or adult involvement in the content. Figure 1 provides concrete examples of adultified portrayals of child influencers.



**Figure 1:** Examples of Adultified Child Influencers

## 2. Theoretical Background

The widespread use of the Internet and social media in daily life is increasingly eroding the boundaries between childhood and adulthood (Meyrowitz, 1985), contributing to emerging phenomena such as the adultification of child influencers. Adultification refers to the process by which children are depicted in ways that align with adult standards of appearance, including the use of bold makeup and adult hairstyles, mature clothing, and confident posing. Scholars have long observed how traditional media encourages such portrayals, particularly among young girls (O'Donohue et al., 1997; Firinci Orman, 2020). With the advent of social media, these patterns have intensified and gained new commercial dimensions, as child influencers become increasingly embedded in monetized digital ecosystems.

On one hand, adultified content may enhance engagement by making child influencers appear more entertaining and playful, traits that are often rewarded within the influencer economy (McShane et al., 2021). Furthermore, audiences may engage with adultified portrayals even when they recognize them as ethically problematic. In this regard, the Moral Disengagement Theory (MDT, Bandura, 1999) posits that individuals can cognitively detach from their internal moral standards in order to justify actions or support behaviours they might otherwise perceive as problematic. In this context, audiences may temporarily suppress ethical concerns about the portrayal of children to enjoy the entertainment value of the content.

On the other hand, adultification may undermine the perceived innocence and authenticity of child influencers, thus raising moral concerns. For instance, prior studies have shown that excessive self-branding or promotional activities can lead to decreased engagement (e.g., Tripp et al., 1994; Cheah et al., 2024), suggesting that adultification can have complex, context-dependent effects on audience responses. Indeed, we suggest that when adultification is accompanied by more explicit signs of exploitation – such as visible brand sponsorships or the presence of adults in the content – this suspension of moral judgment may no longer hold. Formally, we hypothesize that:

*H1: The presence of adultified portrayals of child influencers will generate higher social media engagement compared to non-adultified portrayals.*

*H2: The positive effect of adultification on engagement will be attenuated when the post includes the presence of brand sponsorship.*

*H3: The positive effect of adultification on engagement will be attenuated when the post includes the presence of adults.*

## 3. Field Study

*Method.* In February 2025, we collected data from top child influencer accounts on Instagram. Using listings from specialized agencies such as FeedSpot, we identified 63 accounts with a minimum of 100,000 followers. From these accounts, we gathered all content posted from 2020 onward, including media type, number of likes and comments, captions, and publication timestamps. For the analysis, we focused solely on image and video posts, excluding sidecar posts due to their mixed-media format and single aggregated engagement metric. The final dataset consisted of 14,341 posts. *Econometric models.* The main independent variable, adultification, was coded as a binary variable (1 = post with an adultified child influencer, 0 = post without an adultified child influencer) based on manual annotations conducted by a trained research assistant. Each post was evaluated to determine whether the child influencer exhibited adult-like characteristics in appearance (e.g., makeup, mature hairstyles, or age-inappropriate clothing) or behaviour (e.g., posing in ways typically associated with adult fashion models). In addition, the number of children depicted in the post, the presence of sponsorship, and the presence of adults were also manually annotated to serve as control variables in the analysis. We examined the effect of adultification on social media engagement using a series of regression models. The dependent variable, engagement, was calculated as the sum of likes and comments divided by the number of followers for each account. To address heteroskedasticity, confirmed by the BreuschPagan test, all models were estimated using robust standard errors. In the initial OLS model without control variables, adultification showed a positive and statistically significant effect on engagement ($b$ = .045, $SE$ = .006, $t$ = 8.15, $p$ < .001). In a subsequent model, we introduced fixed effects for Instagram usernames to control for individual characteristics of each child influencer. The effect of adultification remained positive and significant ($b$ = .028, $SE$ = .006, $t$ = 4.85, $p$ < .001). In a third model, we added a comprehensive set of control variables, including post type (video vs. image), number of children

featured, presence of adults, presence of sponsorship, and time fixed effects at the year, month, and day levels (Kanuri et al., 2018). The positive effect of adultification on engagement remained robust and statistically significant ($b$ = .027, $SE$ = .006, $t$ = 4.88, $p$ < .001).

*Robustness tests*. To test the robustness of our findings, we estimated alternative model specifications. First, we used the total number of likes and comments as the dependent variable, including the number of followers as a control. The positive effect of adultification remained significant ($b$ = 18,041.58, $SE$ = 2,232.5, $t$ = 8.08, $p$ < .001). Additionally, we employed a negative binomial regression to account for the count nature of the engagement data. This model produced consistent results ($b$ = .548, $SE$ = .066, $z$ = 8.26, $p$ < .001), further confirming the reliability of our findings.

*Interaction effects*. In a sixth model, we examined the interaction between adultification and the presence of sponsorship and found a significant negative interaction effect ($b$ = –.039, $SE$ = .012, $t$ = –3.17, $p$ = .002). Specifically, adultification positively influenced engagement when no sponsorship was present ($b$ = .030, $SE$ = .006, $t$ = 5.03, $p$ < .001), but this effect became non-significant when the post involved sponsorship ($b$ = –.009, $SE$ = .011, $t$ = –.84, $p$ = .403). We observed a similar pattern when testing the interaction between adultification and adult presence. The interaction was significant ($b$ = –.030, $SE$ = .009, $t$ = –3.5, $p$ < .001), indicating that adultification increased engagement in posts without adults ($b$ = .032, $SE$ = .006, $t$ = 5.30, $p$ < .001), whereas the effect disappeared when adults were present ($b$ = .002, $SE$ = .008, $t$ = .28, $p$ = .78).

*Discussion*. Across all model specifications, posts featuring adultified child influencers consistently generate higher engagement compared to with featuring non-adultified children. This effect remains robust after controlling for account-level characteristics, time fixed effects, and other relevant covariates. However, the presence of sponsorship or adults in the post moderates this relationship, nullifying the positive impact of adultification on engagement.

## 4. Contributions And Implications

This research offers two main contributions. First, it advances the influencer marketing literature by identifying adultification as a critical factor driving engagement in child influencer content. While previous studies have examined the effectiveness of adult influencers (e.g., Leung et al., 2022), we focus on an unconventional yet relevant category of influencers, showing that adultified portrayals can increase audience engagement. Second, we contribute to the literature on childhood studies (e.g., Calvert, 2008; Sigirci et al., 2022) by empirically demonstrating how adultification functions as a commercial strategy within the digital economy.

Furthermore, this research offers important ethical and practical implications for brands and content creators operating in the child influencer industry. While adultified portrayals can increase engagement, our findings also suggest that this effect disappears when signs of potential exploitation become salient (such as the presence of brand sponsorships or adult involvement), indicating a threshold beyond which audiences may perceive the content as morally concerning rather than entertaining. For marketers, this underscores the importance of carefully framing sponsored content to avoid triggering perceptions of exploitation. Likewise, content creators and guardians should be mindful to minimize overt adult presence in posts.

## Key References (the full list is available upon request)

Bandura, A. (1999). Moral disengagement in the perpetration of inhumanities. *Personality and Social Psychology Review*, 3, 193–209.

Beichert, M., Bayerl, A., Goldenberg, J., & Lanz, A. (2024). Revenue generation through influencer marketing. *Journal of Marketing*, *88*(4), 40-63.

Calvert, S. L. (2008). Children as consumers: Advertising and marketing. *The future of children*, 205-234.

Firinci Orman, T. (2020). Adultization and blurring the boundaries of childhood in the late modern era. *Global Studies of Childhood*, 10(2), 106-119.

Leung, F. F., Gu, F. F., & Palmatier, R. W. (2022). Online influencer marketing. *Journal of the Academy of Marketing Science*, 1-26.

Masterson, M. A. (2021). "When Play Becomes Work: Child Labor Laws in the Era of "Kidfluencers"," *169 University of Pennsylvania Law Review 2*.

McShane, Lindsay, Ethan Pancer, Maxwell Poole, and Qi Deng. "Emoji, playfulness, and brand engagement on twitter." *Journal of Interactive Marketing*, 53, no. 1 (2021): 96-110.

Meyrowitz, J. (1986). No sense of place: The impact of electronic media on social behavior. *Oxford University Press.*

Postman, N. (1982). *The Disappearance of Childhood*. New York: Delacorte Press. Raffoul, A., Ward, Z. J., Santoso, M., Kavanaugh, J. R., & Austin, S. B. (2023). Social media platforms generate billions of dollars in revenue from US youth: Findings from a simulated revenue model. *Plos one,* 18(12), e0295337.

Sigirci, O., Gegez, A. E., Aytimur, H., & Gegez, E. E. (2022). Children in marketing: A review, synthesis and research agenda. *International Journal of Consumer Studies*, 46(5), 1594-1639.

Statista (2024). *U.S. adults on the exploitation of children influencers 2023*. Retrieved from https://www.statista.com/statistics/1372764/us-adults-on-child-social-mediainfluencers/

Tirocchi, S. (2014). Media Representations of the 'New'Childhoods: From Mass Media to Digital Environment. *Interdisciplinary Journal of Family Studies*, 19(1), 6076.

Tripp, C., Jensen, T. D., & Carlson, L. (1994). The effects of multiple product endorsements by celebrities on consumers' attitudes and intentions. *Journal of Consumer Research*, *20*(4), 535-547.

Valtorta, R.R., Baldissarri, C., Raguso, G. *et al.* Gender Stereotypes and Sexualization in Italian Children's Television Advertisements. *Sexuality & Culture,* 27, 1625–1645 (2023).

# Sconsigliare si! ma non troppo! Il ruolo della credibilità e omofilia sullo user engagement e l'influencer purpose nel fenomeno del deinfluencing

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## Abstract

Il fenomeno del deinfluencing ha preso piede negli ultimi anni assumendo forme e connotati differenti nel contesto dei social network. Il deinfluencer nasce come conseguenza dell'influencer marketing con l'obiettivo di scoraggiare consumi inutili ed eccessivi all'insegna del risparmio e dell'austerità. Nonostante la letteratura inizi a studiare il fenomeno, poco si sa ancora sulle conseguenze del deinfluencing sul coinvolgimento, sulla percezione dell'influencer purpose e sull'adozione delle informazioni con riferimento alle differenti tipologie di deinfluencer. L'obiettivo del paper è quello di investigare gli effetti congiunti che la qualità dei contenuti, la credibilità, e l'omofilia possono esercitare sull'engagement e la percezione dell'influencer purpose. Inoltre, la ricerca esamina l'influenza esercitata da queste ultime due variabili sulle intenzioni di seguire i suggerimenti del deinfluencer. Un modello di equazione strutturale e un modello di moderazione su un campione di 177 individui dimostra che la credibilità del deinfluencer impatta positivamente sull'engagement solo quando l'influencer resta autentico alla sua missione di "influenzare" e quindi quando utilizza il deinfluencing solo come un'estensione etica del suo ruolo. Mentre l'omofilia non impatta sull'engagement quando il deinfluencer utilizza il deinfluencing come una strategia volta a promuovere altri prodotti. L'engagement attivato dalla qualità del contenuto e il purpose attivato anche dalla credibilità e dal senso di omofilia con il deinfluencer sono in grado di spingere il consumatore ad adottare i suggerimenti che sconsigliano di comprare prodotti/servizi.

*Keyword: deinfluencing, purpose, omofilia, credibilità, follower engagement*

## 1. Background

L'abnorme uso di contenuti sponsorizzati ha determinato, conseguentemente, l'emergere di una sorta di "contro-movimento": il De-influencing. Tale fenomeno, che ha fatto la sua comparsa ed ha trovato da subito terreno fertile sulla piattaforma TikTok, risulta essere una forma di risposta critica e consapevole data dagli influencer e dai consumatori a quelle che sono le dinamiche meno chiare dell'influencer marketing (The Guardian, 2023). Il De-influencing si esplicita, dunque, in un atto comunicativo dissuasivo, finalizzato a scoraggiare l'acquisto di determinati prodotti o servizi, talora ritenuti inutili, sopravvalutati o dannosi, e a promuovere un consumo etico, trasparente e autentico.

La contrapposizione tra influencing e de-influencing, pur tuttavia, non deve essere interpretata come una separazione netta, piuttosto come le due facce di una stessa medaglia. In molti casi, infatti, il de-influencing non si manifesta in un rigetto assoluto del consumo, ma in una revisione del concetto stesso di valore. È per tale ragione, per esempio, che frequentemente dei creator sconsigliano l'acquisto di prodotti di tendenza nonostante siano influencer e come tale "promotori" di prodotti e servizi sponsorizzati oppure promuovano alternative più accessibili, funzionali o sostenibili Belanche et al., 2023). Questa modalità d'azione mette in risalto una crescente sensibilità nei confronti dell'etica del consumo e della responsabilità sociale dell'influencer e, sotto questo profilo, il de-influencing può anche essere interpretato come una strategia evolutiva in seno al personal branding. Riuscire a posizionarsi come influencer "etico", in grado di schivare le logiche della sponsorizzazione acritica e del profitto immediato, può aumentare la credibility e rafforzare l'engagement con la propria community (De Veirman et al., 2023). Alcuni autori sottolineano l'ambiguità delfenomeno perchè, come osservano Scott e Smith (2023), è possibile che il de-influencing venga risucchiato dalla stessa logica commerciale che intende criticare, divenendo una forma di anti-marketing funzionale al sistema capitalistico (Scott et al., 2023).

Il de-influencing, dunque, diventa un nodo cruciale nell'interpretazione dell'evoluzione delle dinamiche comunicative nell'attuale panorama digitale. Nonostante sia innegabile il suo ruolo di risposta critica all'eccesso di consumo e alla promozione indiscriminata dei brand, pur tuttavia pone interrogativi di rilievo riguardo la credibilità, le finalità sociali, l'empatia e l'effettiva capacità trasformativa degli influencer nella relazione con i suoi follower.

La qualità della scrittura incide sulla percezione di affidabilità dei post da parte dei follower. Informazioni credibili, come esperienze personali o contenuti ben curati, possono influenzare le scelte dei turisti leisure (e.g. Choi e Lee, 2021). La qualità del contenuto ha un impatto positivo sull'engagement e sul divertimento dei follower (Sarmiento Guerde et al., 2021), oltre a favorire la fiducia e la credibilità dell'influencer (Duffy e King, 2020). Si ipotizza, quindi, che una maggiore qualità informativa migliori la percezione di credibilità del travel influencer e il coinvolgimento della sua community.

L'engagement è un fattore che attiva la relazione tra consumatore e brand (e.g. Hollebeek et al., 2014). La letteratura evidenzia un effetto positivo tra user engagement e intenzione dei follower di seguire i consigli dell'influencer (Wang, 2012). Si ipotizza quindi che un maggiore coinvolgimento rafforzi il legame con l'influencer, favorendo l'adozione delle informazioni e la continuazione del rapporto (blog e suggerimenti inclusi).

La credibilità dell'influencer è in grado di influenzare positivamente le intenzioni future del follower soprattutto quando il follower risulta soddisfatto e divertito (Choi e Lee, 2021; Hsiao et al., 2013). È stato confermato che, quando il follower percepisce l'influencer come altamente credibile, allora ci sarà un atteggiamento positivo nei loro confronti (Lee e Eastin, 2020). Partendo da tali evidenze e al fine di contribuire alla conoscenza della credibilità dei travel influencer sugli atteggiamenti dei followers, si formulano le seguenti ipotesi.

## 2. Metodology

Il modello di ricerca proposto mira a verificare l'ipotesi di fondo secondo la quale l'omofilia dei follower, la qualità delle informazioni postate, e la credibilità del deinfluencer esercitano un impatto

positivo sull'intenzione di adottare l'informazione condivisa dal deinfluencer (information adoption) e questo grazie alle finalità morali del deinfluencer (purpose) e al coinvolgimento suscitato (user engagement) presso la community di riferimento. Dal punto di vista strutturale, il modello mette in relazione sei costrutti: a) homofilia, che si riferisce al fenomeno per cui le persone tendono a interagire e formare legami più frequentemente con individui che percepiscono come simili a loro per atteggiamenti, valori, background o caratteristiche (Lou and Kim, 2019); b) argument quality, ovvero la percezione da parte del target che il contenuto dei post sia fortemente o debolmente persuasivo (Filieri e McLeary, 2013); c) influencer credibility, intesa come la capacità del deinfluencer di essere percepito affidabile ed esperto su una specifica tematica (Cosenza et al., 2015); e) user engagement, definibile come il livello di coinvolgimento cognitivo, emotivo e comportamentale che il follower ha nei confronti dell'attività dell'influencer (Shiau e Luo, 2013); perceived purpose, riferito alla percezione del follower che l'influencer sia spinto da una genuina aspirazione a contribuire positivamente alla società, un'intenzione che guida le sue decisioni e funge da fonte di ispirazione nelle sue azioni quotidiane (Jasinenko & Steuber, 2023); f) information adoption, interpretabile in termini di accettazione, e successivo utilizzo, da parte del follower, dell'informazione veicolata dall'influencer dopo averne valutato intenzionalmente la validità (Riquelme e Saeid, 2014). Inoltre il modello misura l'effetto moderatore della preferenza per una tipologia di deinfluencer sulle relazioni sopra menzionate.

Per perseguire gli obiettivi conoscitivi dello studio è stato somministrato un questionario strutturato online a un campione di 177 utenti. Il questionario è stato veicolato per l'auto-somministrazione attraverso la pubblicazione di un post informativo su alcuni profili di diversi social network. La raccolta dei dati si è svolta nel periodo Marzo-Maggio 2025.

Dopo aver fatto vedere tre video differenti di tre diverse tipologie di deinfluencer (deinfluencer puro, influencer che usa il deinfluencing ogni tanto solo come estensione etica del suo ruolo, deinfluencer con scopi commerciali che sconsiglia prodotti con la finalità di consigliarne altri), è stato chiesto all'intervistato quale deinfluencer lo rappresentava di più. Le variabili strutturali sono state misurate attraverso scale sviluppate e validate dalla letteratura scientifica. Le risposte a ciascun item sono state misurate su scala di accordo autoancorata (da 1= fortemente in disaccordo a 7= fortemente d'accordo).

L'analisi del modello di misurazione, in aggiunta all'Alpha di Cronbach, ha dimostrato la validità dei costrutti e l'affidabilità delle scale ($\alpha > 0{,}90$) (Nunnally, 1978). Il modello di equazione strutturale (SEM) riporta buoni fit degli indici. ($\chi 2 = 271$; df= 158; $p < 0{,}001$; CFI= 0,987; RMSEA= 0,064; RMSEA p=0.041; NNFI= 0,999; SRMR= 0,045) e tutti i parametri delle variabili osservate sono risultati significativi. I valori di average variance extracted (AVE) e composite reliability (CR) superano le soglie raccomandate, rispettivamente, di 0,50 (Fornell e Larcker, 1981) e 0,70 (Steenkamp e Van Trijp, 1991).

## 3. Preliminary results

I risultati dimostrano come la qualità delle informazioni fornite dal deinfluencer influenza l'engagement e la purpose percepita. In altre parole, maggiore è la qualità riconosciuta alle informazioni ricevute e maggiore è il grado di engagement attribuito al deinfluencer ($\beta = 0{,}428$; $p < 0{,}01$) e alla percezione del suo purpose che l'utente percepisce dai contenuti prodotti dal deinfluencer ($\beta = 0{,}263$; $p < 0{,}01$). Le ipotesi H2a, H2b risultano supportate. Parallelamente, emerge una relazione positiva e significativa tra l'omofilia e la purpose attribuita al deinfluencer ($\beta = 0{,}401$; $p < 0{,}01$) mentre la relazione non risulta significativa tra omofilia e user engagement ($\beta = 0{,}770$; $p < 0{,}01$). Pertanto l'ipotesi H1a è supportata e la H1b risulta non supportata. Al contrario, la credibilità del deinfluencer se da una parte influenza positivamente la purpose percepita ($\beta = 0{,}158$; $p < 0{,}05$) confermando l'ipotesi H3a, esercita un impatto significativo ma negativo sull'engagement, non supportando del tutto l'ipotesi H3b. Il purpose

percepito del deinfluencer ha un effetto positivo sul coinvolgimento (β= 0,627; p < 0,01) confermando l'ipotesi H4. Da ultimo e d'accordo con quanto ipotizzato nelle ipotesi H5a e H5b, l'intenzione di continuare ad affidarsi in futuro alle indicazioni fornite dal deinfluencer per pianificare i propri acquisti è direttamente e positivamente influenzata dalle due dimensioni perceived influencer purpose (β= 0,379; p < 0,01) e, con maggiore intensità, dallo user engagement (β= 0,543; p < 0,01).

Il modello di moderazione misurato ha dimostrato che l'identificazione verso una differente tipologia di deinfluencer modera la relazione tra credibility ed engagement e spiega l'assenza di relazione tra omofilia ed engagement. In particolar modo si nota che, mentre l'effetto della credibilità del deinfluencer sull'engagement è debole per chi si identifica con il deinfluencer a scopi commerciali (coeff=-0,45; p <0,01), l'effetto dell'omofilia sullo user engagement è positiva solo quando lo user si riconosce nell'influencer che adotta il deinfluencing ogni tanto come un'estensione etica del suo ruolo) (coeff=0,02; p <0,01).

## 4. Conclusioni e implicazioni

La ricerca estende la conoscenza sul deinfluencing tenendo in considerazione le multi-sfaccettature del fenomeno e dimostra come la credibilità continua ad essere un fattore imprescindibile quando l'influencer non usa il deinfluencing come strategia di comunicazione o di vendita. In quest'ultimo caso, infatti, esso non è in grado di attivare l'engagement. Un altro elemento che contribuisce alla conoscenza sul deinfluencing è l'importanza ricoperta dal perceived influencer purpose nell'attivare l'engagement e le intenzioni comportamentali. Ad oggi il purpose era stato studiato per lo più in ambito manageriale ma è di fatto, come la ricerca dimostra, un fattore imprescindibile per garantire che il follower segua i suggerimenti del deinfluencer. Questa ricerca invece offre nuance interessanti sul ruolo che esso può avere sulle finalità di comunicazione veicolate attraverso i media. Inoltre, la ricerca estende la letteratura sui fattori che attivano lo user engagement nell'ambito dell'influencer marketing dimostrando il ruolo positivo del purpose nella relazione follower-deinfluencer. Dal punto di vista manageriale gli influencer dovrebbero usare con parsimonia la strategia del deinfluencing poiché essa potrebbe non attivare l'empatia e di conseguenza l'engagement dei follower. Dall'altro lato se il deinfluencer non è percepito come credibile è possibile che esso produca effetti inversi come apatia o evitamento. Le aziende pertanto devono attenzionare il modo con la quale producono i contenuti sui social anche per mezzo degli influencer soprattutto se questi sfruttano il paragone con altri prodotti concorrenti per elicitare risposte comportamentali nel consumatore.

## References


The Guardian (2023), "Tiktok's De-Influencing Trend Shows People Are Sick Of Fake Endorsements" By Mahdawi, A., 2023, The Guardian.

Belanche, D., Casaló, L. V., Flavián, C., & Ibáñez-Sánchez, S. (2023), "Deinfluencing On Tiktok: When Anti-Marketing Shapes Consumer Decisions", Journal Of Business

Research, 162, 1-15

Choi H.Y., Lee Y.K. (2021), "The Influence Of Travel Blog Quality On User Satisfaction And Intention To Revisit", Nveo – Natural Volatiles And Essential Oils Journal, 8(4), 848-861. Cosenza T.C., Solomon M.R., Kwon W.S. (2015), "Credibility In The Blogosphere: A Study Of Measurement And Influence Of Wine Blogs As An Information Source", Journal Of Consumer Behaviour, 14(2), 71-91.

De Veirman, M., Hudders, L., & Nelson, M. R., (2023), "From Influencing To Deinfluencing: Rethinking The Role Of Influencers In Responsible Consumption", Journal Of Advertising, 52(1), 1–16.

Duffy A., Kang H.Y.P. (2020), "Follow Me, I'm Famous: Travel Bloggers'selfmediated Performances Of Everyday Exoticism", Media, Culture And Society, 42(2), 172-190.

Filieri R., Mcleay F. (2013), "Online Consumer Reviews… Why Do We Adopt Them?",

Academy Of Marketing Annual Conference: Marketing Relevance, 8-11 July 2013, Cardiff, Wales Fornell, C., & Larcker, D. F. (1981). Evaluating Structural Equation Models With Unobservable Variables And Measurement Error. Journal Of Marketing Research, 18(1), 39-50. Jasinenko, A., & Steuber, J. (2023), "Perceived Organizational Purpose: Systematic Literature Review, Construct Definition, Measurement And Potential Employee Outcomes". Journal Of Management Studies, 60(6), 1415-1447.

Lee J.A., Eastin M.S. (2020), "I Like What She's #Endorsing: The Impact Of Female Social

Media Influencers' Perceived Sincerity, Consumer Envy, And Product Type", Journal Of

Interactive Advertising, 20(1), 76-91

Lou, C., & Kim, H. K. (2019). Fancying The New Rich And Famous? Explicating The Roles Of Influencer Content, Credibility, And Parental Mediation In Adolescents' Parasocial Relationship, Materialism, And Purchase Intentions. Frontiers In Psychology, 10, 2567.

Mayer, C. (2021). The Future Of The Corporation And The Economics Of Purpose. Journal Of Management Studies, 58(3), 887-901.

Riquelme H.E., Saeid M.H. (2014), "What Drives Readers To Follow Recommendations From Bloggers?" World Business Institute Conference Proceedings, London, Paper, N. 528

Sarmiento Guede J.R., De Esteban Curiel J., Antonovica A. (2021), "Increase The Influence Of The Travel Video Bloggers By Using Youtube To Sell Trips Indirectly Through Relationship Marketing And Service Quality Online", Cuadernos De Gestion, 21(1), 75-87.

Shiau W.L., Luo M.M. (2013), "Continuance Intention Of Blog Users: The Impact Of Perceived Enjoyment, Habit, User Involvement And Blogging Time", Behaviour &Information Technology,

32(6), 570-583

Scott, D. M., & Smith, J. A. (2023), "Anti-Marketing Or Rebranded Capitalism? The Paradox Of Authenticity In Influencer Culture", Critical Studies In Media Communication, 40(2), 129–144.

# When Advertising Speaks Honestly: The Role of AI Usage Declaration in Shaping Consumer Perception and Behavior

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## Abstract

This study examines how disclosing the use of Generative AI in social media advertising influences consumer perceptions and engagement. Based on the Persuasion Knowledge Model, two experiments tested the effects of AI disclosure on ad credibility, language comprehension, and users' willingness to like or share the ad. Study 1 (N=230) found that declaring AI use improves perceived credibility and comprehension. Study 2 (N=324) confirmed these effects across product categories and showed that AI disclosure boosts engagement intentions. Mediation analyses revealed that perceived credibility fully explains the link between AI disclosure and consumer engagement. These findings highlight transparency as a key factor in enhancing consumer trust and behavioral responses in digital advertising. The results align with regulatory initiatives advocating for AI disclosure, showing that transparency not only supports ethical communication but also drives strategic benefits.

*Keywords: Artificial Intelligence; Advertising Credibility; Consumer Engagement; Generative AI; Social Media Advertising*

### 1. Introduction and Hypotheses Development

The increasing digitalization of firms, combined with widespread social media use, has made platforms, like Instagram and TikTok, central to advertising strategies. As users spend over two hours daily on these platforms, brands are leveraging them for consumer engagement.

Within this context, Artificial Intelligence—especially Generative AI (gen-AI)—is transforming marketing by autonomously creating content once produced by humans. While gen-AI enhances efficiency and personalization, its integration into advertising also raises concerns about transparency and content authenticity. Although gen-AI tools enhance efficiency, they also introduce ethical challenges. The risk of deceiving consumers through AI-generated content has raised concerns about trust in advertising. Campbell et al. (2022) highlight the growing relevance of transparency in AI-driven communication. Additionally, the emergence of technologies like deepfakes has led to regulatory and industry responses. The Coalition for Content Provenance and Authenticity (C2PA)[22], for example, developed a digital watermarking tool—the "Content Credentials" icon (CR)—which enables users to verify the origin of AI-generated content. In parallel, legal initiatives, such as the U.S. "AI Disclosure Act of 2023",[23] propose mandatory disclaimers for AI outputs, aiming to ensure accountability and consumer awareness.

Despite these developments, little empirical research has addressed how AI disclosure influences consumer perceptions and attitude. This study aims to fill that gap by examining the psychological impact of declaring AI involvement in the creation of social media advertisements. It focuses on perceived advertising credibility and language comprehension as key outcomes of transparency. To

22 https://c2pa.org/

23 https://www.ilsoftware.it/adobe-lancia-un-nuovo-logo-per-taggare-le-immagini-generate-con-lia/

frame this investigation, the study adopts the Persuasion Knowledge Model (Friestad & Wright, 1994), which argues that consumers develop knowledge of persuasive intent over time and use this knowledge to interpret marketing messages. When they recognize attempts at manipulation, they tend to resist persuasion efforts.

In the context of AI-generated ads, transparency can produce varied effects. On one hand, some studies indicate that disclosing the use of AI may reduce perceived credibility and weaken the ad's persuasive impact (Kietzmann et al., 2021; Campbell et al., 2022). On the other, recent evidence shows that context and content framing play a moderating role: when AI-generated content serves functional purposes and is clearly presented, disclosure does not necessarily harm consumer attitudes (Kirkby et al., 2023; Kim et al., 2021). These mixed findings point to the need for further research on how AI disclosure influences advertising effectiveness in specific contexts.

Two constructs are central to understanding consumer responses to advertising: perceived credibility and language comprehension. Advertising perceived as credible is more persuasive (MacKenzie & Lutz, 1989; Eisend, 2006), and clear, well-adapted language enhances message processing and retention (Puntoni et al., 2009). From the Source Credibility Theory perspective (Fogg et al., 2001), AI itself can act as a credible source when transparently presented, influencing consumers' trust and reactions (Khan & Mishra, 2024). Moreover, genAI's ability to tailor language may improve comprehension—especially when its use is clearly disclosed (Gao et al., 2023; Al Tawalbeh et al., 2024).

Beyond these cognitive aspects, transparency may also influence behavioral outcomes, such as consumers' willingness to like or share ads. Honest communication fosters engagement (Berger & Milkman, 2012; Suraña-Sánchez & Aramendia-Muneta, 2024), whereas concealed AI use may trigger skepticism and reduce interaction. Within this framework, perceived advertising credibility may act as a mediator, linking AI disclosure to engagement. Prior studies demonstrate that credible content promotes user interaction and behavioral intentions (Soh et al., 2009; Appel et al., 2020; Xiao et al., 2018), suggesting that AI transparency could foster positive engagement through enhanced trust. Based on these considerations, the study formulates the following hypotheses:

***$H_1$:*** *Declaring the use of AI (vs. not declaring it) in the creation of advertising positively influences consumers' perception of advertising credibility.*

***H2:*** *Declaring the use of AI (vs. not declaring it) positively influences consumers' comprehension of the advertising's language.*

***H3:*** *Declaring the use of AI (vs. not declaring it) positively influences consumers' a) willingness to like and b) willingness to share the advertising.*

***H4:*** *The effect of declaring the use of AI (vs. not declaring it) on consumers' a) willingness to like and b) willingness to share the advertising is mediated by perceived advertising credibility.*

## 2. Methodology and results

We conducted 2 experimental studies. Study 1 aimed to test whether the AI's use declaration affects the credibility and the language comprehension of the advertising. The use of AI (not declared vs. declared) was manipulated in a between-subjects design, holding constant all other elements in social

media advertising[24]. Study 2 aimed to obtain additional support for the previous results, by providing evidence of the generalizability of the proposed effect against a different product category[25], and to test the effects of AI's use declared (vs. not declared) on consumers' dispositions, such as willingness to like and willingness to share the advertising. Advertising credibility was captured by three 7-point items (Kim et al., 2017;

Study 1 α=.88; Study 2 α=.86); while advertising language comprehension was captured by three 7-point items (Lin & Wang, 2016; Study 1 α=.80; Study 2 α=.80). In Study 2, user's willingness to like and to share the advertising were captured, respectively, by a 7-point item ("To what extent are you willing to put "like" at this advertising?", and "To what extent are you willing to put share this advertising?"), both ranking from 1 "At all" to 7 "Very much".

Two hundred and thirty Italian users (50.4% females; $M_{age}$=26.50; $SD_{age}$=6.80) took part in Study 1 and were randomly assigned to one of the two conditions. Results of a first oneway ANOVA showed that the advertising credibility was significantly higher in the case of AI'use declared compared to not declared ($M_{AIdeclared}$=4.225, SD=1.49; $M_{AInotdeclared}$=3.554, SD=1.323; F(1, 228)=12.94, p < .000). Results of a second one-way ANOVA showed that the advertising language comprehension was significantly higher in the case of AI'use declared compared to not declared ($M_{AIdeclared}$=4.296, SD=1.208; $M_{AInotdeclared}$=3.747, SD=1.186; F(1, 228)=12.05, p < .000). Overall, these findings provide support for the effect of AI's use declared (vs. not declared) on consumers' perception of advertising credibility and consumers' attitude toward the advertising language comprehension.

Three hundred and twenty-four Italian users (58.3% females; $M_{age=}$25.94; $SD_{age}$=7.12) took part in Study 2 and were randomly assigned to one of the four conditions in a 2 (AI's use: not declared vs. declared) by 2 (product category: wine vs. body wash) between-subjects design. Results of a first two-way ANOVA on advertising credibility with the use of AI (not declared vs. declared) and product category (wine vs. body wash) as between-subject factors confirmed a significant main effect of AI's use ($M_{AIdeclared}$=4.227, SD=.106; $M_{AInotdeclared}$=3.699, SD=.107; F(1, 320)=12.36, p <,000). The results also showed a significant main effect of the product category ($M_{Wine}$=4.14, SD=.107; $M_{BodyWash}$=3.787, SD=.106; F(1, 320)=5.51, p =.019). Finally, no significant interaction effect between AI's use and product category was found (F(1, 320)=.028, p =.866). Results of a second two-way ANOVA on advertising language comprehension with the use of AI (not declared vs. declared) and product category (wine vs. body wash) as between-subject factors confirmed a significant main effect of AI's use ($M_{AIdeclared}$=4.379, SD=.090; $M_{AInotdeclared}$=3.869, SD=.091; F(1, 320)=15.867, p < .000). They also showed a significant effect of the product category ($M_{Wine}$=4.298, SD=.091; $M_{BodyWash=}$3.95, SD=.090; F(1, 320)=7.391, p =.007). No significant interaction effect between AI's use and product category was found (F(1, 320)=.884, p =.348). Overall, these findings suggest that the effect of AI's use declared (vs. not declared) on consumer perception of advertising credibility and consumer attitude toward the advertising language comprehension holds regardless of the product category, then provide preliminary evidence of the generalizability of the proposed effects.

24 The stimulus consisted of an Instagram advertisement for a wine product, entirely generated using AI tools—ChatGPT for the text and DeepAI for the visual. The manipulation of AI disclosure (declared *vs.* not declared) was implemented by adding two labels in the declared condition: a "created with AI" logo on the bottom right of the image, and a "Content created with Artificial Intelligence" note at the end of the ad's text. (see Appendix).

25 Body wash. The use of AI (not declared *vs.* declared) was manipulated as in Study 1.

Finally, we tested the user's dispositions (i.e., willingness to like and willingness to share the advertising). Results of a first two-way ANOVA on willingness to like the avd, with the use of AI (not declared vs. declared) and product category (wine vs. body wash) as betweensubject factors showed a significant main effect of AI's use ($M_{AIdeclared}$=3.658, SD=,146; $M_{AInotdeclared}$=3.122, SD=.146; F(1, 320)=6.741, p=.01). The results also showed a significant main effect of the product category ($M_{Wine}$=3.733, SD=.146; $M_{BodyWash}$=3.007, SD=.146; F(1, 320)=13.752, p=.000). Finally, no significant interaction effect between AI's use and product category was found (F(1, 320)=.011, p=.915).

Results of a second two-way ANOVA on willingness to share the advertising, with the use of AI (not declared vs. declared) and product category (wine vs. body wash) as betweensubject factors confirmed a significant main effect of AI's use ($M_{AIdeclared}$=2.67, SD=.129; $M_{AInotdeclared}$=2.288, SD=.130; F(1, 320)=4.365, p=.037). The results also showed a significant main effect of the product category ($M_{Wine}$=2.774, SD=.130; $M_{BodyWash}$=2.183, SD=.129; F(1, 320)=10.437, p=.001). Finally, no significant interaction effect between AI's use and product category was found (F(1, 320)=.003, p=.956). Overall, these findings indicate that users are more willing to like and share the advertising when the use of AI is declared.

To test whether the effect of declaring AI usage in advertising influences consumers' engagement disposition (i.e., willingness to like and to share the advertisement) through the mediator perceived advertising credibility, two separate mediation models were conducted using PROCESS Model 4 (Hayes, 2018). Each model used 5,000 bootstrap samples with 95% bias-corrected confidence intervals. In both models, the independent variable (AI disclosure *vs.* no disclosure) significantly predicted the mediator. Specifically, AI disclosure led to higher levels of perceived advertising credibility (β=.5066, p=.0009, 95% CI [.2098; .8035]).

For the first model, where the dependent variable was consumers' willingness to like the advertisement, perceived advertising credibility was a significant predictor of liking behavior (β=.7764, p<.001, 95% CI [.6496; .9032]). The direct effect of AI disclosure on liking was not significant (β=.0957, p=.5904, 95% CI [–.2536; .4449]), while the indirect effect through perceived credibility was statistically significant (indirect effect=.3934, BootSE=.1196, 95% BootCI [.1636; .6352]). These results indicate that perceived credibility fully mediates the effect of AI disclosure on willingness to like the advertising.

For the second model, in which the outcome was willingness to share the advertisement, perceived credibility again significantly predicted the outcome (β=.6865, p<.001, 95% CI [.5749; .7981]). As with the previous model, the direct effect of AI disclosure on sharing was not significant (β=–.0019, p=.9905, 95% CI [–.3093; .3056]), but the indirect effect through perceived credibility was again significant (indirect effect=.3478, BootSE=.1090, 95% BootCI [.1393; .5719]).

Taken together, these findings provide robust support for $H_4$, demonstrating that the positive effect of AI disclosure on consumer engagement—both in terms of liking and sharing—is fully mediated by the perceived credibility of the advertising. This suggests that credibility serves as a crucial mechanism through which transparency in AI usage influences behavioral responses.

## 3. Conclusion and implications

The findings of this research provide compelling evidence that disclosing the use of AI in advertising plays a crucial role in shaping consumer perceptions and behavioral responses. Across 2 experimental studies, we observed that when the use of AI is openly communicated, consumers perceive advertisements as more credible and linguistically comprehensible. These perceptions are not merely

cognitive—they translate into behavioral intentions, i.e. users are more willing to like and share advertising content when AI usage is declared.

A central contribution of this research lies in identifying perceived advertising credibility as a key mediating mechanism. Mediation analyses confirmed that the relationship between

AI disclosure and consumers' willingness to engage with the advertising (liking and sharing) is fully explained by increased credibility perceptions. This finding underscores the psychological importance of trust and transparency in digital communication and supports the application of the Persuasion Knowledge Model (Friestad & Wright, 1994) to AI-generated advertising. When consumers recognize transparency and ethical intent, they are more receptive and less resistant to persuasive attempts.

From a theoretical perspective, this study enriches the growing literature on human–AI interaction in marketing, especially within the domain of generative AI. While previous research has shown mixed results regarding the impact of AI disclosure on consumer trust, our findings clarify that, under certain conditions—such as consistent messaging and contextually relevant content—disclosure can foster more favorable evaluations. Moreover, the generalizability of the effects across different product categories (wine and body wash) suggests the robustness of these dynamics beyond specific contexts

The implications for practitioners are equally significant. Marketers and communication professionals are increasingly leveraging generative AI to streamline content production, yet many remain uncertain about how to manage transparency. Our results clearly indicate that proactively declaring AI use does not harm brand perception—on the contrary, it strengthens consumer trust and enhances engagement. Brands that embrace transparent practices may benefit from deeper emotional connections with audiences, greater content virality, and more ethical reputations.

Finally, these findings support recent policy efforts—such as the AI Disclosure Act and initiatives like the C2PA standard—that advocate for clearer labeling of AI-generated content. Regulators and industry leaders should consider integrating disclosure guidelines as part of broader strategies to ensure accountability, protect consumers, and foster responsible AI adoption in marketing communication. Transparency, in this regard, is not just a matter of compliance, but a strategic advantage.

Future research should examine boundary conditions under which the disclosure effect may attenuate or even reverse—for example, contexts in which omitting an AI label does not undermine credibility. Because labels occupy scarce visual space and may draw disproportionate attention, identifying when disclosure is unnecessary would be theoretically and practically valuable. To isolate disclosure effects from attention-based confounds, future experiments should include a comparable, non–AI label in the non-disclosure condition (e.g., "created by a designer"), enabling a cleaner test that differences in outcomes are attributable to disclosure content rather than mere label visibility

## Selected References

Baek, T. H., Morimoto, M., & Liu, W. (2024). Persuasion and ethics in AI-generated advertising: Consumer responses and policy implications. *Journal of Advertising Research, 64*(2), 221–238.

Campbell, M. C., Kirmani, A., & Inman, J. J. (2022). Persuasion knowledge and the rise of artificial intelligence: The new frontiers of consumer resistance. *Journal of Consumer Psychology, 32*(2), 278–294.

Euchner, J. (2023). The rise of generative AI: Creativity, automation, and strategy. *Research-Technology Management, 66*(1), 10–16.

Appel, G., Grewal, L., Hadi, R., & Stephen, A. T. (2020). The future of social media in marketing. *Journal of the Academy of Marketing Science, 48*(1), 79–95.

Friestad, M., & Wright, P. (1994). The persuasion knowledge model: How people cope with persuasion attempts. *Journal of Consumer Research, 21*(1), 1–31.

Gao, H., Huang, M., & Zhang, H. (2023). How generative AI improves language personalization in digital ads: Evidence from field experiments. *Marketing Science, 42*(3), 561–578.

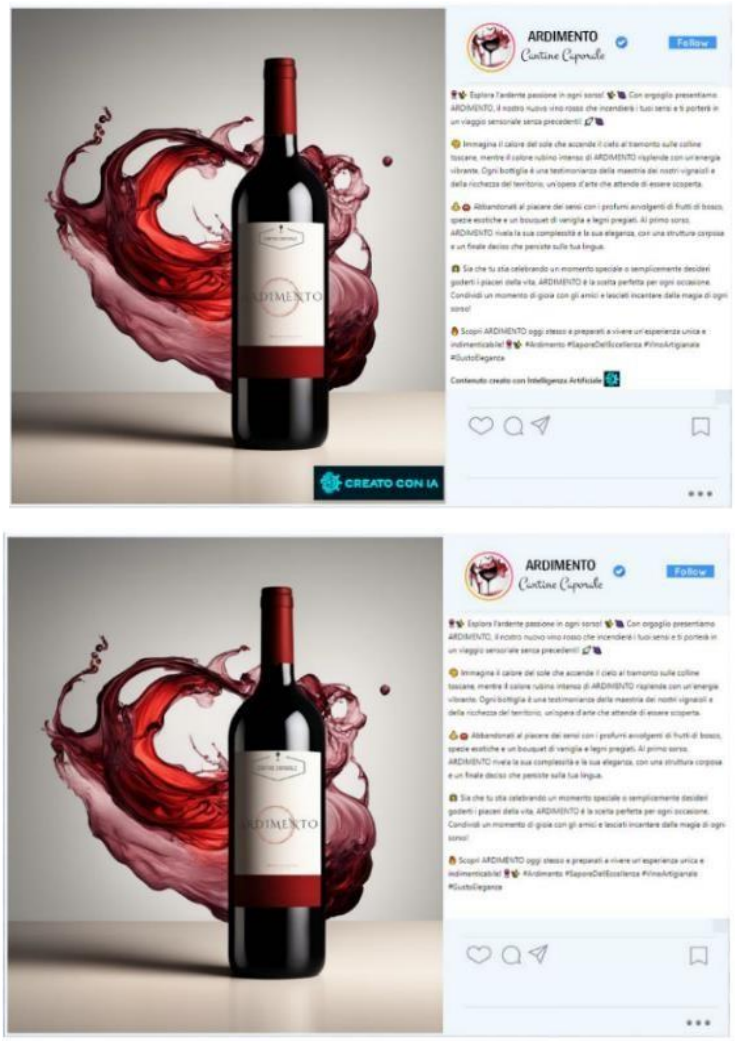
Kietzmann, J., Paschen, J., & Treen, E. (2021). Artificial intelligence in advertising: Impact, implications, and research agenda. *Journal of Advertising Research, 61*(1), 11–21.

Kim, S. J., Wang, R. J., & Malthouse, E. C. (2017). The effects of adopting and disclosing AI in customer-facing platforms. *International Journal of Advertising, 36*(1), 103–124.

MacKenzie, S. B., & Lutz, R. J. (1989). An empirical examination of the structural antecedents of attitude toward the ad in an advertising pretesting context. *Journal of Marketing, 53*(2), 48–65.

Schweitzer, F., Glavas, A., & Chapman, K. (2019). Organizational transparency and trust in brand communication. *Journal of Business Ethics, 154*(2), 385–398.

## Appendix




Examples of stimuli used in the experimental studies – wine version

# Podcast Away: How Podcaster Self-Disclosure Enhances Listener Reactions via Parasocial Relationships

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## Abstract

The consumption of podcasts is on the rise. At the same time, the phenomenon of loneliness is increasingly attracting attention as major relevant societal issue. As people may seek social comfort and connections through media figures, those two phenomena may have a common ground. Taking cues from previous literature about loneliness in consumption and media consumption, we studied the phenomenon of loneliness and podcast consumption through an experimental study. Results show that consumers that listen to podcasts in which the podcaster engages (vs. not engages) in self-disclosure are more likely to develop a positive attitude towards the podcast and are more willing to listen to future content. Furthermore, this effect is mediated by the perception of a parasocial relationship with the podcaster. Finally, the effect of podcasters' self-disclosure on consumers' perception of a parasocial relationships is greater for people experiencing loneliness.

*Keywords*: *loneliness, podcast, media consumption, parasocial relationships, self-disclosure.*

### 1. Introduction and Conceptual Development

In the early months of the Covid-19 pandemic, as daily life shifted into isolation and remote connection, psychologist and Harvard lecturer Richard Weissbourd launched a new line of research focused on loneliness, as he observed the extent to which it had become widespread, "*in the solitude of quarantine, in the darkened windows of the buildings on campus, in the Zoom squares*" (Shaer, 2024). However, loneliness was already on the rise before the pandemic. Scholars had begun referring to an "*epidemic of loneliness*", noting that nearly half of American adults reported high levels of social isolation (Coleman, 2023).

Loneliness is commonly defined as a divergence between one's desired and achieved levels of social relations (Perlman & Peplau, 1981). Yet it is also a complex, multidimensional, and inherently subjective emotional state, often entangled with feelings of sadness, anxiety, fear, and heartache. Young adults (ages 19–29) appear especially vulnerable, reporting some of the highest rates of loneliness despite being highly connected through digital media (Maese, 2023). This paradox, *being more*

*technologically connected than ever, yet increasingly isolated*, highlights the complexity of contemporary on- and offline-life.

The pandemic only amplified this dynamic, making mediated forms of connection essential when face-to-face interaction became difficult or impossible. During lockdowns, in fact, many individuals turned to virtual media for social gratification. In this context, the behavior of seeking companionship in media figures grew more salient. This phenomenon is well explained by media psychology frameworks such as uses and gratifications theory, suggesting that people actively consume media to fulfil emotional or social needs (Katz & Blumler, 1974).

Among the various media, podcasts stand out for their intimate format (Funk et al., 2023). Their nature of "closeness-enhancers", being often consumed alone, through headphones (Lieberman et al., 2022) can offer comfort to individuals who feel alone. During periods of social isolation, many listeners formed parasocial relationships with podcast hosts, using these asymmetrical bonds as substitutes for real-life interaction (Jarzyna, 2021). While not a full replacement for human contact, these relationships have the potential to reduce feelings of isolation by offering a sense of presence, care, and routine companionship.

The convergence of three key topics, the popularity of podcasting, the growth of parasocial host–listener relationships, and the persistence of loneliness, points to a relevant area for academic investigation. Thus, the contribution of this study lies in the investigation of this convergence, as this research explores the role of podcaster self-disclosure in shaping parasocial relationships, and whether this effect is moderated by the listener's level of loneliness.

Loneliness, in fact, is a compelling variable to take into account in the development of parasocial relationships, particularly in the context of host self-disclosure. A listener experiencing social isolation may be more receptive to intimate messages from a podcast host, finding them emotionally compelling. In contrast, individuals with rich social lives may engage with the same content without the same depth of involvement. In this sense, loneliness may amplify the effects of self-disclosure on parasocial relationship formation.

Prior research supports this argument. Recent work on internet celebrity fans found that higher levels of loneliness were associated with stronger parasocial bonds, partly due to a warmer desire for belonging and emotional comfort (Liu & Lee, 2024). Earlier studies have also identified correlations between loneliness and parasocial interaction strength in traditional media contexts (Tsao, 1996; Wang et al., 2008). Scholars have long theorized that parasocial relationships serve as an outlet for loneliness, potentially increasing both engagement and susceptibility to influence (Jarzyna, 2021). Yet, despite these findings, little research has directly tested how these variables interact in the podcasting context, that is, an intimate and increasingly relevant media environment. We fill this gap by studying the phenomenon of parasocial relationships in a podcast scenario and its relationship with self-disclosure and loneliness. We do so through an experimental study that takes cues from previous research. In particular, supported by literature on loneliness (Shrum et al., 2023) and parasocial interaction (e.g., Wang et al., 2008) we propose that:

**H1**: Podcasters' self-disclosure positively influences consumers' a) attitude towards the podcast and b) likelihood of listening to future content.

**H2:** The effects of self-disclosure on a) attitude and b) likelihood of listening to future content are mediated by the perception of a parasocial relationship between the user and the podcaster. In

particular, self-disclosure leads to higher levels of parasocial relationships, that, in turn has a positive effect on the dependent variables.

**H3**: The effect of podcasters' self-disclosure on parasocial relationships is moderated by loneliness, such that the proposed positive effect is stronger among consumers experiencing higher levels of loneliness.

## 2. Methodology

***Method***. We adopted an experimental approach to test our hypotheses. Specifically, we recruited a total of 94 participants (58 females, $M_{age}$ = 33.62, *SD* = 12.92) who were randomly assigned to one of the two conditions (self-disclosure: presence vs absence) according to a between-subjects study design. We manipulated self-disclosure by crafting a fictitious podcast episode (narrated by an Italian American amateur actress), focused on movie reviews. In the *presence of self-disclosure* condition, the actress narrated the plot of a thriller movie while also sharing personal memories, anecdotes, and preferences, thereby embedding self-referential content into the review (Umar et al., 2019). In the *absence of self-disclosure* condition, the actress simply reviewed the thriller movie without including any personal information. The manipulation check for self-disclosure was successful ($M_{selfdisclosure}$=5.99, *SD*=1.25, vs $M_{no\_selfdisclosure}$=2.19, *SD*=1.25, t (92) = 14.75, p < .001).

***Measures***. We collected data on parasocial relationship by asking participants the extent to which they agreed with statements such as "*The podcaster and I could have been good friends*" (adapted from Labrecque, 2014; α = .949). Attitude toward the podcast was measured using three bipolar items (from Muehling, 1987; α = .927), while the likelihood of listening to future content was measured with a single-item ("*How likely is it that you would listen to content narrated by this podcaster in the future?*"). We collected data on loneliness by asking participants to indicate their level of agreement with statements as "*I feel that I am often part of a group of friends*", such that higher scores are associated with people that feel less lonely (adapted from Cai & Wang, 2023 and Russell, 1996; α = .972).

***Results***. We ran two moderated mediation analysis (Hayes, 2022). Both had self-disclosure as the independent variable, parasocial relationship as the mediator and loneliness as a moderator on parasocial relationship.

In one model, we tested these variables effects on attitude as dependent variable, in the other we incorporated users' likelihood of future listening as dependent variable. We found a significant index of moderated mediation on both attitude (b=-0.53, 95% CI=-0.89, -0.21) and likelihood of future listening (b=-0.66, 95% CI=-1.07, -0.27). Specifically, results revealed that the positive impact of self-disclosure on parasocial relationship (b=4.03, SE=0.86, *t*=4.67, *p* < .001) was characterized by the significant interaction with participants' level of loneliness (b=-0.66, SE=0.19, *t*=-3.45, *p* < .001). Individuals experiencing higher levels of loneliness (i.e., loneliness scores below 2.5) were more likely to perceive a stronger parasocial relationship with the podcaster when self-disclosure was present (b=2.44, SE=0.45, *t*=5.42, *p* < .001). However, this difference disappeared for people with lower levels of loneliness (i.e., loneliness scores above 5; b=0.25, SE=0.39, *t*=0.64, *p* = .526). Finally, parasocial relationship had a positive impact on both attitude (b=0.80, SE=0.07, *t*=12.17, *p* < .001) and likelihood of future listening (b=0.99, SE=0.10, *t*=10.24, *p* < .001). These findings support all the predicted effects (H1a, H1b, H2a, H2b, H3).

## 3. General Discussion

To summarize, the results of this study show that podcasters' self-disclosure leads listeners to create a parasocial relationship with the podcaster. This, in turn, can lead to positive outcomes in terms of attitudes and behavioural intentions (likelihood to listen to future content). Furthermore, the elicitation of parasocial relationship promoted by self-disclosure is greater for listeners experiencing loneliness.

This research contributes to the literature about parasocial relationships (e.g., Liu & Lee, 2024) by studying the phenomenon of parasocial bonds in the podcast context and shedding lights on the role of self-disclosure (and its interaction with listeners' loneliness) in the process. This work also contributes to the literature that examines the role of loneliness in consumption. Past research claims that people experiencing loneliness can engage in consumption processes that creates indirect connections with the purpose of satisfying social needs, such as developing bonds with brands or anthropomorphising products (Shrum et al., 2023). We explored how this phenomenon can be also applied to podcast consumption. In particular, the data collected shows that people experiencing loneliness are more susceptible to podcasters' self-disclosure, resulting in higher likelihood of developing parasocial relationships.

One relevant result of this research is the process of podcast consumption that people experiencing loneliness can engage in. However, it is important to observe that the effects of this process are not yet examined. Future research can further explore this process and understands possible effects that consumers can experience in the short, and especially long term. Loneliness research in consumption contexts, indeed, mainly focuses on the short-term effects, leaving the long-term ones (that are arguably more relevant) unexplored. We call for further investigations in that sense.

## Key References


Labrecque, L. I. (2014). Fostering consumer–brand relationships in social media environments: The role of parasocial interaction. *Journal of Interactive Marketing*, 28(2), 134-148.

Muehling, D. D. (1987). Comparative advertising: The influence of attitude-toward-the-ad on brand evaluation. *Journal of Advertising*, 16(4), 43-49.

Russell, D. W. (1996). UCLA Loneliness Scale (Version 3): Reliability, validity, and factor structure. *Journal of Personality Assessment*, *66*(1), 20-40.

Shrum, L. J., Fumagalli, E., & Lowrey, T. M. (2023). Coping with loneliness through consumption. *Journal of Consumer Psychology*, *33*(2), 441-465.

# Digital Platforms, Physical Emissions: Investigating the Environmental CDR in Social Media and AI Practices

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## Abstract

This study investigates how leading Social Media companies address Corporate Digital Responsibility (CDR) from an environmental perspective, with a particular focus on the role of Artificial Intelligence (AI) in amplifying energy consumption and emissions. While the literature on CDR is growing, little attention has been paid to its concrete application in specific sectors, especially in service-oriented digital platforms such as social media. To fill this gap, a Qualitative Document Analysis (QDA) was conducted on publicly available documents (sustainability reports, investor communications, and official corporate disclosures) from major Western Social Media Companies. An analytical framework was developed to map how environmental CDR is articulated across the three foundational layers of corporate culture (Schein, 2004; Lobschat et al, 2021): shared values, specific norms, and observable artifacts and behaviors. The findings highlight a significant gap between strategic intentions and operational implementation, with most companies concentrating their efforts on the normative level while neglecting strategic vision and measurable outcomes. The analysis identifies three clusters of companies based on their level of CDR integration and highlights key priorities and implementation gaps, referencing Herden et al. (2021) framework. The study contributes to advancing sector-specific CDR research and provides actionable insights for firms seeking to align their digital growth with environmental sustainability goals.

*Keywords Corporate Digital Responsibility, environmental impact, AI, Qualitative Document Analysis (QDA)*

## 1. Introduction and theoretical background

Discussions around the Digital sphere are increasingly accompanied by growing attention to issues of ethics and sustainability, particularly with regard to topics such as privacy, security, surveillance, trustability, accessibility, and inclusion. At the same time, environmental concerns linked to this growth are also intensifying.

In March 2024, Amazon.com purchased a nuclear-powered data center from Talen Energy. In September 2024, Microsoft and Constellation Energy signed a power agreement aimed at reviving a unit of the Three Mile Island plant in Pennsylvania—the site of the worst nuclear accident in U.S. history in 1979. Shortly thereafter, Alphabet became the first company in the world to sign a corporate agreement to purchase energy from small modular reactors, in an effort to meet the tripled electricity

demand driven by artificial intelligence (AI). The agreement with Kairos Power aims to bring the first Kairos small modular reactor online by 2030, with further deployments planned through 2035. Meanwhile, ByteDance purchased over 100,000 high-integrity carbon credits from Rubicon Carbonha to offset its emissions and meet its carbon neutrality goal by 2030[26].

Such topics are also beginning to establish their place within Academic research and agenda. In a context of ever-increasing digitalisation, and growing awareness of the opportunities and risks associated with it, Corporate Digital Responsibility (CDR) not only has been addressed and defined by many authoritative scholars (Table 1), but it is also considered to become the path to gain and maintain stakeholder trust and competitive advantage (Harden et al., 2021; Koch and Windsperger, 2017).

| Definition | Source |
|---|---|
| "CDR in the context of service as the principles underpinning a service firm's ethical, fair, and protective use of data and technology when engaging with customers within their digital service ecosystem." | Wirtz et al. (2022)<br>Kunz and Wirtz (2024) |
| "The set of shared values and norms guiding an organization's operations with respect to the creation and operation of digital technology and data." | Lobschat et al. (2019; 2021) |
| "Corporate Digital Responsibility is an extension of a firm's responsibilities which takes into account the ethical opportunities and challenges of digitalization." | Harden et al. (2021) |
| "CDR is about recognizing that the organizations driving forward the advancement of technology, and those that leverage technology to engage and provide services to the citizen, have a responsibility to do so in a manner that is fundamentally leading us toward a positive future." | Joynson (2018) |
| "A CSR strategy that spans the breadth of technology's impact on society." | Price (2018) |
| "Corporate Digital Responsibility is about protecting people's rights around data (in line with regulation), about ensuring that trust is maintained because they see that products and services save them personal time, help them with their health and ageing, and protect them from less acceptable or threatening uses of those same technologies." | Price (2018) |
| "Corporate Digital Responsibility (CDR) refers to corporate responsibility in the digital society." | CSR News (2018) |
| "Corporate Digital Responsibility is an understanding of corporate responsibility in and for a digital society. It involves a regulated and a voluntary level: on the one hand, the observance of relevant laws or directives, on the other hand, the exercise of a voluntary responsibility in shaping the digital society." | politik digital e. V. (2018) |
| "A Corporate Digital Responsibility (CDR) complements corporate responsibility and partially re-thinks it as companies need to think about the societal impact of digital products and services as they evolve and ensure that they are compatible with our value standards." | Andersen (2018) |
| "Corporate digital responsibility is a voluntary commitment. It starts with the need to conform to legal requirements and standards—for handling customer data, confidential, intellectual property and so on—but it also extends to wider ethical considerations and the fundamental values that an organization operates by." | Driesens (2017) |
| "Expanding the remit of CSR to address the impact of the digital tools and environments that businesses operate in." | Ampofo (2016) |

**Table 1:** Conceptualization and definitions of CDR

Across the many, the definition we are going to apply in this contribution is the one proposed by Lobschat et al. (2021), starting from the business ethics and defining CDR as the set of values and specific norms that govern an organization's judgments and choices related to four main processes related to digital technologies and data. Also, if there is some overlap with Corporate Social

[26] https://esgnews.com/it/Bytedance-acquista-100000-crediti-di-carbonio-ad-alta-integrit%C3%A0-da-Rubicon-Carbon/
https://www.ilsole24ore.com/art/google-nuovi-reattori-nucleari-alimentare-l-intelligenza-artificiale-AGEiBnY

Responsibility, the (1) exponential growth of digital technologies, the (2) malleability of digital technologies and the (3) pervasiveness of digital technologies impose to consider separately from CSR this perspective. In particular, the environmental point of view will be the one adopted in this study, trying to highlight an understudied field of CDR.

Moreover, CDR has been developed at the firm and society levels (Lobschat et al. 2021; Mihale-Wilson et al. 2022), and has been explored more deeply in the broad service context (Wirtz et al., 2022): service companies tend to have deeper relations with users, more touchpoints (like in the case of Meta and Google, for instance), and are dealing with much more customer personal data than any other kind of companies. The potential ethical concerns can be found, in a special way, in the Social Media environment: they are deeply rooted in people's lives of every age and generation (not only online), but they also collect generate and manage tons of data and insights (used in profit business models), with many vulnerabilities such as data breaches. Moreover, this sector, dangerously characterized by an oligopoly of companies, increasingly involves AI usage and development, and, as for many other service companies "we do not yet have a good understanding of the potential harms associated with these technologies" (Wirtz et al., 2022).

The aim of this contribution is to apply the principles of Corporate Digital Responsibility (CDR) to the Social Media sector, with a particular focus on the environmental impact of the core activities of Social Media platforms and the AI technologies they employ. While CDR is increasingly well-defined in the literature, there is still a lack of concrete approaches that outline its practical implementation—particularly through sector-specific perspectives that move beyond the traditional distinction between product-based and service-based companies

## 2. Methodology

To outline the characteristics of Environmental CDR in the context of Social Media, it was necessary to begin with an examination of the official documentation produced by the companies that develop and manage these digital platforms

Document Analysis is a systematic procedure for reviewing or evaluating documents and like other analytical methods in qualitative research, and requires that data be examined and interpreted in order to elicit meaning, gain understanding, and develop empirical knowledge (Corbin and Strauss, 2008; Bowen, 2009). Document analysis involves skimming (superficial examination), reading (thorough examination), and interpretation.

In particular, the research path followed these phases:

1. Definition of the corpus. The research protocol followed the following steps to collect the documents to be analysed for each of the major social media platforms in the Western world: search for sustainability reports, investor relations materials, newsroom content, and corporate website sections dedicated to sustainability, commitment, news, environment, and AI. Selected documents were written in English.

2. Analytical framework. To navigate this highly heterogeneous corpus, an analysis grid was developed to assess: (a) the presence or absence of themes related to Corporate Digital Responsibility (CDR) concerning the environmental impact of Social Media and the AI technologies they employ; (b) the narrative strategies used; and (c) the stated objectives.

3. Interpretation. In the light of Schein (2004) and Lobschat (2021) contributions, in evaluating the gap between theory of CDR and Practice we assume that CDR culture exists at three fundamental layers that vary in their grade of accessibility and visibility to the observer but that also are strongly interrelated. These layers are (1) shared values, (2) specific norms, and (3) artifacts and behaviours. Shared values are fundamental and general principles that guide the organization. They are abstract and not easily visible, but deeply embedded in the company's philosophy and goals. Specific norms are more concrete rules that translate values into desired behaviours. They are context-specific and serve as operational guidelines. Artifacts and behaviors are tangible manifestations of the CDR culture. These include technologies, products, practices, processes, and language. All the information extracted in the created corpus and assessed trough the analytical framework has been organized in Table 2, where for each Social Media have been inserted the major themes/narratives/goals.

## 3. Findings and discussion

| Social Media | Shared Values | Specific Norms | Artifacts and behaviors |
|---|---|---|---|
| Facebook/Instagram *(Meta)* | For a better reality | We see our role as protecting people and the planet through responsible operations — reducing our emissions and the energy and water used to power our data centers that enable access to our technologies — while protecting workers and the environment in our supply chain.<br>We set expectations with respect to the environment, labor and human rights in our operations and supply chain. This means ensuring that suppliers that produce and procure hardware adhere to standards that support safe, healthy and fair working conditions.<br>At the same time, we acknowledge we will not realize this vision on our own. We continue to collaborate with multi-stakeholder groups, community members, climate action leaders and scientists to innovate beyond what is possible today and work to achieve net zero emissions across our value chain and become water positive in 2030. | Since 2020, we have maintained net zero emissions across our global operations.<br>We have publicly committed to achieving net zero emissions across our value chain and becoming water positive in 2030.<br><br>Reduce our Scope 1 and 2 emissions by 42% in 2031 from a 2021 baseline.<br>• Enable at least two-thirds of our suppliers to set science-aligned emissions reduction targets by 2026.<br>• Not exceed our 2021 baseline Scope 3 emissions by the end of 2031.<br>• Restore 200% of the water we consume in high water stress regions and 100% of the water we consume in medium water stress regions.<br>• Continue to match 100% of our electricity use with renewable energy to support our operations.<br>• Positively impact the communities and environment where we operate.<br>• Expect supply chain partners to uphold high human rights and environmental standards.<br><br>We work with policy makers, partner organizations, trade groups and industry peers to |

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|---|---|---|---|
| | | | advance climate and clean energy policies. This includes membership in the Clean Energy Buyers Alliance (CEBA), Advanced Energy United (AEU), American Council on Renewable Energy (ACORE), Center for Climate and Energy Solutions (C2ES) and Clean Grid Alliance (CGA). Our memberships should not be viewed as an endorsement of every policy position that individual organizations or their leadership take.<br>We believe that for Meta to reach our own net zero emissions goal, we need governments around the world to move toward a net zero economy. Outside of the US, we are members of the European Climate Pact, Climate Neutral Data Centre Pact, Digital Europe, Re-Source and Asia Clean Energy Coalition (ACEC) to support well-designed climate and clean energy policy around the world.<br><br>The challenge of reaching our sustainability goals given the increased demand for energy and resources driven by AI is not unique to Meta. And it will require major shifts in how companies like ours operate. We are designing our data centers to be future-flexible while considering the short- and long-term impacts on our decarbonization efforts. Our new data centers will be optimized for AI, supporting liquid-cooled hardware and a high-performance network.<br><br>Our newest AI-optimized data centers currently under construction will feature dry-cooling technology. Dry cooling uses air as the cooling medium minimizing water usage, making it the most efficient cooling technology for these geographic locations. |

| | | | |
|---|---|---|---|
| YouTube (Google) | Our products, your impact | We're focused on breakthrough innovation while also diligently managing the environmental impact and energy consumption of this powerful technology. | We innovated across hardware and software to enable our data centers to deliver six times more computing power per unit of electricity than they did just five years ago.<br>We want to use energy in the most efficient way possible—which is good for both our business and the planet. Google data centers—which power all of our products including Search, YouTube, Google Cloud, Gemini, and more—are some of the most efficient in the world. They deliver over six times more computing power per unit of electricity than they did just five years ago. 7 This is in part thanks to pioneering hardware innovations.<br><br>To support all our products and digital services—including AI—our total data center electricity consumption grew by 27% in 2024, compared to 17% growth in the prior year. However, it's important to note that our growing electricity needs aren't solely driven by AI. The accelerating growth of Google Cloud, continued investments in Search, the expanding reach of YouTube, and more, have also contributed to this overall growth.<br><br>Scaling smarter: Successfully reducing our data center energy emissions Powering today: Our record year for clean energy Powering tomorrow: Accelerating advanced energy sources Flexible future: Demand response to enable smarter electricity grids Ambitious vision, complex reality: Our efforts to decarbonize global grids |
| X *(X corp)* | n.a. | n.a. | n.a. |
| TikTok *(ByteDance)* | n.a. | ByteDance Commits to Operational Carbon Neutrality by 2030 | Our global data centers play a critical role in helping to provide a creative, user-centric experience across our products and platforms. We have begun transitioning to renewable |

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|---|---|---|---|
| | | | energy across our data centers, and today we also commit to source 100 percent of renewable electricity for our global operations by 2030.<br><br>Finally, we aim to decarbonize emissions across our value chain in line with scientific standards. We will share more information on our approach by the end of 2023.<br><br>*Latest update: March 14, 2023* |
| Linkedin *(Microsoft)* | We operate sustainably and are creating access to green opportunity for employers, job seekers, and employees seeking new skills.<br><br>Creating a sustainable future for all.<br>We're committed to protecting a healthy planet by greening our operations and empowering individuals and organizations to join the green transformation. | 2030<br>The year LinkedIn will be carbon negative | • We source renewable energy through onsite solar power generation, utility green tariff programs, and virtual power purchase agreements.<br><br>• We're investing in energy efficiency in lighting and temperature control in our buildings, and electrifying our campus cafes.<br><br>• In 2024, our San Francisco campus achieved a gold-level Zero Waste Certification through UL with an impressive 97% waste diversion rate.<br><br>• We reuse and donate office furniture and kitchen equipment through local partners.<br><br>• We're transforming our data center operations to rely on highly efficient, closed-loop cooling systems that drastically reduce our water use.<br><br>• We implement best practices for healthy buildings in conjunction with WELL Health & Safety.<br><br>• We are reducing single-use items & delivery packaging, and leveraging innovative technologies to streamline food preparation & service.<br><br>*Latest update: June 30, 2025* |
| Pinterest | Creating a more inspired internet. | In 2022, Pinterest performed a double materiality assessment for the purposes of our voluntary | Track and reduce<br>Engage and connect<br>Protecting resources |

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|---|---|---|---|
| | Building a better world. | reporting and future strategy: we analysed our actual and potential impacts on the environment and society, as well as the impacts of these factors on the company. Through this assessment—which included desk research, interviews with internal and external stakeholders (investors, content creators and non-profit groups) and executive review—we identified our company's most material impacts. These include: our people, corporate governance, data privacy and security, emotional well-being, inclusion and diversity (I&D), climate change, responsible and inspiring content and advertising, ethical conduct, energy and renewables, human rights, water, community impact, waste and biodiversity. After an additional review of our material impacts in 2023, we removed water and biodiversity from our list. As an online visual search and discovery engine, our water, land and resource use is relatively minimal, so we reassigned water and biodiversity as important but secondary impacts. In 2024, we plan to update our materiality assessment and plan to revisit our material topics every two to three years going forward<br><br>Climate change is one of the most serious issues facing the planet, disproportionately impacting historically marginalised and under-resourced communities. By measuring and reducing our greenhouse gas (GHG) emissions, engaging with employees and suppliers, and partnering with environmental leaders, we are demonstrating our commitment to meaningful climate action and environmental protection. | 'Climate disinformation on digital platforms is a serious threat to the public support needed to solve the climate crisis. Pinterest has demonstrated great leadership by creating a community standard that includes a definition of climate misinformation, and we will continue to press all platforms |
| SnapChat *(Snap Inc)* | n.a. | Through our Climate Strategy, we strive to decarbonize our product offerings, supply chain, and business operations to address our impact on the environment. We focus on conserving natural | We are proud to be one of the 500+ businesses that have joined The Climate Pledge, taking decisive action to achieve the goals of the Paris Agreement a decade ahead of |

| | | | |
|---|---|---|---|
| | | resources, minimizing waste, and reducing the environmental footprint of our products throughout the lifecycle. | schedule. In our pursuit of meaningful climate action, Snap adopted a set of science-based emissions reduction targets in 2021 which were validated by the Science Based Targets initiative (SBTi).<br><br>In 2021, we achieved carbon neutrality with the purchase of carbon offsets for our historical operations from our founding in 2011 through 2020. Since then, we've maintained our carbon-neutral status each year through the purchasing of carbon offsets for emissions attributable to Snap, including for the year ended December 31, 2023. |

**Table 2:** Social Media Platforms and CDR: the environmental footprint

From the layers point of view, it is perhaps surprising to have highlighted how the first and third layers are the least discussed. The missing of the first layer represents evidence of a non-strategic approach to the CDR issues in terms of environmental effort for service companies in the sector analysed, while the absence of the third layer demonstrates a difficulty/lack of concreteness in implementing solutions to support the second layer.

In essence, it seems that many companies are implementing tactical actions (second layer) without a strategic vision of CDR (first layer), nor the ability to translate planning into concrete actions and measurable outcomes (third layer).

An in-depth analysis of specific corporate cases in table 2 shows that X is perhaps the company with the least information related to CSR and CDR. Most of the content, still mixed between Twitter and X, is related in particular to policies that protect "security and privacy", and to promote "civic integrity" and the health of the public conversation by investigating and mitigating material related to spam, platform manipulation, API abuse, and information operations, seeking to make it safe for most users. The lobbying disclosure section has been stuck since 2021, many corporate website sections are stuck in 2023. There are no sustainability reports of recent years. There are companies like Google and Meta, which absolutely recognize the quantum lip of AI in support of their services/social media platforms, and build sustainability objectives and reporting around it, working on infrastructure, reducing waste, creating sustainable supply systems and implementing the use of green solutions, covering all three layers. On the other side, companies like Snapchat and TikTok didn't mention the role of Ai in defining their environmental impact. In the middle, for example, there is Linkedin, which has a more traditional approach to environmental sustainability, addressed and told at a corporate level (Microsoft) and less of Social Media.

On the other hand, there are Social Media Companies that do not even mention the effort towards sustainability, like X or TikTok, with fragmented and outdated information.

It is interesting to note how, in the case of Pinterest, an original and distinctive way of approaching the issue of environmental impact has also been found, such as the effort to limit misinformation and the spread of fake news on climate and the environment.

In this challenge, emerged at least two approaches: companies that tend to move alone, and companies that instead seek many partnerships and alliances with stakeholders and partners (Meta, and Pinterest).

## 4. Conclusion and Managerial Implications

As pointed out by Kurtz and Wirtz (2024), despite the high risks involved, it seems that many companies still not prioritize strong and effective CDR practices, especially from the environmental point of view.

In theory (Schein, 2004; Lobschat at al. 2021), each layer reinforces the others in a circular dynamic: from shared values (e.g., sustainability), derive specific norms (e.g., use of low-energy AI systems), which are expressed through concrete artifacts and behaviors (e.g., choosing green cloud providers or developing lightweight algorithms).

The analysis of the leading social media platforms reveals the emergence of three distinct clusters of companies. The first cluster includes those that acknowledge the relevance of Corporate Digital Responsibility (CDR), including its environmental dimension, and address it across all three layers. Their strong focus on this issue appears to be driven by an awareness of the increased energy demands associated with AI technologies supporting social media operations.

The second cluster comprises companies that recognize environmental CDR as important but not strategic, seemingly underestimating the growing impact of AI deployment. These companies maintain a traditional approach to CDR, closely aligned with conventional CSR frameworks.

The third cluster consists of companies that show no awareness of, nor interest in, CDR. These organizations are currently exposed to the highest levels of risk. As Social Media Marketing becomes increasingly impactful in terms of environmental consequences, communicating—as TikTok does—about the use of AI solely in relation to new feature releases may prove to be the most effective way to miss the appointment with Corporate Digital Responsibility, which for many appears to be set for 2030

In the words of Lobschat, et al. (2021) "It is the responsibility of system designers and the organizations that use these systems to recognize that their technologies may be used in ways other than they had anticipated with unwanted consequences for different stakeholders and society at large" () and "organizations to develop a comprehensive, coherent set of norms, embedded in their organizational culture, to govern the development and deployment of digital technology and data." may result in overlooking a responsibility that can no longer be postponed.

In terms of managerial implication, in Table 3 are evaluated the gap theory/practice and priorities that seem to be most relevant for leading Social Media Companies among the dimensions identified by Herden et al. (2021 p. 24).

| Fase | Actions to perform | Gap/Priority |
|---|---|---|
| 1. Perform a Self-Assessment | i. Analyze the company's current state of digital maturity, including any existing CDR activities, and responsibilities across business units and work- | **Big gap** |

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| | stream processes.<br>ii. Determine why the organization wants or needs to be digitally responsible.<br>iii. Identify the drivers and potential benefits and determine how close digital responsibility is to the organization's business model.<br>iv. Identify the significance of digital responsibility for the organization in the context of its industry and the market(s) in which it operates.<br>v. Determine if corporate digital responsibility could provide a competitive advantage. | **High priority** |
| 2. Develop a Vision | i. Determine what the future of the company is in the field of digital responsibility.<br>ii. Identify what the organization ideally looks like in terms of operations, administration, and communication with a living culture of digital responsibility.<br>iii. Determine which new stakeholders will emerge and how they will be involved.<br>iv. Decide if the CDR strategy is in line with the organization's culture and overall strategy. | **Big gap**<br><br>**Medium priority** |
| 3. Identify the Gaps | i. Identify the gaps between the current state and the ideal future digital state.<br>ii. Knowing the gaps is crucial for setting priorities and strategic initiatives, which could include:<br>a. Revising IT infrastructure or replacement by a new one.<br>b. Getting relevant (IT) processes ISO-verified.<br>c. Assigning a Chief Digital Responsibility Officer (CDRO).<br>d. Setting limitations for AI: e.g., revising embedded assumptions in the algorithms or defining an AI policy.<br>e. Investing in data security training for employees and providing a common understanding of CDR across all subsidiaries. | **Small gap**<br><br>**Medium priority** |
| 4. Close the Gaps | i. Develop a scalable CDR strategy to implement the changes to fill gaps.<br>ii. Assign responsibilities to specific people: individuals, teams, or departments responsible for the digital touchpoints of the organization.<br>iii. Responsibilities could be linked to KPIs, targets, or incentives of individuals, teams, and domains to ensure digital responsibility.<br>iv. If a CDRO is hired, he or she needs to understand the organization and its internal and external activities before implementation.<br>v. Implementation of changes requires alignment with company guidance and its processes and a change in the mindset of employees. | **Small gap**<br><br>**Medium priority** |
| 5. Ensure the Gaps Stay Closed | i. Develop a governance plan to make sure that all gaps are filled, some oversight exists, and the company's strategic CDR targets are met.<br>ii. Establish a common understanding of CDR along with the risks and opportunities at stake and raise awareness throughout the company.<br>iii. Company boards must acknowledge their accountability and assume responsibility for CDR issues.<br>iv. Separate functions, where needed, to increase the flexibility of reporting and foster transparency in order to fulfill stakeholder demand and legal disclosure (e.g., GDPR).<br>v. Incorporate CDR into the risk management plan to ensure that risks related to CDR are identified, managed, and monitored. | **Medium gap**<br><br>**Medium priority** |

**Table 3:** Implementation guide

## 5. Limits and Future Research

The main limitation of this study lies in its reliance solely on publicly available online documents. To enhance its robustness, triangulation with industry experts could represent a valuable methodological addition.

In terms of future research directions, the most promising path appears to be the inclusion of perspectives from key stakeholders of social media platforms—particularly users (to the best of our knowledge, only one study – carl et al., 2024 - to date explores consumers' views on CDR, though not within the context examined here) and investors, who may perceive the topic as highly relevant in terms of Brand Safety (Johnson et al., 2023).

## Main References


Bowen, G. A. (2009). Document Analysis as a Qualitative Research Method. Qualitative Research Journal, 9(2), 27–40. https://doi.org/10.3316/QRJ0902027

Carl, K. V., Mihale-Wilson, C., Zibuschka, J., & others (2024). A consumer perspective on Corporate Digital Responsibility: An empirical evaluation of consumer preferences. Journal of Business Economics, 94, 979–1024. https://doi.org/10.1007/s11573-023-01142-y

Herden, C. J., Alliu, E., Cakici, A., & others (2021). Corporate Digital Responsibility. Nachhaltigkeits Management Forum, 29, 13–29. https://doi.org/10.1007/s00550-020-00509-x

Lobschat, L., Mueller, B., Eggers, F., Brandimarte, L., Diefenbach, S., Kroschke, M., & Wirtz, J. (2021). Corporate Digital Responsibility. Journal of Business Research, 122, 875–888. https://doi.org/10.1016/j.jbusres.2019.10.006

Johnson, R. W., Voorhees, C., & Khodakarami, F. (2023). Is Your Brand Protected? Journal of Advertising Research, 63(3), 205–220. https://doi.org/10.2501/JAR-2023-013

Wirtz, J., Kunz, W. H., Hartley, N., & Tarbit, J. (2022). Corporate Digital Responsibility in Service Firms and Their Ecosystems. Journal of Service Research, 26(2), 173-190. https://doi.org/10.1177/10946705221130467


## Corpus Main sources:

Meta:
https://sustainability.atmeta.com/2024-sustainability-report/

Youtube:
https://sustainability.google/
https://sustainability.google/google-2025-environmental-report/

TikTok:
https://www.tiktok.com/about?lang=en
https://www.bytedance.com/en/news

X:
https://about.x.com/en

Linkedin:

https://news.linkedin.com/about-us
https://news.linkedin.com/about-us#Culture%20and%20values
https://socialimpact.linkedin.com/
https://socialimpact.linkedin.com/environmental-sustainability
https://www.microsoft.com/en-us/corporate-responsibility/sustainability/report/

Pinterest:
https://investor.pinterestinc.com/impact/impact-reports/default.aspx

Snapchat:
https://investor.snap.com/Impact-Reporting/default.aspx

# Personalization Unboxed: A Framework for Strategic Application

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## Abstract

This study develops a multidimensional taxonomy of personalization strategies that integrates fragmented theoretical models with emerging managerial practices. Drawing on a systematic review of eight frameworks, the study organizes personalization into three macro-dimensions: Client, Contest, and Chain, combining established concepts and new factors such as VR and phygital experiences. The framework provides a structured lens for designing and scaling personalization initiatives and offers practical guidance for balancing customer engagement and operational flexibility. While conceptual, it sets the stage for future empirical validation and cross-industry applications.

*Keywords: Personalization, Customization, Taxonomy, Virtual Reality*

### 1. Introduction

In recent years, consumer demand for personalized products and experiences has grown exponentially. Since 2015, interest in personalized offerings more than doubled, transforming personalization from a premium feature into a strategic necessity. Fueled by the digital revolution and an ever-expanding set of technologies, today's consumers expect companies to address their increasingly diverse needs. Standardized, one-sizefits-all approaches no longer suffice. Indeed, 89% of business leaders now view personalization as critical to their success in the coming years (Segment, 2024). However, effective personalization is not merely about delivering tailored experiences, it is about cultivating long-term customer relationships. As Peppers (2015) notes, when firms empower customers to specify how they wish to be treated, and consistently meet those expectations, they foster loyalty by reducing the friction of switching to competitors. Moreover, personalization operates across multiple levels: it transforms goods into services, services into experiences, and experiences into meaningful personal transformations (Pine, 2022). This study contributes to the personalization literature by offering a comprehensive framework that identifies and organizes the key variables involved in crafting effective personalization strategies for products and services. We argue that a persistent gap exists between abstract theoretical models of personalization and the concrete implementation methods used in practice, making it difficult for both researchers and practitioners to evaluate and refine their personalization efforts. Existing models in the literature tend to be fragmented and lack practical integration. To bridge this gap, we develop a taxonomy that synthesizes current theoretical perspectives

with the personalization strategies employed by managers in organizations actively pursuing such initiatives. In addition, we extend this taxonomy with new variables that capture the evolving dynamics of contemporary personalization practices.

## 2. Literature Background

Personalization has become an essential strategic approach as consumers increasingly expect tailored products and experiences rather than one-size-fits-all solutions (Piller, 2021). Foundational contributions have conceptualized personalization and mass customization as strategies to reconcile efficiency with individual relevance (Gilmore & Pine, 1997). In their seminal work, Gilmore and Pine (1997) identify four customization approaches—collaborative, adaptive, cosmetic, and transparent—differentiated by whether product and representation change. These frameworks established a basis for distinguishing between superficial adaptations and deeper forms of personalization integrated into product design. Lampel and Mintzberg (1996) and Da Silveira et al. (2001) further advanced this discourse by positioning personalization along a continuum of consumer involvement, ranging from pure standardization to full design-stage customization. Reus (2006) emphasized that meaningful customization can occur not only during fabrication and assembly but also during earlier stages of product design, while Cadenas USA (2025) developed configurators to operationalize such involvement by capturing functional and aesthetic inputs from consumers. Taxonomies of personalization have also examined the role of digital interfaces and configurators. Weinmann et al. (2013) underline the critical importance of user modeling and system adaptation, proposing seven dimensions to classify how personalization systems collect, interpret, and act upon user data. In parallel, RinconGuevara et al. (2018) highlight the relevance of product architecture—whether modular or integral—in determining the scope of personalization. Their taxonomy integrates product life cycle stages, technology flexibility, and assembly configuration to capture the complexity of customization decisions. Technological advances have also enabled new forms of personalization in service delivery. Abdulrazzaq Qasem Ali et al. (2019) discuss the challenges of customization in SaaS applications, where tenant-specific adaptations can impact performance and require complex code management. These insights underscore that personalization extends beyond product configuration to encompass broader operational and technological dimensions.

Building on this body of research, the present study develops a taxonomy that bridges abstract conceptualizations and practical implementation. While prior studies have examined personalization variables in isolation, few have systematically connected them to actionable frameworks that guide firms in designing, delivering, and scaling personalization strategies. Addressing this gap, this study aims to provide a structured classification of personalization approaches that can inform both academic inquiry and managerial decision-making.

## 3. Methodology

To develop a research framework that would be both academically robust and practically relevant for managers, we conducted an extensive review of existing literature on product and service personalization and customization. This review included both theoretical frameworks proposed in academic publications and practical frameworks developed by leading consulting firms. Our approach followed the taxonomy development method proposed by Nickerson et al. (2009), which combines inductive, deductive, and intuitive processes to ensure that the resulting framework meets key criteria of conciseness, inclusiveness, comprehensiveness, and extendibility.

In applying this method, we first identified eight theoretical and managerial models published since 2000 on personalization and customization. The selection criteria combined two considerations: coherence with the specific focus of this study and citation frequency, to ensure both thematic relevance and academic impact. In addition to highly cited frameworks, we also included other taxonomies and classifications of demonstrable practical relevance, even if they were not necessarily indexed or widely cited in Scopus, to capture emerging perspectives in the field. The process was conducted in three iterative phases: Phase 1 (Inductive): We systematically extracted and compared the variables and dimensions presented across the eight selected frameworks, highlighting both unique characteristics and common themes; Phase 2 (Deductive): Building on this comparative analysis, we synthesized a unified taxonomy that integrates the most significant and recurring variables into a structured framework, organized into primary and secondary dimensions; Phase 3 (Intuitive): Finally, we enriched the taxonomy by incorporating additional variables that reflect the evolving landscape of personalization strategies, informed by recent industry trends, technological advances, and insights from practitioner reports.

This structured approach ensures that the proposed framework is not only grounded in established theory but also responsive to the dynamic and rapidly changing nature of personalization practices in contemporary business environments.

## 4. Analysis and results

After a literature review of eight influential models in the personalization and customization literature (Gilmore & Pine, 1997; Da Silveira et al., 2001; Reus, 2006; Weinmann et al., 2013; Rincon-Guevara et al., 2018; Abdulrazzaq Qasem Ali et al., 2019; Piller, 2022; Cadenas USA, 2025), we synthesized the main dimensions and compared underlying assumptions and design variables (Phase1). This comparative analysis, summarized in Table 1, highlights the evolution of personalization strategies from early mass customization typologies (Gilmore & Pine, 1997) and modular architectures (Da Silveira et al., 2001) to dynamic approaches incorporating configurator technologies (Cadenas USA, 2025), user modeling (Weinmann et al., 2013), and SaaS-specific customization challenges (Abdulrazzaq Qasem Ali et al., 2019).

| **Authors** | **Macro-level variable** | **Sub-variables** |
|---|---|---|
| Gilmore & Pine (1997) | Customization Approaches | Cosmetic |
| | | Transparent |
| | | Adaptive |
| | | Collaborative |
| Da Silveira et al. (2001) | Levels of customization | Standardization |
| | | Usage |
| | | Package and distribution |

| | | |
|---|---|---|
| | | Additional services |
| | | Additional custom work |
| | | Assembly |
| | | Fabrication |
| | | Design |
| Reus (2006) | Product | Physical |
| | | Digital |
| | Process | Bundled |
| | | Unbundled |
| | Value | Online |
| | | Offline |
| Weinmann, et al. (2013) | User Modeling | Type of data |
| | | Acquisition Method |
| | | Life span of Data |
| | System Adaptation | Object |
| | | Volatility |
| | | Scope |
| | | Control |
| Rincon-Guevara et al. (2018) | Product Architecture | Open |
| | | Closed |
| | Technology Flexibility | Structural Flexibility |
| | | Process Flexibility |
| Abdulrazzaq Qasem Ali et al. (2019) | Stakeholder | Tenant |
| | | Provider |
| | Layers/Assets | GUI |
| | | Service |
| | | Workflow |
| | | Data |
| | DLC | Specification |

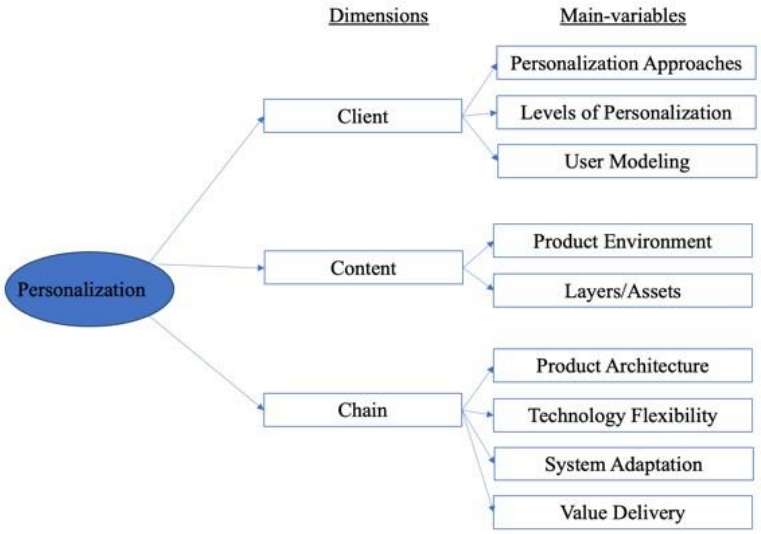
| | | |
|---|---|---|
| | | Design |
| | | Implementation |
| | | Deployment & Testing |
| | | Maintenance & Support |
| | Motivation | Benefits |
| Piller (2022) | Order de coupling point | Engineer-to-order |
| | | Made-to-order |
| | | Final assembly |
| | | Sales/order |
| | | After sales |
| Cadenas USA (2025) | Customized input | Function |
| | | Appearance |
| | | Customer input |

**Table 1:** Comparative analysis

Building on these insights, in phase 2 of the taxonomy development process, we applied a deductive approach to integrate the most significant and recurrent variables into a structured framework organized around three macro-dimensions: Client, Contest, and Chain. Each dimension represented in Figure 1, aggregates key main variables and associated sub-variables to capture the breadth of contemporary personalization practices. Specifically, the Client dimension consolidates Customization Approaches, Levels of Customization, and User Modeling, reflecting the degree and nature of customer involvement in configuring solutions. The Contest dimension groups variables relating to the consumption context, namely Product Environment and Layers/Assets, highlighting the growing relevance of delivery channels, experience modalities, and hybrid environments. Finally, the Chain dimension combines Product Architecture, Technology Flexibility, Value Delivery and System Adaptation, emphasizing the operational and technological backbone supporting personalized offerings. Phase three of the analysis adopted a deductive combined with an intuitive approach to enrich this structure with emerging variables inspired by recent industry trends and practitioner insights. These additions include sub-variables such as Virtual Reality and Phygital experiences. This expansion acknowledges the accelerating role of immersive technologies, modular SaaS infrastructures, and data-driven personalization, which were underrepresented in earlier frameworks. Artificial Intelligence emerges as a transversal enabling factor capable of enhancing each dimension of personalization. It facilitates adaptive customization and predictive profiling within the Client sphere, enables greater automation and flexibility in production and technological processes within the Chain,

and makes it possible to create contextual, immersive, and phygital experiences in the Contest dimension.

**Figure 1:** Personalization Taxonomy




To illustrate how these dimensions can guide practical design decisions, the study proposes a scalable continuum for each macro-dimension. For Client, the scale ranges from Passive, Informed, Interactive, and Collaborative, up to Co-Creative, reflecting increasing degrees of customer engagement in ideation and configuration. The Contest dimension progresses from Physical Only environments, to Digital Support to Physical, Phygital Integrated, Digital Only, and Immersive Virtual contexts such as VR-based configurations. Finally, the Chain dimension spans from fully Standardized Chains, through Modular Chains, Configurable Chains, and Flexible Chains, up to On-Demand Custom Chains, characterized by real-time, end-to-end personalization and adaptive architectures. By integrating classical perspectives (Gilmore & Pine, 1997; Da Silveira et al., 2001) with contemporary technological and operational dimensions, including AI-driven configurators and hybrid service models (Weinmann et al., 2013; Piller, 2022), this framework provides a multidimensional lens to systematically design and evaluate personalization strategies.

## 5. Conclusions

This study advances personalization research by integrating previously fragmented conceptualizations into a unified, multidimensional taxonomy. Drawing on Nickerson et al. (2009), we followed inductive, deductive, and intuitive approaches to ensure that the framework meets key quality criteria: conciseness, inclusiveness, comprehensiveness, and extendibility. These principles guided the development of the three macro-dimensions, Client, Contest, and Chain, which incorporate both established variables and emerging factors such as Virtual Reality and Phygital experiences. In this way, the framework reflects both the foundational perspectives in the literature and the evolving dynamics of contemporary personalization practices. By systematically mapping the principal and sub-variables of personalization strategies, spanning customer involvement models, contextual environments, production architectures, and enabling technologies, the framework offers a holistic perspective on

how personalization creates both value and risk across the customer journey. For practitioners, the findings underscore the importance of carefully calibrating personalization initiatives along all three dimensions. Firms should: Design configurations that balance flexibility and simplicity across the Client continuum, from passive to co-creative engagement; Actively manage the Contest dimension by integrating hybrid and immersive experiences without sacrificing clarity or usability; Develop adaptive Chain architectures capable of delivering scalable, on-demand personalization while maintaining operational efficiency and data integrity. This structured approach can improve adoption rates, enhance customer satisfaction, and sustain long-term loyalty in an increasingly dynamic market environment. The research remains conceptual and does not empirically test the relationships among variables. Furthermore, sectoral, cultural, and technological contingencies may moderate the framework's applicability. Future studies should empirically validate the proposed dimensions and scales across diverse industries and geographies. In addition, longitudinal research is needed to explore how emerging technologies—particularly AI-powered configurators and virtual environments—reshape customer expectations and the effectiveness of personalization strategies over time.

## References


Abdulrazzaq Qasem Ali, A., Abu Bakar Md Sultan, A., Abdul Azim Abd Ghani, A., & Zulzalil, H. (2019). Customization In Multi-Tenant Saas Applications: A Systematic Literature Review. *Ieee Access, 7*, 58851–58866.

Cadenas Usa. (2025). Https://Partsolutions.Com/Product-Configurator/

Da Silveira, G., Borenstein, D., & Fogliatto, F. S. (2001). Mass Customization: Literature Review And Research Directions. *International Journal Of Production Economics, 72*(1), 1–13.

Gilmore, J. H., & Pine, B. J. (1997). The Four Faces Of Mass Customization. *Harvard Business Review, 75*(1), 91–101.

Lampel, J., & Mintzberg, H. (1996). Customizing Customization. *Sloan Management Review, 38*(1), 21–30.

Nickerson, R. C., Varshney, U., & Muntermann, J. (2013). A Method For Taxonomy Development And Its Application In Information Systems. *European Journal Of Information Systems*, *22*(3) Peppers. (2015). How To Customize Even A "Commodity" Product.

Piller, F. (2021). Mass Customization: Business Models For Personalization.

Pine. (2022). Customization For All. Www.Dukece.Com/Insights/Customization-For-All/ Reus, B. (2006). Customization In The Internet Economy. Doctoral Dissertation, Holland.

Rincon-Guevara, S., Santos, J., Uribe-Perez, N., & Pineda, C. (2018). Taxonomy For The Characterization Of Product Customization Strategies. *International Journal Of Industrial Engineering And Management, 9*(4), 199–210.

Segment. (2024). The 2024 State Of Personalization Report. Www.Segment.Com

Weinmann, M., Schneider, C., & Vom Brocke, J. (2013). Virtual Customer Integration In Electronic Commerce: The Impact Of Relationship Management And Information Management On Customer Loyalty. *Electronic Markets, 23*(2), 99–113.

# The Brand Purpose–Authenticity Nexus: Leveraging Instagram Bios to Drive Word-of-Mouth

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## Abstract

Across three experimental studies, this research revealsthat including a brand purpose (BP) in Instagram bios enhances perceived brand authenticity, which in turn increases consumers' intention to engage in positive word-of-mouth (WOM). Study 1 confirms this mediation effect and shows that it is robust regardless of affective brand involvement or cause relevance. Study 2 shows that this effect depends on individual differences in long-term orientation (LTO) and abstract thinking, with stronger outcomes among those high in these traits. Study 3 highlights the moderating role of consumer skepticism, finding that more skeptical consumers perceive brands with BP statements as more authentic. Theoretical and practical implications for digital marketers are also discussed.<

*Keywords: brand purpose, Instagram bio, brand authenticity, word-of-mouth, long-term orientation, abstract thinking.*

## 1. Introduction, purpose, and background

Brand purpose, i.e., the brand's declared objective to achieve a higher-order, long term goal beyond profit (Williams *et al.*, 2022) is a crucial tool for businesses. It may serve as a vital signal of brand authenticity, fostering positive word-of-mouth (WOM) and strengthening brand-consumer relationships. Yet, little is known about its effect in digital micro-spaces such as Instagram bios. This paper seeks to fill this gap by investigating whether and how BP in Instagram bios enhance perceived authenticity, and, in turn, positive WOM. Across three experimental studies, we test the effect of BP presence on authenticity and WOM, considering moderators such as long-term orientation, abstract thinking, and skepticism.

Unlike brand activism, which involves visible stances on socio-political issues (Kotler & Sarkar, 2017), BP reflects a brand's foundational, long-term mission (Charles & Marciniak, 2021). By including BP in this space, brands may reinforce their societal commitment and enhance perceived authenticity (Dwivedi *et al.*, 2019), which prior works link to positive WOM (e.g., Morhart *et al.*, 2015; Spiggle *et al.*, 2012). We expect BP to increase authenticity perceptions, which mediate WOM intentions, with effects contingent on some individual dispositions: *i*) *long-term orientation* (LTO), defined as the tendency to prioritize future outcomes and enduring values (Bearden *et al.*, 2006); *ii*) *abstract thinking*,

i.e., the tendency to process information at a high level of generality (Trope & Liberman, 2010) and interpret distant or long-term goals more favorably (Fujita *et al.*, 2006); *iii*) *skepticism* toward marketing, defined as a tendency to doubt the truthfulness of brand claims (Obermiller & Spangenberg, 1998).

## 2. Method and results

Three between-subject experiments (*N*=110, 190, 180) on Prolific tested BP presence vs. absence in Instagram bios. Measures included brand authenticity, WOM intentions, and moderators (LTO, abstract thinking, skepticism). Each experimental study used a two-cell (BP in Instagram bio: presence vs. absence) between-subject experimental design, with participants randomly assigned to either a fictitious Instagram post featuring a bio containing a brand purpose statement (i.e., "Preserving art history and culture for future generations") or a bio with a conventional promotional message (i.e., "Unleash your style with our unique designs"). Stimuli were pre-tested for realism, and in each study, manipulation checks confirmed that participants correctly perceived the evaluation condition assigned to them. All multi-item scales were checked for unidimensionality, and reliability analyses were performed. PROCESS Macro (Hayes, 2023) was used to conduct the subsequent mediation and moderation analyses.

Study 1 confirmed that BP presence increased authenticity perceptions, which mediated WOM intentions, robust across brand involvement and cause relevance. Study 2 replicated the mediation and showed stronger effects for participants high in LTO and abstract thinking. Study 3 confirmed the effect and revealed that, contrary to expectations, skeptical consumers perceived brands displaying BP in their bios as more authentic.

## 3. Research implications

This paper adds to the literature on BP, perceived brand authenticity, and WOM in digital settings by demonstrating that concise BP statements, such as those placed on Instagram bios, can effectively signal authenticity and foster positive advocacy. Effects were strongest among consumers high in LTO and abstract thinking. Surprisingly, skeptical users also rated brands with BP as more authentic, suggesting a counter skepticism effect.

From a managerial perspective, the results highlight the strategic value of embedding BP in digital brand touchpoints. Purpose statements should emphasize long-term societal commitments and be tailored to resonate with audiences who are high in LTO, abstract thinking, or even skepticism.

Ultimately, this paper underscores the relevance of exploring the nexus between BP communication and consumer perceptions, particularly in an era of AI-generated content and digital overload. A simple digital message can help brands remain authentic, a challenge at the heart of future marketing innovation.

**[References available upon request]**

# Consumer Responsiveness to Influencer Marketing: A Mixed-Methods Approach

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## Abstract

This study investigates the influence of social media influencers on consumer behavior, comparing their impact with traditional media and non-celebrity online promotions. Data were collected via a bilingual questionnaire (Italian and English) from 113 respondents (56% female, 67% Italian), focusing on perceived similarity to influencers, engagement behaviors, and purchase motivations. Statistical analyses including correlation, cluster, regression, ANOVA, and Fisher's Exact Test were conducted using RStudio. Results reveal a weak positive correlation between perceived similarity to influencers and user engagement (likes, shares), with similarity emerging as the sole significant predictor of the perceived relevance of influencer product reviews. Cluster analysis identified three consumer segments varying in susceptibility to influencer marketing, enabling targeted strategy recommendations. No significant differences were found across age groups or between perceived similarity and social media usage frequency. A decision tree revealed that preferences for influencer marketing depend on product popularity and brand reputation. Implications and limits are finally discussed.

*Keywords: Influencer Marketing, Social Media, Self-Congruence, Segmentation*

## 1. Literature Review

Research on digital marketing increasingly focuses on social media influencers. Studies show self-congruity and identification play key roles in influencer marketing. Strong alignment between a consumer's ideal self and an influencer's image improves endorsement effectiveness, mediated by parasocial identification (Shan et al., 2019). While consumer-product congruence directly affects impulse buying, consumerinfluencer congruence requires wishful identification to influence behavior (Koay & Lim, 2024). Self-congruence has two dimensions: 1) actual self-congruence — how much an influencer matches a follower's current self-view, boosting trust and relatability; 2) Ideal self-congruence — how much an influencer reflects qualities the follower aspires to, driving aspirational purchases.

For virtual influencers, both actual and ideal congruence affect emotional attachment and reinforce influencer credibility, content usefulness, and consumer behavior (Venciute et al., 2023). Marketers should consider these psychological factors in influencer selection to improve campaign impact. Schouten et al. (2021) highlight influencers' stronger role than celebrities in building identification, trust, and credibility. Xu and Pratt (2018) emphasize influencer-consumer congruence's importance in tourism decisions. Identification with influencers also encourages product recommendations (Xiao et al., 2021). Zogaj et al. (2021) show actual selfcongruence fosters trustworthiness, while ideal congruence builds perceived competence, highlighting complex pathways to influencer credibility. Von Mettenheim and Wiedmann (2021) describe a triadic congruence model—brand-influencer, actual self-influencer, ideal self-influencer—whose effectiveness depends on consumer involvement. Higher involvement favors actual congruence; lower favors aspirational alignment. Torres et al. (2019) find influencer attractiveness and brand congruence shape positive attitudes and purchase intentions, mediated by affective responses. Farivar and Wang (2022) stress community identification and opinion leadership as key purchase drivers, with social identity being most influential.

Overall, congruence—across self-concept, brand fit, and community—is vital in influencer marketing, with important implications for targeting and messaging strategies. Premised that, this study is aimed at exploring how congruence between users and influencers can impact on their behavior and on marketing strategies. In particular, our research questions are:

1) How does perceived similarity between consumers and influencers (values, lifestyle) affect user engagement (likes, shares) and the perceived credibility of influencer product reviews?

2) Can consumers be grouped based on their perceived similarity to influencers and how much they value influencer content, and how can these groups guide marketing strategies?

3) Do factors like age or social media usage influence how consumers perceive the relevance of influencer reviews?

## 2. Methodology

A questionnaire was used to collect data on how influencers affect behavior compared to traditional media and non-celebrity campaigns. It was translated into English for nonItalian respondents. After data collection, invalid responses were removed, and country data was simplified to "Italy" or "Abroad." The final sample included 113 mainly young participants (56% female, most of the sample aged 18–24), with 67% Italian and 33% from countries like Germany, UK, and the US. No significant difference appeared in how much importance participants gave to influencer opinions (average score 2.6/5), showing general indifference. Purchase decisions were linked more to the content type, mainly product reviews (34.78%) and "Get Ready With Me" videos (27.54%).

## 3. Results And Discussion

Analyses were carried on with RStudio and showed:

***Correlation Analysis*:** There is a weak positive correlation between users' perceived similarity to influencers (values and lifestyle) and their likes/shares. This suggests similarity alone is not enough to boost engagement; content quality and authenticity also matter.

***Cluster Analysis*:** Three user segments were identified:

- Highly Susceptible Users—high perceived similarity and review value, likely very influenced by endorsements.
- Indifferent Users—low similarity and review importance, less responsive to influencer marketing.
- Moderately Susceptible Users—moderate scores, somewhat responsive.

This segmentation helps tailor marketing strategies per group.

***Multiple Linear Regression:*** Perceived similarity was a strong, significant predictor of the importance given to influencer reviews (coefficient 0.3898, $p < 0.001$). Likes and shares had no significant effect. The model explained 14.3% of variance in perceived review relevance and was overall statistically significant.

***Interaction Plots:*** As people felt more similar to influencers, they also saw them as more important. However, people in the middle range of similarity had mixed opinions. Those who felt very similar mostly agreed that influencers were important, but a few people who didn't feel similar still rated influencers as highly relevant, showing that opinions can be complex.

***ANOVA Test:*** No significant age effect on perceived review relevance ($p = 0.0768$), though a trend was observed. A t-test comparing age groups 18–24 and 25–34 confirmed no significant differences ($p = 0.2707$).

***Fisher's Exact Test:*** No significant link was found between perceived similarity and social media usage frequency ($p = 0.1229$). This suggests perceived affinity with influencers is influenced by factors beyond just social media engagement, such as psychological or cultural aspects.

**The Decision tree**

The analysis aims to optimize international marketing by segmenting consumers based on their media preferences—distinguishing between those more influenced by influencers versus traditional media. This helps tailor campaigns, allocate budgets efficiently, and use local influencers or traditional channels depending on regional trust. Using Weka for data mining, the most informative decision tree revealed that consumers uninterested in product popularity prefer traditional ads, while those influenced by popularity and brand reputation lean toward influencer marketing— especially when they actively engage on social media and feel similar to the influencers.

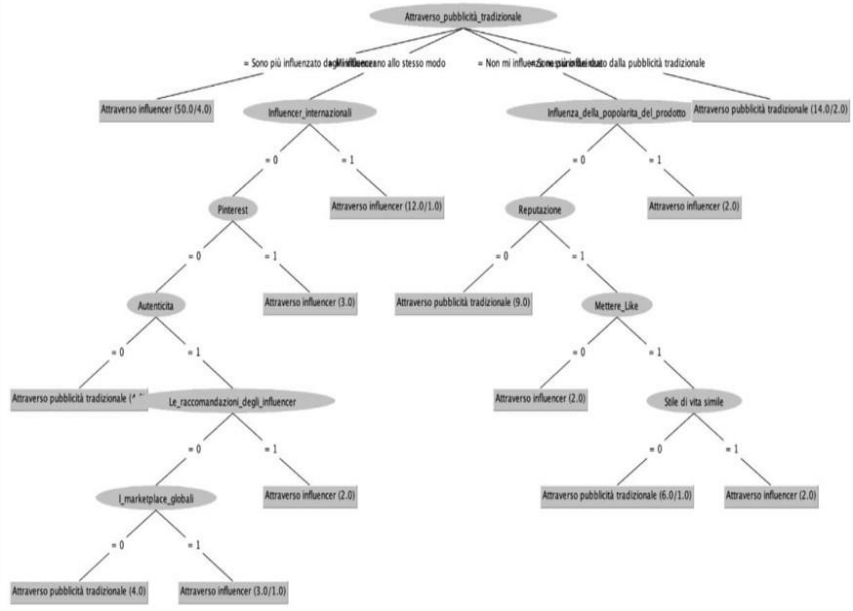



**Figure 1:** The most relevant Decision Tree (Source: Our own elaboration)

## 3. Implications, Limits And Conclusions

The findings highlight that perceived similarity between consumers and influencers significantly enhances the perceived relevance and credibility of influencer product reviews. This implies that marketers should prioritize the selection of influencers whose values and lifestyles closely align with their target audience to maximize promotional effectiveness. This means that it is necessary to invest by considering congruence.

Moreover, since purchase behavior correlates more strongly with specific types of influencer content—namely product reviews and "Get Ready With Me" videos— brands should tailor influencer collaborations toward these content formats to better stimulate consumer purchasing decisions. The cluster analysis reveals heterogeneity among consumers in their susceptibility to influencer marketing. This segmentation provides a valuable framework for firms to customize their strategies—allocating influencer-driven campaigns primarily toward highly susceptible clusters while deploying alternative tactics for more indifferent segments.

The results advocate for a nuanced segmentation of consumer audiences, acknowledging distinct susceptibility levels toward influencer marketing, and recommend a content-focused approach emphasizing authentic and value-congruent messaging. These findings, show, furthermore, that factors beyond social media usage frequency shape consumers' perceived alignment with influencers, encouraging further research into underlying psychological and sociocultural dynamics. Overall, this study provides actionable insights for marketers seeking to optimize influencer partnerships by emphasizing value congruence and content relevance while considering heterogeneity within target markets. The most important limits of this study is represented by the small sample and the prevalence of the 18-24 aged group which requires a more balanced sample in the future development of this research.

## References

Farivar, S., & Wang, F. (2022). Effective influencer marketing: A social identity perspective. Journal of Retailing and Consumer Services, 67, 103026.

Koay, K.Y. and Lim, W.M. (2025), "Congruence effects in social media influencer marketing: the moderating role of wishful identification in online impulse buying intentions", Journal of Product & Brand Management, Vol. 34 No. 3, pp. 265-278.

Schouten, A. P., Janssen, L., & Verspaget, M. (2021). Celebrity vs. Influencer endorsements in advertising: the role of identification, credibility, and ProductEndorser fit. In Leveraged marketing communications (pp. 208-231). Routledge, New York.

Shan, Y., Chen, K. J., & Lin, J. S. (Elaine). (2019). When social media influencers endorse brands: the effects of self-influencer congruence, parasocial identification, and perceived endorser motive. International Journal of Advertising, 39(5), 590–610.

Torres, P., Augusto, M., & Matos, M. (2019). Antecedents and outcomes of digital influencer endorsement: An exploratory study. Psychology & Marketing, 36(12), 12671276.

Venciute, D., Mackeviciene, I., Kuslys, M., & Correia, R.F. (2023). The role of influencer–follower congruence in the relationship between influencer marketing and purchase behaviour. Journal of Retailing and Consumer Services, 75, 103506.

Von Mettenheim, W., & Wiedmann, K. P. (2021). The complex triad of congruence issues in influencer marketing. Journal of Consumer Behaviour, 20(5), 1277-1296.

Xiao, L., Saleem, A., Tariq, S. M., Ul Haq, J., & Guo, M. (2021). I wish I could be like her/him! how self-congruence stimulates a desire to mimic. Journal of Theoretical and Applied Electronic Commerce Research, 16(7), 3025-3042.

Xu, X., & Pratt, S. (2018). Social media influencers as endorsers to promote travel destinations: an application of self-congruence theory to the Chinese Generation Y. Journal of travel & tourism marketing, 35(7), 958-972.

# Leveraging Mechanical AI to Optimize Advertising Performance: Evidence from TikTok Smart+ Campaigns

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## Abstract

This study investigates the impact of mechanical AI systems on the performance of social media advertising. Drawing on a multi-case qualitative design, the research explores the effects of Smart+, an AI-driven automation tool integrated into TikTok Ads Manager, on campaign effectiveness and efficiency. While AI's strategic potential in marketing has been widely recognized, less attention has been paid to its operational role, particularly in automating routine tasks such as bidding, pacing, and budget allocation. The study addresses this gap by analyzing campaign performance metrics (i.e., CTR, CR, CPC, CPA, and CPM) across three companies operating in the construction, home furnishings, and financial services sectors. Each company adopted Smart+ after running campaigns through manual management, offering a before-andafter comparison. Results show that Smart+ generally improves efficiency by lowering cost metrics (i.e., CPC, CPA), and in some cases enhances effectiveness (e.g., higher conversions and conversion rates). Notably, the study also identifies challenges and limitations related to the variability of AI performance depending on campaign complexity and data quality. However, the extent of improvement varies depending on industry context and campaign goals. These findings contribute to the literature on AI in digital advertising by providing an advanced understanding of the role of mechanical AI in operational marketing. From a managerial perspective, results suggest that companies can benefit from integrating AI tools like Smart+ to enhance campaign delivery. However, human oversight remains essential to ensure strategic alignment. Moreover, this research encourages marketers to adopt a balanced approach combining AI automation with human expertise for optimal results. The study highlights the need for more nuanced research into platform-native AI tools and their effects across different sectors and campaign types. Future studies could also explore long-term impacts and ethical considerations associated with AI-driven marketing automation.

*Keywords: Mechanical AI, Digital Advertising, Marketing Automation, Campaign Performance, TikTok Ads, Smart+ Automation*

## 1. Introduction

In recent years, the adoption of Artificial Intelligence (AI) in marketing has revolutionized the way companies manage and evaluate their advertising campaigns. AI systems are now commonly introduced in digital advertising platforms, offering automation capabilities that can enhance operational decision-making, campaign personalization, and resource optimization (Davenport et al., 2020). In this context, social media platforms like TikTok are adopting AI-powered tools to support companies in managing campaign parameters, such as targeting, bidding, and budgeting, in real-time.

Among social platforms, TikTok positions itself as a performance-oriented platform and explicitly promotes automation tools, such as Smart+, to help advertisers optimize delivery, targeting, and bidding processes. According to its official business documentation (TikTok for Business, 2025), Smart+ is presented as a solution to simplify campaign setup and improve both efficiency and effectiveness.

According to Khimich et al. (2021), digital advertising performance could be evaluated based on two dimensions: effectiveness and efficiency. Effectiveness refers to the degree to which campaigns achieve their communication goals as measured by indicators such as impressions, clicks, click-through rate (CTR), and conversion rate (CR). At the same time, efficiency is defined as achieving desired results with the lowest possible cost (Black, 2000). It is commonly assessed using other metrics, such as cost-per-click (CPC), cost-per-thousand (CPT), and cost-per-acquisition (CPA).

Among the various types of AI applications, mechanical AI tools refer to rule-based systems that automate repetitive and structured tasks, and have been identified as a key factor in improving efficiency in marketing campaigns (Huang et al., 2021). Despite growing interest in these AI tools, there is a lack of empirical research on their concrete effects on campaign outcomes in social media environments. Indeed, while the strategic role of AI in digital marketing is increasingly recognized (Dwivedi et al., 2021), its operational role, especially the task execution carried out by mechanical AI systems, remains relatively underexplored.

This study seeks to fill this gap by examining how campaign performance, measured in terms of both effectiveness (e.g., CTR, CR, conversions) and efficiency (e.g., CPC, CPM, CPA), changes after the adoption of a mechanical AI system. The analysis focuses on Smart+ as a critical case of such systems, integrated within the TikTok Ads platform. More specifically, Smart+ is an AI-driven automation tool integrated into TikTok Ads Manager, which affects the effectiveness and efficiency of the advertising campaigns. The study employs a longitudinal approach to investigate whether the use of Smart+ can enhance the effectiveness and efficiency of social media advertising campaigns. In this respect, while marketing automation has been widely studied in B2B content marketing (Järvinen & Taiminen, 2016), fewer studies have focused on comparing campaign performance before and after the adoption of automated AI systems on their social platforms. Therefore, the objective of this study is to investigate whether the adoption of a mechanical AI system, such as Smart+, enhances advertising performance in terms of both effectiveness and efficiency. To conduct this study, we adopted a qualitative case study approach (Yin, 2014), analyzing campaign data from three companies operating in different industries that share a common AI platform usage.

## 2. Literature Review

### 2.1 AI in Digital Advertising

AI has rapidly transformed the digital marketing landscape, reshaping the way companies design, execute, and manage advertising campaigns. Over time, the definition of marketing automation has evolved. Initially, it referred to the use of software to perform marketing actions without manual intervention, and this concept was traditionally associated with B2B workflows such as email drip campaigns or leadnurturing sequences (Järvinen & Taiminen, 2016). AI encompasses systems and algorithms that can execute tasks typically requiring human accuracy, such as data analysis, learning from data, and recognizing patterns to inform decisions (Davenport et al., 2020). In the context of digital advertising, AI technologies enhance the hyperpersonalization of messages, predictive analysis of user behavior, and real-time adjustment of campaign parameters.

Several studies have highlighted the potential of AI to improve marketing capabilities, specifically in automating repetitive and data-intensive tasks (Chatterjee et al., 2022). These capabilities are significant for platforms like TikTok because user-generated content and algorithm-driven distribution are both opportunities and challenges for advertisers. Despite these advancements, several studies have focused on the contribution of AI as a strategic tool to improve tasks such as content generation and personalization (Kumar et al., 2024), while only a few have examined its role in operational aspects, such as campaign performance optimization (Huang and Rust, 2021). This is particularly significant for tools like Smart+, which are embedded in the TikTok platform and aim to manage delivery processes rather than content or targeting. Within the field of artificial intelligence applications in marketing, Huang and Rust (2021) show a widely accepted theoretical framework that categorizes AI into three types: mechanical, thinking, and feeling. They define mechanical AI as a system designed to replicate mechanical human activities, by automating routine and rulebased processes without cognitive involvement, but with higher speed and accuracy. Contrasting thinking AI includes tools that support analytical decision-making, while feeling AI encompasses tools capable of simulating emotional understanding (e.g., chatbots with sentiment recognition). This taxonomy is crucial for framing the Smart+ tool as a mechanical AI. Its primary function is to manage delivery parameters such as campaign pacing (how the advertising budget is spent over time during a marketing campaign) (Xu et al., 2015), creative rotation, and audience targeting automatically, based on predefined algorithms and performance However, it does not operate at a strategic level and should not be considered "intelligent" in terms of decision-making. However, its scope has expanded with the expansion of AI-based tools capable of acting autonomously. In this context, mechanical AI represents a significant advancement, enabling not only automation but also dynamic adaptation to real-time campaign data.

## 2.2 Performance Metrics in Digital Advertising

In digital advertising, the evaluation of campaign success is very reliant on quantitative performance metrics. These metrics serve as Key Performance Indicators (KPIs) that allow marketers to measure the degree to which a campaign achieves its communication and business objectives. Previous literature distinguishes between two primary dimensions of campaign performance: effectiveness and efficiency (Khimich & Perfilova, 2021; Black, 2000). Effectiveness refers to a campaign's ability to generate the desired user actions or engagement, such as viewing an ad, clicking through to a landing page, or completing a conversion action (e.g., lead generation or purchase). According to Khimich and Perfilova (2021), effectiveness KPIs include:

- Impressions: The total number of times an ad is shown to users;
- Clicks: The number of times users interact with an ad by clicking;
- Click-Through Rate (CTR): The percentage of clicks relative to impressions, indicating the relevance and appeal of the ad content;

- Conversions: The number of actions completed by users;
- Conversion Rate (CR): The ratio of conversions to clicks, indicating the effectiveness of the campaign.

These metrics are crucial for evaluating the effectiveness of a campaign in engaging the target audience and driving business outcomes. However, they do not account for cost considerations, which are captured by the second dimension of performance: efficiency.

Efficiency, as defined by Black (2000), is the capability to achieve results with the lowest possible costs. In digital marketing, efficiency is typically assessed using costbased indicators like:

- Cost Per Click (CPC): The average cost incurred for each click;
- Cost Per Thousand (CPT): The cost per thousand impressions;
- Cost Per Acquisition (CPA): The average cost to generate a conversion. The digital marketing landscape has increasingly shifted toward database-driven approaches, where such KPIs are monitored and optimized in real-time (Khimich and Perfilova, 2021). This shift has made automated systems more attractive, as they can process vast datasets and adjust campaign parameters dynamically to improve both efficiency and effectiveness (Chintalapati et al., 2022).

Carrasco Gubernatis (2024) notes that KPI interdependence must be carefully considered, as improvements in one metric do not necessarily translate to holistic campaign success. For instance, a reduction in CPC may be accompanied by a decline in CR if the quality of traffic deteriorates. Therefore, evaluating campaign performance requires a composite view of both cost- and result-based metrics.

## 3. Methodology

We conducted this study adopting a qualitative, case-study method (Yin, 2014). In this context, Smart+ is framed as a mechanical AI tool (Huang et al., 2021) because it autonomously manages key campaign execution tasks, such as audience targeting, pacing, creative optimization, and budget allocation, within TikTok Ads Manager. Its integration as a native, default tool promoted by the platform, and its use across various campaign types (e.g., web, app, lead generation), make it a strategically informative case to study the executional implications of AI-driven automation in advertising (TikTok Business, 2025). Its use is expected to impact performance metrics by optimizing the executional components of ad campaigns.

In this study, we conduct an inter-case comparison between the level of performance achieved after the adoption of Smart+ in advertising campaigns and the level achieved before the introduction of the Smart+ system. The objective is to examine the differences in metric performance (impressions, clicks, click-through rate (CTR), conversions, conversion rate (CR), cost-per-click (CPC), cost-per-thousand (CPM), and cost-per-acquisition (CPA)) before the adoption of an automated system.

We analyzed three companies that manage advertising campaigns on TikTok, focusing on lead generation, which is the initiation of consumer interest or inquiry into a business's products or services (Järvinen and Taiminen, 2016).

While these three companies operate in different sectors, they are comparable in terms of campaign goals because each uses TikTok as its primary advertising platform. The cases were drawn from the

operational experience of a leading digital marketing agency (anonymized for confidentiality), characterized by a high level of technological adoption and specialization in integrated digital strategies.

The three companies, referred to as Case A, Case B, and Case C, show the following characteristics, as summarized in Table 1:

| Case | Sector | Campaign Period | Total Campaigns | Smart+ Campaigns | Manual Campaigns | Campaign Goal |
|---|---|---|---|---|---|---|
| Case A | Construction Materials | Jun 2024 – Mar 2025 | 4 | 2 | 2 | Generate qualified leads via instore appointment bookings for bathroom quotes. |
| Case B | Home Furnishing | May 2024 – Mar 2025 | 10 | 5 | 5 | Attract buyers by collecting contact info from users planning to buy furniture. |
| Case C | Financial Services | Jul 2024 – Mar 2025 | 10 | 5 | 5 | Capture loan prospects by driving form completions for personal loan applications. |

**Table 1:** Summary of company case characteristics

Data were gathered from TikTok Ads Manager, which provides us with objective indicators of campaign performance, reach, and engagement levels across different timeframes. Additionally, internal documentation, such as project reports, campaign briefings, and post-campaign evaluations, was considered to analyze processes related to Smart+-based advertising.

Furthermore, direct observation was conducted in collaboration with project managers and digital strategists involved in the development of AI-driven advertising initiatives for a period spanned between 9 and 16 months to enhance the internal validity of the intra-case comparison (Aguinis and Solarino, 2019), ensuring a longitudinal perspective and to capture variations in performance before and after the adoption of Smart+ in advertising campaigns.

To assess the performance of advertising campaigns, we utilized a set of digital marketing metrics commonly used in this field to measure visibility, conversion outcomes, and interactions. According to Carrasco Gubernatis (2024), the metrics analyzed include CPC, CPM, Clicks, CTR, Conversions, CPA, and CR.

To support our intra-case comparison, we present Tables 2, 3, and 4 below, which contain the performance data for each company's campaigns aggregated over the entire observation window: the totals for all months before Smart+ adoption and the totals for all months following Smart+ adoption. Each table, therefore, enables a like-for-like comparison of every effectiveness and efficiency metric. These consolidated data serve as the quantitative foundation for the qualitative discussion in the next section.

| Case A |
|---|

| Campaign | S+ | Cost | CPC | CPM | Imps. | Clicks | CTR | Conv. | CPA | CR |
|---|---|---|---|---|---|---|---|---|---|---|
| Jun 2024 | no | €1,658 | €1.12 | €3.46 | 479,271 | 1,477 | 0.31% | 2 | €829.17 | 0.14% |
| Oct 2024 | no | €10,497 | €0.89 | €2.72 | 3,861,931 | 11,856 | 0.31% | 10 | €1,049.71 | 0.08% |
| Jan 2025 | yes | €4,993 | €0.85 | €1.73 | 2,880,914 | 5,850 | 0.20% | 18 | €277.39 | 0.31% |
| Mar 2025 | yes | €5,001 | €1.15 | €2.43 | 2,058,195 | 4,331 | 0.21% | 24 | €208.39 | 0.55% |
| Sum NoS+ | no | €12,155 | €0.91 | €2.80 | 4,341,202 | 13,333 | 0.31% | 12 | €1,012.95 | 0.09% |
| Sum S+ | yes | €9,994 | €0.98 | €2.02 | 4,939,109 | 10,181 | 0.21% | 42 | €237.96 | 0.42% |

**Table 2:** Performance data collected for Case

*Notes*: S+ = Smart Plus; CPC = Cost Per Click; CPM = Cost Per Mille; Imps. = Impressions; CTR = Click-Through Rate; Conv. = Conversion; CPA = Cost Per Acquisition; CR = Conversion Rate *Source*: Author's own work.

| Case B | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Campaign** | **S+** | **Cost** | **CPC** | **CPM** | **Imps.** | **Clicks** | **CTR** | **Conv.** | **CPA** | **CR** |
| May 2024 | no | €8,749 | €0.58 | €1.60 | 5,483,243 | 15,151 | 0.28% | 390 | €22.43 | 2.57% |
| Jun 2024 | no | €7,500 | €0.84 | €2.41 | 3,114,556 | 8,936 | 0.29% | 533 | €14.07 | 5.96% |
| Jul 2024 | no | €8,248 | €0.67 | €1.79 | 4,620,829 | 12,338 | 0.27% | 572 | €14.42 | 4.64% |
| Aug 2024 | no | €6,998 | €0.57 | €1.52 | 4,592,400 | 12,266 | 0.27% | 487 | €14.37 | 3.97% |
| Sep 2024 | no | €7,000 | €0.50 | €1.72 | 4,063,473 | 13,997 | 0.34% | 706 | €9.92 | 5.04% |
| Oct 2024 | no | €6,999 | €0.50 | €1.92 | 3,640,629 | 14,012 | 0.38% | 766 | €9.14 | 5.47% |
| Nov 2024 | no | €6,174 | €0.74 | €2.46 | 2,511,097 | 8,350 | 0.33% | 313 | €19.73 | 3.75% |
| Jan 2025 | yes | €6,999 | €0.35 | €1.10 | 6,353,377 | 19,984 | 0.31% | 860 | €8.14 | 4.30% |
| Feb 2025 | yes | €7,001 | €0.42 | €1.39 | 5,033,289 | 16,491 | 0.33% | 666 | €10.51 | 4.04% |
| Mar 2025 | yes | €5,906 | €0.42 | €1.42 | 4,163,635 | 14,088 | 0.34% | 642 | €9.20 | 4.56% |
| Apr 2025 | yes | €6,998 | €0.38 | €1.24 | 5,662,524 | 18188 | 0.32% | 650 | €10.77 | 3.57% |
| May 2025 | yes | €6,978 | €0.34 | €1.44 | 4,841,784 | 20589 | 0.43% | 559 | €12.48 | 2.72% |
| Sum NoS+ | | €51,669 | €0.61 | €1.84 | 28,026,227 | 85,050 | 0.30% | 3,767 | €13.72 | 4.43% |
| Sum S+ | | €33,882 | €0.38 | €1.30 | 26,054,609 | 89,340 | 0.34% | 3,377 | €10.03 | 3.78% |

**Table 3:** Performance data collected for Case B

| Case C | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Campaign** | **S+** | **Cost** | **CPC** | **CPM** | **Imps.** | **Clicks** | **CTR** | **Conv.** | **CPA** | **CR** |
| Jul 2024 | no | €4,986 | €1.02 | €1.18 | 4,219,681 | 4,879 | 0.12% | 1,506 | €3.31 | 30.87% |
| Aug 2024 | no | €4,991 | €0.63 | €0.70 | 7,118,165 | 7,895 | 0.11% | 2,214 | €2.25 | 28.04% |
| Sep 2024 | no | €5,016 | €0.82 | €0.93 | 5,413,175 | 6,093 | 0.11% | 1,934 | €2.59 | 31.74% |
| Oct 2024 | no | €10,089 | €1.33 | €1.63 | 6,184,330 | 7,586 | 0.12% | 2,361 | €4.27 | 31.12% |
| Nov 2024 | yes | €9,045 | €1.10 | €1.57 | 5,769,556 | 8,248 | 0.14% | 2,449 | €3.69 | 29.69% |
| Dec 2024 | yes | €14,979 | €1.30 | €1.58 | 9,457,131 | 11,539 | 0.12% | 2,564 | €5.84 | 22.22% |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Jan 2025 | yes | €14,573 | €0.98 | €1.14 | 12,818,930 | 14,830 | 0.12% | 2,879 | €5.06 | 19.41% |
| Feb 2025 | yes | €22,474 | €1.07 | €1.14 | 19,784,728 | 21,071 | 0.11% | 3,879 | €5.79 | 18.41% |
| Mar 2025 | yes | €19,940 | €1.10 | €1.03 | 19,427,885 | 18,172 | 0.09% | 4,203 | €4.74 | 23.13% |
| Apr 2025 | yes | €24,819 | €1.15 | €1.20 | 20,674,275 | 21,532 | 0.10% | 3,984 | €6.23 | 18.50% |
| May 2025 | yes | €24,855 | €1.21 | €1.34 | 18,589,343 | 20,544 | 0.11% | 4,278 | €5.81 | 20.82% |
| | | | | | | | | | | |
| Sum NoS+ | | €25,081 | €0.95 | €1.09 | 22,935,351 | 26,453 | 0.12% | 8,015 | €3.13 | 30.30% |
| Sum S+ | | €130,685 | €1.13 | €1.23 | 106,521,848 | 115,936 | 0.11% | 24,236 | €5.39 | 20.90% |

**Table 4:** Performance data collected for Case C

## 4. Results

In this section, we analyze the performance results from advertising campaigns across the three cases presented in the study. We focused on comparing key metrics before and after the adoption of the Smart+ automation system to assess potential improvements in both effectiveness (Conversions) and efficiency (CPA and CR) (Khimich and Perfilova, 2021).

The observations are based on the data previously reported in Tables 1, 2, and 3.

### Case A

Case A, a construction materials company, managed four campaigns from June 2024 to March 2025, of which two were handled manually, and Smart+ implemented two. The intra-case comparison reveals a significant improvement in efficiency-related metrics after the adoption of the Smart+ automated system.

Only four TikTok flights were run between June 2024 and March 2025, each with a different budget, so trend interpretation must remain cautious. The brand first launched a pilot in June 2024; the small test produced just two appointments and an extremely high CPA (€829). A larger-budget follow-up in October fared even worse, pushing the cumulative CPA for the two manually managed campaigns above €1,000.

When Smart+ was activated in January 2025, the picture changed markedly. Across the two automated flights (January-March),.The CPA decreased from €1,012.95 to €237.96, representing a 76.5% improvement; The conversion rate increased from 0.09% to 0.41% (+355.6%), and total conversions rose from 12 to 42, despite a 17.8% lower spend.

Thus, even in a short observation window and with uneven budgets, Smart+ delivered a far more efficient and effective lead-generation process than manual optimisation.

### Case B

Case B refers to a company operating in the home furnishing sector. Unlike Case A, this dataset spans nine consecutive months and shows a steady media budget of roughly €7.000 per flight, giving the comparison more reliability. The switch to Smart+ in January 2025 resulted in clear improvements, primarily driven by media-buying efficiency. The performance uplift stems almost entirely from cheaper traffic rather than a higher propensity to convert.

Smart+ reduced the average CPC by 37.7% (from €0.61 to €0.38) and the CPM by 29.3%, allowing the same monthly budget to yield far more visits and conversions. Even if the conversion rate slipped marginally, from 4.43% to 3.78%, thanks to the fact that every click now costs much less while each hundred clicks still generates roughly the same number of leads, the CPA dropped sharply by 26.9% from €13,72 to €10.03. In short, the efficiency gains come from buying clicks at a lower price, rather than increasing the likelihood that a click converts.

### Case C

Case C refers to a financial services provider. During the summer of 2024, it invested approximately €5,000 per month and, with manual optimization, achieved enviably low costs (CPA around €2.24 and €3.31, and a conversion rate of nearly 30%). However, the volumes were modest. In October, the company doubled the budget in an attempt to win more leads. The extra spend was effective, yet it immediately increased costs: the CPC jumped to €1.33 and the CPA to €4.27.

Smart+ was introduced the very next month. Even before the learning period, the algorithm clawed back a significant share of the lost efficiency: November's CPC fell to €1.10 (about 17% lower than the October peak) and CPA to €3.69 (-14%), while the conversion rate remained roughly steady. Encouraged by that result, the advertiser continued to increase the outlay, first to about €15,000 (+50%), then to roughly €20,000 (+100%), and finally to €2 5,000 (+150%) per month. Remarkably, as the budget continued to climb, the key cost metrics remained almost flat: CPC hovered around the €1 mark and later rose to €1.21 (nearly a 20% increase), and CPA fluctuated between €4.74 and €6.23, well below what would normally be expected when spending quintuples. The conversion rate did ease into the low - 20% range, yet the monthly number of leads almost doubled compared with the manual period.

In summary, Smart+ did not replicate the ultra-low CPAs of the initial low-budget months. Still, it allowed the brand to scale its media spend several times over without a proportionate rise in unit costs, something manual optimization had failed to achieve.

## 5. Discussion

The findings of this study contribute to a deeper understanding of how mechanical AI systems, represented here by Smart+, can impact the performance of advertising campaigns on social media platforms such as TikTok. Our inter-case analysis reveals that the adoption of Smart+ enhances both effectiveness (CTR, CR, conversions) and efficiency (CPC, CPM, CPA), reinforcing prior literature that highlights the positive impact of AI systems on digital marketing operations through automation (Davenport et al., 2020).

In this context, Smart+ operates within the definition of mechanical AI as proposed by Huang et al. (2021). This system automates routine, rule-based marketing tasks with high speed and accuracy, eliminating the need for cognitive processing. Its ability to manage delivery parameters, such as pacing, budget allocation, and creative rotation, autonomously aligns with the idea that mechanical AI can significantly optimize the executional aspects of digital campaigns.

While Case A experienced the most notable improvement in cost-efficiency (i.e., lower CPA and CPC), Cases B and C showed balanced gains across both dimensions. This supports the notion that the effectiveness of AI systems is not universally consistent but depends on contextual variables, such as campaign goals, creative assets, and audience segments (Chatterjee et al., 2022).

Crucially, the three cases originate from distinct industry verticals: home improvement, furniture retail, and consumer finance. This sectoral heterogeneity strengthens the analytic generalisability of our results (Yin, 2009), suggesting that mechanical AI can deliver performance gains across markedly different market contexts, not merely within a single niche.

Furthermore, as Dwivedi et al. (2021) emphasize, increasing reliance on AI systems raises concerns regarding explainability and control, particularly in data-driven environments where accountability and strategic flexibility are critical.

Lastly, the longitudinal and embedded nature of our data collection, which involved close collaboration with digital strategists and project managers over several months, adds depth to the findings and enhances internal validity (Aguinis & Solarino, 2019).

## 6. Conclusions and implications

From a theoretical perspective, this study provides an advanced understanding of the role of mechanical AI in operational marketing. While existing literature has concentrated mainly on AI's strategic or creative contributions (Kumar et al., 2024), our findings highlight the operational and executional benefits of AI-driven automation in campaign settings as argued by Huang and Rust (2021), who highlights that mechanical AI represents a foundational layer of marketing automation capable of optimizing repetitive, rule-based processes.

Furthermore, this study examined the impact of implementing a mechanical AI system (Smart+) on the efficiency and effectiveness of advertising campaigns, using a multicase qualitative design. Our results show that Smart+ generally improves both types of performance metrics, particularly in terms of reducing acquisition and click costs while increasing conversion outcomes.

By framing Smart+ within the theory of mechanical AI (Huang & Rust, 2021), we expand the academic understanding of how AI can function not only at the strategic or creative level but also at the executional layer of digital marketing. These findings support a growing consensus that AI tools are not just transformative at a conceptual level but are already delivering operational value in live marketing environments (Davenport et al., 2020).

From a managerial perspective, these insights suggest that companies can benefit from integrating AI tools like Smart+ to enhance campaign delivery, especially in environments like TikTok. However, companies must remain cautious of over-reliance on automation without human oversight. Decisions about budget allocation, targeting, and message framing still require strategic input, and whole delegation to AI may not always yield optimal results. Marketers should therefore treat Smart+ as a complementary tool, not a replacement for human decision-making.

Nonetheless, the study also reveals essential boundaries to these effects, suggesting that the impact of automation changes by industry context, campaign objective, and structure. While the automation offered by Smart+ shows promise, it is not a one-sizefits-all solution. Future research could expand on these findings through quantitative analyses or experiments comparing platform-native AI tools across different advertising platforms (e.g., Meta, Google Ads).

## References


Aguinis, H., & Solarino, A. M. (2019). Transparency and replicability in qualitative research: The case of interviews with elite informants. Strategic Management Journal, 40(8), 1291–1315. https://doi.org/10.1002/smj.3015

Carrasco Gubernatis, D. A. (2024). Understanding Digital Marketing Metrics. In The Digital Marketer's Playbook: How to Effectively Collaborate with Agencies, Freelancers, and Digital Marketing Experts (pp. 91-113). Berkeley, CA: Apress.

Chintalapati, S., & Pandey, S. K. (2022). Artificial intelligence in marketing: A systematic literature review. International Journal of Market Research, 64(1), 38-68.

Huang, M. H., & Rust, R. T. (2021). A strategic framework for artificial intelligence in marketing. Journal of the academy of marketing science, 49, 30-50.

Järvinen, J., & Taiminen, H. (2016). Harnessing marketing automation for B2B content marketing. Industrial marketing management, 54, 164-175.

Khimich, E. V., & Perfilova, M. N. (2021) Key Metrics for Assessing Efficiency Of Online Marketing Communication. European Proceedings of Social and Behavioural Sciences.

Kumar, V., Ashraf, A. R., & Nadeem, W. (2024). AI-powered marketing: What, where, and how?. International Journal of Information Management, 77, 102783.

Purnomo, Y. J. (2023). Digital marketing strategy to increase sales conversion on e-commerce platforms. Journal of Contemporary Administration and Management (ADMAN), 1(2), 54-62.

TikTok Business. (2025). Summer 2025 SMB Playbook. Retrieved from https://ads.tiktok.com/business/library/IT_SMB_Summer_2025_Playbook.pdf

Xu, J., Lee, K. C., Li, W., Qi, H., & Lu, Q. (2015, August). Smart pacing for effective online ad campaign optimization. In Proceedings of the 21st ACM SIGKDD international conference on knowledge discovery and data mining (pp. 2217-2226).

Yin, R. K. (2014). Case Study Research and Applications. Design and Methods (5th ed.). Sage Publications.

# Human vs Virtual Influencers: The Impact of AI on Digital Marketing

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## Abstract

This study investigates the communicative effectiveness of virtual versus human influencers on Instagram, focusing on follower engagement and identity construction. Drawing on a mixed-method approach, we analyzed quantitative metrics—follower count and engagement rate (ER)—for the top 100 influencers in each category, complemented by qualitative observations of 20 influencer profiles. Results show that while human influencers retain broader reach, virtual influencers achieve significantly higher engagement rates, with more consistent interaction patterns across follower tiers. Qualitative insights reveal contrasting narrative styles: human influencers offer emotionally resonant, personal storytelling, while virtual influencers project carefully curated, brand-aligned personas with limited depth. These findings suggest that virtual influencers function as controlled media artifacts rather than relational agents, offering efficiency in brand messaging but requiring strategic narrative design to overcome limitations in perceived authenticity.

*Keywords: Engagement, Virtual Influencer, Influencer Marketing, Artificial Intelligence*

### 1. Introduction

In an ever-evolving digital environment, Artificial Intelligence (AI) has emerged as a transformative force in multiple sectors (Hossain et al., 2024), with digital marketing being one of the primary beneficiaries (Zaki, 2019; Islam et al., 2024). Accenture predicts that by 2035, AI could increase economic growth rates by 1.7% in all sectors and improve productivity by up to 40% (Pereira et al., 2023). Bartelt and Röser (2024) point out that, although AI finds application in numerous areas of marketing, its implementations focus mainly on the operational level. Rapid advances in AI have triggered a large-scale digital transformation, promoting the creation of avatars, automated content generation systems, and virtual environments that can enhance unprecedented levels of social connection (Ahn et al., 2022; Miao et al., 2022; Yu et al., 2024). Such innovations enable more realistic and large-scale digital interactions, significantly improving consumer engagement (Rahman et al., 2023). In this scenario, influencers play a central role. They are defined as individuals or social media users who, having developed a large follower base on one or more platforms, can generate engagement, stimulate conversations, and promote products or services to specific targets (Pick, 2021; Kim & Kim, 2021). An innovative typology based on AI has recently emerged: virtual influencers (Leighton, 2019;

Thomas & Fowler, 2021). These avatars represent an alternative and effective way for brands to reach the public, offering advantages in terms of reputation management and reduction of relational risks compared to human influencers. The influencer marketing sector has experienced extraordinary growth, with forecasts indicating that the market will expand to 32.55 billion dollars by 2025, compared to 24 billion in 2024 and just 1.4 billion in 2014. This compound annual growth rate (CAGR) of 33.11% demonstrates the sector's constant evolution and rapid expansion over the last ten years (InfluencerMarketingHub, 2025). According to a report by HypeAuditor, the global influencer marketing market is expected to grow from $19.8 billion in 2024 to $31.2 billion by 2027, reflecting brands' growing confidence in collaborating with influencers to increase engagement and sales (HypeAuditor, 2025). Most marketers (70.6%) believe AI can surpass human capabilities in key marketing tasks, while nearly 60% fear it could replace their roles (HypeAuditor, 2025). Despite the growing interest in influencer marketing, the literature still lacks systematic research on the role of AI in the perception of content quality. In particular, comparative empirical analyses between human and virtual influencers remain limited, especially regarding their performance on platforms like Instagram. This study addresses this gap through a mixed-method comparative analysis based on secondary data evaluating content creation, identity construction, and audience engagement in influencer communication.

## 2. Background The Impact of AI on Digital Marketing

The emergence of digital technologies has led to a transition from traditional marketing to digital marketing. AI has fostered the advancement of empirical studies, highlighting the growing interest in digital marketing and the adoption of emerging technologies in response to the transformations imposed by the pandemic (Sang, 2024). AI has long been expected to impact marketing strategies and customer behavior significantly (Davenport et al., 2020). A 2018 McKinsey study identified marketing and sales as areas with the most significant potential value from AI (Chui et al., 2018). In 2019, Salesforce predicted AI would become the most widely adopted technology by marketers, highlighting its use in segmentation, analytics, messaging, personalization, and predictive analytics (Columbus, 2019). This integration has given rise to AI-based marketing, defined by Overgoor et al. (2019) as the development of artificial agents that analyze consumer, competitor, and company data to suggest or implement marketing actions. AI has become a central element in transforming the digital marketing landscape by improving automation, customer engagement, and personalization (Keegan et al., 2024). Integrating AI into digital marketing automation allows companies to optimize operations, predict consumer behavior, and adapt marketing strategies to individual customer preferences (Islam et al., 2024). Studies show that thanks to AI tools, marketers can improve products, create more targeted advertising, and analyze audience data. Jarek and Mazurek (2019) and Olson and Levy (2018) also highlight other relevant aspects of AI, such as the introduction of new ways of interaction, a deeper understanding of the customer, improved decision-making and reasoning, automation of processes, increased innovation, the development of new skills, and the emergence of a new marketing ecosystem. The integration of AI positively influences consumer engagement and enables marketers to attract new customers (Bilal et al., 2024). Collecting and analyzing data helps reduce barriers between companies and customers (Dwivedi et al., 2021), while addressing information overload through automated solutions (Capatina et al., 2020; Bag et al., 2022). Consumer engagement has been strengthened by the increasing use of social media platforms (Chaouali et al., 2016; Akram et al., 2023), positively impacting satisfaction and product evaluations (Khamis et al., 2016; Loureiro et al., 2017). AI further enhances this engagement by personalizing online experiences (de Oliveira et al., 2020) and predicting purchasing behaviors (Duan et al., 2019). AI algorithms are particularly effective in analyzing large volumes of data from social media, identifying patterns and trends that can be used to define marketing strategies

(Wang et al., 2013; Lu et al., 2015). The main goal is to keep users engaged, foster their loyalty, and personalize content based on their interests, improving the overall experience on social platforms (Al Qaruty et al., 2023).

## 3. Human vs Virtual Influencers

In the evolving context of influencer marketing, a significant distinction emerges between traditional and virtual influencers. Traditional influencers are real-life social media figures valued for their expertise and ability to attract and influence audiences through authentic content (Hudders et al., 2021). In contrast, virtual influencers (VIs), computer-generated digital representations with human traits and personalities, are a new tool for brand promotion due to their increasing prevalence and economic relevance (Byun et al., 2023). VIs represent an innovative and rapidly growing niche within influencer marketing, distinguished by their reliance on computer technology or AI (Thomas & Fowler, 2021). AI plays a key role in facilitating interactions between VIs and consumers, helping to create a sense of realism in their behaviors (Gao et al., 2023; Miao et al., 2022; Yu et al., 2024). By simulating human actions, VIs facilitate the connection between virtual imagery and the real world, increasing consumer engagement in digital environments (Yu et al., 2024; Zhou et al., 2024). Being created entirely through 3D modeling and machine learning technologies, they are gaining popularity for their ability to be personalized, managed without time limits, and completely controllable by brands (Yu et al., 2024). Their artificial and stylized nature makes them perceived as less threatening and less subject to direct comparisons (Deng & Jiang, 2023), while still achieving comparable levels of engagement and visibility. Literature progressively deepens the public's perception of these figures, but the results remain heterogeneous. Some authors, such as Sands et al. (2022), describe them as "false idols", noting how interactions with artificial entities can generate annoyance or rejection. According to Harambašić and Škare (2024), the emergence of these virtual figures represents a response to the challenges related to managing traditional influencers, allowing companies to eliminate the risks related to behaviors not aligned with the brand's values. However, this research suggests that consumers are increasingly aware of the AI behind these figures and may require greater clarity on how content is created and managed, also raises questions of transparency and trust.

## 4. Method

To explore the communicative effectiveness of virtual versus human influencers, this study adopts a mixed-method approach, combining secondary data analysis with direct profile observation. The objective is to evaluate differences in reach, engagement, and interaction quality, while also capturing stylistic and behavioral nuances shaped by AIgenerated identity construction. We constructed two datasets comprising the top 100 human and 100 virtual influencers on Instagram, ranked by follower count. Sources included publicly accessible profile metrics and the HypeAuditor analytics platform, a validated tool for influencer performance benchmarking. Two quantitative variables were collected:

- Follower count, a proxy for popularity and reach;
- Engagement rate (ER), computed as (likes + comments) / followers × 100, indicating content resonance and audience interaction.

Additionally, qualitative observation of influencer content was conducted for a sample of 10 profiles from each category to interpret differences in style, persona, and interaction cues, complementing numerical data with communication patterns (Marwick, 2015).

Descriptive statistics were followed by:

- An independent-samples t-test to compare average followers and ERs between groups;
- Pearson's correlation to assess the relationship between follower count and ER;
- Visual inspection of content (captions, visual design, narrative tone) to contextualize quantitative findings, in line with mixed-method social media research practices (Djafarova & Rushworth, 2017; Suh, 2020).

## 5. Discussion

As expected, human influencers dominate in follower count, often surpassing 50 million (e.g., Cristiano Ronaldo, Kylie Jenner). In contrast, virtual influencers rarely exceed 6 million, a threshold consistent with their still-niche status. However, virtual influencers outperform humans in ER, with a mean engagement rate significantly higher ($t = -2.81$, $p < 0.01$). This suggests more responsive communities or algorithmically optimized content strategies. A negative correlation between follower count and ER was confirmed among human influencers ($r = -0.43$), consistent with prior findings (De Veirman et al., 2017; Casaló et al., 2020), reinforcing the idea that visibility can dilute engagement. For virtual influencers, correlation was weaker ($r = 0.17$, ns), indicating more consistent interaction levels across different audience sizes— likely due to their designed personas and content regularity. Content analysis reveals stark stylistic contrasts. Human influencers emphasize aspirational authenticity, often rooted in personal milestones, fashion, or lifestyle. Emotional tone varies and comments include both admiration and critique, suggesting parasocial intimacy (Abidin, 2015). Virtual influencers, such as Lil Miquela or Noonoouri, exhibit curated, often futuristic aesthetics. Captions are polished, brand-aligned, and socially neutral. These avatars rarely post controversial or intimate content. Notably, user comments tend to express curiosity or admiration but lack emotional complexity, echoing findings from Mirowska & Arsenyan (2023). This suggests that virtual influencers function more as branded media objects than individual personalities. Their communication is strategically sanitized, which enhances message control but may limit deep relational bonding (Sands et al., 2022). According to the findings, Virtual influencers offer a higher ROI in engagement, especially for niche audiences. However, their limited reach may constrain mass-awareness campaigns. Despite technical polish, virtual influencers still evoke skepticism (Franke et al., 2023). Brands must humanize avatars with storytelling and transparency (e.g., behind-the-scenes of their design or ethical messaging). The future may lie in hybrid campaigns that combine real influencers with virtual ones, balancing emotional depth and brand control (Harambašić & Škare, 2024). Conclusions

This study offers a multifaceted examination of how virtual and human influencers differ not only in performance metrics but also in the construction of digital personae and communicative functions. By combining quantitative data analysis with direct observation of influencer profiles, we have shown that virtual influencers are not simply algorithmic replicas of human influencers but represent a distinct communicative paradigm, one grounded in control, brand alignment, and emotional minimalism. From a quantitative standpoint, virtual influencers demonstrated consistently higher engagement rate than their human counterparts, despite their comparatively limited follower bases. This suggests that algorithmic design and narrative curation may enhance message efficiency, possibly due to novelty effects, audience segmentation, or aesthetic consistency. Yet, the reach gap between the two categories remains significant: real influencers dominate in scale, celebrity, and mainstream recognition. Thus, brands must weigh the tradeoff between broad visibility and targeted resonance when choosing influencer types. Qualitative analysis revealed deeper, structural divergences. Human influencers typically build relationships around emotional narratives, life moments, and parasocial intimacy, fostering trust and perceived authenticity. Their imperfections and unpredictability, once viewed as

liabilities, now serve as signals of realness in a media environment saturated with curated content. Conversely, virtual influencers operate as semiotic vessels: visually compelling, narratively neutral, and highly adaptable. Their communicative style tends toward sanitized branding, which reduces risk but also narrows the bandwidth for emotional engagement. These differences underscore a fundamental shift in digital culture: from identity-based persuasion (centered on individual experience) to aesthetic-brand logic (centered on design and control). Virtual influencers thus offer efficiency without exposure, making them attractive to riskaverse brands or campaigns operating in highly regulated environments. However, their limited relational depth may be problematic for causes that depend on trust, relatability, or moral authority, such as sustainability, social justice, or health. Looking forward, one of the most promising directions lies in hybrid influencer ecosystems. As virtual influencers become more sophisticated and emotionally expressive, and as human influencers adopt algorithmic tools to optimize content, we may see blended formats that integrate emotional authenticity with narrative control. Campaigns could alternate between human-led storytelling and virtual precision messaging, depending on context, target, and platform affordances. Moreover, this study highlights the importance of continuously monitoring digital personas, not just through engagement metrics, but through their stylistic evolution, audience feedback, and socio-cultural positioning. As users become increasingly media-savvy, authenticity will remain a key differentiator, whether it is biologically real or synthetically designed. In conclusion, while virtual influencers cannot yet replicate the relational richness of human influencers, they open new frontiers for brand storytelling, audience targeting, and identity construction in the digital age. Their impact should be understood not as a replacement, but as a transformation of the influencer economy, reflecting broader tensions between automation and emotion, control and connection, efficiency and empathy.

## References


Abidin, C. (2015). Communicative intimacies: Influencers and percieved interconnectedness.

Ahn, R. J., Cho, S. Y., & Sunny Tsai, W. (2022). Demystifying computer-generated imagery (CGI) influencers: The effect of perceived anthropomorphism and social presence on brand outcomes. Journal of interactive advertising, 22(3), 327-335.

Akram, U., Lavuri, R., Ansari, A. R., Parida, R., & Junaid, M. (2023). Havocs of social media fake news! Analysing the effect of credibility, trustworthiness, and selfefficacy on consumer's buying intentions. Journal of Strategic Marketing, 1-15.

Al Qaruty, S., Al-Tkhayneh, K. M., Hadi, S. A., Al Qaruty, R., & Ellala, Z. K. (2023, November). Cyber Fusion: Exploring the Synergy of Social Media and Artificial Intelligence in the Digital Age. In 2023 Tenth International Conference on Social Networks Analysis, Management and Security (SNAMS) (pp. 1-5). IEEE.

Bag, S., Srivastava, G., Bashir, M. M. A., Kumari, S., Giannakis, M., & Chowdhury, A. H. (2022). Journey of customers in this digital era: Understanding the role of artificial intelligence technologies in user engagement and conversion. Benchmarking: An International Journal, 29(7), 2074-2098.

Bartelt, C., & Röser, A. M. (2023). Transforming the Operational Components of Marketing Processes with GenAI: A Paradigm Shift. Advances in Artificial Intelligence and Machine Learning. 2024; 4 (3): 148. Inf Syst.

Bilal, M., Zhang, Y., Cai, S., Akram, U., & Halibas, A. (2024). Artificial intelligence is the magic wand making customer-centric a reality! An investigation into the relationship between consumer purchase intention and consumer engagement through affective attachment. Journal of Retailing and Consumer Services, 77, 103674.

Byun, K. J., & Ahn, S. J. (2023). A systematic review of virtual influencers: Similarities and differences between human and virtual influencers in interactive advertising. Journal of Interactive Advertising, 23(4), 293-306.

Capatina, A., Kachour, M., Lichy, J., Micu, A., Micu, A. E., & Codignola, F. (2020). Matching the future capabilities of an artificial intelligence-based software for social media marketing with potential users' expectations. Technological Forecasting and Social Change, 151, 119794.

Casaló, L. V., Flavián, C., & Ibáñez-Sánchez, S. (2020). Influencers on Instagram: Antecedents and consequences of opinion leadership. Journal of business research, 117, 510-519.

Chaouali, W., Yahia, I. B., & Souiden, N. (2016). The interplay of counter-conformity motivation, social influence, and trust in customers' intention to adopt Internet banking services: The case of an emerging country. Journal of Retailing and Consumer Services, 28, 209-218.

Chui, M., Manyika, J., Miremadi, M., Henke, N., Chung, R., Nel, P., & Malhotra, S. (2018). Notes from the AI frontier: Insights from hundreds of use cases. McKinsey Global Institute, 2(267), 1-31.

Columbus, L. (2019) '10 charts that will change your perspective of AI in marketing'.

Davenport, T., Guha, A., Grewal, D. and Bressgott, T. (2020) 'How artificial intelligence will change the future of marketing', Journal of the Academy of Marketing Science, Vol. 48, No. 1, pp.24–42.

de Oliveira Santini, F., Ladeira, W. J., Pinto, D. C., Herter, M. M., Sampaio, C. H., & Babin, B. J. (2020). Customer engagement in social media: a framework and metaanalysis. Journal of the Academy of Marketing Science, 48, 1211-1228.

De Veirman, M., Cauberghe, V., & Hudders, L. (2017). Marketing through Instagram influencers: the impact of number of followers and product divergence on brand attitude. International journal of advertising, 36(5), 798-828.

Deng, F., & Jiang, X. (2023). Effects of human versus virtual human influencers on the appearance anxiety of social media users. Journal of Retailing and Consumer Services, 71, 103233.

Djafarova, E., & Rushworth, C. (2017). Exploring the credibility of online celebrities' Instagram profiles in influencing the purchase decisions of young female users. Computers in human behavior, 68, 1-7.

Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., ... & Williams, M. D. (2021). Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. International journal of information management, 57, 101994.

Franke, C., Groeppel-Klein, A., & Müller, K. (2023). Consumers' responses to virtual influencers as advertising endorsers: novel and effective or uncanny and deceiving?. Journal of Advertising, 52(4), 523-539.

Gao, W., Jiang, N., & Guo, Q. (2023). How do virtual streamers affect purchase intention in the live streaming context? A presence perspective. Journal of Retailing and Consumer Services, 73, 103356.

Harambašić, S., & Škare, V. (2024). Influence Decoded: Challenges and Opportunities Shaping the Future of Influencer Marketing Research. Market-Tržište, 36(1), 99114.

Hossain, F., Ahmed, G. S., Shuvo, S. P. P., Kona, A. N., Raina, M. U. H., & Shikder, F. (2024). Unlocking artificial intelligence for strategic market development and business growth: innovations, opportunities, and future directions. Edelweiss Applied Science and Technology, 8(6), 5825-5846.

Hudders, L., De Jans, S., & De Veirman, M. (2021). The commercialization of social media stars: a literature review and conceptual framework on the strategic use of social media influencers. Social media influencers in strategic communication, 2467.

Islam, M. A., Fakir, S. I., Masud, S. B., Hossen, M. D., Islam, M. T., & Siddiky, M. R. (2024). Artificial intelligence in digital marketing automation: Enhancing personalization, predictive analytics, and ethical integration. Edelweiss Applied Science and Technology, 8(6), 6498-6516.

Jarek, K. and Mazurek, G. (2019) 'Marketing and artificial intelligence', Central European Business Review, Vol. 8, No. 2, pp.46–55,

Keegan, B. J., Dennehy, D., & Naudé, P. (2024). Implementing artificial intelligence in traditional B2B marketing practices: an activity theory perspective. Information systems frontiers, 26(3), 1025-1039.

Khamis, S., Ang, L., & Welling, R. (2017). Self-branding,'micro-celebrity'and the rise of social media influencers. Celebrity studies, 8(2), 191-208.

Kim, D. Y., & Kim, H. Y. (2021). Influencer advertising on social media: The multiple inference model on influencer-product congruence and sponsorship disclosure. Journal of Business Research, 130, 405-415.

Leighton, H. (2019). What it means for virtual Instagram influencers' popularity rising. Forbes. https://www. forbes. com/sites/heatherleighton/2019/11/26/what-itmeans-for-virtualinstagram-influencers-popularity-rising.

Loureiro, S. M. C., Gorgus, T., & Kaufmann, H. R. (2017). Antecedents and outcomes of online brand engagement: The role of brand love on enhancing electronic-wordof-mouth. Online Information Review, 41(7), 985-1005.

Lu, J., Wu, D., Mao, M., Wang, W., & Zhang, G. (2015). Recommender system application developments: a survey. Decision support systems, 74, 12-32.

Marwick, A. E. (2015). Instafame: Luxury selfies in the attention economy. Public culture, 27(1 (75)), 137-160.

Miao, F., Kozlenkova, I. V., Wang, H., Xie, T., & Palmatier, R. W. (2022). An emerging theory of avatar marketing. Journal of Marketing, 86(1), 67-90.

Mirowska, A., & Arsenyan, J. (2023). Sweet escape: The role of empathy in social media engagement with human versus virtual influencers. International Journal of Human-Computer Studies, 174, 103008.

Olson, C., & Levy, J. (2018). Transforming marketing with artificial intelligence. Applied Marketing Analytics, 3(4), 291-297.

Overgoor, G., Chica, M., Rand, W., & Weishampel, A. (2019). Letting the computers take over: Using AI to solve marketing problems. California Management Review, 61(4), 156-185.

Pereira, L., Tomás, D., Dias, Á., Costa, R. L. D., & Gonçalves, R. (2023). How artificial intelligence can improve digital marketing. International Journal of Business Information Systems, 44(4), 581-624.

Pick, M. (2021). Psychological ownership in social media influencer marketing. European Business Review, 33(1).

Rahman, M. S., Bag, S., Hossain, M. A., Fattah, F. A. M. A., Gani, M. O., & Rana, N. P. (2023). The new wave of AI-powered luxury brands online shopping experience: The role of digital multisensory cues and customers' engagement. Journal of Retailing and Consumer Services, 72, 103273.

Sands, S., Ferraro, C., Demsar, V., & Chandler, G. (2022). False idols: Unpacking the opportunities and challenges of falsity in the context of virtual influencers. Business Horizons, 65(6), 777-788.

Sang N.M. (2024). Bibliometric insights into the evolution of digital marketing trends. Innovative Marketing, 20(2), 1-14.

Suh, S. (2020). Fashion everydayness as a cultural revolution in social media platforms—Focus on fashion Instagrammers. Sustainability, 12(5), 1979.

Thomas, V. L., & Fowler, K. (2021). Close encounters of the AI kind: Use of AI influencers as brand endorsers. Journal of Advertising, 50(1), 11-25.

Wang, Z., Zhu, W., Cui, P., Sun, L., & Yang, S. (2013). Social media recommendation. Social media retrieval, 23-42.

Yu, J., Dickinger, A., So, K. K. F., & Egger, R. (2024). Artificial intelligence-generated virtual influencer: Examining the effects of emotional display on user engagement. Journal of Retailing and Consumer Services, 76, 103560.

Zaki, M. (2019). Digital transformation: harnessing digital technologies for the next generation of services. Journal of Services Marketing, 33(4), 429-435.

Zhou, Q., Li, B., Li, H., & Lei, Y. (2024). Mere copycat? The effects of human versus human-like virtual influencers on brand endorsement effectiveness: a moderated serial-mediation model. Journal of Retailing and Consumer Services, 76, 103610.

# Track 9
# Sustainable Marketing and Inclusivity

Coordinators: Giovanna Pegan & Barbara Masiello

I cambiamenti economici, sociali e ambientali, unitamente alle critiche spesso rivolte alla disciplina del marketing in tema di etica, hanno portato le imprese a rivedere negli anni le proprie politiche di mercato. Il nuovo obiettivo è quello di garantire la soddisfazione, anche nel lungo periodo, non solo del singolo consumatore ma di tutta la collettività. In questa prospettiva, si parla di "marketing sostenibile" per intendere un approccio strategico e un set di strumenti che possono essere adottati dalle aziende per conciliare la crescita economica con i vincoli ambientali e la tutela dei diritti dell'uomo. La track, attraverso la presentazione di ricerche teoriche, empiriche e casi di studio, intende fornire un avanzamento all'applicazione del concetto di sostenibilità ed evidenziare come l'implementazione di strategie di marketing possano fornire un contributo importante allo sviluppo sostenibile. In questo ambito sono sollecitati in particolar modo, ma non esclusivamente, contributi applicati ai diversi settori industriali, sui seguenti temi: CSR e creazione di valore condiviso nelle politiche di marketing; marketing sociale; sostenibilità e scelte di prodotto; green marketing; marketing nelle organizzazioni ibride (imprese sociali, B-corp); comunicazione ambientale.

Economic, social, and environmental changes—together with ethical critiques of marketing—have pushed firms to rethink their market policies, aiming to satisfy not only individual consumers but society as a whole. "Sustainable marketing" refers to strategies and tools that help companies align economic growth with environmental constraints and human rights protection.

This track seeks to advance understanding of sustainability in marketing through theoretical studies, empirical research, and case analyses, showing how marketing strategies can contribute to sustainable development. Contributions are especially invited on topics such as CSR and shared value in marketing policies, social marketing, sustainability in product decisions, green marketing, marketing in hybrid organizations (e.g., social enterprises, B-corps), and environmental communication.

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# Beyond Greenwashing: Communicating Sustainability in the Age of Regulatory Verification

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## Abstract

The growing relevance of sustainability is prompting companies to integrate environmental and social dimensions into their communication strategies. However, the proliferation of environmental claims unsupported by objective evidence increases the risk of deceptive practices, leading the EU to introduce a new regulatory framework aimed at countering greenwashing. Directive (EU) 2024/825 represents a turning point, mandating transparency, traceability, and verifiability for all environmental statements directed at consumers. This short paper analyzes the implications of the directive for sustainable marketing, with the goal of understanding how companies can construct responsible narratives aligned with the new standards. It offers a theoretical-applied analysis integrating tools such as Life Cycle Assessment (LCA), ESG reporting, and ISO standards, highlighting the transition from emotional communication to one grounded in measurable data. Through two case studies of Italian companies operating in different sectors, emerging practices in claim management, the development of internal guidelines, and oversight of digital channels are explored. Findings suggest that regulatory compliance, if effectively managed, can evolve into a strategic opportunity. Sustainable marketing now plays a pivotal role in building trust, protecting corporate reputation, and strengthening competitive positioning.

*Keywords: environmental communication, sustainable marketing, greenwashing, European directive, environmental claims, ESG*

### 1. Introduction

Over the past two decades, sustainability has become a cornerstone of corporate strategy, evolving from an ethical driver to a structural component of competitiveness (Leonidou et al., 2013). Companies are being prompted by consumers, investors, and institutions to incorporate environmental and social dimensions into their business models and to communicate them using appropriate tools and language. In this context, sustainable marketing plays a critical role in translating ESG values into practice, acting as a bridge between technical data and corporate storytelling (Peattie & Crane, 2005).

However, the widespread use of unsupported environmental claims has eroded consumer trust, who are increasingly exposed to vague or misleading messages (Delmas & Burbano, 2011). Greenwashing has become a threat to the credibility of ecological transition and to the informative function of corporate communication (OECD, 2022). According to the European Commission (2020), more than 50% of environmental claims in the EU market are unclear or unverifiable.

In response to these concerns, the EU initiated a legislative process that culminated in Directive (EU) 2024/825, which introduces obligations of transparency, traceability, and verifiability for environmental declarations. The directive redefines the scope of environmental marketing and promotes regulated communication practices.

This paper aims to examine how companies can respond to these demands by developing strategies based on technical standards and measurable data. Through two Italian business cases, the paper reflects on emerging models of sustainable communication that comply with the new European regulations.

## 2. The European Regulatory Framework: From Transparency to Verifiability

In recent years, European legislation has strengthened consumer protection against greenwashing. Directive 2005/29/EC, the first reference on unfair commercial practices, prohibited misleading statements but left wide margins for interpretation (European Parliament, 2005).

Directive (EU) 2024/825, in force since March 26, 2024, marks a decisive turning point by amending Directives 2005/29/EC and 2011/83/EU. It prohibits the use of generic claims such as "green" or "climate neutral" if not supported by verifiable evidence (European Parliament, 2024). Article 6 assigns the burden of proof to the operator, who must provide evidence based on standards recognized at European or international level. Among the accepted technical tools there are Life Cycle Assessment (ISO 14040:2006), Type II and III environmental declarations (ISO 14021:2016, ISO 14025), and verification by accredited bodies (ISO/IEC 17065:2012) (ISO, 2023). The European Commission emphasizes that the data must be "clear, relevant, verified, and understandable" (European Commission, 2023).

In parallel, the ESRS standards introduced by EFRAG in 2023 enhance consistency between financial and non-financial data, promoting transparency, comparability, and verifiability (EFRAG, 2023).

Overall, the new European regulatory framework mandates an environmental communication approach based on standards, evidence, and accountability—shifting the function of communication from persuasion to demonstration.

## 3. Tools and Challenges in Environmental Communication

The evolution of environmental communication has driven the adoption of tools that support corporate sustainability declarations. Life Cycle Assessment (LCA) is one of the most established, as it evaluates environmental impacts across the product's entire life cycle (ISO 14040:2006). Today, LCA is used not only for eco-labels (e.g., EPDs), but also for technically validating green claims (Testa et al., 2018).

At the same time, ESG reporting has become central to stakeholder communication, integrating environmental, social, and governance metrics under standards such as GRI (2021) and SASB (Sullivan

& Mackenzie, 2021). However, without the support of clear language, even rigorously grounded content can be perceived as greenwashing (Nyilasy et al., 2014).

A critical challenge lies in the gap between technical validation and public perception: inconsistencies between corporate narratives and stakeholder expectations can breed distrust, even when certifications are present (Becker-Olsen et al., 2006). In this context, environmental marketing cannot be limited to technical dissemination but must reconcile regulatory language, value alignment, and communication clarity.

Finally, the absence of independent verification represents a vulnerability. According to Lyon and Montgomery (2015), self-regulation invites opportunistic risks, while the use of accredited certifications (e.g., ISO/IEC 17065:2012) enhances credibility. The effectiveness of environmental communication thus depends on integrating methodological rigor with responsible storytelling, in line with European legislation.

## 4. Analysis of Two Business Cases: Towards Verifiable Communication

Following the approach by Yin (2018), this section analyzes two Italian companies that have adopted structured approaches to environmental and social communication, in line with the principles of Directive (EU) 2024/825. The companies operate in different industries - one in healthcare technologies (Predict S.p.A.) and the other in agri-food (2 ERRE S.r.l.) - yet both are committed to developing internal sustainability communication guidelines.

Predict S.p.A. has drafted an environmental and social communication guide aimed at promoting transparent, consistent and regulation-compliant messages. Intended for the entire organization, the document is based on ISO 14021 and ISO 14063 standards and provides operational guidance on formulating truthful and evidence-based environmental claims. Emphasis is placed on using measurable data to substantiate terms like "compostable," "biodegradable," or "recyclable". Internal validation of content is recommended, overseen by a designated "Sustainability Officer". The guide also differentiates among communication channels (e.g., social media, press, events, promotional materials) and suggests criteria for integrated, reliable communication that ensures consistency and information accuracy.

2 ERRE S.r.l., by contrast, has implemented an Environmental Communication Manual which, in addition to incorporating the Green Claims Directive, includes a specific section on the careful use of environmental statements on labels and in marketing materials. The manual contains a glossary of accepted claims, examples of compliant wording, and specific references to ISO 14021. Moreover, the company has established a formal internal procedure to monitor both online and offline communications, overseen by a dedicated sustainability officer.

In both cases, a multidisciplinary approach to environmental communication emerges, rooted in a preventive rather than reactive logic. The development of internal policies and manuals is both a strategic response to regulatory complexity and a reputational investment. Although the companies differ in size and sector, they share a common goal: to ensure the quality of environmental information in order to reinforce value alignment and stakeholder trust.

## 5. Managerial Implications: Sustainability, Governance, and Communication

The case study analysis shows that alignment with Directive (EU) 2024/825 can become a strategic opportunity, extending beyond mere regulatory compliance. Defining internal policies allows

companies to transform regulatory obligations into competitive leverage, standardizing practices and reducing risks of inconsistency.

Developing manuals and guidelines, as seen in the cases examined, requires coordination across business functions: marketing, legal, technical, and ESG. Building "green marketing capabilities" demands trained personnel, dedicated tools, and an organizational culture oriented toward transparency (Papadas et al., 2017). Establishing specific roles to oversee environmental communication, as implemented by 2 ERRE S.r.l., strengthens governance and ensures continuity in monitoring practices. This approach aligns with GRI (2021) and ESRS (2023), both of which stress the importance of governance in non-financial disclosures. Proactive verification of environmental claims and the use of ISO protocols (e.g., 14021, 17065) enhance credibility with stakeholders and mitigate the perceived risk of greenwashing (Nyilasy et al., 2014; Lyon & Montgomery, 2015). Effective integration of technical verification and strategic storytelling helps reinforce trust and reputational positioning.

Finally, for SMEs, responsible communication requires efficient resource use: the analyzed cases demonstrate that even medium-sized companies can develop replicable and effective models.

## 6. Conclusions and Future Developments

The growing emphasis on sustainability has redefined the role of corporate marketing. Directive (EU) 2024/825 marks a critical shift, imposing new transparency and verifiability criteria on environmental communication.

This analysis demonstrates that tools such as LCA, ESG reporting, and ISO standards—when systematically integrated—can serve as a robust foundation for objective communication. The cases of Predict S.p.A. and 2 ERRE S.r.l. show that regulations can be translated into concrete practices, including operational guides, internal training, and communication oversight. This not only reduces the risk of greenwashing but also generates reputational value.

Looking ahead, marketing departments will increasingly be called upon to blend technical and narrative skills. The emergence of regulated marketing poses new challenges, but also opportunities for differentiation for those who can leverage compliance effectively.

Future research should assess the long-term impact of the directive, examine stakeholder engagement strategies, and extend the analysis to other sectors and contexts to identify scalable and verifiable models of sustainable communication.

## References

Becker-Olsen, K. L., Cudmore, B. A., & Hill, R. P. (2006). The impact of perceived corporate social responsibility on consumer behavior. Journal of Business Research, 59(1), 46–53.

Commissione Europea (2023). Proposta di Direttiva sui green claims. COM(2023) 166 final.

Commissione Europea (2020). Regolamento (UE) 2020/852 sulla Tassonomia UE.

Delmas, M. A., & Burbano, V. C. (2011). The Drivers of Greenwashing. California Management Review, 54(1), 64–87.

Direttiva (UE) 2024/825. Modifica delle direttive 2005/29/CE e 2011/83/UE per quanto riguarda la responsabilizzazione dei consumatori nella transizione verde.

Direttiva 2005/29/CE. Pratiche commerciali sleali delle imprese nei confronti dei consumatori.

Direttiva (UE) 2022/2464. Corporate Sustainability Reporting Directive (CSRD).

EFRAG (2023). European Sustainability Reporting Standards – Final Drafts.

Forethinking Srl SB (2024). Guida alla comunicazione ambientale e sociale – Predict S.p.A. Rev.00.

Forethinking Srl SB (2024). Manuale sulla comunicazione ambientale – 2 ERRE S.r.l. Rev.00.

GRI (2021). GRI Standards – Universal, Sector, and Topic Standards.

ISO (2006). ISO 14040: Environmental management – Life cycle assessment – Principles and framework.

ISO (2006). ISO 14044: Environmental management – Life cycle assessment – Requirements and guidelines.

ISO (2016). ISO 14021: Environmental labels and declarations – Self-declared environmental claims (Type II).

ISO (2012). ISO/IEC 17065: Conformity assessment – Requirements for bodies certifying products, processes and services.

Leonidou, C.N., Katsikeas, C.S., & Morgan, N. a. (2013). "Greening" the marketing mix: do firms do it and does it pay off? Journal of the Academy of Marketing Science, 41, 151-170.

Lyon, T. P., & Montgomery, A. W. (2015). The Means and End of Greenwash. Organization & Environment, 28(2), 223–249.

Nyilasy, G., Gangadharbatla, H., & Paladino, A. (2014). Perceived Greenwashing: The Effects of Green Marketing on Environmental and Product Perceptions. Journal of Business Ethics, 125(4), 693–707.

Papadas, K-K., Avlonitis, G. J., & Carrigan, M. (2017). Green marketing orientation: Conceptualization, scale development and validation. Journal of Business Research, 80, 236–246.

Yin, R.K. Case Study Research and Applications; COSMOS Corporation: St. Peters, MO, USA, 2018

# Communication of the SDGs in the Company's Mission Statement: The Effect on Performance

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## Abstract

Since sustainable development became a global priority, the UN 2030 Agenda has recognized companies as key agents of transformative change in advancing sustainability practices. Consequently, a growing number of firms started integrating sustainability into their core strategies and operations, incorporating the SDGs into their mission statements, to demonstrate alignment with global sustainability initiatives. Despite their symbolic and communicative importance, the actual impact of such references on sustainability performance remains underexplored. While mission statements are often viewed as communication tools, few empirical studies have assessed their impact on tangible outcomes such as ESG performance. This study addresses that gap by examining whether references to the SDGs in mission statements are associated with higher ESG performance. The results indicate a clear and positive correlation, suggesting that incorporating global goals into a corporate mission statement is more than a symbolic gesture and can drive real progress in sustainability outcomes. In addition, a controversial result was found as companies in countries with higher SDG ratings reported lower ESG scores. This research contributes to the broader discourse on corporate sustainability and strategic alignment, offering valuable insights for both business leaders and policymakers aiming to link organizational purpose, strategic communication, and measurable sustainability performance.

*Keywords: Mission Statement; SDGs; Sustainability Communication; ESG Performances; Manufacturing firms; WLS Regression*

## 1. Framing of the research

Since the late 1970s, scholars in the field of management have made significant progress in exploring both the theoretical foundations and practical implications of mission statements within organizations (Toh et al., 2022; Alegre et al., 2018). This increasing academic interest aligns with a growing need among business leaders and consultants for a unified approach to corporate communication (Stallworth Williams, 2008). While a variety of interpretations of the term "mission statement" exist in scholarly discussions, it is widely understood to be a concise, formal declaration outlining an organization's core purpose and fundamental objectives (David, 1989). Often identified through interchangeably terms such as "credo", "purpose", "manifestos", "core values", mission statements shape an organization's identity and guide its operations (Babnik et al., 2014). Mission statements can be used for internal and external purposes (Klemm et al., 1991). Externally, they are tools for enhancing a company's public image, strengthening its brand, and improving relations with key stakeholders.

Because of their visibility, mission statements play a pivotal role in strategic corporate communication, offering insights into a firm's values, ethical stance, vision, and long-term commitments (Cochran et al., 2008). Internally, these statements act as motivational instruments, aligning employees around shared goals and fostering a sense of purpose. In this regard, mission statements function as internal guiding frameworks that help shape organizational behavior and decision-making (Bart, 1997). They contribute significantly to organizational culture, acting as a cohesive force that binds members together and reinforces a shared identity and direction (Campbell & Yeung, 1991). In recent years, the rise of innovative organizational models that combine financial objectives with social responsibility has revitalized scholarly interest in mission statements. This trend reflects a broader shift in corporate thinking, where sustainability is increasingly viewed as a core strategic element. Many firms now incorporate environmental, social, and economic considerations into their long-term planning. As a result, mission statements have evolved beyond mere declarations of intent, becoming essential instruments for expressing a company's dedication to inclusive and responsible growth, balancing profitability with a commitment to societal and environmental well-being. Furthermore, since the adoption of the 2030 UN Agenda, businesses are increasingly recognized as pivotal agents in fostering the achievement of the 17 Sustainable Development Goals by aligning their strategies with targeted global goals. Embracing these global objectives signifies a move beyond conventional corporate social responsibility toward a more comprehensive corporate sustainability framework. This shift demands a fundamental transformation in how organizations operate, encouraging the integration of sustainable practices across all levels (Jimenez et al., 2021). Consequently, companies are increasingly reevaluating their mission statements to incorporate sustainability priorities, recognizing stakeholders as part of a unified, interdependent system (León-Soriano et al., 2010). Within this evolving landscape, mission statements centered on sustainability are gaining prominence, often surpassing traditional missions in relevance to both corporate strategy and communication (Ding et al., 2023).

## 2. Purpose of the paper

Despite the recognized importance of mission statements as strategic communication tools, it remains difficult to discern to what extent the integration of the SDGs into mission statements reflects a genuine and transformative commitment of companies to sustainability or whether it results from rhetorical strategies aimed at improving public perception. The literature shows that while some companies are making significant changes, others are implementing only marginal contributions to their operational and strategic structure, demonstrating a superficial approach. This raises crucial questions about the actual role of the SDGs in driving substantial improvements in organizations' environmental, social, and economic performance, an issue that requires more in-depth investigation. Our study aims to fill this knowledge gap, providing a more nuanced investigation to understand the dynamics between stated commitment to SDG goals and actual business practices. Specifically, it seeks to answer the following research question:

**RQ:** How does communicating Sustainable Development Goals (SDGs) commitment into firms' mission statements influence firms' sustainability performance?

## 3. Methodology

To investigate the research question, a quantitative approach was adopted. Specifically, we applied a weighted least squares (WLS) regression using R software on a dataset of 340 European manufacturing firms. The manufacturing sector was selected due to its strong involvement in industrial activity and its significant environmental footprint. As a major driver of economic growth and employment, the industry is also deeply tied to sustainability challenges through its high consumption of energy, water, and raw materials. To evaluate references to the Sustainable Development Goals (SDGs) in the firm's mission statement, we conducted a content analysis. This method systematically categorizes textual data to produce numerical insights and is frequently used in mission statement research (Bartkus et al., 2004). We used an accredited keyword list of 876 terms provided by the Sustainable Development Solutions Network (SDSN), derived from United Nations documents, expert consultations, and internet searches (SDSN Australia, New Zealand, and Pacific, 2017). The content analysis was conducted using NVivo software to code and organize the data. Each mission statement was assigned a binary value: "1" if it included SDG-related terms, and "0" if it did not. The dependent variable was each company's ESG (Environmental, Social, and Governance) score, gathered from Refinitiv Eikon. This score serves as a comprehensive measure of a firm's sustainability performance, covering aspects such as ethical governance, environmental responsibility, and social impact. The ESG score reflects a company's overall sustainability performance, including governance, environmental, and social factors. Ratings range from A to D (or 0 to 100). Scores above 50 (A or B) indicate strong sustainability efforts, while scores below 50 (C or D) suggest limited engagement. To control for external factors that might affect ESG performance, two control variables were included. The first was the national SDG Index which evaluates country-level progress toward the SDGs. Created by SDSN in 2016, the index helps guide public policy and may indirectly influence business behavior. The second control variable was company size, measured by the number of employees, based on data from the ORBIS database. Larger firms generally have more resources and infrastructure to support sustainability initiatives, making size an important factor to consider.

## 4. Results

Findings reveal the existence of a significant positive relationship between the presence of references to the Sustainable Development Goals (SDGs) in companies' mission statements and their ESG scores. Specifically, each additional reference is associated with an enhancement of sustainability performance, controlling for SDG Index and company size, suggesting that companies that claim to be committed to the UN 2030 Agenda effectively tend to perform better in sustainability metrics. Additionally, the variable "company's size" was found to have a positive and modest impact on ESG score, indicating that larger firms, based on employee number, are associated with superior sustainability achievements, probably on the strength of their greater capabilities. Interestingly, the results show an inverse relationship between national SDG performance and company ESG scores, revealing that a country's progress on the SDGs does not necessarily translate to stronger corporate sustainability. Overall, the model used in the analysis proves to be highly reliable and explains nearly all the variation in ESG performance, confirming the robustness of the findings.

## 5. Implications and Limitations

This research offers practical insights for both managers and policymakers pursuing sustainable development. For companies, aligning mission statements with the SDGs is both a strategic and ethical move to boost performance and reputation. Clear, consistent communication of sustainability goals strengthen this impact. For policymakers, the gap between national SDG progress and corporate ESG performance signals the need for targeted measures such as incentives, stricter ESG guidelines, or public-private partnerships to better align business efforts with global goals. However, several

limitations should be considered. ESG scores, while widely used, may not fully capture the depth or authenticity of a company's sustainability initiatives, as they aggregate different dimensions and can overlook specific actions or the quality of communication. Moreover, the analysis is limited to European companies, which may affect the generalizability of the results to other regions. Future research could address these limitations by exploring patterns across industries, expanding the study to other geographic contexts with more detailed sustainability metrics, and conducting multiple case studies to assess whether stated SDG commitments are effectively implemented and embedded into corporate culture through consistent and impactful communication strategies.

Originality of the paper: Since little attention has been given to how the explicit integration of the Sustainable Development Goals (SDGs) into corporate mission statements may impact sustainability performance metrics, this study addresses this empirical gap by investigating whether explicit SDG integration in mission statements correlates with improved sustainability performance, shedding light on the effectiveness of mission statements as tools for strategic communication and sustainability performances. It provides empirical evidence that referencing the SDGs in companies' manifestos can be an effective strategy for aligning business objectives with global sustainability priorities. Moreover, the study reinforces the idea that organizations demonstrating explicit commitments to sustainability can play a pivotal role in advancing progress toward the Sustainable Development Goals by 2030.

## References


Alegre, I., Berbegal-Mirabent, J., Guerrero, A., & Mas-Machuca, M. (2018). The real mission of the mission statement: A systematic review of the literature. Journal of Management & Organization, 24(4), 456-473.

Babnik, K., Breznik, K., Dermol, V., & Trunk Širca, N. (2014). The mission statement:Organisational culture perspective. Industrial Management & Data Systems, 114(4), 612-627.

Bart, C. K. (1997). Sex lies and mission statements. Business Horizons, 9–18, November–December.

Bartkus, B. R., Glassman, M., & McAfee, R. B. (2004). A comparison of the quality of european, japanese and us mission statements: A content analysis. European Management Journal, 22(4), 393-401.

Campbell, A., & Yeung, S. (1991). Creating a sense of mission. Long Range Planning, 24(4), 10–20.

Cochran, D., David, F., & Gibson, C. K. (2008). A framework for developing an effective mission statement. Journal of Business Strategies, 25(2), 27–39.

David, F. R. (1989). How companies define their mission. Long Range Planning, 22(1), 90–97.

Ding, M. C., Lii, Y. S., & Lai, K. F. (2023). A great start? Sustainability mission statements affect consumer behavior. Environment, Development and Sustainability, 1–30.

Jimenez, D., Franco, I. B., & Smith, T. (2021). A review of corporate purpose: An approach to actioning the sustainable development goals (SDGs). Sustainability, 13(7), 3899.

Klemm, M., Sanderson, S., & Luffman, G. (1991). Mission statements: Selling corporate values to employees. Long Range Planning, 24(3), 73–78.

León - Soriano, R., Jesús Muñoz - Torres, M., & Chalmeta - Rosaleñ, R. (2010). Methodology for sustainability strategic planning and management. Industrial Management & Data Systems, 110(2), 249–268.

Stallworth Williams, L. (2008). The mission statement: A corporate reporting tool with a past, present, and future. The Journal of Business Communication (1973), 45(2), 94–119.

Toh, S. Y., Tehseen, S., Mahmoud, A. B., Cheok, J., Grigoriou, N., & Opute, J. (2022). Mission statement effectiveness: Investigating managers' sensemaking role. Corporate Communications: An International Journal, 27(2), 329–345.

# Fear That Protects: Integrating Eco-Emotions Into Protection Motivation Theory

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## Abstract

This study applies Protection Motivation Theory to examine how threat and coping appraisals shape pro-environmental behavioural intentions, focusing on the role of eco-fear. Using structural equation modelling on survey data from 181 Italian respondents, results show that eco-fear significantly enhances protection motivation, leading to stronger intentions to act sustainably. While the geographic scope may limit generalizability, the findings suggest that leveraging eco-fear in communication strategies can effectively promote sustainable consumer behaviour. This is the first known study to explore the influence of eco-fear on environmental behavioural intent.

*Keywords: Eco-fear, Protection motivation theory, Pro-environmental intention*

### 1. Introduction

Climate change is one of the biggest threats of this century (Stanley et al., 2021). Climate is a complex system characterized by fluctuation, which has different implications for the ecological system, global economies, and human well-being (Scheffer, 2009). One of the last reports from the World Meteorological Organization (2022) underlined the severity of climate impacts, such as rising global temperatures, glacial melting, more frequent extreme weather events, biodiversity loss, and ecosystem collapse. Scholars refer to this global change as "anthropogenic climate change" because its acceleration is attributed to human activity, and it represents an environmental and psychological threat (Cianconi et al., 2023). Maibach et al. (2021) confirmed that "a stable climate is the most fundamental determinant of human health", but the psychological effects of climate crises are only at the beginning to be systematically understood. Increasing concern and awareness about the climate crisis increases the pro-environmental intention, so understanding the psychological mechanism that drives pro-environmental behaviour becomes urgent.

In recent years, researchers coined a new term to refer to the psychological experience of global climate change: *Eco-emotions* (Pihkala, 2022). From that moment, the number of words that begin with the prefix "*eco*" increased, often leading to confusion due to a lack of conceptual clarity in the field (Kalwak & Weihgold, 2022). Studies on this topic remain fragmented, and the way in which emotional responses relate to climate action is still unclear (Stanley et al., 2021). This study focuses on one of these eco-emotions: Eco-fear. The fear relates to climate change and environmental issues (Cianconi., 2023). While emotions have long been studied, the role of eco-fear remains under-investigated. This study

aims to advance the understanding of psychological mechanisms that drive pro-environmental intentions in response to climate change. By adopting the Protection Motivation Theory (PMT) by Rogers (1975), this study is, to the best of our knowledge, the first to investigate the role of eco-fear as an emotional antecedent that impacts the intention to act sustainably. Specifically, it addresses the following research question: Does eco-fear positively influence protection motivation in the context of pro-environmental behaviour?

In the next section, we introduce the theoretical background, followed by methodology, results, discussions, and final remarks.

## 2. Theoretical background

### 2.1 Protection motivation theory

PMT was introduced by Rogers (1975) and revised in 1983 (Rogers, 1983) to analyse the psychological mechanisms under the decision to act. The theory was elaborated for the healthcare context, and it is the first theory that focuses on psychological conditions that explain why people protect themselves from a threat (Rogers, 1975). PMT explains the effect on protection motivation of two cognitive appraisal processes: coping and threat appraisals. Both shape individuals' motivation to protect themselves by driving them to act. Specifically, protection motivation is considered the intention of individuals to engage in actions that protect them from threats, and in recent research, it has evolved into behavioural intention (Liu & Jiang, 2023). Protection motivation or behavioural intention is positively influenced by the perception that the threat is severe, that the individual is susceptible to it, that they can perform the recommended response, and that the response is effective. Conversely, it is negatively influenced by the perception that not performing the response is more beneficial, or that carrying it out would be expensive (Hedayati et al., 2023). Thus, for protection motivation, perceived severity, perceived vulnerability, self-efficacy, and response efficacy are positive predictors; meanwhile, maladaptive rewards and response cost are negative predictors. To empirically test the proposed model, we developed a set of hypotheses as follows:

H1: Perceived severity is positively associated with protection motivation.

H2: Perceived vulnerability is positively associated with protection motivation.

H3: Maladaptive rewards are negatively associated with protection motivation.

H4: Self-efficacy is positively associated with protection motivation.

H5: Response efficacy is positively associated with protection motivation.

H6: Response cost is negatively associated with protection motivation.

### 2.2 Eco fear as an emotional driver

Eco-fear, as defined by Fisher (2017), refers to a deep and extreme fear of disturbing natural events (Alex & Susan Deborah, 2019). Eco-fear belongs to the broader category of eco-emotions, which are defined as feelings and affective phenomena shaped by climate change and environmental injustices and, in addition, influenced by circumstances, temperament, and social dynamics (Galway & Beery, 2022). The literature categorizes eco-emotions as positive or negative (Pihkala, 2022). Fear is a negative eco-emotion characterized by heightened physiological arousal in response to an immediate threat. If left unmanaged, it can become eco-phobia, an intense aversion toward nature (Alex & Susan Deborah,

2019). Although their negative valence, emotions like fear play a crucial role in motivating action as an innate motivator for behavioural change to avoid danger (Chen, 2016). This study aims to analyse whether eco fear is an effective driver of action and if it has a direct effect as an antecedent on protection motivation (Ezati et al., 2021). By positioning eco-fear as an emotional antecedent within the PMT framework, this research contributes to a deeper understanding of how emotional responses to climate change can drive sustainable consumer behaviour.

H7: Eco-fear positively influences protection motivation.

By integrating eco-fear as a direct predictor, this study expands the PMT framework, highlighting the importance of emotional drivers in climate-related behavioural motivation.

## 3. Methodology

To test the research hypotheses, this study utilized an online survey technique. We collected 181 valid responses from a sample in Italy between May 24, 2025, and June 11, 2025. Measurement scales were mainly adapted from extant literature. To measure perceived severity (PS), we used six items adapted from Saleeby (2000) and Woon et al. (2005).To mesure perceived vulnerability (PV) we used six items adapted from Saleeby (2000).A protection motivation theory approach to home wireless security.The maladaptive rewards (MR) variable was evaluated using seven items adapted from Bax et al. (2021).To measure self-efficacy (SE) we employed six items adapted from Bax et al. (2021). Response efficacy (RE) was measured using four items adapted from Witte (1996). Response cost (RC) was measuring eight items adapted from Boss et al. (2015). Protection motivation (PM) was evaluated using six items adapted from Woon et al. (2005) and Bax et al. (2021).Finaly, to evaluate eco-fear (EF) we used five items adapted from Bax et al. (2021). Each item was measured on a 7-point Likert scale (1 = Strongly disagree to 7 = Strongly agree). To estimate the hypothesized relationship between variables, we performed a structural equation modeling (SEM) analysis using IBM SPSS AMOS 23.

## 4. Results

The majority of respondents were female (n = 107, 58.5%), followed by males (n = 69, 37.7%). The mean age of participants was 30.05 years (SD = 11.45). Most respondents held a master's degree (38.8%), followed by those with a bachelor's degree (32.2%) and a high school diploma. To evaluate the relationships among the variables proposed in the model, we followed the two-step approach recommended by Anderson and Gerbing (1988). First, we assessed the measurement model for reliability and validity. As shown in Table 1, all constructs exhibited strong internal consistency, with Cronbach's alpha (α) values exceeding the recommended threshold of 0.70. Composite reliability (CR) values were also above 0.80, and average variance extracted (AVE) values surpassed the 0.50 benchmark, indicating satisfactory convergent validity (Hair et al., 2010). Next, we tested the structural model using SEM anlysis in AMOS 23. The squared multiple correlations indicate that the model explains 68.4% of the variance in protection motivation. The SEM results revealed mixed support for the proposed hypotheses. Perceived severity (β = 0.323, p = 0.002) and self-efficacy (β = 0.313, p = 0.016) were found to be significant positive predictors of protection motivation, supporting H1 and H4, respectively. Most notably, eco-fear showed a strong positive effect on protection motivation (β = 0.500, p = 0.001), confirming H7 and emphasizing the role of emotional drivers in shaping pro-environmental intentions. In contrast, perceived vulnerability (β = -0.050, p = 0.732), maladaptive rewards (β = -0.209, p = 0.059), response efficacy (β = 0.029, p = 0.859), and response cost (β = -0.043, p = 0.645) were not statistically significant predictors, indicating a lack of support for H2, H3, H5, and H6.

| | α | CR | AVE | EF | PS | MR | PV | RE | SE | RC | PM |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **EF** | 0.895 | 0.897 | 0.636 | **0.797** | | | | | | | |
| **PS** | 0.888 | 0.891 | 0.579 | 0.558 | **0.761** | | | | | | |
| **MR** | 0.931 | 0.929 | 0.653 | 0.406 | 0.063 | **0.808** | | | | | |
| **PV** | 0.903 | 0.908 | 0.630 | 0.649 | 0.720 | 0.163 | **0.793** | | | | |
| **RE** | 0.842 | 0.849 | 0.587 | 0.461 | 0.537 | 0.015 | 0.540 | **0.766** | | | |
| **SE** | 0.869 | 0.868 | 0.532 | 0.275 | 0.295 | 0.113 | 0.298 | 0.740 | **0.729** | | |
| **RC** | 0.938 | 0.938 | 0.655 | 0.319 | 0.093 | 0.805 | 0.130 | 0.058 | 0.216 | **0.810** | |
| **PM** | 0.973 | 0.882 | 0.559 | 0.648 | 0.656 | 0.008 | 0.575 | 0.631 | 0.519 | 0.041 | **0.748** |

**Table 1:** Validity and reliability analysis.

## 5. Discussion

This study explored how cognitive appraisals and emotional responses, particularly eco-fear, influence pro-environmental intentions within the PMT framework. The findings offer important theoretical and practical insights. The significant role of eco-fear supports extending PMT to include emotional constructs, consistent with emerging evidence that emotions are key drivers of environmental behaviour (Pihkala, 2022; Stanley et al., 2021; Chen, 2016). While perceived severity and self-efficacy predicted motivation, other cognitive factors, such as perceived vulnerability, response efficacy, response cost, and maladaptive rewards, showed limited influence, suggesting these may be less relevant in climate contexts (Liu & Jiang, 2023). By positioning eco-fear as a validated antecedent to behavioural intention, this study helps bridge cognitive and affective models in climate psychology (Cianconi et al., 2023; Ezati Rad et al., 2021).

From a practical perspective, these results highlight the potential of eco-fear as a motivational tool when paired with constructive messaging. Fear-based appeals that also emphasize individual efficacy can encourage engagement without causing disengagement or anxiety (Chen, 2016; Pihkala, 2022; Kalwak & Weihgold, 2022). Given the importance of self-efficacy, communications should empower individuals by showcasing tangible, everyday actions. Moreover, the limited impact of cost-benefit perceptions suggests that emotional and moral appeals may be more effective than economic arguments in promoting sustainable behaviour (Stanley et al., 2021; Maibach et al., 2021). For organizations, aligning sustainability messaging with emotionally resonant narratives can enhance public connection to broader environmental goals.

## 6. Limitations and future research

While this study advances theoretical understanding, it has limitations. The sample, composed of Italian respondents, may limit generalizability to other cultures with differing environmental norms and emotional responses. Also, the cross-sectional design prevents establishing causal relationships. Future research should consider longitudinal or experimental designs to confirm the causal role of eco-fear. Moreover, future studies could explore the influence of other eco-emotions such as eco-anger, guilt, or hope, to understand the interplay between multiple affective states and cognitive appraisals in sustainability behaviour.

## References


Alex, R. K., & Susan Deborah, S. (2019). Ecophobia, reverential eco-fear, and indigenous worldviews. ISLE: Interdisciplinary Studies in Literature and Environment, 26(2), 422-429.

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, 103(3), 411.

Bax, S., McGill, T., & Hobbs, V. (2021). Maladaptive behaviour in response to email phishing threats: The roles of rewards and response costs. *Computers & Security*, *106*, 102278.

Boss, S. R., Galletta, D. F., Lowry, P. B., Moody, G. D., & Polak, P. (2015). What do systems users have to fear? Using fear appeals to engender threats and fear that motivate protective security behaviors. *MIS quarterly*, *39*(4), 837-864.

Chen, M. F. (2016). Impact of fear appeals on pro-environmental behavior and crucial determinants. International Journal of Advertising, 35(1), 74-92.

Cianconi, P., Hanife, B., Grillo, F., Lesmana, C. B. J., & Janiri, L. (2023). Eco-emotions and psychoterratic syndromes: reshaping mental health assessment under climate change. *The Yale journal of biology and medicine*, *96*(2), 211.

Ezati Rad, R., Mohseni, S., Kamalzadeh Takhti, H., Hassani Azad, M., Shahabi, N., Aghamolaei, T., & Norozian, F. (2021). Application of the protection motivation theory for predicting COVID-19 preventive behaviors in Hormozgan, Iran: a cross-sectional study. *BMC Public Health*, *21*, 1-11.

Galway, L. P., & Beery, T. (2022). Exploring climate emotions in canada's provincial north. Frontiers in Psychology, 13, 920313.

Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2010). *Multivariate Data Analysis* (7th Edition). NJ: Prentice Hall.

Hedayati, S., Damghanian, H., Farhadinejad, M., & Rastegar, A. A. (2023). Phenomenology of COVID-19 pandemic effects on the behavior of staff in the banking industry. *Interdisciplinary Journal of Management Studies (Formerly known as Iranian Journal of Management Studies)*, *16*(2), 481-500.

Kałwak W, Weihgold V. The Relationality of Ecological Emotions: An Interdisciplinary Critique of Individual Resilience as Psychology's Response to the Climate Crisis. Front Psychol. 2022 Apr;13:823620. 25.

Liu, Y., & Jiang, X. (2023). Application of protection motivation theory and cultural tightness-looseness for predicting individuals' compliance with the government's recommended preventive measures during regular prevention and control of the COVID-19 pandemic in China. *Frontiers in Public Health*, *11*, 1043247.

Maibach, E., Miller, J., Armstrong, F., El Omrani, O., Zhang, Y., Philpott, N., ... & Jensen, G. K. (2021). Health professionals, the Paris agreement, and the fierce urgency of now. *The Journal of Climate Change and Health*, 1, 100002.

Pihkala, P. (2022). Toward a taxonomy of climate emotions. Frontiers in climate, 3, 738154.

Rogers, R. (1975). A protection motivation theory of fear appeals and attitude change1. Journal of Psychology, 91 (1), 93-114.

Rogers, R. (1983). Cognitive and Physiological Processes in Fear Appeals and Attitude Change: A Revised Theory of Protection Motivation. 153-177. In: Cacioppo, J. and Petty, R., Eds., Social Psychophysiology, Guilford Press, New York.

Saleeby, J. R. (2000). Health beliefs about mental illness: An instrument development study. *American Journal of Health Behavior*, *24*(2), 83-95..

Scheffer, M. (2009). *Critical transitions in nature and society*. Princeton university press Stanley, S. K., Hogg, T. L., Leviston, Z., & Walker, I. (2021). From anger to action: Differential impacts of eco-anxiety, eco-depression, and eco-anger on climate action and wellbeing. *The Journal of Climate Change and Health*, *1*, 100003.

# The Communication of Sustainability and Mitigation in Manufacturing SMEs

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## Abstract

This study explores how manufacturing Small and Medium Enterprises (SMEs) communicate their sustainability and mitigation strategies in the context of reducing greenhouse gas emissions by 33% by 2030. SMEs are under increasing pressure to adopt and communicate sustainable practices, as global environmental concerns intensify. Previous studies have highlighted the importance of adopting sustainability and effectively communicating it to meet regulatory and consumer expectations. Our research addresses three key questions: Is there a difference between the communication of the mitigation and the sustainability strategy? Is there a relationship between the development of sustainability and mitigation strategies adopted by SMEs and their communication? Is there a relationship between the communication done by SMEs and their perception of being sustainability leaders? To investigate, we surveyed 1,500 SMEs in 2024 about their sustainability and mitigation practices, focusing on Scopes emissions. The survey responses were paired with web scraping analysis of company websites to assess qualitatively how these firms communicate their actions, followed by a quantitative analysis.

Findings indicate that while many firms focus on Scope 2 emissions (purchased energy), fewer address Scope 1 or Scope 3 emissions. The communication depends of the topic communicated, in particular general topics tend to lead greenwashing behaviours, rather than the more specifics which induce more greenhushing. From a statistical point of view, Mitigation and Sustainability levels are not generally related to the communication, but depend from the specific topic. Moreover, there seems not to be any dependence between the communication and how firms perceive to be sustainability leaders. This study contributes to the literature by revealing the significant disconnect between SMEs' environmental actions and their public communication efforts, emphasizing the need for better transparency and accountability in the manufacturing sector. Our findings suggest that stronger communication of mitigation strategies could enhance stakeholder trust and support Italy's broader climate goals.

*Keywords: communication, sustainability, mitigation, strategies, climate change*

## 1. Introduction

In today's business environment, companies face mounting pressure—from stakeholders demanding stronger ESG performance to regulators enforcing stricter reporting mandates—to reconcile economic growth with environmental stewardship and social equity (Brundtland Commission, 1987; Bansal & DesJardine, 2014). Sustainable development, defined by the Brundtland Commission (1987) as meeting present needs without compromising future generations, requires firms to integrate economic, environmental, and social goals into their core operations (Elkington, 1997). By embedding responsible resource management, fair labor practices, and long-term value creation into strategy, companies balance profitability with responsibility, ensuring resilience and relevance in a rapidly changing global landscape (Bansal & DesJardine, 2014).

Within manufacturing—responsible for about 20–30 % of global greenhouse-gas emissions due to energy-intensive, fossil-fuel-driven processes (IEA, 2021)— sustainable strategies split into two complementary approaches. Mitigation focuses on cutting emissions at the source through circular-economy practices like material recycling and reuse to minimise waste and enhance resource efficiency (IPCC, 2014; Geissdoerfer et al., 2017). Adaptation builds resilience to climate impacts—via supplier diversification, climate-risk assessments, and investment in resilient infrastructure—to safeguard continuity against extreme weather and resource scarcity (Smit & Wandel, 2006; Linnenluecke et al., 2013; Engert et al., 2016).

Small and medium-sized enterprises (SMEs), with their limited budgets and expertise, often struggle to implement these measures. However, partnerships with larger firms, participation in industry networks, and access to government incentives—such as green loans or clean-energy subsidies—can help overcome these barriers (Revell et al., 2010; Porter & van der Linde, 1995). Equally important is effective communication: transparent reporting and stakeholder engagement around mitigation and adaptation efforts build trust, enhance reputation, and attract eco-conscious customers and investors, while correlating with stronger environmental performance (Delmas & Burbano, 2011; IPCC, 2021).

By weaving sustainability, mitigation, and adaptation into their business models—from procurement through production to marketing—manufacturers of all sizes can not only reduce emissions and pollution but also improve operational efficiency, competitiveness, and resilience, thereby aligning with global climate targets such as those set out in the Paris Agreement (IPCC, 2018). In this context, we focused on the communication of sustainability and mitigation strategies of Italian SMEs, in particular we aims to identify if:

- There is a difference between the communication of the mitigation and the sustainability strategies.
- Exists a relationship between the development of sustainability and mitigation strategies adopted by SMEs and their communication.
- The communication done by SMEs and their perception of being sustainability leaders are related.

## 2. Literature Review

### 2.1 Mitigation In The Manufacturing Sector

The urgent need for mitigation strategies is underscored by the escalating climate crisis. As mentioned before, mitigation refers to efforts to reduce or prevent the emission of greenhouse gases, which can be achieved through various means including technological changes, improved energy efficiency, and shifts in management practices.

These efforts are critical in limiting the global temperature increase to well below 2°C above pre-industrial levels, as stipulated in the Paris Agreement (UNFCCC, 2015). For the manufacturing sector, this translates into a pressing need to transform production processes, energy sources, and supply chains.

A crucial aspect of understanding mitigation strategies is the categorization of greenhouse gas (GHG) emissions into three scopes, as defined by the Greenhouse Gas Protocol (GHGP) (Patchell, 2018). This framework, widely adopted by companies and organizations worldwide, provides a comprehensive approach to measuring and managing GHG emissions.

- Scope 1 emissions: refer to direct emissions from owned or controlled sources. For manufacturing companies, these typically include emissions from on-site fuel combustion, company vehicles, and any process emissions (Blanco, Caro & Corbett, 2016).

- Scope 2 emissions are indirect emissions from the generation of purchased energy. In the manufacturing context, this primarily relates to electricity consumption. The mitigation of Scope 2 emissions often involves improving energy efficiency and transitioning to renewable energy sources (Brander, Sood, Wylie, Haughton & Lovell, 2011).

- Scope 3 emissions include all other indirect emissions that occur in a company's value chain. For manufacturers, this can encompass a wide range of activities, from the extraction and production of purchased materials to the use and end-of-life treatment of sold products (Huang, Weber & Matthews, 2009). Scope 3 emissions often represent the largest share of a company's carbon footprint but are also the most challenging to measure and mitigate.

The link between climate change and mitigation in the manufacturing context is multifaceted. Firstly, the manufacturing sector must drastically reduce its direct emissions through improved energy efficiency, electrification, and innovative production processes (Bataille et al., 2018). Secondly, manufacturers must consider the entire lifecycle of their products, addressing emissions from raw material extraction to end-of-life disposal (Scope 3 emissions).

However, challenges remain in implementing such mitigation strategies. Several barriers to industrial energy efficiency and mitigation were identified, including high upfront costs, lack of information, and split incentives (Fischedick et al., 2014). Additionally, the impacts of climate change itself pose risks to manufacturing operations, necessitating adaptation strategies alongside mitigation efforts. Companies implementing robust mitigation strategies often find themselves better positioned to adapt to climate-related disruptions, demonstrating the synergies between mitigation and adaptation (Gasbarro, Rizzi & Frey, 2017).

As we move forward, the integration of innovation and digital technologies in mitigation efforts presents new opportunities. Both internal capabilities and external pressures play significant roles as drivers of eco-innovation in manufacturing firms (Mazzanti, Antonioli, Ghisetti & Nicolli, 2015), suggesting that effective mitigation strategies need to consider both firm-level factors and broader policy environments. Even Industry 4.0 concepts can contribute to sustainable manufacturing, potentially enabling more efficient and less carbon-intensive production processes; however, realizing

these benefits requires careful planning and implementation (Beier, Niehoff & Xue, 2018). In this context, the digitalization can play a role in the communication of mitigation efforts as effective communication of the strategies can enhance a company's legitimacy and stakeholder support (Hahn, Reimsbach, & Schiemann, 2015).

### 2.2 A Focus On Small-Medium Enterprises

Although there is extensive research on climate-change mitigation in manufacturing, we still lack a clear picture of how Small and Medium-sized Enterprises (SMEs) tackle this issue worldwide. SMEs form the backbone of industrial ecosystems, accounting for roughly 90% of businesses and over 50% of employment globally (World Bank, 2020). Learning how these firms mitigate climate impacts is therefore essential to understanding the sector's overall environmental footprint.

Most existing studies focus on large companies, which have very different resources and capabilities than SMEs—especially when it comes to managing Scope 1, 2, and 3 emissions. Examining SME-specific challenges could help shape more effective policies and support on a global scale (Hoogendoorn, Guerra & van der Zwan, 2015). SMEs face a set of common challenges—limited financial resources, insufficient in-house expertise, and poor access to best-practice guidance—that hinder their ability to tackle emissions across all three scopes (Cagno, Worrell, Trianni & Pugliese, 2013; Ormazabal, Prieto-Sandoval, Puga-Leal & Jaca, 2018). In particular, measuring and reporting direct (Scope 1) emissions is often inaccurate or incomplete, since SMEs typically lack the sophisticated monitoring systems of larger firms, leading to underestimation of their true footprint (Jansson, Nilsson, Modig & Hed Vall, 2017). When it comes to indirect emissions from purchased energy (Scope 2), SMEs usually have less bargaining power to secure renewable contracts or favorable utility rates, and they encounter higher barriers to adopting energy-efficient technologies (Trianni, Cagno & Farné, 2016). Moreover, the intricate nature of value-chain emissions (Scope 3) presents perhaps the steepest hurdle: constrained resources and complex supplier networks mean many SMEs can only provide partial or superficial disclosures of these indirect impacts (Johnson, 2015).

Despite these challenges, SMEs can improve their mitigation efforts by adopting environmental management systems (EMS), which help them track and reduce emissions across all scopes (Testa, Gusmerotti, Corsini, Passetti & Iraldo, 2017). Collaborative approaches—such as industrial symbiosis networks—also enable SMEs to share resources and knowledge, boosting environmental performance (Patricio, Axelsson, Blome & Rosado, 2018; Borghesi, Cainelli & Mazzanti, 2021).

### 2.3 The Communication Of Sustainability And Mitigation Efforts

Effective communication is a cornerstone of any successful sustainability strategy, acting as the bridge that ensures stakeholders—employees, customers, investors, regulators, and communities—understand, support, and help implement climate mitigation goals (Genc, 2009). Yet SMEs often lack the resources and expertise to produce quantitative emission data, instead relying on qualitative narratives to describe their environmental initiatives (Borga, Citterio, Noci & Pizzurno, 2009). While this approach may seem less rigorous, it nonetheless signals a genuine commitment to sustainability. At the same time, ambitious targets set by governments and agencies can backfire—if stakeholders perceive them as imposed or insincere, communication risks provoking skepticism rather than buy-in (Cox, 2008; Lee, Park & Klassen, 2015). Firms without sufficient expertise or funding may even resort to greenwashing— presenting misleading or exaggerated claims about environmental performance—which can severely damage credibility and erode trust (Ockwell, 2009; Delmas &

Burbano, 2011). Common greenwashing tactics include using vague claims ("eco-friendly"), highlighting minor green initiatives while ignoring larger impacts ("selective disclosure"), or employing misleading visuals and labels without third-party verification (Christensen & van Rensburg, 2020). Regulators and industry bodies are responding: the EU's Green Claims Directive now requires SMEs to substantiate green marketing with clear evidence, and voluntary certifications are gaining traction as a means to demonstrate legitimacy.

Worse still, some companies practice greenhushing by deliberately downplaying or concealing their sustainability efforts out of fear of backlash, regulatory scrutiny, or accusations of hypocrisy. This silent approach can leave stakeholders uninformed about genuine improvements and stifle peer learning across industries (Walker & Wan, 2012; Lyon & Montgomery, 2015). Recent case studies in the food-processing sector reveal that firms with strong emission-reduction records withheld data to avoid drawing attention to upstream suppliers with weaker performance, inadvertently slowing sector-wide progress (Scott & Wang, 2023).

Both greenwashing and greenhushing undermine transparent dialogue: the former by overstating progress and risking legal penalties or "green penalties" in stock markets, the latter by obscuring real gains and denying SMEs the reputational benefits of sustainability leadership (Crijns, Cauberghe & Hudders, 2018). To counter these risks, experts recommend adopting a "Gold Standard" approach to communication— combining verified quantitative metrics (e.g., emission intensity per unit output) with narrative context, and engaging third-party auditors to validate claims (Delmas & Burbano, 2011; Christensen & van Rensburg, 2020).

Internally, clear, ongoing dialogue—through training programs, regular updates, and participatory initiatives—engages employees and embeds environmental responsibility into day-to-day operations (Baumgartner & Rauter, 2017). Externally, transparent reporting helps avoid the reputational damage of greenwashing (Crijns, Cauberghe & Hudders, 2018) and can directly drive better environmental performance: researchers have found that companies that openly communicate their climate strategies tend to achieve greater emissions reductions (Dahlmann, Branicki & Brammer, 2019). Moreover, involving key stakeholders—employees, suppliers, local communities—in both mitigation efforts and their communication not only improves outcomes but also strengthens credibility and reach (Ferraro, Siano & Vollero, 2019; Penz & Polsa, 2018). The channels and formats of communication matter just as much as the message itself. Sustainable business model frameworks—such as the archetypes proposed by Bocken, Short, Rana & Evans (2014)—encourage firms to integrate mitigation strategies into their core models, rather than treat them as peripheral add-ons. This integration is reflected in the rising quality and depth of corporate sustainability reports, particularly among manufacturers, where disclosures on mitigation efforts have become more comprehensive (Reilly & Hynan, 2014; Michelon, Pilonato & Ricceri, 2019). Digital and social media now offer targeted, emotionally engaging platforms for sharing climate initiatives, fostering peer-to-peer advocacy and community action (Gill, Dickinson & Scharl, 2008; Testa, Cosic & Iraldo, 2020), though these tools must be wielded carefully to avoid misinformation, polarization, and short-term gimmicks (Chatterjee, Thongprasert & Some, 2024).

Policymakers are beginning to recognize and support SMEs' pivotal role in climate goals. The European Union's SME Strategy for a Sustainable and Digital Europe, for example, provides measures to help smaller firms transition to greener business models and boost energy efficiency (European Commission, 2020). Looking ahead, emerging technologies—blockchain for traceability, AI for data analysis, advanced ICT for real-time monitoring—promise to revolutionize how companies track, verify, and communicate their mitigation work (Hermundsdottir & Aspelund, 2021). Early studies

suggest that environmental innovators are more likely to collaborate with external partners, further highlighting the value of collective approaches to both implementing and narrating climate strategies (De Marchi, 2012; De Marchi & Di Maria, 2015; Kouhizadeh, Saberi & Sarkis, 2021). Yet despite these advances, the relationship between actual mitigation actions and their communication in SMEs remains underexplored—a crucial gap given the unique challenges and opportunities these firms face across different cultural and economic contexts (Baumann-Pauly, Wickert, Spence & Scherer, 2013; Johnson & Schaltegger, 2016).

## 3. Research Framework And Empirical Analysis

As mentioned above, the communication of sustainability and mitigation strategies is relevant for manufacturing companies, which often face scrutiny regarding their environmental impact, as the global community intensifies its efforts to address climate change and environmental sustainability. Italy's commitment to reducing greenhouse gas emissions by 33% by 2030, as part of the European Union's climate goals, has placed significant pressure on its manufacturing sector (European Commission, 2021). This commitment, coupled with growing stakeholder expectations and the transformative impact of the COVID-19 pandemic, has accelerated the trend towards adopting and communicating robust mitigation strategies among Italian manufacturers. Moreover, in Italy, SMEs represent a significant part of the economy and the manufacturing sector. According to ISTAT (2020), SMEs constitute over 99% of Italian businesses and contribute to about 67% of the added value in the manufacturing sector. Understanding how these companies address climate change mitigation is therefore crucial to assessing the sector's overall environmental impact. On this context, our work aims to answer these research questions:

- Is there a difference between the communication of the mitigation and the sustainability strategy?
- Is there a relationship between the development of sustainability and mitigation strategies adopted by SMEs and their communication?
- Is there a relationship between the communication done by SMEs and their perception of being sustainability leaders?

We employed a multi-faceted research approach by quantifying the declared levels of sustainability and mitigation efforts, analyzing the associated communication strategies, and cross-referencing self-reported data with publicly available information, in order to identify best practices, common challenges, and areas for improvement in how the analyzed firms articulate their environmental commitments and actions. Initially, we developed a detailed close-ended survey structured to gather information on various aspects of sustainability practices and mitigation strategies implemented by these companies. This allowed us to gain insights into the depth and breadth of environmental initiatives across the sector. The survey was provided to 1500 SMEs Italian manufacturing firms in 2024, containing 11 questions, 5 on the sustainability strategy and 6 about the mitigation strategies. Concerning the sustainability strategy we asked strategic question related to CSRs (Kassier, 2024), B-corps (Richardson & O'Higgins, 2019) and environmental reports (Christensen, Hail & Leuz, 2021). On the other hand, regarding the mitigation we asked something about direct/indirect emissions (Fawzy, Osman, Doran & Rooney, 2020) and Carbon credits (Probst et al., 2024). More details on the questionnaire are reported in Appendix A.

A sample of $N_{answers}$=1497 answers was finally collected. All the answers were coded as dummy variabes $Qs_i^n$, for the sustainability strategy related questions, and $Qm_i^n$, for the mitigation-related ones (where n=1, …, $N_{answers}$ and i the number of the question), assuming value 1 or 0. More details on the coding of each answer are reported in Appendix A. These variables have been combined for the generation of new dichotomic indicators; the sustainability level of a n-th firm has been evaluated as:

$$\text{SustLevel}_n = \begin{cases} \text{High} & if \sum_{i=1}^{4} Qs_i^n \geq 3 \\ \text{Low} & otherwise \end{cases}$$

indicating high level if a firm obtained 1 in at least three of the first four questions related to the sustainability strategy. Firms who answered "Don't know/prefer not to answer" in all four questions were removed from the sample. The last question regarding the sustainability strategy ($Qs_5^n$) was used to evaluate if a firm perceives to be a sustainable leader in the sector, thus the related variable has been defined as:

$$\text{SustLeader}_n = \begin{cases} \text{Yes} & if \quad Qs_5^n = 1 \\ \text{No} & otherwise \end{cases}$$

All the questions related to the mitigation were used to code the effort of each firm related to each Scope emissions. The indicators of such Scopes emissions were defined as:

$$\text{Scope1}_n = \begin{cases} 1 & if \quad OR(Qm_1^n, Qm_2^n) = 1 \\ 0 & otherwise \end{cases}$$

$$\text{Scope2}_n = \begin{cases} 1 & if \quad OR(Qm_3^n, Qm_4^n) = 1 \\ 0 & otherwise \end{cases}$$

$$\text{Scope3}_n = \begin{cases} 1 & if \quad OR(Qm_5^n, Qm_6^n) = 1 \\ 0 & otherwise \end{cases}$$

being $OR(\cdot,\cdot)$ the logical or operator that assumes value equal to one if at least one of the two analyzed variables is equal to one. Firms who answered "Don't know/prefer not to answer" in all six questions were removed from the sample.

Finally, exploiting the single Scopes indicators, an overall variable indicating the global Mitigation level assuming value "High" only if a firms employed efforts on at least two Scopes:

$$MitLevel_n = \begin{cases} \text{High} & if \sum_{i=1}^{3} \text{Scope } i^n \geq 2 \\ \text{Low} & otherwise \end{cases}$$

Subsequently, we retrieved from ORBIS database size, market, ATECO and profit of the firms. Due to some unavailable data, a refined final sample of $N_{refined}$=1033 firms was recorded with full characterization of sustainability level, mitigation level, financial and structural data.

Following the survey analysis, we employed web scraping techniques to analyze the public communication of sustainability and mitigation efforts on the $N_{refined}$ firms' websites. This step was crucial in complementing the information obtained through the questionnaire to compare the self-reported data from the survey with publicly available information.The web scraping process was performed by using a custom-made Phyton code allowing the retrieval of all words reported on each firm's website. Afterwards, a list of sustainability-related relevant words was selected and divided into eight buckets of keywords in order to categorize them into topics specifically related to sustainability and/or mitigation efforts. The complete list of the eight buckets is reported in Appendix. Then, to empirically evaluate the communication, we calculated the Term-Frequency Inverse Document Frequency (TF-IDF) of each *n*-th website for all eight buckets. The TF-IDF has been calculated following Paik (2013) as:

$$TF - IDF_k^n = \sum_{i=1}^{N-words_k} TF(t_i, k) * IDF(t_i, k)$$

where $k=1,\ldots,8$ is the number of the bucket, $t_i$ is the $i$-th term($i=1, \ldots, N\text{-}words_k$) belonging to the $k$-th bucket, $TF(t_i,k)$ represents the frequency of each term ($t_i$) of the bucket $k$, normalized over the document length and the intra-document Terms

Frequencies, and $IDF(t_i,k)$ is the rarity of the term $(t_i)$ among all the $N_{refined}$ websites. Then, we create a new three-level cathegorical variable representing the communication level of each $n$-th firm per $k$-th bucket as:

$$CommLevel_k^n = \begin{cases} \text{Zero} & if \quad TF - IDF_k^n = 0 \\ \text{Low} & if \quad 0 < TF - IDF_k^n \leq Median_k \\ \text{High} & if \quad Median_k < TF - IDF_k^n \end{cases}$$

where $Median_k$ is the median among all $TF - IDF_k^n$ different from zero of the $k$-th bucket.

Regression models were implemented using STATA to statistically evaluate relationship among variables for answering research question 2 and 3.

The first model used employed exponential-mean where the regression equation was set as:

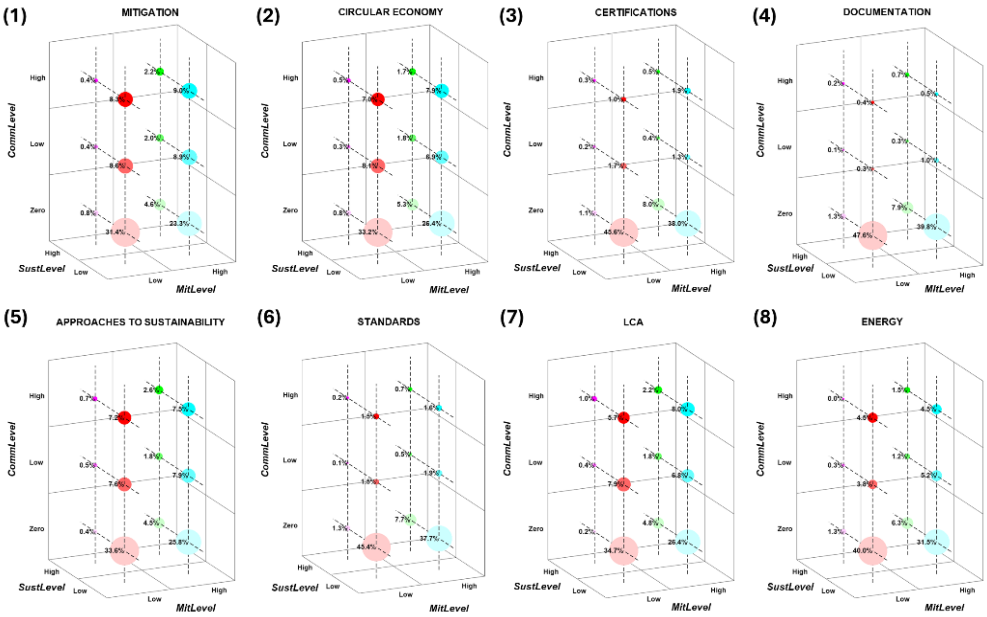
$$(TF - IDF|x) = exp(a_1 SustLevel + a_2 MitLevel + a_3 ln(Profit) + a_4 Size + a_5 Market + a_6 GeoArea + b)$$

The second model involved a probit regression as follows:

$$\Pr(SustLead = 1) = a_1 ln(TF - IDF) + a_2 SustLevel + a_3 MitLevel + a_4 ln(Profit) + a_5 Size + a_6 Market + a_7 GeoArea + b$$

Concerning the variables used, TF-IDF, SustLevel, MitLevel and SustLead are the same above-described, Profit represent the net profit of a firm, Size is a dummy variable assuming value 0 for small enterprises and 1 for medium ones, Market is a dummy variable assuming value 1 if the firm has B2B

market and 0 for the B2C one, and GeoArea is a three level categorical value assuming value 2 for firms from North-East of Italy, 1 for the North-West ones and 0 otherwise.




Source: Our elaboration.

**Figure 1:** Communication of Sustainability and Mitigation (divided in eight topics) with respect to the Sustainability Strategy level and the Mitigation level.

## 4. Results And Discussions

We started analyzing the firms' mitigation efforts in relation with the three scopes. The major efforts are related to Scope 2 emissions; actually, 69.7% (720 firms) of the sample undertakes initiatives on the mitigation of purchased energy, in particular electricity. This can be motivated by the fact that in recent years Italy gives benefits on the purchasing or re-arrangement of energy production with renewable energy sources (Canelli, Fontana, Realfonzo & Passarella, 2024) especially to SMEs. Scope1 emissions related mitigation efforts were still relevant, as taken into account by about 1 out of every 2 firms (49.8%) but, on the other hand, the Scope 3 emissions efforts were not very high (35.9%) probably due to the known difficulties of SMEs to control the emission along the whole value chain (Olekanma, Rodrigo, Adu & Gahir, 2024). However, 19.1% of the sample declared mitigation efforts on all three Scopes emissions placing them as Mitigation leaders.

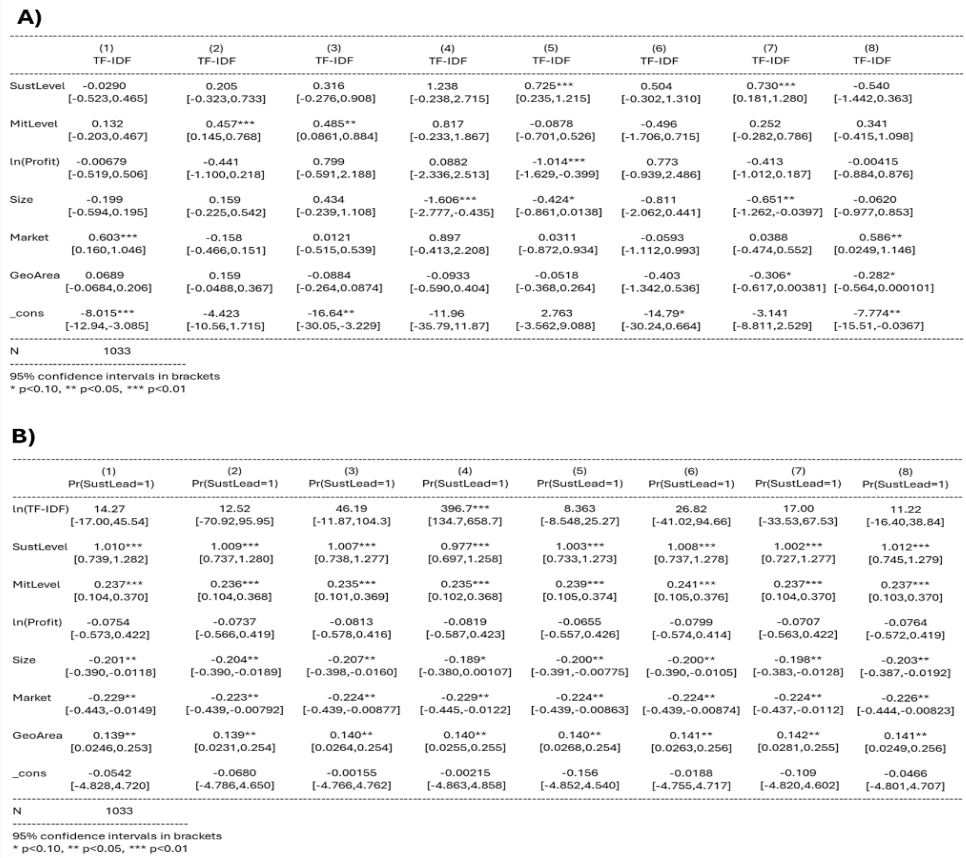
To answer the first research question, we qualitatively analyzed the dispersion of the different communication levels of the 8 topics (buckets) with respect to the Sustainability Level and Mitigation Level. From Figure 1, we can notice that firms tend to communicate general topics (Mitigation, Circular Economy, Approaches to Sustainability, LCA and Energy) more than specific ones (Certifications, Documentation and Standards). This communication of general topics also contains a significant number of firms (from 8% for the Energy topic to 16.9% of the Mitigation topic) which perform

greenwashing, as depicted by bright red circles in Figure 1. On the other hand, regarding the specific topics, we observe an increase in greenhushing behaviours (light green circles in Figure 1) from firms that don't communicate even if their Sustainability and Mitigation levels are high.

To assess a possible relationship between communication and the Sustainability/Mitigation levels, we evaluate the exponential-mean regression described in the above section; the results are reported in Figure 2A. It is worth noting that is no generalizable relationship between firm's levels and its communication, but it is strictly related to the communicated topic. In particular, an increase of mitigation level induces a statistically relevant increase in communication only for the Circular Economy and Certification buckets; on the other hand, an increase of Sustainability level leads a statistically relevant increase in communication only for the Approaches to sustainability and LCA buckets.Thereafter, we assessed whether the communication of sustainability strategies and mitigation affects firms' perceptions of being sustainability leaders. From Figure 2B, only for the Documentation Bucket, an increase of communication (TF-IDF) is associated with a statistically relevant increase of probability that the firm perceives to be a Sustainability Leader. Thus, communication is not a factor that influences the perception of being a sustainability leader; on the contrary, as expected, the levels of sustainability and mitigation positively affect this perception.

## 5. Conclusions

This study adds a fresh perspective to the ongoing conversation about sustainability in SMEs, especially within the manufacturing sector. One of its key contributions is shedding light on the gap between the sustainability actions that SMEs are taking and how they communicate these efforts. While many companies are making strides in reducing their environmental impact, their communication often falls short, leaving stakeholders unclear about the true extent of their commitment. This disconnect raises important questions about how SMEs can better align their actions with their messaging to build trust and transparency (Adams & Frost, 2008; Hahn et al., 2015).



**A)**

| | (1) TF-IDF | (2) TF-IDF | (3) TF-IDF | (4) TF-IDF | (5) TF-IDF | (6) TF-IDF | (7) TF-IDF | (8) TF-IDF |
|---|---|---|---|---|---|---|---|---|
| SustLevel | -0.0290 | 0.205 | 0.316 | 1.238 | 0.725*** | 0.504 | 0.730*** | -0.540 |
| | [-0.523,0.465] | [-0.323,0.733] | [-0.276,0.908] | [-0.238,2.715] | [0.235,1.215] | [-0.302,1.310] | [0.181,1.280] | [-1.442,0.363] |
| MitLevel | 0.132 | 0.457*** | 0.485** | 0.817 | -0.0878 | -0.496 | 0.252 | 0.341 |
| | [-0.203,0.467] | [0.145,0.768] | [0.0861,0.884] | [-0.233,1.867] | [-0.701,0.526] | [-1.706,0.715] | [-0.282,0.786] | [-0.415,1.098] |
| ln(Profit) | -0.00679 | -0.441 | 0.799 | 0.0882 | -1.014*** | 0.773 | -0.413 | -0.00415 |
| | [-0.519,0.506] | [-1.100,0.218] | [-0.591,2.188] | [-2.336,2.513] | [-1.629,-0.399] | [-0.939,2.486] | [-1.012,0.187] | [-0.884,0.876] |
| Size | -0.199 | 0.159 | 0.434 | -1.606*** | -0.424* | -0.811 | -0.651** | -0.0620 |
| | [-0.594,0.195] | [-0.225,0.542] | [-0.239,1.108] | [-2.777,-0.435] | [-0.861,0.0138] | [-2.062,0.441] | [-1.262,-0.0397] | [-0.977,0.853] |
| Market | 0.603*** | -0.158 | 0.0121 | 0.897 | 0.0311 | -0.0593 | 0.0388 | 0.586** |
| | [0.160,1.046] | [-0.466,0.151] | [-0.515,0.539] | [-0.413,2.208] | [-0.872,0.934] | [-1.112,0.993] | [-0.474,0.552] | [0.0249,1.146] |
| GeoArea | 0.0689 | 0.159 | -0.0884 | -0.0933 | -0.0518 | -0.403 | -0.306* | -0.282* |
| | [-0.0684,0.206] | [-0.0488,0.367] | [-0.264,0.0874] | [-0.590,0.404] | [-0.368,0.264] | [-1.342,0.536] | [-0.617,0.00381] | [-0.564,0.000101] |
| _cons | -8.015*** | -4.423 | -16.64** | -11.96 | 2.763 | -14.79* | -3.141 | -7.774** |
| | [-12.94,-3.085] | [-10.56,1.715] | [-30.05,-3.229] | [-35.79,11.87] | [-3.562,9.088] | [-30.24,0.664] | [-8.811,2.529] | [-15.51,-0.0367] |
| N | 1033 | | | | | | | |

95% confidence intervals in brackets
* p<0.10, ** p<0.05, *** p<0.01

**B)**

| | (1) Pr(SustLead=1) | (2) Pr(SustLead=1) | (3) Pr(SustLead=1) | (4) Pr(SustLead=1) | (5) Pr(SustLead=1) | (6) Pr(SustLead=1) | (7) Pr(SustLead=1) | (8) Pr(SustLead=1) |
|---|---|---|---|---|---|---|---|---|
| ln(TF-IDF) | 14.27 | 12.52 | 46.19 | 396.7*** | 8.363 | 26.82 | 17.00 | 11.22 |
| | [-17.00,45.54] | [-70.92,95.95] | [-11.87,104.3] | [134.7,658.7] | [-8.548,25.27] | [-41.02,94.66] | [-33.53,67.53] | [-16.40,38.84] |
| SustLevel | 1.010*** | 1.009*** | 1.007*** | 0.977*** | 1.003*** | 1.008*** | 1.002*** | 1.012*** |
| | [0.739,1.282] | [0.737,1.280] | [0.738,1.277] | [0.697,1.258] | [0.733,1.273] | [0.737,1.278] | [0.727,1.277] | [0.745,1.279] |
| MitLevel | 0.237*** | 0.236*** | 0.235*** | 0.235*** | 0.239*** | 0.241*** | 0.237*** | 0.237*** |
| | [0.104,0.370] | [0.104,0.368] | [0.101,0.369] | [0.102,0.368] | [0.105,0.374] | [0.105,0.376] | [0.104,0.370] | [0.103,0.370] |
| ln(Profit) | -0.0754 | -0.0737 | -0.0813 | -0.0819 | -0.0655 | -0.0799 | -0.0707 | -0.0764 |
| | [-0.573,0.422] | [-0.566,0.419] | [-0.578,0.416] | [-0.587,0.423] | [-0.557,0.426] | [-0.574,0.414] | [-0.563,0.422] | [-0.572,0.419] |
| Size | -0.201** | -0.204** | -0.207** | -0.189* | -0.200** | -0.200** | -0.198** | -0.203** |
| | [-0.390,-0.0118] | [-0.390,-0.0189] | [-0.398,-0.0160] | [-0.380,0.00107] | [-0.391,-0.00775] | [-0.390,-0.0105] | [-0.383,-0.0128] | [-0.387,-0.0192] |
| Market | -0.229** | -0.223** | -0.224** | -0.229** | -0.224** | -0.224** | -0.224** | -0.226** |
| | [-0.443,-0.0149] | [-0.439,-0.00792] | [-0.439,-0.00877] | [-0.445,-0.0122] | [-0.439,-0.00863] | [-0.439,-0.00874] | [-0.437,-0.0112] | [-0.444,-0.00823] |
| GeoArea | 0.139** | 0.139** | 0.140** | 0.140** | 0.140** | 0.141** | 0.142** | 0.141** |
| | [0.0246,0.253] | [0.0231,0.254] | [0.0264,0.254] | [0.0255,0.255] | [0.0268,0.254] | [0.0263,0.256] | [0.0281,0.255] | [0.0249,0.256] |
| _cons | -0.0542 | -0.0680 | -0.00155 | -0.00215 | -0.156 | -0.0188 | -0.109 | -0.0466 |
| | [-4.828,4.720] | [-4.786,4.650] | [-4.766,4.762] | [-4.863,4.858] | [-4.852,4.540] | [-4.755,4.717] | [-4.820,4.602] | [-4.801,4.707] |
| N | 1033 | | | | | | | |

95% confidence intervals in brackets
* p<0.10, ** p<0.05, *** p<0.01

Source: Our elaboration.

**Figure 2:** Panel of Regressions described in the "Research framework and empirical analysis" section.

We also deepen the discussion around emission mitigation, particularly in the context of SMEs tackling Scope 1, 2, and 3 emissions. The findings highlight how Scope 3 emissions remain a significant challenge due to the complexity of managing environmental impacts across supply chains. This aspect is critical, as it underscores the need for more tailored solutions that help SMEs navigate these obstacles and strengthen their sustainability practices (Gadde & Dubois, 2010; Matthews et al., 2008).

Another valuable insight from this research is the nuanced view it offers on greenwashing and greenhushing. By exploring these two extremes—overstating or downplaying environmental efforts—we provide a better understanding of how these practices can influence public perception and stakeholder trust. This is especially relevant today, as transparency becomes an increasingly important driver of corporate reputation (Delmas & Burbano, 2011).

Looking ahead, there's a lot more to uncover in this field. Future research could explore how SMEs approach sustainability in different regions or industries, considering how cultural and regulatory differences might shape their strategies and communication. The challenges of Scope 3 emissions also deserve more attention—what innovative tools, like blockchain or collaborative networks, might help SMEs better manage their supply chains and reduce emissions? (Saberi et al., 2019).

It would also be valuable to understand how effective sustainability communication impacts key business outcomes, such as customer loyalty, investor interest, or brand reputation. This could help SMEs craft strategies that not only showcase their environmental efforts but also support their growth (Chkanikova & Mont, 2015). Public policies and incentives are another area worth exploring. Research here could guide governments and organizations in designing programs that genuinely empower SMEs to adopt greener practices (Brammer et al., 2012).

Finally, technology opens up exciting possibilities for the future of sustainability. How can tools like artificial intelligence or advanced analytics make it easier and more affordable for smaller companies to measure, report, and communicate their progress? Exploring these questions could unlock new opportunities for SMEs to lead the way in sustainability, despite their limited resources.

By diving into these areas, future studies can help bridge the gap between theory and practice, offering practical solutions that benefit SMEs, policymakers, and stakeholders alike in the journey toward a more sustainable future.

## References


Adams, C. A., & Frost, G. R. (2008). Integrating Sustainability Reporting Into Management Practices. Accounting Forum, 32(4), 288-302.

Bansal, P., & Song, H. C. (2017). Similar But Not The Same: Differentiating Corporate Sustainability From Corporate Responsibility. Academy Of Management Annals, 11(1), 105-149.

Bataille, C., Åhman, M., Neuhoff, K., Nilsson, L. J., Fischedick, M., Lechtenböhmer, S., ... & Rahbar, S. (2018). A Review Of Technology And Policy Deep Decarbonization Pathway Options For Making Energy-Intensive Industry Production Consistent With The Paris Agreement. Journal Of Cleaner Production, 187, 960-973.

Baumann-Pauly, D., Wickert, C., Spence, L. J., & Scherer, A. G. (2013). Organizing Corporate Social Responsibility In Small And Large Firms: Size Matters. Journal Of Business Ethics, 115(4), 693-705.

Baumgartner, R. J., & Rauter, R. (2017). Strategic Perspectives Of Corporate Sustainability Management To Develop A Sustainable Organization. Journal Of Cleaner Production, 140, 81-92.

Beier, G., Niehoff, S., & Xue, B. (2018). More Sustainability In Industry Through Industrial Internet Of Things? Applied Sciences, 8(2), 219.

Blanco, C., Caro, F., & Corbett, C. J. (2016). The State Of Supply Chain Carbon Footprinting: Analysis Of Cdp Disclosures By Us Firms. Journal Of Cleaner Production, 135, 1189-1197.

Bocken, N. M., Short, S. W., Rana, P., & Evans, S. (2014). A Literature And Practice Review To Develop Sustainable Business Model Archetypes. Journal Of Cleaner Production, 65, 42-56.

Borga, F., Citterio, A., Noci, G., & Pizzurno, E. (2009). Sustainability Report In Small Enterprises: Case Studies In Italian Furniture Companies. Business Strategy And The Environment, 18(3), 162-176.

Borghesi, S., Cainelli, G., & Mazzanti, M. (2021). Environmental Innovations In The Manufacturing Sector: The Role Of Firm-Level Factors And Policy. Business Strategy And The Environment, 30(1), 195-211.

Brammer, S., Hoejmose, S., & Marchant, K. (2012). Environmental Management In Smes In The Uk: Practices, Pressures, And Perceived Benefits. Business Strategy And The Environment, 21(7), 423-434.

Brander, M., Sood, A., Wylie, C., Haughton, A., & Lovell, J. (2011). Technical Paper | Electricity-Specific Emission Factors For Grid Electricity. Ecometrica, 1-22.

Brundtland Commission. (1987). Our Common Future. Oxford

University Press.

Cagno, E., Worrell, E., Trianni, A., & Pugliese, G. (2013). A Novel Approach For Barriers To Industrial Energy Efficiency. Renewable And Sustainable Energy Reviews, 19, 290-308.

Canelli, R., Fontana, G., Realfonzo, R., & Passarella, M. V. (2024). Energy Crisis, Economic Growth And Public Finance In Italy. Energy Economics, 132, 107430.

Chatterjee, J. S., Thongprasert, S., & Some, S. (2024). Communication, Climate Mitigation, And Behavior Change Interventions: Understanding Message Design And Digital Media Technologies. Annual Review Of Environment And Resources, 49.

Chkanikova, O., & Mont, O. (2015). Corporate Supply Chain Responsibility: Drivers And Barriers For Sustainable Food Retailing. Corporate Social Responsibility And Environmental Management, 22(2), 65-82.

Christensen, L. T., & Van Rensburg, B. (2020). Greenwashing: Communication Strategies And Stakeholder Perceptions. Journal Of Business Communication, 57(4), 405–433.

Christensen, H. B., Hail, L., & Leuz, C. (2021). Mandatory Csr And Sustainability Reporting: Economic Analysis And Literature Review. Review Of Accounting Studies, 26(3), 1176-1248.

Cox, M. J. (2008). Sustainable Communication: A Study Of Green Advertising And Audience Reception Within The Growing Arena Of Corporate Social Responsibility. Case Study: British Petroleum. Earth & E-Nvironment, 3(1), 32-51.

Crijns, H., Cauberghe, V., & Hudders, L. (2018). Terrorism Threat In Belgium: The Resilience Of Belgian Citizens And The Protection Of Governmental Reputation By Means Of Communication. Public Relations Review, 44(2), 210-218.

Dahlmann, F., Branicki, L., & Brammer, S. (2019). Managing Carbon Aspirations: The Influence Of Corporate Climate Change Targets On Environmental Performance. Journal Of Business Ethics, 158(1), 1-24.

De Marchi, V. (2012). Environmental Innovation And R&D Cooperation: Empirical Evidence From Spanish Manufacturing Firms. Research Policy, 41(3), 614-623.

De Marchi, V., & Di Maria, E. (2015). Environmental Strategies And Firm Performance: A Meta-Analysis Of Italian Manufacturing Firms. Business Strategy And The Environment, 24(8), 831-847.

Delmas, M. A., & Burbano, V. C. (2011). The Drivers Of Greenwashing. California Management Review, 54(1), 64-87.

Elkington, J. (1997). Cannibals With Forks: The Triple Bottom Line Of 21st Century Business. Capstone.

Engert, S., Rauter, R., & Baumgartner, R. J. (2016). Exploring The Integration Of Corporate Sustainability Into Strategic Management: A Literature Review. Journal Of Cleaner Production, 112, 2833-2850.

European Commission. (2020). An Sme Strategy For A Sustainable And Digital Europe. Com(2020) 103 Final.

European Commission. (2021). 2030 Climate Target Plan.

Fawzy, S., Osman, A. I., Doran, J., & Rooney, D. W. (2020). Strategies For Mitigation Of Climate Change: A Review. Environmental Chemistry Letters, 18, 2069-2094.

Ferraro, C., Siano, A., & Vollero, A. (2019). Sustainability Communication And Stakeholder Engagement Strategies: An Exploratory Study In The Italian Context. Corporate Social Responsibility And Environmental Management, 26(3), 650-660.

Fischedick, M., Roy, J., Abdel-Aziz, A., Acquaye, A., Allwood, J. M., Ceron, J. P., ... & Tanaka, K. (2014). Industry. In Climate Change 2014: Mitigation Of Climate Change. Contribution Of Working Group Iii To The Fifth Assessment Report Of The Intergovernmental Panel On Climate Change. Cambridge University Press.

Gadde, L. E., & Dubois, A. (2010). Partnering In The Construction Industry— Problems And Opportunities. Journal Of Purchasing And Supply Management, 16(4), 254-263.

Gasbarro, F., Rizzi, F., & Frey, M. (2017). Adaptation Measures Of Energy And Utility Companies To Cope With Water Scarcity Induced By Climate Change. Business Strategy And The Environment, 26(1), 54-72.

Geissdoerfer, M., Savaget, P., Bocken, N. M., & Hultink, E. J. (2017). The Circular Economy – A New Sustainability Paradigm? Journal Of Cleaner Production, 143, 757-768.

Genc, R. (2017). The Importance Of Communication In Sustainability & Sustainable Strategies. Procedia Manufacturing, 8, 511–516.

Gill, D. L., Dickinson, S. J., & Scharl, A. (2008). Communicating Sustainability: A Web Content Analysis Of North American, Asian And European Firms. Journal Of Communication Management, 12(3), 243-262.

Hahn, T., Preuss, L., Pinkse, J., & Figge, F. (2015). Cognitive Frames In Corporate Sustainability: Managerial Sensemaking With Paradoxical And Business Case Frames. Academy Of Management Review, 40(2), 222-245.

Hahn, R., Reimsbach, D., & Schiemann, F. (2015). Organizations, Climate Change, And Transparency: Reviewing The Literature On Carbon Disclosure. Organization & Environment, 28(1), 80-102.

Hermundsdottir, F., & Aspelund, A. (2021). Sustainability Innovations And Firm Competitiveness: A Review. Journal Of Cleaner Production, 280, 124715.

Hoogendoorn, B., Guerra, D., & Van Der Zwan, P. (2015). What Drives Environmental Practices Of Smes? Small Business Economics, 44(4), 759781.

Huang, Y. A., Weber, C. L., & Matthews, H. S. (2009). Categorization Of Scope 3 Emissions For Streamlined Enterprise Carbon Footprinting. Environmental Science & Technology, 43(22), 8509-8515.

International Energy Agency [Iea]. (2021). Tracking Industry 2021. Retrieved From Https://Www.Iea.Org/Reports/Tracking-Industry-2021

Ipcc. (2014). Climate Change 2014: Mitigation Of Climate Change. Cambridge University Press.

Ipcc. (2021). Climate Change 2021: The Physical Science Basis. Contribution Of Working Group I To The Sixth Assessment Report Of The Intergovernmental Panel On Climate Change. Cambridge University Press.

Istat. (2020). Rapporto Sulla Competitività Dei Settori Produttivi. Istituto Nazionale Di Statistica.

Jansson, J., Nilsson, J., Modig, F., & Hed Vall, G. (2017). Commitment To Sustainability In Small And Medium - Sized Enterprises: The Influence Of Strategic Orientations And Management Values. Business Strategy And The Environment, 26(1), 69-83.

Johnson, M. P. (2015). Sustainability Management And Small And Mediumsized Enterprises: Managers' Awareness And Implementation Of Innovative Tools. Corporate Social Responsibility And Environmental Management, 22(5), 271-285.

Johnson, M. P., & Schaltegger, S. (2016). Two Decades Of Sustainability Management Tools For Smes: How Far Have We Come? Journal Of Small Business Management, 54(S1), 481-505.

Kassier, L. (2024). Identifying Transitions In Corporate Sustainability Reporting: A Content Analysis Of Jse/Ftse Multinational Sustainability Reports From 2016 To 2021. International Journal Of Corporate Social Responsibility, 9(1), 12.

Kouhizadeh, M., Saberi, S., & Sarkis, J. (2021). Blockchain Technology And The Sustainable Supply Chain: Theoretically Exploring Adoption Barriers. International Journal Of Production Economics, 231, 107831.

Lee, S. Y., Park, Y. S., & Klassen, R. D. (2015). Market Responses To Firms' Voluntary Climate Change Information Disclosure And Carbon Communication. Corporate Social Responsibility And Environmental Management, 22(1), 1-12.

Linnenluecke, M. K., Griffiths, A., & Winn, M. (2013). Firm And Industry Adaptation To Climate Change: A Review Of Climate Adaptation Studies In The Business And Management Field. Wiley Interdisciplinary Reviews: Climate Change, 4(5), 397-416.

Lyon, T. P., & Montgomery, A. W. (2015). The Means And End Of Greenwash. Organization & Environment, 28(2), 223–249.

Matthews, H. S., Hendrickson, C. T., & Weber, C. L. (2008). The Importance Of Carbon Footprint Estimation Boundaries. Environmental Science & Technology, 42(16), 5839-5842.

Mazzanti, M., Antonioli, D., Ghisetti, C., & Nicolli, F. (2015). Firm Surveys Relating Environmental Policies, Environmental Performance And Innovation: Design Challenges And Insights From Empirical Application. Oecd Environment Working Papers, No. 82, Oecd Publishing, Paris.

Michelon, G., Pilonato, S., & Ricceri, F. (2019). Sustainability Reporting, Integrated Reporting, And The Role Of The Accounting Profession. In Sustainability Disclosure: State Of The Art And New Directions (Pp. 125-146). Emerald Publishing Limited.

Ockwell, D., Whitmarsh, L., & O'neill, S. (2009). Reorienting Climate Change Communication For Effective Mitigation: Forcing People To Be Green Or Fostering Grass-Roots Engagement?. Science Communication, 30(3), 305-327.

Olekanma, O., Rodrigo, L. S., Adu, D. A., & Gahir, B. (2024). Small - And Medium - Sized Enterprises' Carbon Footprint Reduction Initiatives As A Catalyst For Green Jobs: A Systematic Review And Comprehensive Business Strategy Agenda. Business Strategy And The Environment, 33(7), 6911-6939.

Ormazabal, M., Prieto-Sandoval, V., Puga-Leal, R., & Jaca, C. (2018). Circular Economy In Spanish Smes: Challenges And Opportunities. Journal Of Cleaner Production, 185, 157-167.

Paik, J. H. (2013, July). A Novel Tf-Idf Weighting Scheme For Effective Ranking. In Proceedings Of The 36th International Acm Sigir Conference On Research And Development In Information Retrieval (Pp. 343-352).

Patchell, J. (2018). Can The Implications Of The Ghg Protocol's Scope 3 Standard Be Realized? Journal Of Cleaner Production, 185, 941-958.

Patricio, J., Axelsson, L., Blome, S., & Rosado, L. (2018). Enabling Industrial Symbiosis Collaborations Between Smes From A Regional Perspective. Journal Of Cleaner Production, 202, 1120-1130.

Penz, E., & Polsa, P. (2018). How Do Companies Reduce Their Carbon Footprint And How Do They Communicate These Measures To Stakeholders?. Journal Of Cleaner Production, 195, 1125-1138.

Pinkse, J., & Gasbarro, F. (2019). Managing Physical Impacts Of Climate Change: An Attentional Perspective On Corporate Adaptation. Business & Society, 58(2), 333-368.

Porter, M. E., & Van Der Linde, C. (1995). Toward A New Conception Of The Environment-Competitiveness Relationship. Journal Of Economic Perspectives, 9(4), 97-118.

Probst, B. S., Toetzke, M., Kontoleon, A., Díaz Anadón, L., Minx, J. C., Haya, B. K., ... & Hoffmann, V. H. (2024). Systematic Assessment Of The Achieved Emission Reductions Of Carbon Crediting Projects. Nature Communications, 15(1), 9562.

Reilly, A. H., & Hynan, K. A. (2014). Corporate Communication, Sustainability, And Social Media: It's Not Easy (Really) Being Green. Business Horizons, 57(6), 747-758.

Revell, A., Stokes, D., & Chen, H. (2010). Small Businesses And The Environment: Turning Over A New Leaf? Business Strategy And The Environment, 19(5), 273-288.

Richardson, A., & O'higgins, E. (2019). B Corporation Certification Advantages? Impacts On Performance And Development. Business & Professional Ethics Journal, 195-221.

Saberi, S., Kouhizadeh, M., Sarkis, J., & Shen, L. (2019). Blockchain Technology And Its Relationships To Sustainable Supply Chain Management. International Journal Of Production Research, 57(7), 2117-2135.

Scott, J., & Wang, L. (2023). Greenhushing In The Food-Processing Sector: Impact On Emission Reporting And Sector-Wide Progress. Journal Of Corporate Sustainability, 7(3), 150–168.

Smit, B., & Wandel, J. (2006). Adaptation, Adaptive Capacity, And Vulnerability. Global Environmental Change, 16(3), 282-292.

Testa, F., Cosic, A., & Iraldo, F. (2020). Determining Factors Of Curtailment And Purchasing Energy Related Behaviours. Journal Of Cleaner Production, 245, 118641.

Testa, F., Gusmerotti, N. M., Corsini, F., Passetti, E., & Iraldo, F. (2017). Factors Affecting Environmental Management By Small And Micro Firms: The Importance Of Entrepreneurs' Attitudes And Environmental Investment. Corporate Social Responsibility And Environmental Management, 24(4), 373-385.

Trianni, A., Cagno, E., & Farné, S. (2016). Barriers, Drivers And Decisionmaking Process For Industrial Energy Efficiency.

Walker, K., & Wan, F. (2012). The Harm Of Symbolic Actions And Green-Washing: Corporate Actions And Communications On Environmental Performance And Their Financial Implications. Journal Of Business Ethics, 109(2), 227–242.

## Appendix A

Here we report in detail the questions and the available answers provided to the firms. The questions are divided depending on the contribution they have either on sustainability or mitigation. In addition we reported how we coded each question.

### Sustainability

Question 1: Is your company a Benefit Corporation and/or a certified BCorp?

Yes No Don't know/Prefer not to answer

$Qs_{1n} = \{1 \quad if \quad answer = Yes$

$0 \quad otherwise$

Question 2: Have you ever produced an environmental report? Examples: social report, environmental report, impact report, mission statement, sustainability report.

Yes No Don't know/Prefer not to answer

$Qs_{2n} = \{1 \quad if \quad answer = Yes$

$otherwise$

Question 3: What environmental certifications have you achieved? Select from the list.

CAM; CARBON FOOTPRINT; ECOLABEL; EMAS; ISCC; ISO13009; ISO14001; ISO14006; ISO 14040/14044; ISO 14064; 14067: 14090/14091; ISO 21401; ISO

50001; Made Green in Italy; Life Cycle Assessment; No One; Don't know

$Qs_{3n} = \{0 \quad if \quad OR(No\ One, Don't\ know) \quad 1 \quad otherwise$

being OR(•,•) the logical or operator.

Question 4: To what extent is environmental sustainability part of your mission or "corporate goal"?

(Very unlikely) 2 3 4 5 (Very Likely)

Don't know/Prefer not to answer

$Qs_{4n} = \{1 \quad if \quad answer \geq 4$

$otherwise$

Question 5: How much do you agree with the following statement, "Regarding environmental sustainability actions (example: reducing carbon emissions), our company acts ahead of competitors."

(Very unlikely) 2 3 4 5 (Very Likely)

Don't know/Prefer not to answer

$Qs_{5n}$ = {1 $if$ $answer \geq 4$ 0 $otherwise$

### Mitigation

Question 1: To reduce emissions, your company had to :

Introduce new products Modify existing products Change the production process Update employee skills Identify new ad hoc professionals Find new sources of funding Other (specify) No action Don't know/prefer not to answer

$Qm_{1n}$ = {0 $if$ $OR(No\ Action, Don't\ know \backslash prefer\ not\ to\ answer)$ 1 $otherwise$

Question 2: Does your company purchase carbon credits (carbon offsets) or participate in reforestation projects and other similar environmental initiatives to reduce its environmental impact?

Yes No Don't know/Prefer not to answer

$Qm_{2n}$ = {1 $if$ $answer = Yes$

$otherwise$

Question 3: Does your company produce its own electricity? If yes, through what facilities? [multiple answers possible].

Wind; Solar/Thermal; Photovoltaic; Thermoelectric; Hydroelectric; Geothermal; We do not produce our own energy; Don't know/prefer not to answer

$Qm_{3n}$ = {0 $if$ $OR(We\ do\ not\ produce\ \ldots, Don't\ know \backslash prefer\ not\ to\ \ldots)$

$otherwise$

Question 4: Do you buy energy from renewable sources (but not self-generated)?

[choose one]

Yes No Don't know/Prefer not to answer

$Qm_{4n}$ = {1 $if$ $answer = Yes$

0 $otherwise$

Question 5: Let us now consider "scope 3 emissions," i.e., emissions related to activities that occur outside your company boundaries but are linkable to your product and/or production process (e.g., emissions related to the raw materials you use). How often have you assessed these emissions in your business discussions? [choose one]

Never Rarely Occasionally Often Very often

Don't know/prefer not to answer

$Qm_{5n} = \{1 \quad if \quad OR(Often, Very\ often)$

$0 \quad otherwise$

Question 6: Which of these activities did you consider as sources of indirect emissions? Other: emissions related to production cycle and business travel; waste generated in operations; employee commuting

Emissions related to the purchase of materials, products or services for your business Emissions related to the transportation of the products, materials or services you purchase (inbound logistics, handled by you or companies you contract)

Emissions related to the transportation of the products, materials or services you sell

(outbound logistics, managed by you or companies contracted by you)

Emissions related to the end-of-life of products

Emissions related to the distribution network of your products

Emissions related to the use of your products by consumers

None of these

Don't know/prefer not to answer

$Qm_{1n} = \{0 \quad if \quad OR(None\ of\ these, Don't\ know\ \backslash prefer\ not\ to\ answer)$

$1 \quad otherwise$

## Appendix B

| | | | |
|---|---|---|---|
| GHG | Downcycling | ISO 14064 | Analisi degli impatti ambientali |
| impronta carbonica | Ciclo di Vita | BREEAM | Analisi degli impatti sociali |
| decabonizzazione | Design per la Sostenibilità | Building Research Establishment Environmental Assessment Method | Analisi degli impatti socio-ambientali |
| riduzione delle emissioni | Biomimetica | Certificazione LEED | B-Corp |
| rinnovabil* | Circolarità | certificazioni green | Bilancio ambientale |
| Impronta ambientale | Riparabilità | Commercio equosolidale | Bilancio di impatto ambientale |
| greenhouse | Risorse Rinnovabili | Cradle to Cradle Certified | Bilancio di impatto sociale |
| net zero | Riduzione materie prime | Ecolabel UE | Bilancio di missione |
| carbon footprint | Riduzione rifiuti | EMAS | Bilancio di sostenibilità |
| Emissioni di carbonio | Simbiotica Industriale | Energy Star | bilancio integrato |
| scopo 1 | Riuso | Fair Trade | Bilancio Sociale |

| | | | |
|---|---|---|---|
| scope 2 | Longevità | Forest Stewardship Council | dichiarazione non finanziaria |
| greenhouse gas emissions | Materiali Sostenibili | FSC | DNF |
| Emissioni CO2 | Recupero | Global Organic Textile Standard | Documento di sostenibilità |
| Impatto ambientale | Progettazione sostenibile | GOTS | NFD |
| Riduzione C02 | Biomateriali | Green Seal | non financial disclosure |
| carbon free | Chiusura del Ciclo | iso 14000 | Rapporto sulla sostenibilità |
| Carbonio | Materiali rinnovabili | iso 14001 | Relazione di impatto |
| Efficientamento energetico | Economia della Performance | iso 14024 | Relazione di responsabilità sociale |
| Efficienza energetica | Recupero delle risorse | iso 14025 | Relazione di sostenibilità |
| neutralità carbonica | Riciclo | iso 14040 | Relazione ESG |
| scopo 3 | Loop Chiusi | iso 14044 | Relazione sulla performance sostenibile |
| Riduzione anidride carbonica | Upcycling | iso 14067 | Rendicontazione di sostenibilità |
| carbon neutral* | Economia del riciclo | iso 14067: 2018 | Report ambientale |
| impronta cabonio | Raccolta Differenziata | iso 14090 | Report di gestione sostenibile |
| scopo 2 | Rigenerazione | iso 14091 | Report di responsabilità aziendale |
| gas serra | | iso 21930 | Report di Sostenbilità |
| Basse emissioni | | iso 50001 | report integrato |
| scope 1 | | ISO 50001 | Reporting di sostenibilità |
| Sequestro del carbonio | | iso14064 | Valutazione degli impatti sociali |
| Innovazione verde | | Leadership in Energy and Environmental Design | Valutazione di impatto |
| Tecnologie pulite | | leed | visione sostenibile |
| Ottimizzazione energetica | | | |
| risparmio energetico | | | |
| Conservazione dell'energia | | | |
| carbon negative | | | |
| Impronta di carbonio | | | |
| scope 3 | | | |
| twin transition | | | |
| anti corruzione | ANAC | ciclo di vita | Autoconsumo |
| codice etico | CDP | Cradle to Cradle | Biogas |
| comitato etico | CDSB | Analisi Multicriterio | Biomassa |
| Corporate Social Responsibility | Conformità normativa | Bilancio di Massa | Celle a Combustibile |
| CSR | CSDD | Dati di ciclo di vita | Efficienza Energetica |
| degrado ambientale | CSRD | ecodesign | Energia da Biomassa |
| Diritti Umani | Digital Product Passport | Impatti Ambientali | Energia da fonti rinnovabili |
| diversity management | DPP | Impronta ecologica | Energia da Onde e Maree |
| Environmental, social corporate governance | Due diligence ambientale | Inventario del ciclo di Vita | Energia da Rifiuti |
| equity movement | Environmental Product Declaration | LCA | Energia Eolica |
| ESG | EPD | LCI | Energia Geotermica |
| etica | ESRS | LCIA | Energia Idroelettrica |
| etico | EU Taxonomy | Life Cycle Assessment | Energia Pulita |
| Gestione della diversità | GRI | Sostenibilita | Energia Solare |

| | | | |
|---|---|---|---|
| Governance ambientale | IR | Sostenibilità | Energia solare termica |
| Impact invest* | Norme di sostenibilità | Sostituzione delle Materie Prime | Energie Rinnovabili |
| impatto ambientale | Regolamenti sulla divulgazione | Valutazione degli Impatti del Ciclo di Vita | Idrogeno Verde |
| impatto sociale | SASB | Valutazione del ciclo di vita (LCV) | Impianti Geotermici |
| Investimenti sostenibili | SBTi | | Moduli fotovoltaici |
| Movimento per la diversità | Standard ambientali | | Pannelli Fotovoltaici |
| obiettiv* ambient* | TCFD | | Pannelli Solari |
| obiettiv* social* | TNFD | | Rete Elettrica Intelligente (Smart Grid) |
| Obiettivi di sviluppo sostenibile | UNEP FI | | Riduzione dei consumi |
| Obiettivi sociali | UNGC | | Sistemi di accumulo dell'energia |
| preservazione dell'ambiente | VRF | | Sistemi fotovoltaici |
| Reporting ESG | WEF Stakeholder Capitalism Metrics | | Stoccaggio di Energia |
| Responsabilità ambientale | | | Turbine Eoliche |
| Responsabilità sociale | | | |
| sbti | | | |
| Science Based Targets initiative | | | |
| SDG | | | |
| SGI | | | |
| social goals | | | |
| Sostenibilità aziendale | | | |
| stakeholder | | | |
| Sustainable developments goals | | | |
| Sustainable Governance Indicators | | | |
| Tutela dei consumatori | | | |
| Tutela dei consumatori | | | |
| valorizzazione dell'ambiente | | | |
| WGI | | | |
| World Governance Index | | | |

# Implementing the Inclusive Branding Strategy: Key Challenges and Managerial Solutions from the Perspective of Marketing Practitioners

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## Abstract

As companies are increasingly called upon to play a role in addressing societal challenges, they are expected to adopt hybrid logic, integrating market and social logic. This shift has profound implications for brand management, as brands become powerful vehicles through which companies articulate their social commitments and values. In this evolving landscape, the integration of Diversity, Equity, and Inclusion (DEI) principles into branding has gained growing strategic relevance. Brands are being urged to not only represent diverse social identities (e.g., gender, disability, race, etc.), but also to foster equity and promote active inclusion, both in the marketplace and in broader society. Inclusive branding emerges as a Social Purpose Branding strategy based on this hybrid logic, aligning competitive positioning with a clear social purpose.

Despite the growing relevance of the topic, academic literature on inclusive branding remains fragmented. Most studies focus on specific marketing tools (e.g., product, advertising) or diversity dimensions (e.g., disability), often adopting a theoretical and consumer-centered approach. There is a lack of comprehensive frameworks that reflect managerial perspectives on understanding the complexity of implementing an inclusive branding strategy.

The study addresses these gaps by: (1) mapping inclusive branding initiatives through the triad "marketing tools/activities-intended audiences–diversity dimensions"; and (2) identifying key challenges and managerial solutions in implementing inclusive branding strategies. Based on document analysis of the Diversity Brand Index and eight in-depth interviews with DEI and branding professionals, the study offers both theoretical insights and practical implications for managers seeking to build credible, inclusive, and socially impactful brands.

*Key words: Diversity Equity and Inclusion (DEI), inclusive branding, Diversity Brand Index (DBI), in-depth interview, content analysis.*

## 1. Introduction

In recent years, both marketing scholars and practitioners have widely recognized the increasingly significant role of brands as catalysts for social change (Swaminathan et al., 2020). Brands are taking a stance on socially meaningful issues, particularly in light of consumers' growing distrust in institutions (Edelman, 2025). The issue of social recognition of inequality and the demand for reduced social discrimination have gained notable attention (Chandy et al., 2021). This growing relevance can be primarily attributed to the heightened awareness of the diversity of social identity categories (e.g., gender, race/ethnicity, body size and shape, etc.) present in contemporary society (Licsandru et al., 2020).

This phenomenon is shaped by macro-level factors such as demographic shifts — for instance, the aging population in countries like Italy (Eurostat, 2025) — and migratory flows, which are making societies increasingly multicultural (Demangeot et al., 2019). Moreover, the rising importance of this issue is also linked to factors that have intensified the negative effects of diversity, thereby exacerbating forms of discrimination and social exclusion. These include the Covid-19 pandemic (Kipnis et al., 2021; Ferraro et al., 2023), political and regulatory developments, and the digital revolution, which has introduced disparities in access to technology (Patric and Hollenbeck, 2021), algorithmic discrimination, and cyberbullying (Vernuccio et al., 2025).

As highlighted by Ferraro et al. (2023), corporate leaders are also assigning high strategic priority to DEI initiatives (Creary et al., 2021), especially in response to increasing pressures from younger generations - namely Generation Z and Generation Alpha- who are significantly more attuned to these issues than their predecessors. Against this backdrop, it is increasingly evident that companies must define and implement inclusive branding strategies grounded in the principles of diversity, equity, and inclusion (DEI). These strategies aim to welcome, represent, include, and empower all social identity categories, while actively working to eliminate all forms of social discrimination among market participants (Vernuccio et al., 2025; Burgess et al., 2021, 2022). To this end, firms must reconcile market logic with social logic by adopting a "hybrid logic" (Spry et al., 2021), which underpins the Social Purpose Branding approach (Gray et al., 2024). This approach is characterized by: (1) a social commitment that is integrated into the brand identity and articulated through a deliberate social mission, guiding corporate actions and behaviors toward addressing the root causes of discrimination linked to diversity; (2) a medium- to long-term strategic horizon; (3) the development of a meaningful connection with consumers who identify with the DEI values endorsed by the brand; (4) the consistent alignment between the firm's social commitment and its core business; and (5) the generation of tangible and measurable impact both in the market and within society (Gray et al., 2024). Accordingly, firms are expected to build an inclusive social brand identity (Ferraro et al., 2023) to articulate a clear positioning - both competitive, in the minds of consumers, and social, within the broader societal community - and to uphold the brand's social promise through the integrated use of all tools of the marketing mix (Henderson & Williams, 2013; Kipnis et al., 2021; Burgess et al., 2022; Vernuccio et al., 2025).

However, the academic literature on this topic remains notably fragmented. Specifically, when examining the tools of the marketing mix, the focus has primarily been placed on the product and advertising, typically adopting a consumer perspective to explore the effects of advertising communication on psychological responses among consumers (e.g., Eisend et al., 2023; Wilkie et al., 2023; Branca et al., 2024; Chauhan et al., 2025). Therefore, there is a lack of a comprehensive analysis that considers the full range of marketing tools that companies can deploy to implement an inclusive branding strategy. Furthermore, existing studies have primarily focused on specific dimensions of

diversity (e.g., Licsandru & Cui, 2018; Montecchi et al., 2024), without addressing how different elements of the marketing mix can be combined to tackle various facets of diversity through an intersectional lens. Moreover, following the logic of Social Purpose Branding, it becomes essential to consider the two main categories of intended audiences: (1) consumers, who must be engaged to promote inclusion within the marketplace; and (2) the societal community, which must be addressed to remove the underlying causes of discrimination in society.

In this regard, the academic marketing literature lacks empirical studies on this phenomenon from a managerial perspective - a viewpoint that is particularly relevant for supporting practitioners in understanding how social and market logics can be effectively integrated through the strategic use of the marketing mix.

To address these gaps, the present study adopts a managerial perspective with the aim of:

(1) mapping, through an integrated framework, the variety of marketing initiatives implemented by firms in the execution of inclusive branding strategies, based on the triad "marketing tools–intended audiences–dimensions of diversity";

(2) exploring the most critical managerial challenges perceived in the implementation of inclusive branding strategies, as well as the main managerial practices adopted by firms to address them.

From a theoretical standpoint, this study contributes to addressing the fragmentation of existing literature by proposing an integrative framework that captures the breadth of inclusive branding initiatives. Specifically, it accounts for the different dimensions of diversity tackled by such strategies, while also considering the distinct categories of intended audiences. Furthermore, by offering an original systematization of the multifaceted managerial challenges inherent in inclusive branding, the study puts forward - for the first time - a comprehensive set of actionable marketing and branding responses. In this regard, the paper offers a valuable managerial contribution as well, serving as a structured set of strategic guidelines for practitioners engaged in the definition and implementation of inclusive branding strategies.

The remainder of the paper is structured as follows: it begins with a literature review on diversity, discrimination, inclusion, and inclusive branding, followed by a presentation of the research methodology and the key findings. The paper concludes with a discussion of the results, limitations of the study, and avenues for future research.

## 2. Theoretical background: from diversity to inclusion

Diversity refers, in general terms, to physical or sociocultural differences- either real or perceived - that are attributed to individuals, as well as to the representation of such differences within academic research, market contexts, and organizations (Arsel et al., 2022). According to Park et al. (2023), diversity is a measure of heterogeneity in individuals' social identities, focusing on «traditionally underrepresented, underserved and marginalized populations» (p. 175). Heterogeneous starting conditions can lead to a disproportionate or inappropriate allocation of opportunities and resources among individuals within and across different social groups (Shultz et al., 2022; Ashik et al., 2025). An individual may be marginalized due to a specific structure or category of social identity. The structure of social identity refers to overarching criteria such as gender, body shape or body size, sexual orientation, and socioeconomic status, whereas the category of social identity refers to a specific class within that structure (for example, "obesity" as a category within the "body size" structure). In what follows, the terms "structure" and "category" will be collectively referred to as dimensions of diversity.

Given that individual identity is increasingly fluid and nuanced, and that people are less and less likely to fit neatly into clearly defined social identity categories (Ferraro et al., 2023), diversity should be understood as a multidimensional construct (Patrick & Hollenbeck, 2021; Branca et al., 2024), embracing an intersectional perspective (Gopaldas & DeRoy, 2015). In fact, focusing on a single dimension of diversity can sometimes lead to additional forms of discrimination (Burgess et al., 2022).

Therefore, heterogeneous starting conditions can result in the acquisition of either privilege or discrimination. In the presence of such "distortions," the concept of equity refers to fairness and impartiality toward individuals, both in terms of opportunities and outcomes, regardless of the initial conditions that may lead to unequal situations (Arsel et al., 2022; Campbell et al., 2023). Regardless of their initial social identity categories, individuals should be ensured fair treatment in accessing resources, opportunities, and markets, and should have the same potential to achieve comparable outcomes as members of other groups.

The concept of inclusion, in turn, pertains to the creation of a culture that fosters a sense of belonging and the integration of diverse groups (Arsel et al., 2022). It goes beyond mere tolerance to encompass the active embrace and valorization of diversity, ensuring full participation in decision-making processes and equal access to resources and opportunities for all individuals (Schultz et al., 2022). While diversity may be considered a given - a structural element embedded within the society in which economic actors operate - equity and inclusion policies result from a deliberate commitment to social responsibility voluntarily undertaken by companies. In this perspective, inclusive branding should be defined as a Social Purpose Branding strategy grounded in the principles of diversity, equity, and inclusion, aimed at welcoming, representing, including, and valuing all categories of social identity, while eliminating any form of social discrimination for all participants in market exchanges (Vernuccio et al., 2025).

The inclusive branding strategy is grounded in the adoption of a hybrid logic that combines both social and market-oriented perspectives. To build an inclusive brand, a company must first define its social brand identity (Ferraro et al., 2023; Vernuccio et al., 2025) as well as its competitive and social positioning and subsequently identify the marketing activities required to fulfill the brand's social promise addressed to both consumers and the broader societal community (Vernuccio et al., 2025).

Recent theoretical contributions (e.g., Grieco, 2024) highlight the importance of jointly considering the various tools of the marketing mix and the multiple dimensions of diversity, to provide a more comprehensive understanding of the path toward inclusion undertaken by firms and to identify different approaches to inclusive branding. In this regard, Vernuccio et al. (2024) show that brands adopt a strategic approach to inclusion when they: (i) embrace a hybrid logic characterized by deep integration of DEI principles into the brand identity, (ii) demonstrate a strong focus on intersectionality, and (iii) make extensive use of marketing mix tools. Similarly, Burgess et al. (2022) refer to a "transformative" approach to inclusion when companies act as first movers in assuming social commitments, achieve a high degree of DEI integration within the brand identity, and pay close attention to intersectional dynamics.

However, with specific regard to the tools of the marketing mix, academic literature has primarily focused on the product and advertising tools. Concerning the former, Hays (2008) highlighted how the product - considered together with packaging - has the potential to address all dimensions of diversity. Achieving this requires that product design be guided by the principles of inclusion, taking into account the needs and abilities of all individuals to reduce both actual and perceived difficulties related to product use (Keenan et al., 2021; Patrick & Hollenbeck, 2021). In line with this perspective,

Masiello et al. (2024), focusing on the specific case of toys designed for children with disabilities, emphasized that the design of such products should be inspired by the "universal" need shared by all children to play and to grow through play.

As for advertising, numerous studies underscore the powerful role this communication tool can play in fostering social change (e.g., Ruggs et al., 2018, cited in Wilkie et al., 2023). Nonetheless, several scholars draw attention to the critical issues associated with advertising, particularly the stereotypical portrayal of individuals (Viglia et al., 2023; Graw & Zotos, 2016), and of women in particular (Eisend, 2010; Tsichla, 2020). Similar concerns apply to body size representations - with beauty often depicted as synonymous with slim and sculpted physiques (Chauhan et al., 2025) – and disability (Masiello et al., 2024).

Adopting a predominantly consumer-centered perspective to investigate the psychological effects of advertising (e.g., Wilkie et al., 2023; Branca et al., 2024; Chauhan et al., 2025), previous research has shown that such stereotypes in advertising can lead to negative consequences - especially for female consumers - by diminishing their sense of inclusion and perceived fairness (Åkestam et al., 2017). These portrayals may also contribute to broader societal harms, including the reinforcement of discrimination and social exclusion (Ferraro et al., 2023). Even with respect to the dimensions of diversity, scholarly contributions tend to focus on specific issues in isolation, such as disability, sexual orientation, ethnicity, body size, and body shape.

While prior studies have focused on specific marketing tools and particular dimensions of diversity, they have largely overlooked the diversity of intended audiences—namely, consumers and societal communities—addressed by firms in the implementation of inclusive branding strategies. A joint consideration of the triad "marketing tools/activities–intended audiences–diversity dimensions" could offer a more comprehensive understanding of inclusive brand management. Moreover, the predominance of theoretical contributions and the consumer-oriented focus of the limited empirical research underscore the need to adopt a managerial perspective—particularly valuable when seeking to uncover the underlying logics that guide certain types of business decisions and activities (Bartoli et al., 2025).

## 3. Methodology

This study adopts a qualitative design articulated in two complementary phases: the methodological approach is based on the integration of document analysis and in-depth interviews, within a design that emphasizes the progressive construction of knowledge (Dubois & Gadde, 2002).

The first phase involved a systematic document analysis (Bowen, 2009) of official sources related to the Diversity Brand Index (DBI) from 2018 to 2025 (www.diversitybrandindex.org). The Diversity Brand Index is a study that, through a web survey conducted on a statistically representative sample of the Italian consumers, identifies the brands perceived as most inclusive by consumers. It then analyzes and evaluates the marketing initiatives/activities that the brands implement through a Scientific Committee and a Security Check Committee composed of experts in various areas of diversity (LGBTQ+, ethnicity, disability, gender and gender identity, religion, age). In 2021, the DBI became a European certification mark for brands that are genuinely committed to DEI and successfully bring this commitment to the market and society.

The information provided in the different editions of the DBI has been integrated with information obtained from corporate websites of the brands included in the index.

The systematic document analysis adopted an approach based on ex-ante coding that considered: (a) brand and initiative; (b) marketing tools/activities, (c) intended audiences (i.e., consumers and societal community); (d) dimensions of diversity supported (i.e., gender, body, disability, ethnicity/race, sexual orientation, age, and economic status).

The outcome of this phase is a qualitative map of the various initiatives that companies have implemented to promote their inclusive branding strategies. It also offers a holistic reading of the intended audiences and the diversity dimensions involved in these initiatives. The findings from the first phase of the research informed the design of the second phase, which aimed to explore professionals' perspectives on the key managerial challenges associated with implementing inclusive branding strategies, as well as the managerial solutions companies can use to address these challenges.

The second phase involved conducting eight in-depth qualitative interviews (Creswell, 1998) with seven managers responsible for defining and implementing inclusive branding strategies. The purpose was to gather their insights on the key managerial challenges they face in this area and to explore how these challenges can be addressed through marketing and branding initiatives. Additionally, one interview was conducted with the consultant responsible for the Diversity Branding Initiative (DBI) to gain a broader perspective on the same topics.

In selecting the professionals to be included in the survey, managers from the most active companies identified in the first phase of the study were contacted. The key informant approach (Robson and Foster, 1989) was adopted: given the subject matter, only expert profiles (e.g., Chief D&I Officer, Equality Diversity & Inclusion Leader) were included in the "theoretical sample", as they were able to provide a broad and in-depth view of the phenomenon, precisely because of their experience and responsibilities (Dexter, 1970). Respondents have an average of 17 years of work experience, with about 5 of those years dedicated to Diversity, Equity, and Inclusion (Table 1). The average tenure in DEI may seem low, but this is due to the fact that these positions were only recently established in the company in response to the increasing relevance of the issue.

| Interview ID | Industry | Participant job title | Years of professional experience | Years of experience in DEI |
|---|---|---|---|---|
| I1 | Entertainment | Senior Director Marketing Italia & Grecia | 23 | 7 |
| I2 | Grocery retail | Diversity, Equity, Inclusion Manager | 17 | 3 |
| I3 | Fashion | Brand Manager South East Hub | 18 | 4 |
| I4 | Food | Chief D&I Officer | 18 | 3 |
| I5 | Food | Creative Content and Brand Image manager | 18 | 4 |
| I6 | Furniture | Equality diversity & inclusion leader | 13 | 3 |
| I7 | Toy industry | Channel Director | 14 | 5 |
| I8 | Consultancy | Chief Operating Officer | 18 | 10 |

**Table 1:** Study informants

The interviews were guided by a semi-structured protocol developed based on insights emerging from the document analysis about the initiatives, the intended audiences and the diversity dimensions and some questions regarding the perspectives of the respondents on the most relevant challenges to address in implementing the inclusive branding strategy and the managerial solutions that could be proposed to overcome these challenges.

Each interview, with an average duration of approximately 40 minutes, was fully transcribed and analyzed using thematic content analysis (King & Horrocks, 2010), following an iterative approach that integrated descriptive coding, interpretive coding, and the identification of overarching themes. This process contributed to the development of a more articulated understanding of the phenomenon through a framework that summarizes the most relevant challenges concerning the various intended audiences considered (i.e., consumers and societal community) and the managerial solutions deemed most appropriate to address them.

## 4. Findings

### 4.1 Mapping inclusive marketing initiatives

Through systematic document analysis, three categories of inclusive marketing initiatives targeting different intended audiences have emerged:

1. Inclusive marketing initiatives for consumers. These initiatives focus primarily on consumers and utilize the product along with packaging, distribution, and physical or virtual points of sale. They also involve pricing strategies and communication through owned media (Edelman and Salsberg, 2010).
2. Inclusive marketing initiatives for societal community. This category targets primarly the broader societal community and includes activities such as sponsorship programs (e.g., sponsor for "Pride" events or for International Day for the Elimination of Violence Against Women), local engagement initiatives (e.g., support for local programs for breast cancer prevention), training and education projects (e.g, mentoring programs for unoccupied women), and welcoming projects (e.g., for the refugees). What sets these initiatives apart from those aimed at consumers is their focus on individuals as members of a specific societal community, particularly those who may be at risk of

exclusion or discrimination. As a result, companies may leverage their products for social purposes beyond mere sales.

3. Inclusive marketing initiatives for both consumers and societal community. These initiatives target both consumers and the societal community through advertising efforts.

This clear division enhances the understanding of how different marketing initiatives are employed depending on the audience they seek to engage. Adding the analysis of the dimensions of diversity considered in the various initiatives, a summary map emerges, as shown in Figure 1.

| Intended audiences | Consumers | | | | Consumers and societal community | Societal community | | |
|---|---|---|---|---|---|---|---|---|
| Tools/ activities / Diversity dimensions | Product and packaging | Distribution and point of sale | Price | Communication in brand owned media | Advertising | Sponsorship/ Local community engagement | Training projects | Welcoming projects |
| Gender | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | |
| Body | ✓ | | | ✓ | ✓ | | | |
| Disability | ✓ | ✓ | | ✓ | ✓ | ✓ | | |
| Ethnicity/race | ✓ | | | ✓ | ✓ | | | ✓ |
| Sexual orientation | ✓ | | | ✓ | ✓ | ✓ | ✓ | ✓ |
| Age | ✓ | ✓ | ✓ | ✓ | | | ✓ | |
| Economic status | ✓ | ✓ | ✓ | | | ✓ | | |

Source: Authors' own work.

**Figure 1:** Implementing the inclusive branding strategy:
marketing tools/activities, intended audiences, and diversity dimensions

The picture that emerges allows for further considerations. First, concerning marketing tools/activities (columns), it appears that product/packaging and advertising are the tools that companies can use to work on the greatest variety of diversity dimensions, together with communication at brand touchpoints on owned media - the so-called owned media - which allows companies to reach consumers primarily in their journey of interaction with the brand. The other marketing tools aimed at consumers (i.e., distribution and price) focus on a smaller variety of DEI issues, as do initiatives aimed primarily at the community, which focus predominantly on gender and sexual orientation.

Then, considering the diversity dimensions (rows), there appears to be a substantial balance these dimensions and the variety of tools used by companies to address them, although gender, disability, and sexual orientation seem to be the areas for which the greatest number of marketing tools and activities are used.

### 4.2 The most relevant perceived managerial challenges and solutions

Through interviews with professionals, we identified the challenges perceived by the respondents as most relevant in the implementation of an inclusive branding strategy with respect to different intended audiences (i.e., consumers and societal community).

Specifically, the analysis revealed four key perceived challenges:

1. Ensuring accessibility. According to the respondents, brands must first work to make products, pricing, and distribution accessible to consumers, not only to meet functional benefits (related, for example, to product and packaging usability), but also symbolic benefits (such as making consumers feel that the brand acknowledges and values their specific needs) and experiential benefits (e.g., enabling autonomy in accessing the point of sale or in using the product).

2. Representing diversity. Respondents highlighted that companies should convey their commitment to fostering a culture of inclusion, both internally and externally, through an appropriate representation of diversity that goes beyond stereotypical or even discriminatory portrayals. In this way, consumers and individuals belonging to the societal community will be able to recognize themselves in the values the company embraces and the diversity it supports.

3. Defining and maintaining an authentic brand promise. Companies must select the dimensions of diversity they intend to address in line with their brand identity values, to establish authentic brand promises both towards consumers and the societal community.

4. Building brand credibility. To allow the positive effects of inclusive branding to mature for the brand, consumers, and the societal community, the company must be perceived as credible. This challenge is closely linked to the previous one and, as we will see, some of the managerial solutions highlighted by respondents will overlap.

For each of these challenges, specific sub-themes were identified, corresponding to the main managerial solutions (in terms of marketing and branding) that, from the respondents' perspective, can be adopted to address them. The resulting framework is illustrated in Figure 2.

- **Managerial solution for "ensuring accessibility", "representing diversity", "defining and maintaining an authentic brand promise", and "building brand credibility".**

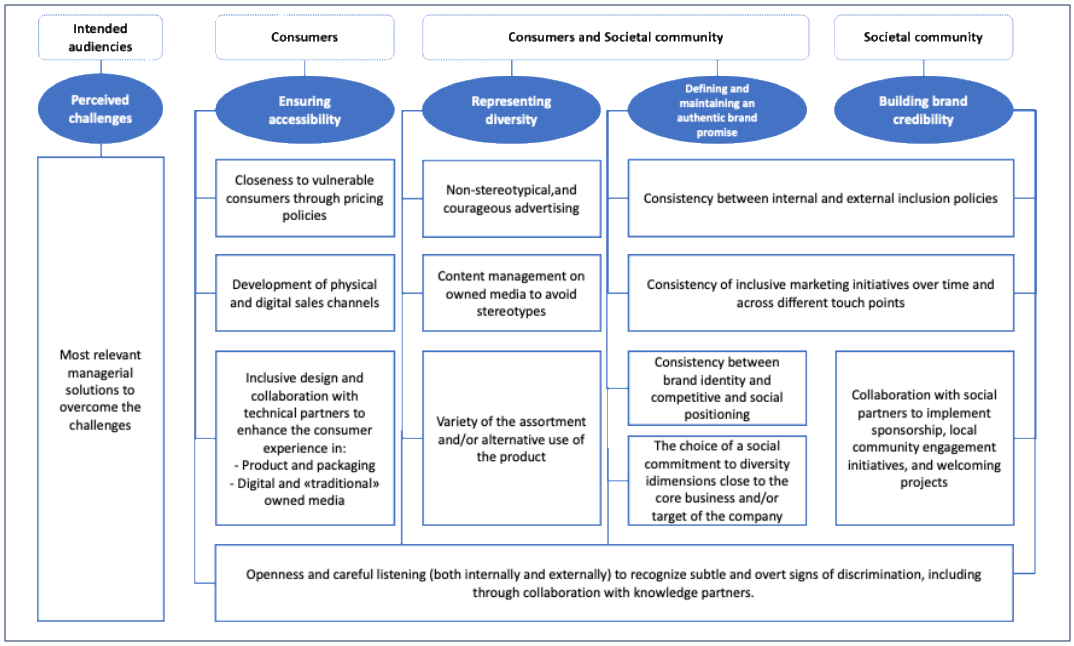
All respondents emphasized the importance of a managerial solution that cuts across the various challenges: continuously working on fostering openness and careful listening towards employees, consumers, and individuals belonging to the societal community, to recognize subtle or overt signs of discrimination, including through collaboration with knowledge partners.

With specific reference to the challenge of accessibility, by incorporating bottom-up suggestions from staff, target consumers, or individuals close to them (such as caregivers in the case of disability), the brand can develop more inclusive product offerings (for example, for different body sizes or races), or identify and support dimensions of diversity that are particularly relevant to the communities it serves.

In other cases, listening to consumers also proves useful for addressing the second challenge (i.e., representing diversity), by responding to demands for greater consideration of diverse social identities (e.g., race or ethnicity) within the brand's product assortment.

These practices are also particularly important for addressing the challenge of defining and maintaining an authentic brand promise. Often, the choice of the theme or themes to be embraced in promoting

DEI is informed by internal and external listening processes, including collaborations with knowledge partners who conduct more structured research on consumers and society more broadly. These partnerships are essential for gathering data and insights to assess the current state of exclusion or discrimination related to one or more dimensions of diversity, and to identify the most appropriate actions to address such issues.



Source: Authors' own elaboration.

**Figure 2:** Key challenges and managerial solutions in implementing the inclusive branding strategy

Finally, by monitoring social media conversations, the company can engage more closely with consumers and understand whether, and how, the brand's credibility in implementing inclusion strategy is being perceived.

- **Managerial solutions for "ensuring accessibility"**

According to respondents, companies can work toward accessibility through several key managerial practices:

a) The development of inclusive design for both products and packaging, as well as for owned digital assets - such as websites, branded immersive environments, and applications - and traditional touchpoints, including physical stores, customer service, and brand events. The underlying logic is that of "design for all", an approach that does not focus solely on the special needs of consumer groups at risk of marginalization, but rather aims to create products and brand touchpoints that are suitable for everyone:

"We pay close attention to size variety, offering both plus-size models and smaller sizes. We are very inclined to meet customer requests when they ask for a specific fit or size that is not currently available. Of course, there must be a minimum quantity threshold, but if a loyal customer tells us, 'I would be interested in buying this model in a 4XL,' we definitely try to accommodate their request" (I3).

To achieve this, it is often necessary to engage technical partners, particularly for the adoption of advanced technological solutions. In this regard, artificial intelligence (AI) holds significant potential for enhancing the accessibility and usability of certain products and services. For example, AI tools can support automatic translation of texts into less common languages, brand voice assistants can assist people with visual or motor impairments, and facial recognition technologies can facilitate product and service use for individuals with visual disabilities. Another noteworthy example is the use of voice assistants, which help blind individuals perform various activities (such as reading a book), while also supporting those with motor disabilities in managing tasks in the domestic environment, thanks to integration with home automation systems.

b) The development of physical and digital sales channels.

According to the interviewees, distribution is considered an important tool for the implementation of inclusive branding strategies. Industrial firms can promote more inclusive distribution by integrating their physical retail structure with the development of online sales channels. E-commerce, in this regard, presents significant potential, offering:

- Access to services across time and space. E-commerce platforms are always available, regardless of location, and can therefore be used by individuals who, for various reasons, may not be able to reach physical stores (for example, due to disabilities or geographical constraints) or comply with standard opening hours (because of work schedules or other commitments).

- Accessibility for people with disabilities. E-commerce websites should be designed to ensure easy navigation for users with visual impairments (for example, through high contrast between text and background or compatibility with screen readers), motor impairments (by enabling keyboard navigation or compatibility with adaptive joysticks), or hearing impairments (for example, by providing video subtitles, written transcripts, or animated visual alerts as alternatives to audio signals).

The need to make physical retail environments accessible also informs all decisions regarding store design, as stores represent a fundamental brand touchpoint for companies aiming to foster inclusion. While accessibility achieved through the removal of architectural barriers primarily provides functional benefits, the potential of physical stores to deliver symbolic and experiential value should not be underestimated. A store can be not only physically accessible, but also welcoming and perceived as a safe space for consumers at risk of social exclusion or discrimination. This can be achieved, for instance, through training staff on physical or mental disabilities, offering dedicated materials, and creating spaces tailored to vulnerable minority groups, such as neurodivergent individuals or women at risk of violence.

"Our stores play an important role in ensuring both accessibility and a welcoming environment for all consumers. In particular, we have focused on two initiatives. The first, developed in collaboration with the association Donnexstrada, involved converting some of our stores into 'purple points'. These locations have staff trained in supporting women facing street violence or insecurity. We have also introduced 'quiet hours', during which we reduce the level of sensory stimuli within stores to prevent overstimulation for neurodivergent individuals" (I2).

c) The use of pricing strategies to demonstrate closeness to vulnerable consumers.

Pricing can also serve as a means of demonstrating closeness and support toward consumer groups at risk of marginalization, such as those defined by age, socioeconomic status, or gender. For example, some retail chains offer specific promotions for older customers. These initiatives are intended not only to provide functional benefits, such as price reductions, but also to convey symbolic value, by making consumers feel acknowledged and valued. One interviewee cited the example of Nuvenia in this regard:

"An interesting pricing initiative is the one introduced by Nuvenia, which has taken a stand against period poverty. In Italy, they launched a cashback campaign called 'we absorb the VAT', aimed at counteracting the effects of the tampon tax - the ten percent VAT rate on sanitary products - and supporting women in accessing essential goods" (I8).

- **Managerial solutions for "representing diversity"**

From the respondents' perspective, companies can address this challenge through the following managerial practices:

a) Variety of assortment and/or alternative use of the product. Regarding the first point, brands are expected to provide adequate representation of diversity through the breadth of their product assortment, including items that reflect and give visibility to different diversity dimensions. As one interviewee highlighted:

"Think about Barbie a few years ago: she was the beautiful, slim, blonde doll who embodied a single concept of feminine beauty. Today, Barbie can have different skin tones, body types, and even some disabilities. Today's Barbie reflects the diversity of our society" (I7).

This illustrates the company's clear intention to offer symbolic benefits to consumers. The same logic applies when limited-edition products are launched in connection with specific events, commemorations, or diversity-related themes. For instance, fashion brands often release capsule collections during Pride Month, sometimes even adapting their visual brand identity for a limited period, such as incorporating the rainbow colors associated with the LGBTQ+ community.

Companies can also suggest different uses of a product in order to meet the needs of specific social identity groups:

"Over time, we introduced gluten-free pasta into our assortment because we believe food should bring people together, not separate them. For the same reason, we often reinterpret traditional recipes to accommodate special dietary needs or religious restrictions on the consumption of certain ingredients" (I4).

b) Content management on owned media to avoid stereotypes.

Gender diversity can be addressed with brand touchpoints such as product packaging. The example of Lego, cited by one of the interviewees, helps to illustrate this point:

"In 2021, Lego removed gender distinctions from its product packaging to avoid the frustration boys might feel when asking for a toy that was traditionally marketed to girls. Today, Lego packages include only an age recommendation, which is intended to guide consumers based on the cognitive development needed to fully enjoy the product. There are no longer sets specifically for boys or girls" (I7).

Still within the analogue realm, brand communication events also play an important role. These experiential contexts offer an opportunity for consumers to engage directly with a brand's commitment to diversity, equity, and inclusion. Several interviewees referred to fashion shows as a relevant example, where brands are now actively embracing a more inclusive representation of beauty by featuring models who do not conform to conventional aesthetic standards.

On digital owned media, brands can also represent a wide range of social identities through the appropriate use of digital technologies:

"Thanks to artificial intelligence, our online stores can now display virtual models with different body types, skin tones, sizes, and ages, overcoming the limitations of the past when the only available choice was between a male and a female model" (I3).

In branded immersive environments, such as the metaverse, companies can work on representing specific aspects of diversity such as disability, ethnicity, race, and sexual orientation. Within these virtual spaces, users can interact through avatars they create, and they can exchange unique digital goods, such as Non-Fungible Tokens (NFTs). In particular, some developers, such as Meta, have significantly expanded avatar customization options to include features like wheelchairs, hearing aids, a variety of body shapes, and a broad range of skin tones.

c) Non-stereotypical and courageous advertising. Advertising emerges as a key area of intervention, as emphasized by several respondents who highlighted the essential characteristics that inclusive advertisements should embody. First and foremost, brands must commit to eliminating stereotypes. However, promoting inclusive content may sometimes generate mixed reactions from the broader public. Despite this risk, brands are encouraged to act courageously and take responsibility for challenging dominant representations of diversity in order to foster social change.

With specific reference to disability, some interviewees pointed out that recent efforts by brands to embrace inclusion have shown that portraying physical disability is not incompatible with the desire to

inspire and captivate consumers. Such efforts can result in positive outcomes for consumers, the brand, and society. As in the case of product and packaging design, the approach to advertising should also aim for universal representation. Rather than emphasizing the special needs of a particular group, advertising should employ an empathetic tone consistent with the inclusive identity of the brand, avoiding any form of pity or glorification.

- **Managerial solutions for "defining and maintaining an authentic brand promise"**

According to respondents, companies can address this challenge through the following managerial solutions:

a) Social commitment to diversity dimensions close to the core business and/or target of the company. Respondents emphasized that, in order to build an authentic brand promise, companies should first engage with diversity issues that are closely related to their area of activity in the market.

"To be authentic, we must not stray too far from our core business, and it makes sense to build inclusion starting from what we do best. If we are Nike, we want to change the world through the power of sport, and no one will question our authenticity because working in the world of sport is what we are best at" (I6).

Another useful aspect to consider when defining the brand's promise, including its social dimension, is its alignment with the core target audience. Thanks to ongoing listening efforts, companies may appear more authentic when promoting inclusive initiatives that primarily address the consumers they already know and are close to:

"In our commitment to diversity and inclusion, we started with an issue that matters to women, who are our core target. Gender equality and the fight against violence towards women were therefore the first causes we felt compelled to support" (I2).

b) The consistency between brand identity and competitive and social positioning. Respondents highlighted that the implementation of an inclusive branding strategy can be perceived as authentic only if diversity, equity, and inclusion values are embedded in the brand's identity. When this is the case, it becomes possible to build an authentic positioning that is both market oriented and socially driven. As will be discussed further, this is even more valid when a culture of inclusion is embedded throughout the organization, starting with human resource management. Otherwise, there is a significant risk of diversity washing, which occurs when consumers and societal communities perceive the company's commitment to DEI as inauthentic.

- **Managerial solution for "building brand credibility"**

Credibility emerges as a particularly significant challenge from the perspective of the respondents. In their view, brands need to establish collaborations with social partners to develop initiatives such as sponsorships, local community engagement, and welcoming projects. As previously noted with regard to authenticity, when brands move beyond their core market domain to embrace a social commitment, they must rely on the expertise of those who have long operated within that specific context:

"Partnering with social organizations is, for us, a necessary condition both for identifying diversity issues that are distant from our business environment but still relevant, and for implementing initiatives. We cannot be credible if we act alone; we need the contribution of experts in the specific area" (I1).

- **Managerial solutions for "defining and maintaining an authentic brand promise" and "building brand credibility"**

Both to work on the authenticity of the brand promise and on brand credibility, the respondents emphasized the need to focus on:

a) The consistency of inclusive marketing initiatives over time and across different touchpoints. To make the social promise authentic and the brand credible, the company must be recognized as inclusive in every element of the marketing mix and at every stage of the customer journey. It is essential to ensure alignment across all marketing activities so that the necessary synergy is created to strengthen brand value both in the market and in society. For example, as one respondent pointed out:

"If there is not a truly inclusive offering, building communication on top of it quickly collapses, because consumers are quite savvy and will notice" (I1).

b) The consistency between internal and external inclusion policies. Several respondents highlighted that the approach to inclusion primarily develops within human resource management, aiming to ensure the representation of as many organizational structures and categories of social identity as possible, to value diversity, and to promote work that is dignified and rewarding for all individuals within the company. When an inclusive culture permeates the organization, employees can play a crucial role in promoting diversity, equity, and inclusion toward the market and in advancing concrete social commitments to the societal community. It is common for employees to collaborate in implementing socially oriented activities or projects such as mentoring or targeted training for groups at risk of discrimination to facilitate their integration into the workforce. Finally, the company's social commitment to inclusion can translate into initiatives that inspire and stimulate the growth of specific social identities.

## 5. Conclusion

This study contributes to the growing body of research on inclusive branding by advancing a more comprehensive understanding of how brands implement DEI principles through marketing strategies and operations.

Concerning the first phase of the research – realized through the systematic document analysis – the study provides a representation of the marketing initiatives' variety, jointly considering marketing tools/activities, intended audiences, and diversity dimensions. The proposed map (Figure 1) offers a more holistic view of inclusive branding practices. While existing literature has often focused on specific tools of the marketing mix - primarily product design and advertising (e.g., Hayes, 2008; Eisend et al., 2023) - our findings highlighted a broader approach. Moreover, the multidimensional lens (in

adopting the above mentioned "triad") allows for a clearer distinction between initiatives aimed at consumers and those directed toward the broader societal community, addressing a key gap in the current academic literature. Finally, the construction of the map also made it possible to understand which tools and activities are mainly used by brands to respond to the needs of different categories and social identity structures, confirming, on the one hand, the versatility of the product (highlighted by Hayes, 2008) and also highlighting that of communication on owned media.

Regarding the second phase of the study – realized through in-depth interviews with experts - preliminary findings of a broader, ongoing research project are presented. The results complement the predominantly theoretical and consumer-focused orientation of existing studies and bring to light the internal decision-making processes, challenges, and rationales behind inclusive branding strategies. Although exploratory, these early findings already offer valuable insights into the key managerial challenges and the most relevant managerial solutions in implementing inclusive branding strategies, as perceived by marketing professionals.

Four challenges have emerged as most relevant from the practitioners' perspective - ensuring accessibility, representing diversity, defining and maintaining an authentic brand promise, and building brand credibility – as well as the managerial solutions that companies can use to address them (Figure 2).

Although some previous studies (Burgess et al., 2021; 2022) have highlighted some of these challenges (i.e.., the credibility and authenticity issues), the research provided a comprehensive reading of the main criticalities that companies should address in their inclusive branding strategies, also deepening the main managerial practices that could be utilized to overcome these challenges. In the "ensuring accessibility" challenge, the study confirmed the need for the inclusive design emerged in previous study (Keenan et al., 2021; Patrick and Hollenbeck, 2021). Moreover, it showed the relevance of technological partnerships in developing inclusive product offering and branded touch points (both digital and "traditional" owned media). Furthermore, findings provide an original insight about the role of pricing policies that was not addressed in previous studies. Regarding the "representing diversity" challenge, the study overcomes the focalization of previous research on the advertising (e. g., Foster et al., 2022; Chauhan et al., 2024), highlighting the need for providing the representation of different social identity dimensions in all brand touch points. The study also encourages further inquiry into the role of marketing mix coherence and message consistency in shaping perceived authenticity and long-term brand equity.

On the managerial side, this study offers actionable insights for practitioners aiming to design and implement inclusive branding strategies. First, implementing an inclusive branding strategy requires more than isolated campaigns or symbolic gestures. It calls for a deep, strategic commitment that permeates the brand's culture, values, and operations. Moreover, credibility in inclusive branding depends on consistency over time. The findings suggest that when brands maintain a coherent DEI commitment across all touchpoints - and avoid opportunistic or seasonal engagement – they can build an authentic brand promise. Authenticity is not achieved through messaging alone but through alignment between brand promises and all the inclusive marketing initiatives carried out by brands.

Another key implication concerns the role of employees, who can act as influential ambassadors of DEI values when they feel genuinely involved in the brand's purpose. This internal alignment not only strengthens the organizational culture but also enhances the brand's external credibility.

Ultimately, DEI is not just a moral imperative but a strategic opportunity: it enables brands to innovate, reach underserved audiences, and build deeper, values-based relationships with both consumers and societal community.

This study presents some limitations that open avenues for further research. First, concerning the systematic document analysis, it considered only the initiatives in the Diversity Brand Index. Although these are the most relevant in the Italian context, the decision to use this database may have excluded some elements of variety and, consequently, limited the generalizability of the reading. Second, the empirical investigation relies on a limited number of in-depth interviews conducted within a specific national and cultural context. Although the selected informants possess high levels of expertise, the managerial perspectives gathered may reflect context-dependent dynamics shaped by institutional, market, or socio-cultural characteristics.

Future studies could expand the qualitative field by interviewing other professionals from companies engaged in different stages of implementing inclusive branding strategies (e.g., early adopters, followers, and those who are relatively reluctant) to increase the variety of viewpoints further. Furthermore, it would be interesting to conduct a cross-case analysis that provides a deeper understanding of the various approaches to inclusion employed by companies. Finally, by adopting a consumer perspective, further exploration is needed on the role of emerging technologies and data ethics in representing diversity.

## References

Åkerstam, N., Rosengren, S., & Dahlen, M. (2017). Think about it – can portrayals of homosexuality in advertising prime consumer-perceived social connectedness and empathy? European Journal of Marketing, 51(1), 82–98.

Arsel, Z., Crockett, D., & Scott, M. L. (2022). Diversity, Equity, and Inclusion (DEI) in the Journal of Consumer Research: A Curation and Research Agenda. Journal of Consumer Research, 48(5), 920–933.

Ashik, F., Lim, W. M., Vassallo, J. P., & Voola, R. (2025). Can marketing reduce inequality? Evidence from marketing science. Journal of Business Research, 188, 115053.

Bartoli, C., Bonetti, E., Ceccotti, F., Mattiacci, A. (2025). Understanding blockchain's influence on brand management: The Blockchain Branding Model. Journal of Product & Brand Management, 34(6), 769–787.

Bowen, G. A. (2009). Document analysis as a qualitative research method. Qualitative Research Journal, 9(2), 27–40.

Branca, G., Grosso, M., & Castaldo, S. (2024). Value through diversity: A systematic literature review to understand diversity and inclusion in consumer research. Psychology & Marketing, 41(11), 2854–2873.

Burgess, A. J., Wilkie, D. C., & Dolan, R. (2021). Towards successful diversity initiatives: the importance of building audience connectedness. Journal of Marketing Management, 37(1–2), 144–161.

Burgess, A., Wilkie, D. C. H., & Dolan, R. (2022). Brand approaches to diversity: a typology and research agenda. European Journal of Marketing, 57(1), 60–88.

Campbell, C., Sands, S., McFerran, B., & Mavrommatis, A. (2023). Diversity representation in advertising. Journal of the Academy of Marketing Science, 1–29.

Chandy, R. K., Johar, G. V., Moorman, C., & Roberts, J. H. (2021). Better marketing for a better world. Journal of Marketing, 85(3), 1–9.

Chauhan, V., Gupta, M., & Das, G. (2025). Empowered by representation: How plus - size models create brand evangelists. Psychology & Marketing, 42(1), 236–254.

Creary, S. J., Rothbard, N., & Scruggs, J. (2021, May). Improving workplace culture through evidence-based diversity, equity, and inclusion practices. University of Pennsylvania. https://www.wharton.upenn.edu/wp-content/uploads/2021/05/Applied-Insights-Lab-Report.pdf

Creswell, J. W. (1998). Qualitative inquiry and research design: Choosing among five traditions. Sage.

Demangeot, C., Kipnis, E., Pullig, C., Cross, S. N. N., Emontspool, J., Galalae, C., et al. (2019). Constructing a bridge to multicultural marketplace well-being: A consumer-centered framework for marketer action. Journal of Business Research, 100, 339–353.

Diversity Brand Index. (2018–2025). Annual reports. Retrieved from https://www.diversitybrandindex.org

Dubois, A., & Gadde, L. E. (2002). Systematic combining: an abductive approach to case research. Journal of Business Research, 55(7), 553–560.

Edelman, D., & Salsberg, B. (2010). Beyond paid media: Marketing's new vocabulary. McKinsey Quarterly, November.

Edelman. (2025). Edelman Trust Barometer. Global Report, Trust and the crisis of grievance.

Eisend, M. (2010). A meta-analysis of gender roles in advertising. Journal of the Academy of Marketing Science, 38(4), 418–440.

Eisend, M., Muldrow, A. F., & Rosengren, S. (2023). Diversity and inclusion in advertising research. International Journal of Advertising, 42(1), 52–59.

Ferraro, C., Hemsley, A., & Sands, S. (2023). Embracing diversity, equity, and inclusion (DEI): Considerations and opportunities for brand managers. Business Horizons, 66, 463–479.

Gopaldas, A., DeRoy, G. (2015), An intersectional approach to diversity research, Consumption Markets & Culture, 18(4), 333-364.

Graw, S. L., & Zotos, Y. C. (2016). Gender stereotypes in advertising: A review of current research. International Journal of Advertising, 35(5), 761–770.

Gray, H., Dolan, R., Wilkie, D. C. H., Conduit, J., & Burgess, A. (2024). Social purpose branding approaches: a typology of how brands engage with a social purpose. European Journal of Marketing, 58(5), 1207–1240.

Grieco, C. (2024). Conceptualizing inclusive marketing: A synthesis of theory and practice. European Management Journal, 1–16.

Hays, P. A. (2008). Addressing cultural complexities in practice: Assessment, diagnosis, and therapy (2nd ed.). American Psychological Association.

Henderson, G. R., & Williams, J. D. (2013). From exclusion to inclusion: An introduction to the special issue on marketplace diversity and inclusion. Journal of Public Policy & Marketing, 32(1_suppl), 1–5.

Keenan, E. A., Sucher, S. J., & Gupta, S. (2021). Tommy Hilfinger Adaptive: Fashion for All. Harvard Business School, November 5.

King, N., & Horrocks, C. (2010). Interviews in Qualitative Research. Sage.

Kipnis, E., Demangeot, C., Pullig, C., Cross, S. N., Cui, C. C., Galalae, C., ... Williams, J. D. (2021). Institutionalizing diversity-and-inclusion-engaged marketing for multicultural marketplace well-being. Journal of Public Policy & Marketing, 40(2), 143–164.

Licsandru, T. C., & Cui, C. C. (2018). Subjective social inclusion: A conceptual critique for socially inclusive marketing. Journal of Business Research, 82, 330–339.

Licsandru, T. C., & Cui, C. C. (2020). Inclusive Branding – An Examination of Antecedents Using fsQCA. In AMA Summer Academic Conference (p. 795), Newcastle University.

Masiello, B., Garofano, A., Izzo, F., & Bonetti, E. (2024). Inclusive marketing and disability: value creation strategies for organisations and society in the toy industry. Journal of Marketing Management, 40(9–10), 851–876.

Montecchi, M., Micheli, M. R., Campana, M., & Schau, H. J. (2024). From crisis to advocacy: Tracing the emergence and evolution of the LGBTQIA+ consumer market. Journal of Public Policy and Marketing, 43(1), 10–30.

Park, Y. W., Voss, G. B., & Voss, Z. G. (2023). Advancing customer diversity, equity, and inclusion: Measurement, stakeholder influence, and the role of marketing. Journal of the Academy of Marketing Science, 51(1), 174–197.

Patrick, V. M., & Hollenbeck, C. R. (2021). Designing for all: Consumer response to inclusive design. Journal of Consumer Psychology, 31(2), 360–381.

Shultz, C., Hoek, J., Lee, L., Leong, W. Y., Srinivasan, R., Viswanathan, M., & Wertenbroch, K. (2022). JPP&M's global perspective and impact: An agenda for research on marketing and public policy. Journal of Public Policy & Marketing, 41(1), 34–50.

Spry, A., Figueiredo, B., Gurrieri, L., Kemper, J. A., & Vredenburg, J. (2021). Transformative branding: a dynamic capability to challenge the dominant social paradigm. Journal of Macromarketing, 41(4), 531–546.

Swaminathan, V., Sorescu, A., Steenkamp, J. B. E., O'Guinn, T. C. G., & Schmitt, B. (2020). Branding in a hyperconnected world: Refocusing theories and rethinking boundaries. Journal of Marketing, 84(2), 24–46.

Tsichla, E. (2020). The changing roles of gender in advertising: Past, present, and future. Contemporary Southeastern Europe, 7(2), 28–44.

Vernuccio, M., Ceccotti, F., & Patrizi M., (2025). L'evoluzione del branding nell'era digitale. La nascita del Social Purpose Brand, McGraw-Hill, Milano.

Vernuccio, M., Ceccotti, F., & Patrizi, M. (2024). Inclusive branding approaches: A conceptual framework. XXI SIM Conference "Brands and purpose in a changing era", 17–19 ottobre, Università IULM Milano.

Vernuccio, M., Patrizi, M., & Ceccotti, F. (in press). Deepening inclusive branding: A managerial perspective. In Masiello, B., Izzo, F., & Bonetti, E. (Eds.), Inclusive Marketing and Social Sustainability. Strategies for creating value for organizations, conscious consumers, and society. Cambridge Scholars Publishing.

Viglia, G., Tsai, W.-H. S., Das, G., & Pentina, I. (2023). Inclusive advertising for a better world. Journal of Advertising, 52(5), 643–646.

Wilkie, D. C. H., Burgess, A. J., Mirzaei, A., & Dolan, R. M. (2023). Inclusivity in advertising: A typology framework for understanding consumer reactions. Journal of Advertising, 52(5), 721–738.

# Designing for Clarity: Investigating the Effects of Packaging Complexity on Consumer Perception

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## Abstract

Packaging design plays a crucial role in shaping consumer behavior. Excessive design complexity can disrupt visual attention and information processing, impairing information processing and influencing product perceptions. This research examines how packaging design complexity affects consumer perceptions of sustainability, healthiness, tastiness, and naturalness, as well as purchase intentions, through the lens of visual attention. Building on existing conceptualization of design complexity, we focus on the quantity of informative and non-informative elements present on the packaging. We investigated the effects of these design elements on consumer perception and decision-making using eye-tracking and behavioral measures. The research contributes to the literature on visual complexity in packaging by elucidating the role of visual attention patterns in shaping consumer attitudes and purchase intention towards packaged food products. Findings offer insights into optimizing packaging design for both clarity and appeal, balancing aesthetics with functional effectiveness to enhance consumer experience and promote sustainable consumption.

*Keywords: Design complexity, eye-tracking, packaging, sustainability, purchase intention*

### 1. Introduction

Packaging design serves as a powerful tool for influencing consumer decision-making (Rettie & Brewer, 2000; Silayoi & Speece, 2007). While visually appealing packaging can enhance product attractiveness, excessive design complexity may result in cognitive overload, thereby negatively impacting consumer perceptions and purchase intentions (Guo et al, 2025; Thomas & Capelli, 2015). High visual crowding can lead to attentional dispersion, where competing elements draw gaze away from key product cues. This study examines how packaging design complexity affects its perceived sustainability, as well as consumer perceptions of product healthiness, tastiness, naturalness, and purchase intention. Furthermore, it investigates whether visual attention patterns can explain these differences in packaging perception.

### 2. Literature review

Consumers' initial impressions of food packaging are shaped not only by core brand and product elements but also by the visual complexity of the elements displayed on the product packaging. Pieters et al. (2010) operationalize visual complexity by distinguishing between feature complexity and design complexity. Feature complexity pertains to variations in basic visual features such as color and luminance, whereas design complexity refers to the overall elaborateness of shapes, objects, and patterns. Our study focuses on design complexity, which can be assessed according to six key principles (Pieters et al. 2010): quantity of objects, irregularity of objects, dissimilarity of objects, detail of objects, asymmetry of objects, irregularity of object arrangement.

A complementary theoretical lens is provided by processing fluency theory, which holds that the ease or difficulty with which a stimulus is processed influences affective reactions and judgments (Reber et al., 2004). Simpler designs, due to higher perceptual fluency, tend to generate more positive emotional reactions, while highly complex or irregular layouts demand greater cognitive effort, reducing immediate fluency. Recent studies further link minimalist aesthetics with cues of purity and eco-friendliness. Ton et al. (2023) demonstrated that minimalist packaging not only increased consumers' willingness to pay but also enhanced perceptions of product purity and naturalness. Similarly, Wang et al. (2024) found that lower visual complexity improved perceived environmental friendliness by amplifying notions of naturalness and product authenticity.

However, emerging research nuances this traditional fluency account by introducing perceptual fluency. Xu (2024) demonstrates that the relationship between packaging design complexity and consumer response depends on the consumer's construal level, the way individuals mentally represent and interpret information. Consumers operating at a low-level construal focus on concrete details and, for them, visually crowded and information-rich packaging can increase purchase intention because greater design complexity aligns with their processing style. By contrast, consumers which a highlevel construal think more abstractly and, therefore, respond more favorably to packaging with a simple design, in line with the classic predictions of processing fluency theory. These findings suggest that perceptual fluency is conditional and arises when the packaging design style matches the consumer's construal level, rather than when simplicity is objectively high.

Despite these insights, prior studies have not systematically disentangled the effects of decorative (geometric) versus meaningful (product-related) complexity across different levels of complexity. To address this gap, the present study integrates visual attention theory, with processing and perceptual fluency perspectives to examine how varying levels of both geometric and product-related complexity influence gaze behavior and downstream consumer evaluations. Specifically, we investigate how design complexity shapes visual attention patterns and how these patterns translate into perceptions of sustainability, healthiness, tastiness, naturalness and purchase intentions. Building on this framework, our research applies these principles to food packaging, examining their impact on consumer perceptions and purchase intention, and addresses three central research questions:

**RQ1:** How does design complexity level (low/high) influence visual attention patterns on food packaging?

**RQ2:** Does design complexity influence perceived sustainability, healthiness, tastiness, naturalness, and purchase intention?

**RQ3:** Do different types of complexity (non-informative vs informative) interact with complexity level to influence attention and perception?

By integrating visual attention theory with processing and perceptual fluency and packaging design insights, these questions will elucidate how varying degrees and types of visual complexity shape both the early-stage perceptual engagement and the downstream evaluative judgments that drive consumer choice.

## 3. Methodology

This research comprises two between-subjects eye-tracking lab experiments in which participants are randomly assigned to view one of two complexity conditions (C1-low vs. C2-high) for a fixed duration of 10 seconds. Within their assigned condition, each participant views two distinct mock pasta packages. Immediately after stimulus exposure, participants complete a brief questionnaire assessing packaging perceived sustainability and product healthiness, tastiness, naturalness and purchase intention.

In Study 1, complexity is introduced via abstract, purely decorative geometric shapes. The low-complexity condition features a minimal layout containing only essential branding and product information while the high-complexity condition displays numerous shapes dispersed irregularly across the package surface.

Study 2 will adopt an identical structure but replace the abstract shapes with meaningful product-related ingredient imagery. More specifically, the low-complexity condition presents the same elements of Study 1 while the high-complexity one showcases multiple, densely arranged ingredient illustrations. In *Figure 1* the stimuli for both studies have been reported.

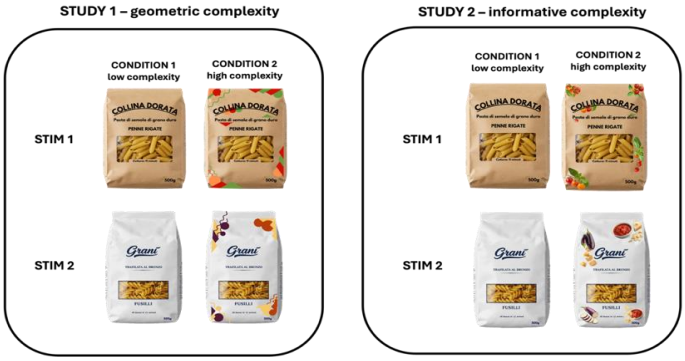



**Figure 1:** Stimuli

Visual attention is recorded using a Tobii Pro Fusion screen-based eye-tracker (sampling rate 120 Hz) during the ten-second exposure. Key metrics include:

**Visit Count:** Number of visits on predefined areas of interest (AOIs).

**Time to First Fixation:** The time it takes for the participant's gaze to fixate on a specific AOI.

**Dwell Time:** Total time spent within each AOI (ms).

AOIs encompass the brand logo, product description, product image, cooking instructions, and complexity-related elements. By correlating gaze patterns with survey responses, we aim to determine how each level and type of complexity guides attention and shapes consumer perceptions.

Furthermore, in the questionnaire portion of the experiment, the following behavioral measures were recorded: Perceived Environmental Friendliness (Sokolova et al., 2024), Perceived Healthiness (Hagen, 2021), Perceived Tastiness (Raghunathan et al., 2006), Perceived Naturalness (Hagen, 2021) and Purchase Intention (Putrevu, 2008)

## 4. Results

The final sample consisted of 65 participants (Mage = 22.53; SD=2.33; 55% female), who were evenly distributed across the low and high complexity conditions (n = 32 and n = 33 respectively).

### 4.1 Behavioral Results

Pairwise Mann–Whitney U-tests were conducted to investigate which of the variables investigated was significantly affected by design complexity. The findings, reported in *Table 1*, reveal that the more complex packaging outperformed the simpler one in both purchase intention and perceived sustainability. By contrast, no significant differences emerged across conditions with regards to tastiness, healthiness and naturalness, suggesting that design complexity did not exert a measurable influence on these product attributes.

| Mann–Whitney U test | STIMULUS 1 | | | STIMULUS2 | | |
|---|---|---|---|---|---|---|
| Metric | Mean_C1 (low complexity) | Mean_C2 (low complexity) | Wilcox_p | Mean_C1 (low complexity) | Mean_C2 (low complexity) | Wilcox_p |
| Purchase Intention | 3.30 | 4.04 | 0.04 | 3.31 | 3.87 | 0.05 |
| Perceived Sustainablity | 4.51 | 5.06 | 0.05 | 2.71 | 2.87 | 0.5 |
| Perceived Tastiness | 5.17 | 5.27 | 0.93 | 5.40 | 5.07 | 0.25 |
| Perceived Healthiness | 4.57 | 4.53 | 0.84 | 4.13 | 4.24 | 0.39 |
| Perceived Naturalness | 3.92 | 3.90 | 0.94 | 3.60 | 3.47 | 0.60 |

**Table 1:** Behavioral Results

### 4.2 Eye-tracking Results

The eye-tracking data was analyzed both qualitatively, through the generation of heatmaps, and quantitatively using pairwise Mann–Whitney U-tests. The heatmaps, shown in *Figure 2*, illustrate the degree of visual attention with color intensity, where red denotes the areas with the highest fixation density and green indicates minimal attention. In the low-complexity condition participants' fixations were highly concentrated on key informational elements such as brand, claims and product window, Whereas the high-complexity condition exhibited a more dispersed fixation pattern, consistent with the presence of the additional complexity elements.




**Figure 2:** Eye-tracking Heatmaps

Eight areas of interest (AOIs) were defined on the packaging stimuli with two categories aggregated for analytical purposes (sidetext and complexity). For the present analysis we will focus on four key AOIs:

Complexity: containing the complexity elements

Description: containing the product description (e.g. "Trafilata al Bronzo")

Sidetext: text placed on the side of the packaging

Window: opening where the product is visible

The results, reported in *Table 2* and *Table 3*, for stimulus1 and stimulus 2 respectively. Overall, the *Complexity* AOI consistently drew greater dwell time and revisits, demonstrating that the decorative elements were visually salient without distracting from core product cues such as brand, pasta type, or cooking time. The *Description*AOI showed higher revisit counts and shorter time to first fixation in the high-complexity condition, indicating enhanced salience in richer visual contexts. In contrast, *Sidetext* attracted more attention in the low-complexity condition, suggesting that simpler designs encourage exploration of peripheral information. Finally, the *Window* AOI was more attended to under low complexity, implying a stronger focus on product-related visuals when fewer competing elements are present.

| Stim | Metric | Mean_C1 | Mean_C3 | Wilcox_p | NOTES |
|---|---|---|---|---|---|
| stim1 | Total_duration_of_Visit_Complexity | 745.56 | 1509.03 | <0.001 | High > Low |
| stim1 | Number_of_Visits_Complexity | 3 | 4.90 | <0.001 | High > Low |
| stim1 | Number_of_Visits_Description | 2.3 | 3.06 | 0.007 | High > Low |
| stim1 | Number_of_Visits_Sidetext | 0.81 | 0.42 | 0.028 | Low > High |
| stim1 | Number_of_fixations_Sidetext | 1.12 | 0.54 | 0.037 | Low > High |
| stim1 | Total_duration_of_Visit_Sidetext | 355.71 | 161.57 | 0.027 | Low > High |
| stim1 | Time_to_first_fixation_Description | 1909.09 | 1293.39 | 0.030 | Slower in low |

**Table 2:** Eye-tracking Results for Stimulus 1

| Stim | Metric | Mean_C1 | Mean_C3 | Wilcox_p | NOTES |
|---|---|---|---|---|---|
| stim2 | Number_of_Visits_Complexity | 1.40 | 3.84 | <0.001 | High > Low |
| stim2 | Total_duration_of_Visit_Complexity | 375.56 | 1216.18 | <0.001 | High > Low |
| stim2 | Time_to_first_fixation_Window | 1425.65 | 2535.54 | 0.001 | Faster in low |
| stim2 | Number_of_fixations_Window | 5.25 | 4 | 0.003 | Low > High |
| stim2 | Total_duration_of_Visit_Window | 1450.75 | 1045.87 | 0.013 | Low > High |

**Table 3:** Eye-tracking Results for Stimulus 2

## 5. Conclusions

This research aimed to clarify how low versus high levels of packaging design complexity shape early visual attention and downstream judgments of sustainability, healthiness, tastiness, naturalness, and purchase intention. Results show that added complexity increased purchase intention and, for one stimulus, enhanced perceived sustainability, while tastiness, healthiness, and naturalness remained unaffected. Eyetracking indicates that complexity broadens the spread of visual attention without reducing focus on core brand or product cues and even improves detection of key descriptive information. These findings refine processing fluency theory by showing that visual richness can

create its own form of fluency when it matches consumers' detail-oriented processing, consistent with construal-level and visual crowding perspectives. From a managerial standpoint, carefully organized geometric complexity can spotlight priority information and strengthen quality or sustainability cues, whereas overly minimalist designs risk drawing attention to peripheral, nonessential elements. Building on these insights, in Study 2 informative complexity will be tested, directly addressing RQ3 by incorporating elements that are both visually rich and product relevant. The goal of this next phase is to clarify how meaningful complexity may amplify of constrain the effects observed in the present study.

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## References

Guo, J., Zhao, Y., Zhang, W., Lu, K., Feng, X., & Xia, T. (2025). The Influence of the

Information Richness of Interfaces on Consumers' Purchase Intention: The Sequential Mediating Effects of Cognitive Load, Mental Imagery, and Flow

Experience. *Behavioral Sciences*, *15*(5), 673.

Hagen, L. (2021). Pretty healthy food: How and when aesthetics enhance perceived healthiness. *Journal of Marketing*, *85*(2), 129-145.

Pieters, R., Wedel, M., & Batra, R. (2010). The stopping power of advertising: Measures and effects of visual complexity. *Journal of Marketing*, 74(5), 48–60.

Putrevu, S. (2008). Consumer responses toward sexual and nonsexual appeals: The influence of involvement, need for cognition (NFC), and gender. *Journal of advertising*, *37*(2), 57-70.

Raghunathan R., Walker R. N. & Hoyer W. (2006). The Unhealthy = Tasty Intuition and Its Effects on Taste Inferences, Enjoyment, and Choice of Food Products. Journal of marketing, 70(4).

Reber, R., Schwarz, N., & Winkielman, P. (2004). Processing fluency and aesthetic pleasure: Is beauty in the perceiver's processing experience? *Personality and Social Psychology Review*, 8(4), 364–382.

Rettie, R., & Brewer, C. (2000). The verbal and visual components of package design. *Journal of Product & Brand Management*, *9*(1), 56-70.

Silayoi, P., & Speece, M. (2007). The importance of packaging attributes: a conjoint analysis approach. *European Journal of Marketing*, 41(11/12), 1495-1517.

Sokolova, T., Krishna, A., & Döring, T. (2023). Paper meets plastic: The perceived environmental friendliness of product packaging. *Journal of Consumer Research*, *50*(3), 468-491.

Thomas, F., & Capelli, S. (2015, May). Cognitive load and visual cues complexity: effects on consumers' attitude. In *European Marketing Academy-EMAC*.

Ton, L. A. N., Smith, R. K., & Sevilla, J. (2023). How simple packaging design influences willingness to pay for consumable products. *Journal of Marketing*. 88(2), 121-140.

Wang, X., Chen, J., Ma, C., & Jiang, Y. (2024). Simpler is greener: The impact of packaging visual complexity on products' eco-friendliness perception. *Psychology & Marketing*, 41(12), 2992–3008.

Wedel, M., & Pieters, R. (2008). *Eye Tracking for Visual Marketing*. Foundations and Trends in Marketing, 1(4).

Xu, Z. (2024). Effect of visual crowding in packaging on consumers' buying intention. *Asia Pacific Journal of Marketing and Logistics*, *36*(2), 293-314.

# EmpowHER: A Pink Entrepreneurship for Digital Success

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## Abstract

Women's entrepreneurship, recognized as a source of economic growth and social innovation, remains underrepresented in traditional male-dominated industries, where several structural, cultural and institutional barriers persist. This study investigates strategic pathways and orientations that shape women participation in the low-tech industry, thus addressing the following research questions: *what are the distinctive entrepreneurial pathways through which women enter and dominate the low-tech industry? How do contextual factors influence these trajectories?*
This study employs a comparative multiple analysis approach focused on seven women-led wine startups. The findings show three different entrepreneurial pathways- the heritage-driven entrepreneur, the opportunity-based digital entrepreneur and the artisanal innovator- thus reflecting the heterogeneity of women leadership, with its own socio-demographic profiles, management characteristics and innovation trajectories. Theoretical and managerial implications are discussed.

*Keywords: Women entrepreneurship; Wine industry, Startups, Entrepreneurial pathways.*

## 1. Introduction

Women-led entrepreneurship is increasingly acknowledged as a driver of social innovation, fostering sustainable managerial business models (Audretsch *et al.*, 2022; Gul & Jan, 2025). Yet, limited attention has been dedicated to understanding the intersection between gender and entrepreneurship (Foss *et al.*, 2019), producing a severe delay in transferring scientific evidence into practical support (Martínez-Rodríguez *et al.,* 2022). This is more even true in some masculine-dominated industries, where the marginal position of women entrepreneurs (Livat & Jaffré, 2022) often clashes with the increasing success of the business they lead (Chadwick & Dawson, 2018). Against this backdrop, it is increasingly urgent to acknowledge that women may engage in distinct entrepreneurial process, meaning that there could be alternative gender-informed interpretation of how entrepreneurial ventures are initiated and managed (Harrison *et al.*, 2015). Recognizing such specificities could effectively contribute to advancing the understanding of entrepreneurship, better documenting the barriers women face and how to circumvent them (Serrano-Pascual & Carretero-Garcìa, 2022). One such industry where these gendered dynamics remain pronounced is the wine industry, that has been cultural masculine for many years and whose firms are currently experiencing a wave of female entrepreneurship (Livar & Jaffré, 2022). Such dynamics open up research trying to assess how the industry is impacted by this increasing feminization, with a specific focus on how women conceptualize, structure, take control and guide

their businesses (Paoloni *et al.*,2020). The Italian wine industry represents a fertile context for exploring gendered entrepreneurial dynamics. As the world's leading wine producer[27], Italy blends tradition with innovation across production, distribution, and marketing (Vrontis *et al.,* 2016; Duarte Alonso *et al.,* 2021). Yet, limited knowledge exists on the strategic orientations, entry logics, and contextual influences shaping women's entrepreneurial trajectories in this sector. To fill this gap, this study addresses the following research questions: *what are the distinctive entrepreneurial pathways through which women enter and dominate the low-tech industry? How do contextual factors influence these trajectories*?

In doing so, drawing from a comparative multiple-case analysis of seven Italian women-led wine startups, this paper uncovers the heterogeneity of women entrepreneurship pathways, shedding lights on contextual dimensions and gender norms embedded in local ecosystems. As such, this study advances a more nuanced understanding of entrepreneurial narratives in a tradition-bound sector.

## 2. Framing Women's entrepreneurship: beyond the gender gap

In the last decades, female entrepreneurship literature has moved beyond studies focusing on the "underperformance" of women compared to male entrepreneurs, toward a more nuanced understanding on how gender shapes entrepreneurial logics (Jennings & Brush, 2013; Foss *et al.,* 2019). Women are increasingly recognized for their transformative role in reshaping business narratives and archetypes (Bryne *et al.*, 2019). While existing literature has examined factors hindering women's entrepreneurial orientation (Santos *et al.*, 2018), recent research has emphasized the diversity of factors women mobilize when creating new ventures, and their ability to act upon heterogeneous value creation logics, shaped by biographical trajectories and social capital (Hechavarría *et al.*, 2017). This shift has fostered different entrepreneurial typologies according to different goal orientations and cultural, social, and economic motivations (Alam *et al.*, 2021) and they non-linear ways they could combine (Wu *et al.*, 2019). That is, the emergence of woman-led firms could not be understood as the adoption of the masculine norm of entrepreneurship, but as a process of contextual innovation (Lewis, 2006). Women entrepreneurs are driven by the pursuit of autonomy, work-life balance, social goals and personal identity expression (Santos *et al.*, 2018), instead of profit maximization logics. They usually adopt alternative strategic orientations for survival and growth (Audretsch *et al.,* 2022) - especially in the case of poor institutional support (Arun, 2023) - and show a strong preference for digital social innovation (Suseno & Abott, 2021) to transgressively respond to structural constraints and dominant norms they are subjected to (Lewis, 2006). Collectively, these insights call for a typological approach to women's entrepreneurship, redefining it through inclusive and pluralistic theoretical frameworks.

## 3. Research Setting and Design

The wine sector represents a compelling empirical context for studying gendered entrepreneurship dynamics (Duarte Alonso *et al.*, 2021; Livat & Jaffré*,* 2022), as it is currently experiencing a wave of

[27] https://www.efanews.eu/item/49565-italy-first-in-wine-production-second-for-export.html

feminization. Italy not only leads global wine production (41.0 mhl in 2024)[28] but it also the birthplace of a cohort of women-led early-stage firms that are redefining the supply chain through digital retail, direct-to-consumer logistic and experiential values. To capture such gendered entrepreneurship in resource-constrained and path-dependent settings (Jennings & Brush, 2013), this study employs a comparative multiple-case analysis of seven women-led wine startups, launched between 2016 and 2023. From 1147 Italian food and beverage startups listed on Crunchbase, 65 mentioned "wine", and only those with at least one-woman founder or CEO were retained: *Piccini 1882*, *Casa Botter*, *Vino.com*, *Digital Wines*, *Enologica Vason*, *Viniamo Eno Lab* and *Emporio Liquoreria Mainardi*. Secondary data for each firm was triangulated and manually coded along five dimensions: founder profile, entry logic, strategic orientation, resource mobilization and ecosystem ties.

## 4. Findings

Table 1 summarized the features of three different entrepreneurial pathways in wine women startups. Four startups (*Piccini 1882*, *Casa Botter*, *Enologica Vason* and *Emporio Liquoreria Mainardi*) are well-established firms with a long family tradition over decades. In all cases, women leading these firms have inherited a mature asset base (vineyards, cellars, a well-recognized brand) and focused on renewal processes to update firms' value proposition. *Piccini*'s Orange Label Chianti is an example of chromatic revitalization. *Casa Botter* followed a similar logic, with the glitter-packaged Brilla! Prosecco line, who expanded their exports to the USA. Differently, *Enologica Vason* chose a technological upgrading, by introducing mobile filtration and biotech ingredients, in such ways to reposition the family-service business to "precision winemaking" partner. In a similar way, *Emporio Liquoreria Mainardi* revived vermouth recipes for niche export markets, combining micro-scale production with experiential retail in their physical stores. All these firms are example of the "heritage-driven pathways": all firms in which the female successors inherit mature tangible and intangible assets, that finance innovation internally and privilege incremental innovations to strengthen the authenticity narrative while safeguarding inter-generational control. At the opposite extreme, *Vino.com* and *Digital Wines* represent the "opportunity-based digital pathways". In these cases, women founders entered downstream, bypassing vineyard ownership and building technology-centered business models. While *Vino.com* operates as a virtual sommelier with more than 8000 labels online, *Digital Wines* combines a B2C shop with a B2B data service. Both women founders transform their ICT and finance skills into strategic assets to overcome structural barriers in accessing credit and financing innovations. Interestingly, both firms leverage fixed investments, cross-border partnerships and proprietary recommendation engines to compensate for the absence of a family base. Finally, *Viniamo Eno Lab* emerged as an exceptional entrepreneurial artisanal innovator path. A firm born from the creative initiative of a single entrepreneur with marketing expertise, that combines a "wine-library" retail space with strong social-networking ties, thus leveraging the experiential value of wine tasting while deepening its embeddedness in the local community.

| Startups | Founder | Entry logic | Strategic orientation | Resource mobilization | Ecosystem ties | Paths |
|---|---|---|---|---|---|---|

[28] https://www.oiv.int/sites/default/files/2024-11/OIV_2024_World_Wine_Production_Outlook.pdf

| | | | | | | |
|---|---|---|---|---|---|---|
| Piccini 1882 | Martina Piccini, 4th generation co-owner; marketing background | Family succession | Refresh heritage through the iconic orange Chianti label and terroir storytelling | Multi-generational vineyards, brand equity | Deep cluster links in Chianti; intergenerational team governance | Heritage-driven |
| Casa Botter | Annalisa Botter, 3rd generation; marketing & sustainability focus | Family succession | Globalise Prosecco via the *BRILLA! Organic prosecco* | Long-term contracts; strong export channels | Producer & consultant networks | Heritage-driven |
| Vino.com | Elisa Scarpin, cofounder; digital background | Opportunity e-commerce start-up | "Virtual sommelier"; B2C platform; global scaling (Alibaba, Google deals) | Proprietary tech stack; accelerator funding | Partnerships with small wineries & international marketplaces | Opportunity-based digital |
| Digital Wines | Alessia Ammassari, ICT & marketing mix | Opportunity start-up | ML-driven wine marketplace and B2B data services | Big-data platform, tech know-how | Ten-year supply ties with Italian wineries | Opportunity-based digital |
| Enologica Vason | Paola Vason, chemist and biotech expert | Family succession | Tech services for wineries | In-house R&D labs, scientific know-how | Technical partnerships across Italian wineries | Heritage-driven |
| Viniamo Eno Lab | Silvia Amoni, marketer & wine scout | Personal opportunity | Experiential "wine library", tastings, rotating craft labels | Passion capital, curation skills, local producer network | Community events, craft clusters in Foligno | Artisanal innovator |
| Emporio LiquoreriaMainardi | Giusi Mainardi, heir & craft historian | Family legacy | Revives historic vermouth & spirits with vintage labels | Archival recipes, artisanal production skills | Niche gastronomic tourism, heritage branding | Heritage-driven |

**Table 1:** Women entrepreneurship pathways

## 5. Discussions and Conclusions

This study explores women's entrepreneurship in the Italian wine industry by identifying three distinct pathways—heritage-driven, opportunity-based digital, and artisanal innovator—each reflecting a unique configuration of founder profile, entry logic, strategy, resources, and ecosystem ties. While the

heritage-driven pathway confirms that longstanding tradition, terroir narrative and archival recipes can underwrite renewal processes reinforcing the strategic value of legacy resources, thus contributing to a more nuanced understanding of the resource-based view of family firms (Vrontis *et al.*, 2016). Consistently with the global trend, the opportunity-based digital pathway demonstrates the role of ICT and technical expertise that allow women entrepreneurs to offset gendered institutional barriers, by substituting code and analytics for vineyard and cellars (Gul & Jan, 2025). Finally, the single artisanal-innovator startup shows that leveraging community embeddedness can be a successful strategy ensuring economic viability through experiential approaches to wine entrepreneurship. Overall, our findings advance typological understanding in women entrepreneurship research, by categorizing alternative trajectories women can follow to revitalize firms' business models. More specifically, our study advances the literature about women entrepreneurship, showing that women do not merely replicate a masculine archetype, but instead mobilize heterogeneous strategic and organizational resources to suit their specific constraints and aspiration, often in a creative way. From a practical point of view, pathway heterogeneity has several implications for incubators and investors, suggesting the necessity of considering differentiated evaluation criteria in entrepreneurial projects. Finally, policymakers should tailor entrepreneurial support, to successfully drive family transitions, while contemporaneously incentivizing industry consortia to reinforce digital infrastructure.

## References


Lewis, P. (2006). The quest for invisibility: Female entrepreneurs and the masculine norm of entrepreneurship. Gender, work & organization, 13(5), 453-469.

Suseno, Y., & Abbott, L. (2021). Women entrepreneurs' digital social innovation: Linking gender, entrepreneurship, social innovation and information systems. Information Systems Journal, 31(5), 717-744.

Audretsch, D. B., Belitski, M., & Brush, C. (2022). Innovation in women-led firms: an empirical analysis. In Innovative behavior of minorities, women, and immigrants (pp. 90-110). Routledge.

Wu, J., Li, Y., & Zhang, D. (2019). Identifying women's entrepreneurial barriers and empowering female entrepreneurship worldwide: a fuzzy-set QCA approach. International Entrepreneurship and Management Journal, 15(3), 905-928.

Alam, M. S., Biswas, K., & Sulphey, M. M. (2021). A case study on the entrepreneurial process of push and pull women entrepreneurs. South Asian Journal of Business and Management Cases, 10(2), 207-217.

Hechavarría, D. M., Terjesen, S. A., Ingram, A. E., Renko, M., Justo, R., & Elam, A. (2017). Taking care of business: The impact of culture and gender on entrepreneurs' blended value creation goals. Small Business Economics, 48, 225-257.

Santos, G., Marques, C. S., & Ferreira, J. J. (2018). What are the antecedents of women's entrepreneurial orientation?. International Entrepreneurship and Management Journal, 14(4), 807-821.

Byrne, J., Fattoum, S., & Diaz Garcia, M. C. (2019). Role models and women entrepreneurs: Entrepreneurial superwoman has her say. Journal of Small Business Management, 57(1), 154-184.

Gul, R., & Jan, S. (2025). Redefining Gendered Leadership Stereotypes: The Hustler, Hipster and Hacker Roles in Addressing the Double Bind Dilemma in Women-Led Startups. Dialogue Social Science Review (DSSR), 3(2), 445-465.

Foss, L., Henry, C., Ahl, H., & Mikalsen, G. H. (2019). Women's entrepreneurship policy research: a 30-year review of the evidence. Small Business Economics, 53, 409-429.

Martínez-Rodríguez, I., Quintana-Rojo, C., Gento, P., & Callejas-Albinana, F. E. (2022). Public policy recommendations for promoting female entrepreneurship in Europe. International Entrepreneurship and Management Journal, 18(3), 1235-1262.

Livat, F., & Jaffré, C. (2022). Women in wine… occasionally: Gendered roles in the wine industry. The Routledge Handbook of Wine and Culture, 320-330.

Duarte Alonso, A., Kok, S., & Galbreath, J. (2021). Entrepreneurial women in the wine industry: A study in emerging economies. International Journal of Wine Business Research, 33(2), 197-216.

Chadwick, I. C., & Dawson, A. (2018). Women leaders and firm performance in family businesses: An examination of financial and nonfinancial outcomes. Journal of family business strategy, 9(4), 238-249.

Paoloni, P., Cosentino, A., & Iannone, B. (2020). Investigating the Female Role in the Wine Sector: Business Administration Perspective on a Decade of Research (2010–2019). In Gender Studies, Entrepreneurship and Human Capital: 5th IPAZIA Workshop on Gender Issues 2019 (pp. 185-210). Springer International Publishing.

Jennings, J. E., & Brush, C. G. (2013). Research on women entrepreneurs: challenges to (and from) the broader entrepreneurship literature?. Academy of Management Annals, 7(1), 663-715.

Harrison, R., Leitch, C., & McAdam, M. (2015). Breaking glass: Toward a gendered analysis of entrepreneurial leadership. Journal of Small Business Management, 53(3), 693-713.

Serrano-Pascual, A., & Carretero-García, C. (2022). Women's entrepreneurial subjectivity under scrutiny: Expert knowledge on gender and entrepreneurship. Gender, Work & Organization, 29(2), 666-686.

Vrontis, D., Bresciani, S., & Giacosa, E. (2016). Tradition and innovation in Italian wine family businesses. British Food Journal, 118(8), 1883-1897.

Arun, K., & Yildirim Özmutlu, S. (2023). Effects of gender diversity in strategic orientation and strategy execution. Leadership & Organization Development Journal, 44(7), 882-906.

# From Greenwashing to Green Claims: Regulatory Implications of EU Directive "Empowering Consumers for the Green Transition"

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## Abstract

In un contesto di crescente attenzione verso la sostenibilità ambientale, le imprese utilizzano con frequenza crescente dichiarazioni ambientali – o "green claims" – nella comunicazione della sostenibilità. Tuttavia, tali affermazioni risultano spesso vaghe, ingannevoli o non verificabili, favorendo pratiche di greenwashing. Il contributo applica la recente Direttiva 2024/825 Empowering Consumers for the Green Transition all'analisi del contenuto della comunicazione green di sette imprese italiane operanti nel settore alimentare. La Direttiva rappresenta il primo tentativo di disciplinare in modo diretto, specifico e vincolante la comunicazione ambientale, prevedendo obblighi e divieti puntuali. L'analisi dei casi ha permesso di osservare nel concreto quali claim risultano più ricorrenti nella comunicazione aziendale e consente di valutare il grado di conformità delle attuali strategie comunicative alle nuove disposizioni normative. I risultati evidenziano l'inadeguatezza dei messaggi promozionali rispetto agli standard richiesti, sottolineando la necessità per le imprese di rivedere il proprio approccio comunicativo. Lo studio propone infine indicazioni strategiche per una comunicazione green conforme, trasparente e responsabile e delinea dei possibili percorsi di disciplina di una comunicazione green indisciplinata.

*Keywords: environmental labelling; consumer trust; information transparency; sustainable consumer*

## 1. Introduzione

In un contesto globale segnato da una crescente crisi ambientale, la sostenibilità è emersa come una delle dimensioni centrali nelle scelte di consumo e nelle strategie aziendali (Capgemini, 2020). Negli ultimi decenni, numerosi studi hanno evidenziato una trasformazione profonda nelle preferenze dei consumatori, sempre più consapevoli e disposti a orientare i propri acquisti verso prodotti e servizi caratterizzati da un minore impatto ambientale (Iraldo & Melis, 2012; Camilleri, 2017; Testa et al., 2021). Secondo un recente sondaggio dell'Eurobarometro (2024), oltre due terzi dei cittadini europei dichiara di essere disposto a sostenere un costo maggiore per beni e servizi sostenibili, riconoscendo che le scelte individuali possono contribuire alla mitigazione del cambiamento climatico. Questa

crescente attenzione dei consumatori ha reso la comunicazione ambientale da parte delle imprese una leva competitiva cruciale, ma anche un terreno ad alto rischio. Da un lato, i green claims – ovvero le dichiarazioni di carattere ambientale che accompagnano prodotti e strategie aziendali – rappresentano uno strumento essenziale per informare e orientare i consumatori (Leonidou et al., 2014). Dall'altro, la diffusione di pratiche ambigue o non verificabili ha sollevato preoccupazioni crescenti di greenwashing, minando la fiducia dei consumatori e la legittimità delle imprese (Peattie & Crane, 2005; Delmas & Burbano, 2011).Per rispondere a queste criticità, l'Unione Europea ha adottato la Direttiva (UE) 2024/825 "*Empowering Consumers for the Green Transition*", che entrerà in vigore nel 2026. Si tratta del primo intervento normativo strutturato e vincolante volto a disciplinare l'uso dei green claims, introducendo divieti espliciti, criteri di verificabilità e requisiti di chiarezza. La nuova cornice regolatoria segna un cambio di paradigma, imponendo alle imprese di passare da dichiarazioni generiche e persuasive a comunicazioni trasparenti, documentate e proporzionate all'impatto reale dei propri prodotti. In questo quadro, il presente contributo analizza il caso di sette imprese italiane del settore alimentare, con l'obiettivo di: (i) identificare le tipologie di green claim oggi più diffuse; (ii) valutarne la conformità rispetto ai requisiti della Direttiva (UE) 2024/825; e (iii) delineare le implicazioni strategiche per le imprese chiamate ad adeguarsi alle nuove regole. L'analisi intende offrire un duplice contributo: teorico, arricchendo il dibattito sul marketing sostenibile e sulla regolamentazione della comunicazione ambientale; e pratico, fornendo indicazioni utili alle imprese che si preparano ad affrontare le sfide di trasparenza e accountability poste dalla nuova disciplina.

## 2. Green Claims e Greenwashing: evidenze dalla letteratura

Negli ultimi decenni, le imprese hanno progressivamente integrato i *green claims* nelle proprie strategie comunicative. Secondo la definizione della Commissione Europea (2016), un green claim è una dichiarazione commerciale che suggerisce, direttamente o indirettamente, che un prodotto, un servizio o un'impresa abbia un impatto ambientale ridotto o addirittura positivo, rispetto al passato o ai concorrenti. Tali affermazioni possono assumere diverse forme: testi descrittivi, nomi di prodotto o azienda, simboli, loghi, colori o immagini. Esse trovano diffusione su molteplici canali, dalla pubblicità tradizionale ai media digitali, fino all'etichettatura e al packaging dei prodotti (Leonidou et al., 2014). Diversi studi hanno evidenziato come i green claims rappresentino uno strumento centrale attraverso cui le imprese comunicano il proprio impegno ambientale (Ottman, 1993; Easterling et al., 1996; Hartmann & Apaolaza-Ibáñez, 2009; Reale, 2024), informano i consumatori sulle performance ecologiche dell'offerta (Peattie & Belz, 2010) e stimolano comportamenti d'acquisto più sostenibili (Carlson et al., 1996; Testa et al., 2011). Una parte consistente della letteratura si è concentrata sull'analisi della diffusione, dei contenuti e delle strategie narrative delle dichiarazioni ambientali, con l'obiettivo di identificare le caratteristiche principali e le modalità comunicative ricorrenti (Testa et al., 2011). Per favorire una sistematizzazione teorica, diversi autori hanno proposto classificazioni dei green claims in base alla loro forma, funzione e grado di specificità ambientale (Iyer & Banerjee, 1993; Chen & Chang, 2013; Stoica, 2021; Nes et al., 2024). All'interno di questo ambito si inserisce il fenomeno del *greenwashing*, ovvero la pratica di comunicare in modo fuorviante l'impegno ambientale dell'impresa. Secondo Delmas e Burbano (2011), si tratta di un disallineamento tra le dichiarazioni pubbliche e le effettive caratteristiche ambientali di prodotti, servizi o processi aziendali. Più

recentemente, Montgomery et al. (2024) hanno sottolineato la dimensione percettiva del fenomeno, descrivendolo come un meccanismo ingannevole in grado di indurre nei consumatori valutazioni eccessivamente positive sull'impatto ambientale dell'organizzazione. Il greenwashing può manifestarsi a livello aziendale, quando coinvolge l'intera identità comunicativa dell'impresa, o a livello di prodotto, quando riguarda specifici messaggi legati all'offerta. Da un punto di vista semiotico, si distinguono pratiche basate su elementi testuali (*claim-based greenwashing*) da quelle fondate su segnali visivi (*executional greenwashing*). La letteratura ha spesso evidenziato il ruolo delle affermazioni ambigue, non verificabili o esagerate, in particolare nei messaggi promozionali, come principale veicolo di comunicazione ingannevole (Delmas & Burbano, 2011; Matthes, 2014). Le diverse strategie di greenwashing – che includono omissioni informative, affermazioni generiche, simboli ambigui o riferimenti a benefici ambientali non dimostrati – concorrono a costruire una rappresentazione distorta della sostenibilità aziendale (Tabella 1). A fronte della diffusione crescente di queste pratiche, la letteratura internazionale ha posto in evidenza la necessità di definire criteri armonizzati e standard condivisi per garantire l'uso corretto delle affermazioni ambientali nei diversi settori e mercati.

| Forma di Greenwashing | Descrizione | Autori | Definizione |
|---|---|---|---|
| Falsità | Dichiarazioni ambientali completamente false o inesatte | Kangun et al. (1991); de Jong et al. (2020); Ziolo et al. (2024) | Ziolo et al. (2024, p. 5346) "(…) ingannare consapevolmente il destinatario con un messaggio che crea l'immagine di un'azienda/prodotto come amico dell'ambiente" |
| Ambiguità e vaghezza | Affermazioni generiche ed esagerate; claim poco accurati e specifici | Carlson et al (1993); Banarjee et al. (1995); Baum et al. (2012); Leonidou et al. (2014); Steenis et al. (2024); Polonsky et al. (2024); Marrucci et al. (2025) | Carlson et al. (1993, p. 31): "il claim è eccessivamente vago o ambiguo; contiene una frase o un'affermazione che è troppo ampia per avere un significato chiaro". |
| Divulgazione selettiva | Claims che mettono in evidenza solo alcuni aspetti positivi, più o meno marginali, o che trascurano quelli negativi | Lyon e Maxwell (2011); Marquis e Toffel (2016); Balzan (2023) | Lyon e Maxwell (2011, p. 9): "(…) informazioni positive sulle prestazioni ambientali o sociali di un'azienda senza la piena divulgazione di informazioni negative su queste dimensioni, in modo da creare un'immagine aziendale eccessivamente positiva" |
| Mancanza di prove attendibili | Affermazioni prive di prove accessibili o scientificamente fondate; Comunicazione fuorviante legata ad obiettivi e piani futuri | Delmas e Burbano (2011); Testa et al. (2015); Torelli et al. (2020) Spaniol et al. (2024) | Spaniol et al. 2024, "l'affermazione non è comprovata se chi la formula non è in grado di fornire la documentazione della validità della rivendicazione". |
| Greenwashing esecutivo | Uso ingannevole di colori, immagini, simboli che evocano la sostenibilità | Hartmann et al. (2013); Parguel et al. (2015), Bonincelli et al. (2023) | Parguel et al., (2015, p.2) "l'uso di elementi evocativi della natura per migliorare artificialmente l'immagine ecologica di un marchio." |

**Tabella 1:** Definizioni delle principali forme di greenwashing. Elaborazione propria.

## 3. Regolamentazione europea e contrasto al greenwashing

Per tutelare i consumatori e garantire il corretto funzionamento del mercato interno, l'Unione Europea ha adottato fin dal 2005 la Direttiva 2005/29/CE sulle pratiche commerciali sleali tra imprese e consumatori. In mancanza di regole specifiche sulle dichiarazioni ambientali, molti Stati membri hanno fatto ricorso a strumenti volontari – come linee guida pubbliche e codici di autodisciplina – per interpretare e applicare le norme generali in materia di pubblicità ingannevole ai green claim. Negli ultimi anni, tuttavia, la crescente pressione dell'opinione pubblica e della società civile ha accelerato il dibattito normativo, stimolando un intervento più strutturato da parte delle istituzioni europee. In tale contesto si colloca la recente Direttiva (UE) 2024/825, entrata in vigore nel 2024 con applicazione prevista a partire dal 2026, e la proposta di Direttiva 2023/166, ancora in fase di approvazione, relativa all'attestazione e comunicazione delle asserzioni ambientali (*Green Claims Directive*). La Direttiva 2024/825 rappresenta un punto di svolta nel percorso di regolazione della comunicazione ambientale: per la prima volta l'Unione Europea introduce criteri vincolanti e tipizzazioni esplicite che superano l'incertezza interpretativa del passato. Essa sancisce il passaggio da un approccio generale e indiretto a una regolazione specifica delle pratiche di comunicazione ambientale, offrendo così maggiore certezza giuridica e strumenti concreti per il contrasto al greenwashing (Tabella 2). Tra gli elementi di maggiore rilievo, la direttiva:

- riconosce espressamente le caratteristiche ambientali e sociali come attributi essenziali del prodotto, rispetto ai quali possono configurarsi pratiche ingannevoli;
- regola le asserzioni riferite a prestazioni ambientali future, imponendo che siano fondate su impegni concreti, verificabili e monitorabili;
- impone trasparenza nei confronti comparativi, obbligando l'impresa a fornire informazioni chiare sul metodo e sul perimetro del confronto tra prodotti o operatori, pena l'ingannevolezza per omissione.

La novità più incisiva risiede nell'inserimento di cinque divieti specifici tra le pratiche commerciali considerate sleali in ogni caso, a prescindere dalla valutazione individuale. In particolare, la Direttiva 2024/825:

- vieta l'uso di marchi di sostenibilità non supportati da sistemi di certificazione indipendenti o istituiti da autorità pubbliche.
- proibisce l'impiego di asserzioni ambientali generiche – come "verde", "ecologico" o "amico della natura" – in assenza di una comprovata eccellenza delle performance ambientali del prodotto o servizio.
- interdice l'attribuzione di benefici ambientali all'intero prodotto o azienda quando il vantaggio riguarda solo un elemento parziale, contrastando una delle forme più comuni di greenwashing (Tabella 2), come ad esempio nel caso in cui si affermi che un prodotto è "realizzato con materiale riciclato" quando tale caratteristica riguarda esclusivamente l'imballaggio.
- vieta l'uso di dichiarazioni sulla neutralità climatica ("carbon neutral", "a impatto zero") basate su meccanismi di compensazione delle emissioni che non rientrano nella filiera diretta del prodotto.

- impedisce di presentare come vantaggi ambientali caratteristiche che rappresentano il semplice rispetto di obblighi normativi comuni a tutti i prodotti della stessa categoria, affrontando una forma di comunicazione fuorviante particolarmente insidiosa.

| **Forma di Greenwashing** | **Principi non rispettati** | **Direttiva 2005/29 come modificata dalla 2024/825** |
|---|---|---|
| Falsità | Veridicità | Ingannevolezza rispetto a caratteristiche ambientali e sociali di un prodotto/servizio (art.6, par.1) |
| Ambiguità e vaghezza | Chiarezza dell'oggetto | Ingannevolezza rispetto a caratteristiche ambientali e sociali di un prodotto/servizio (art.6, par.1) Violazione divieto genericità (All. 1, p.to 4 bis) |
| | Accuratezza e Specificità | Violazione divieto amplificazione (All. 1, p.to 4 ter)<br>Violazione divieto claim su carbon neutrality basato su compensazione (All. I, p.to 4 quater) |
| Divulgazione selettiva | Rilevanza | Ingannevolezza rispetto a caratteristiche ambientali e sociali di un prodotto/servizio (art.6, par.1) |
| | Coerenza con il prodotto<br>Comparazione non ingannevole | art. 6, par. 2, lett. d art.7, par.7 |
| Mancanza di prova attendibili | Esistenza della prova e metodologia scientifica | art. 12 |
| | Aggiornamento e claim futuri | art. 6, par. 2, lett. e |
| Greenwashing esecutivo | Veridicità | Ingannevolezza rispetto a caratteristiche ambientali e sociali di un prodotto/servizio (art.6, par.1) |
| | Accuratezza e specificità | Violazione divieto genericità |
| | Uso corretto marchi | Violazione divieto di amplificazione<br>Violazione divieto marchio di sostenibilità non basato su sistema di certificazione (Allegato 1, 2-bis) |

**Tabella 2**: Corrispondenze tra forme di greenwashing, principi di corretta comunicazione e disposizioni normative. Fonte: elaborazione propria.

Con questa codificazione, la direttiva pone fine alla frammentazione e all'ambiguità che hanno caratterizzato l'enforcement in materia di green claims. Per le imprese, ciò implica un cambiamento significativo: non è più sufficiente un adeguamento superficiale, ma diventa necessario rivedere in profondità le strategie comunicative, integrando trasparenza, verificabilità e coerenza normativa.

## 4. Metodologia

Lo studio adotta un approccio qualitativo di tipo esplorativo, fondato su un disegno a casi multipli (*multiple case study*). Tale scelta metodologica è ritenuta adeguata per indagare fenomeni complessi e contestuali come la comunicazione ambientale delle imprese, che si colloca all'intersezione tra pratiche di marketing, vincoli normativi ed evoluzione delle aspettative sociali (Eisenhardt, 1989; Yin, 2018). Il campione comprende sette imprese italiane appartenenti a diversi segmenti dell'industria alimentare – acque minerali, zucchero, caffè, lattiero-caseario, prodotti da forno, gelato e pasta – con l'obiettivo di garantire una copertura rappresentativa delle principali categorie merceologiche e delle relative pratiche comunicative in materia di sostenibilità. Le aziende analizzate sono San Benedetto, Eridania, Lavazza, La Molisana, Misura, Granarolo e Sammontana. La selezione dei casi è avvenuta a partire dall'osservazione delle imprese associate a Centromarca (Associazione Italiana dell'Industria di Marca), individuata come punto di partenza per mappare le aziende più rappresentative del comparto. Successivamente, l'analisi è stata estesa anche a imprese non associate, così da includere brand rilevanti del settore alimentare italiano che ricorrono con frequenza a dichiarazioni ambientali. La raccolta dei dati è avvenuta da Aprile a Giugno 2025 e si è basata principalmente su quanto visualizzabile direttamente sui packaging dei prodotti, reperibili online attraverso Google Immagini, sui siti ufficiali delle aziende e su piattaforme di acquisto online (come Amazon, Carrefour, Esselunga, Coop, ecc.), con l'obiettivo di analizzare le dichiarazioni di sostenibilità così come vengono realmente presentate al consumatore nei contesti di esposizione e acquisto. Questa scelta è motivata dall'esigenza di valutare la comunicazione visiva e testuale direttamente accessibile al pubblico, ovvero quella che incide in modo più immediato sulla percezione e sulle decisioni d'acquisto. L'analisi dei contenuti è stata condotta con un approccio qualitativo di tipo interpretativo (Krippendorff, 2018; Mayring, 2000). Il processo di codifica è stato iterativo e condiviso tra i ricercatori, così da incrementare l'affidabilità interpretativa.

## 5. Risultati

L'analisi condotta ha consentito di individuare alcune tendenze comuni, nonché di mettere in luce criticità ricorrenti rispetto ai criteri di chiarezza, verificabilità e proporzionalità introdotti dalla Direttiva (UE) 2024/825. Un primo elemento trasversale riguarda la diffusione di claim generici, spesso espressi tramite slogan sintetici e suggestivi, privi di riferimenti specifici all'impatto ambientale effettivo. È il caso, ad esempio, di espressioni come *"Ecogreen"* (San Benedetto), *"A misura d'ambiente"* (Misura), *"For Planet"* (Lavazza) o *"#bontàresponsabile"* (Granarolo), che, pur evocando un orientamento valoriale, risultano privi di elementi oggettivi a supporto e spesso veicolati attraverso elementi visivi amplificativi.

Tali dichiarazioni si pongono in contrasto con il divieto di affermazioni ambientali vaghe o non dimostrabili, previsto dall'Allegato I della Direttiva. In alcuni casi, come San Benedetto o Lavazza, tali claim sono accompagnati da più espressioni accattivanti e colori simbolici (verde, blu, immagini di natura) che accentuano l'effetto persuasivo, ma non sono sostenute da alcuna prova accessibile. Inoltre, nella maggior parte dei casi analizzati, tali affermazioni non sono accompagnate da documentazione o fonti consultabili dal consumatore. L'assenza di link, QR code o riferimenti a report di sostenibilità o standard metodologici limita fortemente la verificabilità dei messaggi, violando uno dei pilastri centrali della nuova normativa. Anche laddove sono riportati valori o etichette ambientali, non è quasi mai presente un'indicazione delle fonti, delle modalità di misurazione o di confronto utilizzato. Questo fenomeno suggerisce un approccio comunicativo ancora prevalentemente autoreferenziale, in cui la prova dell'affermazione ambientale viene data per implicita o scontata, piuttosto che dimostrata. Accanto ai claim identitari, si osservano anche numerose affermazioni riferite a singole caratteristiche del packaging o dei materiali utilizzati, come l'impiego di plastica riciclata, carta compostabile o materiali da fonti rinnovabili. Questi messaggi – riscontrabili in aziende come San Benedetto, La Molisana, Granarolo e Sammontana – risultano talvolta formulati in modo corretto, ma in altri casi enfatizzano aspetti marginali o obbligatori, presentandoli come vantaggi distintivi. Ad esempio, l'indicazione "87% materiali rinnovabili" di Granarolo o "pack completamente compostabile" di La Molisana è priva di dati metodologici o confronti comparativi, limitandone l'efficacia informativa e configurando potenziali casi di amplificazione indebita. Nel caso di Sammontana, ad esempio, l'indicazione "oltre 50% di plastica bio-circolare" è supportata da una certificazione (ISCC), ma non chiarisce né il tipo di plastica né il peso ambientale dell'intervento, rendendo difficile valutare il beneficio reale per il consumatore. Un ulteriore ambito ricorrente riguarda i claim relativi alla neutralità climatica o alla compensazione delle emissioni, come quelli utilizzati da San Benedetto, Lavazza, La Molisana, Misura e Sammontana. In molti di questi casi, la dichiarazione di "$CO_2$ impatto zero" o "carbon neutrality" si basa su meccanismi di compensazione non esplicitamente indicati, né accompagnati da dati quantitativi verificabili. L'assenza di trasparenza metodologica, unita all'uso di simboli evocativi (foglie, sfondi verdi, loghi "green"), compromette la chiarezza e può indurre il consumatore a sovrastimare l'effettivo impatto positivo del prodotto sul clima. Secondo la nuova normativa europea, tale forma comunicativa rientra tra le pratiche vietate in ogni caso (Allegato I, punto 4-quater), in quanto potenzialmente fuorviante. Lavazza, ad esempio, associa il claim "$CO_2$ impatto zero" a una compensazione generica indicata solo online, mentre Sammontana afferma di compensare le emissioni della linea "Barattolino" ma non specifica con quali standard o quantità. In molti casi, inoltre, la neutralità climatica viene associata visivamente a simboli naturali e loghi "green" che rafforzano l'effetto persuasivo del messaggio. Questo tipo di comunicazione combinata (claim + visual semiotico) può generare un effetto cumulativo, amplificando la percezione di sostenibilità anche in assenza di reali evidenze. Si tratta di un esempio di greenwashing visivo, particolarmente frequente nei settori ad alta esposizione reputazionale come quello alimentare (Changing Markets Foundation, 2023). In questo senso, la Direttiva invita non solo a verificare le affermazioni testuali, ma anche a vigilare sull'uso ingannevole di elementi iconografici e simboli grafici che possano indurre in errore. Diversi claim analizzati si riferiscono, invece, a modalità di produzione o approvvigionamento. Alcuni esempi includono l'uso di energia rinnovabile da parte di Eridania e Misura, oppure la tracciabilità delle

filiere dichiarata da Sammontana per le mandorle o da Granarolo per il benessere animale. Anche in questo caso, si riscontra una significativa variabilità nella qualità della comunicazione: se da un lato alcuni messaggi sono supportati da certificazioni di terza parte (es. Rainforest Alliance, ISCC), dall'altro la maggior parte dei claim appare generica o non verificabile, con fonti documentali non accessibili al consumatore. In alcuni casi, come quello di Eridania, il riferimento all'uso di "energia da fonti rinnovabili" è accompagnato da diciture tecniche (es. "certificato GO"), ma senza possibilità di verifica esterna, lasciando il consumatore senza strumenti per accertarne l'autenticità. Infine, si rileva la presenza di claim basati su dati quantitativi, soprattutto in riferimento alla riduzione delle emissioni di $CO_2$. Eridania, Granarolo e Sammontana riportano percentuali o valori assoluti riferiti alla diminuzione dell'impatto ambientale. Tuttavia, anche in presenza di informazioni numeriche, le imprese raramente forniscono dettagli su periodo di riferimento, metodologia di calcolo o confronto utilizzato (es. versione precedente del prodotto, media di mercato). Questo limita la possibilità di valutare l'affidabilità e la coerenza del messaggio comunicato. L'indicazione "–35% $CO_2$" di Eridania è un esempio emblematico: pur trattandosi di un dato misurabile, mancano dettagli fondamentali come l'anno base, il perimetro di analisi e la fonte di certificazione. Nel complesso, i risultati mostrano come, sebbene le imprese analizzate manifestino un chiaro intento di valorizzare le proprie pratiche sostenibili, la comunicazione che ne deriva presenti ancora forti criticità in termini di trasparenza, coerenza e conformità normativa. Tale comunicazione ambientale appare spesso orientata a finalità persuasive più che informative, generando affermazioni che, pur suggestive, risultano ambigue o non supportate da evidenze documentali. La lettura incrociata dei risultati ha inoltre messo in luce una forte eterogeneità tra i settori: le aziende del beverage e del caffè fanno maggiore uso di claim visivi e simbolici, mentre nel lattiero-caseario e nei prodotti da forno prevalgono claim identitari e riferimenti all'etica o alla tradizione, sebbene anch'essi spesso non verificabili. La sintesi comparativa riportata nella Tabella 3 consente di visualizzare tali vulnerabilità comunicative in modo strutturato, evidenziando sia le ricorrenze che le specificità settoriali. In prospettiva, ciò impone una riflessione strategica sulla necessità di riallineare i green claim ai criteri imposti dalla Direttiva (UE) 2024/825, valorizzando la rendicontazione ambientale come leva di trasparenza e accountability.

| **Azienda** | **Settore** | **Green claim** | **Criticità riscontrate** |
|---|---|---|---|
| San Benedetto | Beverage | *"Ecogreen", "$CO_2$ impatto ZERO", "100 ECO", "il nostro impegno concreto", "100% carbon neutral", "100% bottiglia plastica riciclata"*  | Claim generici e di forte impatto visivo; assenza di dati quantitativi, fonti o dettagli metodologici su calcolo delle emissioni e compensazione. Le affermazioni di neutralità climatica non sono accompagnate da prove verificabili. Utilizzo di simboli, colori e parole che rafforzano la percezione di sostenibilità senza garantirne la trasparenza. |

| Azienda | Settore | Green claim | Criticità riscontrate |
|---|---|---|---|
| Eridania | Zucchero | *"Il futuro chiede dolcezza", "100% energia da fonti rinnovabili", "-35% $CO_2$"*  | Claim quantitativi non accompagnati da dati di calcolo, fonti o riferimenti temporali. Mancanza di trasparenza metodologica e potenziale greenwashing visivo tramite simboli evocativi. |
| Lavazza | Caffè | *"For Planet", "Eco Caps", "ZERO $CO_2$ impact caps", "sostenibile con note fruttate"*  | Claim suggestivi (es. "For Planet") senza supporto informativo. Neutralità climatica ($CO_2$ zero) dichiarata ma senza trasparenza metodologica. Uso intensivo di visual greenwashing (colori, natura, foglie). |
| La Molisana | Pasta | *"Impronta ambientale ridotta", "pack compostabile", "Carbon Neutrality"*  | Claim coerenti e supportati da etichette di smaltimento e certificazioni; tuttavia, manca evidenza quantitativa sull'impatto ambientale reale. Uso di claim simbolici ("ritorna alla terra") non sempre verificabili. |
| Misura | Prodotti da forno | *"A misura d'ambiente", "energia da fonti rinnovabili", "zero impatto $CO_2$", "$CO_2$ compensata", "Confezione 100% raccolta carta certificata FSC®"*  | Claim parziali e non sempre verificabili; mancano dati quantitativi, fonti documentali e riferimenti a metodologie. Focus sul packaging, ma assenza di trasparenza sull'impatto complessivo del prodotto. |

| Azienda | Settore | Green claim | Criticità riscontrate |
|---|---|---|---|
| Granarolo | Lattiero-caseario | *"#bontàresponsabile", "100% riciclabile", "–20% $CO_2$", "bio", "benessere animale"*   | Claim variegati, non supportati da fonti verificabili. La riduzione di $CO_2$ non è contestualizzata; l'hashtag e il claim etico risultano simbolici più che informativi. |
| Sammontana | Gelato | *"Dal 2017 Sammontana compensa le emissioni di $CO_2$ generate nel ciclo di vita della linea Barattolino", "oltre 50% di plastica bio-crcolare"*   | Claim visivi e testuali su riduzione e compensazione $CO_2$, uso di materiali sostenibili (plastica bio-circolare, carta), supportati da certificazioni parziali (es. ISCC, FSC). Mancano dati quantitativi accessibili, riferimenti metodologici chiari e prove verificabili. Forte enfasi grafica e simbolica che può amplificare indebitamente la percezione di sostenibilità. |

**Tabella 3:** Sintesi dei green claim analizzati per ciascuna azienda.

## 6. Discussione

I risultati emersi dall'analisi evidenziano come, nella maggior parte dei casi, le imprese analizzate dimostrino un'effettiva attenzione alle tematiche ambientali e un impegno sostanziale nella riduzione del proprio impatto ecologico. Tuttavia, tale impegno non trova un corrispettivo adeguato nella comunicazione adottata: le criticità riscontrate non derivano tanto dalla falsità delle informazioni fornite, quanto piuttosto da una certa superficialità comunicativa che mina la trasparenza e la precisione dei messaggi veicolati. L'utilizzo ricorrente di dichiarazioni vaghe, generalizzazioni, semplificazioni visive ed espressioni enfatiche suggerisce una strategia comunicativa orientata prevalentemente alla persuasione piuttosto che alla rendicontazione. Tali modalità – sebbene efficaci nel catturare l'attenzione del consumatore sensibile ai temi ambientali – risultano oggi inadeguate rispetto agli standard di chiarezza, verificabilità e proporzionalità introdotti dalla Direttiva (UE) 2024/825. In questa prospettiva, la direttiva rappresenta non solo uno strumento sanzionatorio, ma anche una leva di trasformazione strutturale della comunicazione green: il ricorso a slogan evocativi o a formulazioni

generiche non sarà più sufficiente. Le imprese dovranno orientarsi verso un nuovo modello comunicativo, fondato su: l'impiego di affermazioni circostanziate, proporzionate e non ambigue; la documentazione rigorosa e verificabile dei benefici ambientali dichiarati; la contestualizzazione esplicita di dati, confronti e obiettivi futuri; la chiarezza informativa, anche in presenza di simboli, claim visivi o marchi ambientali. Le criticità attualmente più ricorrenti consistono proprio nella violazione dei nuovi divieti assoluti dell'Allegato I, con: claim generici (es. "eco", "sostenibile", "green") non supportati da prove di eccellenza complessiva e privi di specificazioni adeguate (violazione del punto 4-bis e 4-ter); dichiarazioni di neutralità climatica fondate, anche solo in parte, su compensazioni (violazione del punto 4-quater); marchi ambientali autodichiarati (violazione del punto 2-bis); amplificazioni indebite di benefici ambientali, espressi sia in termini testuali che visivi (violazione del punto 4-ter). Il quadro normativo emergente stimola una riflessione più ampia sulla necessità di armonizzare le strategie comunicative con l'effettiva performance ambientale, rafforzando il nesso tra pratiche aziendali e narrazione pubblica. In tal senso, diventa sempre più rilevante il confronto tra ciò che viene comunicato esternamente e le effettive pratiche ambientali interne, per evitare disallineamenti potenzialmente lesivi della fiducia dei consumatori. Dal punto di vista teorico, i risultati contribuiscono ad alimentare il dibattito sulla tensione tra marketing valoriale e regolazione pubblica, ponendo in luce le sfide che le imprese devono affrontare nel coniugare l'esigenza di differenziazione competitiva con i vincoli di trasparenza e responsabilità. Invece, dal punto di vista manageriale, lo studio evidenzia la necessità per le aziende di rafforzare i propri processi di rendicontazione, migliorare la governance della comunicazione ambientale, e promuovere una maggiore integrazione tra funzioni marketing, sostenibilità e compliance normativa. L'adozione di una comunicazione più rigorosa e verificabile può diventare non solo un obbligo normativo, ma anche un'opportunità strategica per costruire relazioni più solide con consumatori consapevoli e stakeholder esigenti. Tuttavia, l'analisi presenta alcuni limiti metodologici che è opportuno evidenziare. In primo luogo, la valutazione dei green claims è stata effettuata sulla base di criteri interpretativi, ancorati a un impianto normativo che – pur formalmente in vigore – non è ancora pienamente operativo nei singoli Stati membri e potrà essere oggetto di successivi chiarimenti applicativi. In secondo luogo, l'analisi si è limitata a fonti documentali pubblicamente accessibili, escludendo ogni possibilità di verifica interna o confronto diretto con le aziende coinvolte: ciò ha confinato l'osservazione all'universo comunicativo esterno, escludendo eventuali elementi di approfondimento o giustificazione. In particolare, lo studio ha focalizzato l'analisi su ciò che è effettivamente visibile al consumatore nel momento dell'acquisto – ovvero quanto esposto su packaging, siti ufficiali e piattaforme di e-commerce – senza poter accedere a documentazione tecnica interna o a ulteriori materiali aziendali. Questo approccio, pur coerente con l'obiettivo di valutare la trasparenza comunicativa verso l'esterno, limita la comprensione dell'intero processo di costruzione e validazione dei claim. Tra le prospettive per future ricerche, appare opportuno estendere l'analisi a un numero più ampio di imprese e settori, e soprattutto integrare l'approccio documentale con strumenti qualitativi come interviste in profondità a responsabili marketing, sustainability manager o altri esponenti aziendali. Ciò consentirebbe non solo di accedere a fonti aggiuntive e approfondire le motivazioni strategiche alla base dei green claim, ma anche di valutare la coerenza tra comunicazione e pratiche aziendali. Ulteriori sviluppi potrebbero inoltre prevedere una sistematizzazione dei formati comunicativi più efficaci e conformi, sulla base di casi virtuosi e benchmarking tra imprese. Alla luce di quanto emerso, è possibile affermare che la Direttiva (UE) 2024/825 può costituire un punto di

svolta normativo e culturale nella disciplina della comunicazione ambientale, contribuendo a definire uno spazio comunicativo più regolato, coerente e orientato alla responsabilità. Le evidenze raccolte suggeriscono, inoltre, che l'attuale comunicazione green, pur animata da intenti positivi, si trovi ancora in una fase "indisciplinata", che richiede un'evoluzione verso forme più trasparenti, verificabili e legalmente sostenibili.

## Riferimenti


Camilleri, M. A. (2017). Corporate Sustainability and Responsibility: Creating Value for Business, Society and the Environment. Asian Journal of Sustainability and Social Responsibility, 2, 59-74.

https://doi.org/10.1186/s41180-017-0016-5

Carlson, L., Grove, S. J., Kangun, N., & Polonsky, M. J. (1996). An International Comparison of Environmental Advertising: Substantive versus Associative Claims. Journal of Macromarketing, 16(2), 57-68. https://doi.org/10.1177/027614679601600205

Capgemini Research Institute. (2020). How sustainability is fundamentally changing consumer preferences. Capgemini. https://www.capgemini.com/insights/research-library/how-sustainability-is-fundamentally-changing-consumer-preferences/ (retrived 30 Giugno 2025)

Changing Markets Foundation (2023). *Feeding us Greenwash: misleading claims in food sustainability marketing*. https://changingmarkets.org/wp-content/uploads/2023/03/Feeding-us-Greenwash-final.pdf (retrived 9 Settembre 2025)

Chen, Y.-S., & Chang, C.-H. (2013). Greenwash and green trust: The mediation effects of green consumer confusion and green perceived risk. Journal of Business Ethics, 114(3), 489–500. https://doi.org/10.1007/s10551-012-1360-0

Commissione Europea, Orientamenti sull'interpretazione e sull'applicazione della Direttiva 2005/29/ce del Parlamento Europeo e del Consiglio relativa alle pratiche commerciali sleali delle imprese nei confronti dei consumatori nel mercato interno, 2021/C 526/01, Bruxelles, 29 dicembre 2021.

Commissione europea, Atteggiamento dei cittadini europei nei confronti dell'ambiente, Eurobarometro, Report no. 98, Bruxelles, maggio 2024.

Delmas, M., & Burbano, V. (2011). The drivers of greenwashing. California Management Review, 54(1), 64–87. https://doi.org/10.1525/cmr.2011.54.1.64

Easterling, D., Kenworthy, A., & Nemzoff, R. (1996). The Greening of Advertising: A Twenty-Five Year Look at Environmental Advertising. Journal of Marketing Theory and Practice, 4(1), 20–34. http://www.jstor.org/stable/40469786

Eisenhardt, K. M. (1989). Building Theories from Case Study Research. The Academy of Management Review, 14(4), 532–550. https://doi.org/10.2307/258557

Hartmann, P., & Apaolaza, V. (2009). Green advertising revisited: Conditional virtual nature experiences. International Journal of Advertising, 28(4), 715–739. https://doi.org/10.2501/S0265048709200837

Iyer, E., & Banerjee, S. B. (1993). Anatomy of green advertising. Advances in Consumer Research, 20, 494–501. http://acrwebsite.org/volumes/7499/volumes/v20/NA-20

Iraldo, F., & Melis, M. (2012). Green marketing: Come evitare il greenwashing comunicando al mercato il valore della sostenibilità. Il Sole 24 Ore.

Krippendorff, K. (2018). Content Analysis: An Introduction to Its Methodology. Sage Publications.

Leonidou, L. C., Leonidou, C. N., Hadjimarcou, J. S., & Lytovchenko, I. (2014). Assessing the greenness of environmental advertising claims made by multinational industrial firms. Industrial Marketing Management, 43(4), 671–684. https://doi.org/10.1016/j.indmarman.2014.02.003

Matthes, J., Wonneberger, A., & Schmuck, D. (2014). Consumers' green involvement and the persuasive effects of emotional versus functional ads. Journal of Business Research, 67(9), 1885–1893. https://doi.org/10.1016/j.jbusres.2013.11.054

Mayring, P. (2000). Qualitative Content Analysis. Forum Qualitative Sozialforschung Forum: Qualitative Social Research, 1(2). https://doi.org/10.17169/fqs-1.2.1089

Montgomery, A. W., Lyon, T. P., & Barg, J. (2023). No End in Sight? A Greenwash Review and Research Agenda. Organization & Environment, 37(2), 221-256. https://doi.org/10.1177/10860266231168905

Nes, K., Antonioli, F., & Ciaian, P. (2024). Trends in sustainability claims and labels for newly introduced food products across selected European countries. Agribusiness, 40(1), 371–390. https://doi.org/10.1002/agr.21894

Ottman, J.A. (1993) Green Marketing: Challenges and Opportunities. NTC Business Books, Chicago.

Parlamento europeo e consiglio dell'unione europea, Direttiva 2005/29/CE del parlamento europeo e del consiglio dell'11 maggio 2005 relativa alle pratiche commerciali sleali tra imprese e consumatori nel mercato interno, gazzetta ufficiale dell'Unione Europea, Bruxelles, 2005.

Parlamento europeo e consiglio dell'unione europea, direttiva (UE) 2024/825 del 28 febbraio 2024 che modifica le direttive 2005/29/ce e 2011/83/ue per quanto riguarda la responsabilizzazione dei consumatori per la transizione verde mediante il miglioramento della tutela dalle pratiche sleali e dell'informazione, gazzetta ufficiale dell'unione europea, bruxelles, 2024.

Peattie, K., Belz, FM. Sustainability marketing — An innovative conception of marketing. Thexis 27, 8–15 (2010). https://doi.org/10.1007/s11621-010-0085-7

Peattie, K., & Crane, A. (2005). Green marketing: legend, myth, farce or prophesy? Qualitative Market Research: An International Journal, 8(4), 357-370. https://doi.org/10.1108/13522750510619733

Reale, M. C. (2024). Comunicare l'impegno per l'ambiente: le nuove regole europee contro il greenwashing. Sociologia Del Diritto, 51(1). https://doi.org/10.54103/1972-5760/24013

Stoica, M. (2021). Green marketing communication strategies: An integrative literature review. The Annals of the University of Oradea. Economic Sciences, 30(1), 388–396. https://doi.org/10.47535/1991AUOES30(1)043

TerraChoice Environmental Marketing Inc. (2009). The Seven Sins of Greenwashing: Environmental claims in consumer markets. Summary Report: North America. https://www.sinsofgreenwashing.org

Testa, F., Iraldo, F., Tessitore, S., & Frey, M. (2011). Strategies and approaches in green advertising: An empirical analysis of the Italian context. International Journal of Environment and Sustainable Development, 10(4), 375–395. https://doi.org/10.1504/IJESD.2011.047772

Yin, R. K. (2018). Case Study Research and Applications: Design and Methods (6th ed.). Thousand Oaks, CA: Sage.

# Greenhushing on Online Delivery Platforms: To Disclose or Not to Disclose Green Cues?

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## Abstract

As sustainability becomes a key concern for consumers, online delivery platforms face a dilemma: should they highlight their eco-friendly efforts or remain silent to avoid potential drawbacks? While greenwashing—the overstatement of sustainability claims—has been widely studied, greenhushing, the

intentional undercommunication of sustainability efforts, remains underexplored. This paper examines greenhushing on online delivery platforms from a consumer perspective, investigating why companies choose to withhold green cues and how this decision influences consumer perception and purchasing behavior. Empirical evidence suggests that managers engage in greenhushing due to concerns about consumer price sensitivity and skepticism. Our findings indicate that while consumers often perceive green products as more expensive, green labeling does not significantly impact their choices. Furthermore, greenhushing does not harm companies' moral perception or consumer attitudes, even when the rationale behind it is disclosed. However, revealing green efforts post-purchase enhances expectations, satisfaction, and review intentions. This study offers strategic recommendations for online platforms on effectively managing green disclosures to balance credibility, consumer expectations, and competitive advantage.

*Keywords: greenhushing, delivery platforms, sustainable communication*

## 1. Introduction

Toyota decided to remain quiet about achieving zero waste-to-landfill and zero waste-to-incineration in its manufacturing facilities in Europe for over a decade (Burrows, 2020). Similarly, Walmart has reduced its plastic bag waste by 38% since 2005 and cut CO2 emissions without explicitly publicizing it (Lindsey, 2016). At the same time, South Pole, a world-leading climate project developer and solutions provider, found that more climate-aware companies are setting science-based targets for their net-zero commitments, but 25% do not plan to disclose them. These are just a few examples of "greenhushing"—a deliberate strategy where companies conceal their environmental initiatives (Font et al., 2016; Ginder et al., 2021). Even as sustainability disclosure gains more attention, some businesses take the opposite approach, intentionally withholding information about their sustainability efforts to avoid scrutiny, backlash, or accusations of greenwashing (Acuti, Pizzetti, and Dolnicar 2022; Liadeli, Sotgiu & Verlegh, 2024; Malik, Ahmad & Guzmàn, 2025; Vallaster et al., 2012). This highlights a "Catch-22 communication" (Morsing, Schultz, & Nielsen, 2008), where the fear of criticism leads companies to stay silent about their sustainability actions. This strategic silence raises critical questions for marketing scholars and practitioners: Why do companies engage in greenhushing, and how does it impact consumer decision-making?

Therefore, in the spirit of an empirics-first approach (Golder et al., 2022), we identified the following research opportunity: literature on greenhushing and, in particular, consumers' reactions to greenhushing is still in its infancy, and the motivations related to greenhushing are not clearly defined (Tao, 2024). However, companies face a dilemma related to the choice of communicating their green efforts or not. Through discussions with managers, we discovered that, beyond the risks of reputational damage and greenwashing accusations, companies may also choose to withhold their sustainability efforts to avoid being perceived as overpriced due to their green claims, potentially leading to their exclusion from consumers' consideration sets. For instance, a manager said: "If I add an organic label to the product, consumers do not choose it because it is perceived as a more expensive product" (Interview made in December 2023). Literature has already pointed out that despite growing demand for sustainability, consumers often perceive organic products as costly and may hesitate to purchase them due to their higher price compared to traditional options (Haws, Winterich, and Naylor 2014). Moreover, research suggests that consumers attach lower performance to green products since they think that companies have diverted resources to make the product greener at the cost of its quality (Mai et al. 2019; Newman, Gorlin, and Dhar 2014; Usrey et al. 2020). However, we do not know how

consumers react to undisclosed sustainability efforts and the trade-offs companies face in choosing whether to communicate their green initiatives or not.

By adopting an experimental design approach, we aim to fill this gap by exploring the motivations behind greenhushing and its impact on consumer perception and decision-making. In particular, we investigate how consumers will perceive a company engaging in greenhushing, whether managers' fears about negative associations with green products are true, why consumers think companies engage in greenhushing, and what is a possible solution for this problem. By shedding light on this underexamined phenomenon, we contribute to the broader discussion on corporate sustainability communication and its implications for both businesses and consumers.

## 2. Background Literature: Greenwashing Versus Greenhushing

The growing emphasis on corporate sustainability has led companies to adopt different communication strategies regarding their environmental efforts. Greenwashing, a well-documented phenomenon, occurs when firms overstate or overclaim their environmental commitments to appear more sustainable than they actually are (Delmas & Burbano, 2011; Lyon & Montgomery, 2015). This practice has led to consumer skepticism, regulatory scrutiny, and reputational risks for brands found guilty of misleading claims (Nyilasy, Gangadharbatla, & Paladino, 2014).

In contrast, greenhushing refers to the deliberate decision by companies to under-communicate or entirely withhold information about their sustainability initiatives (Font et al., 2016; Ginder et al., 2021). Unlike greenwashing, which seeks to gain favor through exaggerated sustainability claims, the reason for such behavior could be as simple as cost-saving (Falchi et al., 2022) but could also be to avoid any risk associated with these green initiatives, such as from fears of backlash, accusations of greenwashing, or competitive disadvantage (Acuti, Pizzetti, & Dolnicar, 2022; Vallaster et al., 2012). Often, these companies are known as the "Silent Green firms" (Delmas & Burbano, 2011) or companies with discrete positioning towards corporate social responsibility (Ginder et al., 2021). While greenwashing has been widely studied in marketing literature, greenhushing remains relatively underexplored, particularly in terms of its impact on consumer perceptions and purchase behavior. Tao (2024), by exploring why companies engage in greenhushing, hypothesizes that companies facing reputational crises are more likely to adopt greenhushing, driven by increased conservatism. Ettinger et al. (2021) discovered that, contrary to managers' concerns, consumers in the hospitality sector actually appreciate hotels that communicate their CSR efforts. Such transparency not only enhances consumer attitudes but also helps reduce unsustainable behaviors. Other research refers to this phenomenon as green blushing (Falchi et al., 2022) suggesting interventions to mitigate negative outcomes of green communication and identifying various forms of greenhushing. Moreover, greenhushing, like greenwashing, undermines a company's environmental efforts and can harm its reputation by eroding trust and credibility (Tao 2024). It may also signal that sustainability is unimportant, particularly when adopted by market leaders, potentially influencing smaller companies to do the same.

## 3. Methodology

The context of this paper is the online food delivery market. We chose this context because this market is growing rapidly (about $1 trillion in 2023, according to Statista, 2024), and it has a big environmental impact. Second, we know little about consumers' sustainable choices when they order food online. Finally, the choice architecture of online food delivery platforms makes it an interesting context to study and test possible interventions.

The following four studies explore different aspects of greenhushing and its impact on consumer perceptions. Study 1 tests the manager's assumption that green products labeled as such will be perceived as more expensive, potentially deterring consumers. Study 2 investigates consumer reactions to greenhushing versus greenwashing. Study 3 examines consumer responses when they know the reasons behind a company's greenhushing, revealing no significant difference in perceptions of credibility, integrity, or brand attitude between greenhushing and green promotion. Finally, Study 4 tests an intervention where the green nature of a product is disclosed after purchase.

### *Study 1: Testing the assumption*

Following an empirical-first approach, Study 1 tested the original assumption held by business managers regarding the potential downsides of explicitly framing products as "green." The key prediction explored in this study was that when green products are clearly labeled as such, consumers would perceive them as more expensive, which would, in turn, negatively affect their purchasing decisions. To this aim, we recruited 400 American participants from Prolific (47.7% female, 49.7% male, 2.5% nonbinary, 0% preferred not to state, $M_{age}$= 36.6). Participants saw two apples (i.e., Apple 1 and Apple 2) that looked similar (same color, same size, etc.). We asked participants to imagine seeing these two apples while doing their online groceries. We randomly assigned participants to one of the two conditions (disclosure of the green nature of Apple 1: yes vs. no) between-subjects design, which varied whether Apple 1 had a label saying 100% organic. We chose a label that is commonly used on organic fruits in grocery stores. Our first dependent variable was the perception of the price difference between the two apples. We measured this with a single-item 7-point scale: "Which apple do you think is more expensive?" anchored (1 = Apple 1 is much more expensive, 4 = The two apples have about the same price, 7 = Apple 2 is much more expensive). Our second dependent variable was the choice between the two apples. We measured this with a single-item 7-point scale: "If you were to buy an apple, which apple would you prefer to buy?" anchored (1 = For sure, Apple 1, 4 = I have no preference, 7 = For sure, Apple 2). Finally, participants reported their age and gender. Results show that disclosing the green nature of Apple 1 has significantly increased its perceived price ($M$ = 1.72, $SD$ = .84) compared to another apple that appeared to have the same price in the control condition (i.e., no disclosure / no organic label) ($M$ = 3.64, $SD$ = 1.70, $t(398)$ = 14.25, $p$ < .001, $d$ = 1.43). However, the disclosure of the green nature of Apple 1 did not have any significant effect on the choice of participants ($M$ = 3.47, $SD$ = 1.96) compared to the control condition ($M$ = 3.63, $SD$ = 2.22, $t(398)$ = .75, $p$ = .45, $d$ = .08). This indicates that the intuition of managers is correct about how consumers might associate a higher price with a product which is explicitly labeled as organic. These preliminary results also indicate that managers, by engaging in greenhushing, might not be losing any potential demand for their products, as the choice between the two apples was not affected by whether Apple 1 was labeled as organic or not. If any, managers are avoiding losing the demand of price-

sensitive consumers who might associate green labels with more expensive products.

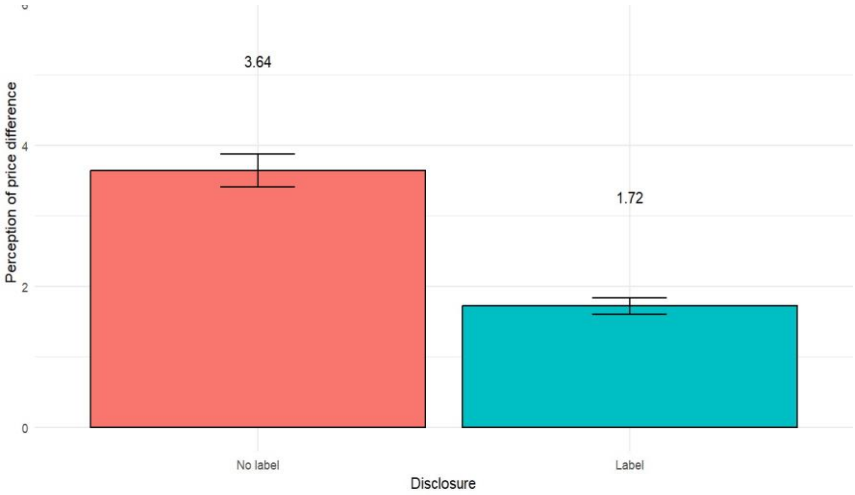
Notes: $N$ = 400. The graph displays the means and the 95% confidence interval as error bars.

**Figure 1:** Products are perceived as more expensive when labeled as organic

### *Study 2: Consumers' Reactions to Different Strategies*

Study 2 investigates how consumers might react when knowing that a company is engaging in greenhushing and how it compares to other strategies like greenwashing. We tested consumers' moral reactions and their attitudes toward the company.

We recruited 400 American participants from Prolific (48.7% female, 50.0% male, 1.0% nonbinary, 0.2% preferred not to state, $M_{age}$= 38.25). Participants were presented with a scenario about a mid-



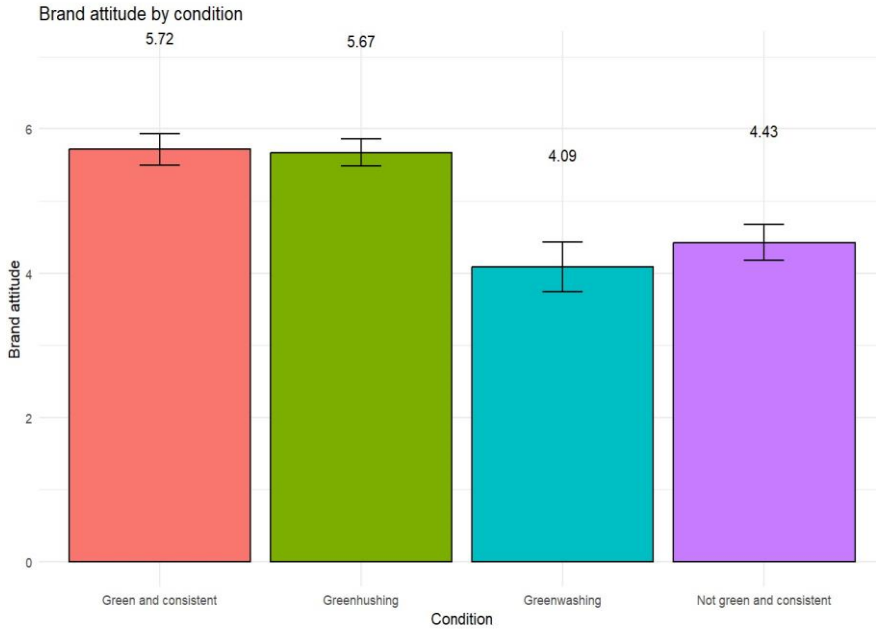

sized company called *Food to You* working in the food delivery business. Participants were told that the company needed to make some operational decisions (new vehicles, packaging) and that the company had two options: sustainable options (electric vehicles, eco-friendly packaging) vs less sustainable but cost-effective options. We randomly assigned participants to one condition in a 2 (choice: sustainable vs not sustainable) x 2 (self-promotion as environmentally conscious: yes vs. no) between-subjects design, which varied which option the company had chosen and whether it promotes itself as environmentally conscious or not. So, each participant, depending on the condition they were assigned to, learned about the company's decision (sustainable vs cost-effective) and whether the company is promoting itself as environmentally conscious, i.e., walk-the-talk (Schoeneborn, Morsing, and Crane 2020).

As a consequence, we identify four strategies: green and consistent (i.e., when the company chooses sustainable options and promotes itself as environmentally friendly), not green and consistent (i.e., when the company does not choose sustainable options and does not promote itself as environmentally friendly), greenwashing (i.e., when the company does not choose sustainable options and promotes itself as environmentally friendly), and greenhushing (i.e., when the company chooses sustainable options but does not promote itself as environmentally friendly). Our first dependent

variable is the morality of the firm's choices. We measured this with a threeitem 7-point scale: "How fair/acceptable/ethical are the company's choices?" ($a$ = 0.94) anchored (1 = Extremely unfair/unacceptable/unethical, 7 = Extremely fair/acceptable/ethical). Our second dependent variable was brand attitude. We measured this with a four-item 7-point scale: "I think of Food to You as:" ($a$ = 0.95) anchored (1 = negative/bad/uninteresting/unattractive, 7 = positive/good/interesting /attractive). We averaged both our dependent variables. Finally, participants reported their age and gender.

For our first dependent variable (i.e., morality), a two-way ANOVA revealed a significant main effect of choosing green options ($F$(1, 396) = 143.77, $p$ < .001, $\eta_p^2$ = .27) and of self-promotion as environmentally conscious ($F$(1, 396) = 8.07, $p$ = .005, $\eta_p^2$ = .02), as well as the interaction of the two factors ($F$(1, 396) = 16.55, $p$ < .001, $\eta_p^2$ = .04). As shown in Figure 2, when the company chooses the green options there is no difference whether the firm promotes itself as green ($M$ = 5.91, $SD$ = 1.17) or not ($M$ = 5.73, $SD$ = 1.15, $t$(396) = .89, $p$ = .81). Meaning that greenhushing might not be seen as morally bad by consumers. On the other hand, when the company does not choose sustainable options, it makes a difference whether the firm promotes itself as environmentally conscious ($M$ = 3.65, $SD$ = 1.83) or not ($M$ = 4.61, $SD$ = 1.38, $t$(396) = 4.88, $p$ < .001). This means that greenwashing is the worst strategy a company could adopt.

For our second dependent variable (i.e., brand attitude), a two-way ANOVA revealed a significant main effect of choosing green options ($F$(1, 396) = 122.92, $p$ < .001, $\eta_p^2$ = .24) but not of self-promotion as environmentally conscious ($F$(1, 396) = 1.31, $p$ = .25, $\eta_p^2$ = .003), as well as the interaction of the two factors ($F$(1, 396) = 2.15, $p$ < .001, $\eta_p^2$ = .005). Similar to what we found before, when the company chooses the green options, there is no difference in brand attitude whether the firm promotes itself as green ($M$ = 5.72, $SD$ = 1.11) or not ($M$ = 5.67, $SD$ = .93, $t$(396) = .23, $p$ = .99). As a result, greenhushing might not negatively influence brand attitudes. Different from morality, when the company does not choose sustainable options, it makes no difference whether the firm promotes itself as environmentally conscious ($M$ = 4.09, $SD$ = 1.74) or not ($M$ = 4.43, $SD$ = 1.25, $t$(396) = 1.85, $p$ = .25). Directionally, greenwashing is worse than not choosing sustainable options and being consistent with communication.




Notes: $N$ = 400. The graph displays the means and the 95% confidence interval as error bars.

**Figure 2:** Brand attitude toward different strategies

These results suggest that companies practicing greenhushing don't face negative moral reactions or brand-related drawbacks. Consumers consistently respond positively to green practices, regardless of whether the company publicizes them. Conversely, companies engaging in greenwashing get the worst outcomes and reactions from consumers. Managers might opt for greenhushing to avoid any risk associated with green communications. Given that greenhushing is considered similar to being green and explicit, it might be an attractive option for managers. At the same time, communicating green efforts can enhance reputation as well as nudge sustainable behavior (Liu, Cao and Font, 2024). In the following study, we propose a possible intervention to solve this trade-off.

### *Study 3: Disclosing Greenhushing Reasons*

In Study 3, we used the scenarios from Study 2 to ask some participants about their opinions on why companies engage in greenhushing. Each participant was asked to indicate the motivation that influenced the company's choice.

Results from this preliminary investigation showed that consumers expect companies to engage in greenhushing either to avoid misinterpretation or to avoid being perceived as expensive. We used these motivations to test how participants would react to greenhushing if they knew the reason for the company's choice.

We recruited 301 American participants from Prolific (49.8% female, 48.1% male, 1.3% nonbinary, 0.6% preferred not to state, $M_{age}$= 38.9). Participants saw 3 different scenarios depending on the experimental group they were assigned to. In a three-condition between-subjects design, participants were assigned to one of the following conditions: green and consistent (same as in Study 2),

greenhushing to avoid misinterpretation, and greenhushing to avoid being perceived as expensive. Respondents then rated the credibility of the company on a three-item 7-point scale ($a$ = .94) (A brand that will not betray you/A brand that accomplishes its value promise/An honest brand) (1 = Totally disagree, 7 = Totally agree), the integrity of the on a fouritem 7-point scale ($a$ = .90) (A brand that gives back to its consumers/A brand with moral principles/A brand true to a set of moral values/A brand that cares about its consumers) (1 = Totally disagree, 7 = Totally agree), and their attitude toward the company on a three-item 7-point scale ($a$ = .95) (Negative – Positive/Dislike – Like/Unfavorable - Favorable). Finally, participants reported their age and gender.

Results show that participants do not show a significant difference between the three different conditions. For credibility, the difference between green and consistent ($M$ = 5.57, $SD$ = 1.00) and greenhushing to avoid misinterpretation ($M$ = 5.66, $SD$ = 1.13) or greenhushing to avoid being perceived as expensive ($M$ = 5.44, $SD$ = 1.27) was not significant ($p$ > 0.70). For integrity, the difference between green and consistent ($M$ = 5.11, $SD$ = 1.15) and greenhushing to avoid misinterpretation ($M$ = 5.39, $SD$ = 1.09) or greenhushing to avoid being perceived as expensive ($M$ = 4.99, $SD$ = 1.19) was not significant ($p$ > 0.21). Finally, for brand attitude, the difference between green and consistent ($M$ = 4.95, $SD$ = 1.07) and greenhushing to avoid misinterpretation ($M$ = 5.27, $SD$ = 1.23) or greenhushing to avoid being perceived as expensive ($M$ = 4.75, $SD$ = 1.23) was not significant ($p$ > 0.14). These results indicate that even when consumers might know the reason for a company's choice to engage in greenhushing, they might not perceive it as less credible or integral compared to a company that uses green practices and is vocal about it.

### *Study 4: A Possible Intervention*

Study 4 tests an intervention that allows companies to benefit from communicating their green efforts and avoid engaging in greenhushing. Our main prediction is that if the green nature of a product is disclosed only after the purchase is done, consumers will react positively to it, and the company will avoid all the risks of negative associations with green products, while also encouraging sustainable behavior among both consumers and competitors.

We recruited 100 American participants from Prolific (49% female, 50% male,

1% nonbinary, 0% preferred not to state, $M_{age}$= 38.45). Participants saw an assortment of four apples with different colors, types, and prices, emulating a real online delivery platform that sells groceries. We asked participants to choose the most preferred apple from the assortment (i.e., the apple that they would choose in a real purchase setting). After that, regardless of their choice, we randomly assigned participants to one of the two experimental conditions (disclosure of the green nature of apple 1: yes vs. no) between-subjects design, which varied the message they saw after completing their choice. Participants were either shown a standard thank you message by the platform – control condition - (i.e., Thank you for ordering from us! Your order is confirmed, and we're getting it ready to ship. We hope to see you again.) or a message that revealed the organic characteristic of the apple they have chosen – treatment condition (i.e., Thank you for ordering from us! Your order is confirmed, and we're getting it ready to ship. We're excited to let you know that the product you've chosen is an organic product. We hope to see you again). We controlled in our analysis for the choice of apple. Respondents rated the apple they have chosen in terms of expectations (please rate the apple you have chosen) on a 7-point scale (1 = much worse than expected, 7 = much better than expected), their satisfaction (my feelings toward the apple I have chosen can best be characterized as) on a 7-point scale (1 = very dissatisfied, 7 = satisfied), and their likelihood and motivation to leave a review (please indicate how likely / motivated you would be to post a star rating and a text review at the review forum?) on a two

item ($a$ = .94) 7-point scale (1 = Not very likely/motivated, 7 = very likely/motivated). Finally, participants reported their age and gender.

Results show that participants reported higher expectations (*M control* = 4.8, *SD* = .990; *M treatment* = 5.48, *SD* = .995; $t(98) = 3.43$, $p < .001$) and satisfaction (*M control* = 5.64, *SD* = 1.16; *M treatment* = 6.08, *SD* = .944; $t(98) = 2.08$, $p = .020$) in the treatment condition compared to the control condition. Next, we tested for mediation: disclosure (0 = No disclosure, 1 = Disclosure) was a significant predictor of expectations ($b$ =.68, *SE* = .19, $t(98) = 3.43$, $p < .001$), which, in turn, was a significant predictor of both satisfaction ($b$ =.60, *SE* = .09, $t(98) = 6.66$, $p < .001$) and intention to write a review ($b$ =.52, *SE* = .18, $t(98) = 2.99$, $p = .004$). Our estimation of the indirect effect using 10,000 bootstrap replications produced a significant indirect effect of postpurchase disclosure on satisfaction ($a \times b$ =.41, *SE* = .13, 95% *CI* .17 to .68) and intention to write a review ($a \times b$ =.36, *SE* = .17, 95% *CI* .07 to .71) via expectations. Importantly, this indirect effect remained significant when we controlled apple choice. In sum, this study highlights that disclosing a product's organic nature in the postpurchase phase significantly boosts consumer expectations, satisfaction, and review intentions. This strategy enhances perceptions without affecting initial purchase decisions, helping to mitigate potential negative associations with green product cues.

## 4. General Discussion

As sustainability continues to shape consumer expectations, online delivery platforms must navigate the complex landscape of green communication. Greenhushing, while often a strategic decision, carries potential risks and missed opportunities. By understanding consumer responses to green cues and developing clear communication strategies, businesses can enhance trust, loyalty, and long-term sustainability goals. In this work, we examined the phenomenon of greenhushing on online delivery platforms, adding to the scant literature on consumers' perceptions towards greenhushing. Results confirm that consumers perceive green-labeled products as pricier (Study 1), but their choice is not significantly affected, suggesting that greenhushing may not harm demand (Study 2), even when disclosing the motivation behind the choice (Study 3). Consumers do not seem to differentiate between brands that "walk the talk" (Schoeneborn, Morsing, and Crane 2020) or brands that neglect to communicate their green efforts. Interestingly, greenhushing can be a viable strategy if managed properly, and our intervention, i.e., disclosing the green nature of products after the purchase, can enhance consumer engagement (Study 4). Results show indeed that post-purchase disclosure boosts consumer expectations, satisfaction, and review intentions without affecting purchase decisions, offering companies a way to highlight sustainability efforts without the risk of negative perceptions. Together, the studies suggest that greenhushing can be a viable strategy if managed properly, and postpurchase disclosures can enhance consumer engagement without the drawbacks of upfront green labeling.

This work makes several contributions to the literature on sustainable marketing and corporate communication. First, it extends the concept of greenhushing—previously underexplored in empirical marketing research—by systematically examining how consumers perceive this strategy across different scenarios. Second, by contrasting greenhushing with both greenwashing and explicit green promotion, we enrich our understanding of consumer attributions, moral judgments, and brand attitudes in response to varied sustainability communication strategies. Third, the paper introduces post-purchase green disclosure as a novel communication intervention, showing its potential to enhance satisfaction and engagement without influencing initial purchase decisions, challenging assumptions about when and how green signals should be conveyed. Together, these contributions

broaden the scope of sustainability communication literature, suggesting that timing and transparency are key levers for effective green positioning.

Our findings provide some guidance to companies, suggesting a promising strategy to enhance consumer perceptions without influencing their initial purchasing decisions, thereby potentially mitigating negative pricing associations often linked with green product cues. Our research highlights the importance of timing in sustainability communication, showing that disclosing green attributes post-purchase avoids negative perceptions, mitigates price-related backlash, and fosters informed, unbiased consumer decisions.

Given the scant literature on greenhushing, we hope that our study will stimulate further research in the field. Table 1 provides some future research questions that can be explored to extend our understanding of greenhushing practices.

| **Future Research Direction** | **Description** | **Potential Research Questions** |
|---|---|---|
| **Consumer Segmentation in Greenhushing** | Investigate how different consumer segments (e.g., price-sensitive vs. sustainability-driven) react to greenhushing | How do consumer preferences and perceptions of greenhushing vary across demographic and psychographic segments? |
| **Long-Term Effects of Greenhushing** | Analyze how greenhushing influences brand trust, loyalty, and consumer behavior over time. | Does greenhushing impact long-term brand equity compared to transparent green marketing? |
| | | |
| **Cross-Cultural**<br><br>**Perspectives on Greenhushing** | Examine cultural differences in consumer responses to greenhushing strategies | Are there cultural variations in how consumers perceive greenhushing versus greenwashing? |
| **Effectiveness of PostPurchase Green**<br><br>**Disclosure** | Explore the psychological mechanisms behind the positive effects of postpurchase green disclosure. | Why does revealing a product's green nature after purchase enhance consumer satisfaction and brand perception? |
| **Competitive Effects of Greenhushing** | Investigate whether greenhushing influences competitors' sustainability<br><br>communication strategies | Does greenhushing by one company encourage or discourage competitors from openly marketing their green initiatives? |

| | | |
|---|---|---|
| **Ethical and Moral Considerations in Greenhushing** | Assess whether consumers view greenhushing as ethical or deceptive and how this perception evolves. | Under what conditions do consumers perceive greenhushing as an ethical business practice? |
| **Impact of Greenhushing on other stakeholders (e.g. investors)** | Explore how greenhushing affects investor confidence and corporate social responsibility (CSR) assessments | Do investors view greenhushing as a strategic move or a lack of commitment to sustainability? |
| **Impact on Sustainable Consumer Behavior** | Explore whether greenhushing has a negative effect on sustainable consumer behavior | Does greenhushing reduce consumer engagement with sustainability and ecofriendly behaviors? |

**Table 1:** Future research avenues

## References


Acuti, D., Pizzetti, M., & Dolnicar, S. (2022). When sustainability backfires: A review on the unintended negative side-effects of product and service sustainability on consumer behavior. *Psychology & Marketing*, *39*(10), 1933–1945. https://doi.org/10.1002/mar.21709

Burrows, D. (2020). *Sustainability under wraps?* Institute of Environmental Management and Assessment. https://www.iema.net/articles/sustainability-under-wraps/

Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. *California Management Review*, *54*(1), 64–87. https://doi.org/10.1525/CMR.2011.54.1.64

Ettinger, A., Grabner-Kräuter, S., Okazaki, S., & Terlutter, R. (2021). The desirability of CSR communication versus greenhushing in the hospitality industry: The customers' perspective. *Journal of Travel Research*, *60*(3), 618–638. https://doi.org/10.1177/0047287520930087

Falchi, A., Grolleau, G., & Mzoughi, N. (2022). Why companies might under-communicate their efforts for sustainable development and what can be done? *Business Strategy and the Environment*, *31*(5), 1938–1946. https://doi.org/10.1002/BSE.2991

Font, X., Elgammal, I., & Lamond, I. (2016). Greenhushing: the deliberate under communicating of sustainability practices by tourism businesses. *Journal of Sustainable Tourism,* *25*(7), 1007–1023. https://doi.org/10.1080/09669582.2016.1158829

Ginder, W., Kwon, W., & Byun, S. E. (2021). Effects of internal–external congruence-based CSR positioning: An attribution theory approach. *Journal of Business Ethics*, *169*(2), 355–369. https://doi.org/10.1007/s10551-019-04282-w

Haws, K., Winterich, K., & Naylor, R. W. (2014). Seeing the world through GREEN-tinted glasses: Green consumption values and responses to environmentally friendly products. *Journal of Consumer Psychology*, *24*(3), 336–354.

Lindsey, K. (2016). *Why Wal-Mart is a retail sustainability leader (but doesn't really want to talk about it)*. Retail Dive. https://www.retaildive.com/news/why-wal-mart-is-a-retailsustainability-leader-but-doesnt-really-want-to/423713/

Liu, Y., Cao, X., & Font, X. (2024). Nudge pro-environmental contagion: Residents to tourists. *Annals of Tourism Research*, *105*, 103738. https://doi.org/10.1016/j.annals.2024.103738

Lyon, T. P., & Montgomery, A. W. (2015). The Means and End of Greenwash. *Organization & Environment*, *28*(2), 223–249. https://doi.org/10.1177/1086026615575332

Mai, R., Hoffmann, S., Lasarov, W., & Buhs, A. (2019). Ethical products= less strong: How explicit and implicit reliance on the lay theory affects consumption behaviors. *Journal of Business Ethics*, *158*(3), 659–677. https://doi.org/10.1007/s10551-017-3669-1

Morsing, M., Schultz, M., & Nielsen, K. U. (2008). The 'Catch 22' of communicating CSR: Findings from a Danish study. *Journal of Marketing Communications*, *14*(2), 97–111. https://doi.org/10.1080/13527260701856608

Newman, G., Gorlin, M., & Dhar, R. (2014). When going green backfires: How firm intentions shape the evaluation of socially beneficial product enhancements. *Journal of Consumer Research*, *41*(3), 823–839. https://doi.org/10.1086/677841

Nyilasy, G., Gangadharbatla, H., & Paladino, A. (2014). Perceived greenwashing: The interactive effects of green advertising and corporate environmental performance on consumer reactions. Journal of business ethics, 125, 693-707.

Schoeneborn, D., Morsing, M., & Crane, A. (2020). Formative Perspectives on the Relation Between CSR Communication and CSR Practices: Pathways for Walking, Talking, and T(w)alking. *Business & Society*, *59*(1), 5–33. https://doi.org/10.1177/0007650319845091

Statista. (2022). *Worldwide sales of organic food from 1999 to 2022*. https://www.statista.com/statistics/273090/worldwide-sales-of-organic-foods-since1999/

Statista. (2024). *Online Food Delivery - Worldwide*. Statista. https://www.statista.com/outlook/emo/online-food-delivery/worldwide

Tao, Z. (2024). Do not walk into darkness in greenhushing: A cross-cultural study on why Chinese and South Korean corporations engage in greenhushing behavior. *Business Strategy & Development*, *7*(2), 1–25. https://doi.org/10.1002/bsd2.401

Usrey, B., Palihawadana, D., Saridakis, C., & Theotokis, A. (2020). How downplaying product greenness affects performance evaluations: Examining the effects of implicit and explicit green signals in advertising. *Journal of Advertising*, *49*(2), 125–140. https://doi.org/10.1080/00913367.2020.1712274

Vallaster, C., Lindgreen, A., & Maon, F. (2012). Strategically leveraging corporate social responsibility: A CORPORATE BRANDING PERSPECTIVE. *California Management Review*, *54*(3), 34–60. https://repository.lincoln.ac.uk/ndownloader/files/42834451

# When the Lie Hurts More: Comparing Investors' Reactions to Socialwashing and Greenwashing

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## Abstract

Over the last decades, the scope of sustainability-related communications – and consequently their misleading use – has expanded from lying about the environment (greenwashing) to deceptions regarding social issues (socialwashing). This research compares these two forms of corporate misleading communications, socialwashing and greenwashing, and investigates their effects on investors' intentions. Our experimental results suggest that socialwashing is more detrimental for investment intentions than greenwashing. Because individuals self-recognize more with human victims rather than the environment, investors perceive the crisis caused by socialwashing as more severe than greenwashing. Notably, when companies harm other human beings, the divergence between claims and behavior is less relevant compared to events impacting the environment. The article contributes to deepen the understanding of variation in investor reactions across different corporate washing contexts and raises awareness of corporate risks when communicating social issues.

*Keywords: corporate misleading communication, intention to invest, greenwashing, socialwashing, sustainable marketing.*

### 1. Introduction

In the last years, concern about the role of organizations regarding environmental and social issues has drastically increased. Sustainability management and marketing are generally regarded as global goals aimed at reducing the harm caused by corporate activities to society and the environment. However, companies have often instrumentally adopted sustainability as a mean to increase profits and create economic value (e.g. Russo & Harrison, 2005). Through decoupling and impression management tactics (Patriotta, Gond, & Schultz, 2011), businesses often act irresponsibly rather than responsibly, and manage sustainability-related communications that are intentionally false or misleading to project a responsible image and improve consumers' perception of ads and brands (Schmuck, Matthes, & Naderer, 2018). This questionable behavior is referred in literature as *greenwashing*, that is the attempt to disseminate disinformation so as to present a responsible public image.

Literature and cases happened in the marketplace (e.g. 2019 McDonald's paper straws case; 2021 Adidas green marketing campaign for its Stan Smith sneakers) suggest that, when detected,

greenwashing causes severe consequences for companies. Greenwashing deteriorates company's reputation and trust (Guo, Zhang, Wang, Li, & Tao, 2018), increases consumer skepticism (Delmas & Cuerel Burbano, 2011), and reduces purchase intentions (Swaen & Vanhamme, 2005). Besides consumers, greenwashing affects also other stakeholders. For instance, it erodes investor's confidence (Delmas & Cuerel Burbano, 2011). Indeed, investors are increasingly interested in sustainability and ESG issues and look for information about them (Cellier, Chollet, & Gajewski, 2016; Nath, Holder-Webb, & Cohen, 2013). In relation to private investors, Gatti et al. (2021) analyzed how different forms of greenwashing influence investment intentions. Their findings suggest that individuals are less likely to invest in companies that falsify environmental claims (falsification) or engage in manipulative business practices (deceptive manipulation), compared to those that selectively disclose information (information selection) or divert attention from poor environmental performance by promoting positive practices (attention diversion). Notably, investors are likely to distance themselves from the greenwashing company not only when it is directly involved in making false claims about its environmental performances, but also when the behavior of a supplier is in contrasts with their statements. Thus, greenwashing seems pervasive and contagious, vicariously affecting companies within the supply-chain (Pizzetti et al., 2021).

Recently, not only the frequency and the forms of greenwashing have multiplied, but also the scope of misleading communications has expanded, extending the scope of washing to multiple domains. For example, in late 2023, the term "charitywashing" was used to describe the case involving influencer Chiara Ferragni and confectioner Balocco over their "Pink Christmas" pandoro (Russo, 2023). Due to a misleading marketing campaign, consumers paid a premium believing their purchases would support pediatric oncology at Turin's Regina Margherita Hospital. However, the actual €350.000 donation came directly from Balocco and was not linked to sales of that specific product. Meanwhile, Ferragni earned over €1 million for her promotional involvement. Another example comes from Danone, which promoted its Actimel drink as offering significant health benefits, despite the product being ultra-processed and calorie-dense, and not actually providing the alleged benefits. This strategy, known as "healthwashing," aimed to create a false connotation of healthfulness (Delerm et al., 2023).

Recently, Gatti et al. (2025) have identified and described 39 distinct types of *washing through a review of academic, practitioner, and media articles, as well as blogs, forums, and personal websites. Their analysis has resulted in a dictionary of *washing phenomena, which includes concepts such as Biodiversitywashing, Bluewashing, Brownwashing, Carbonwashing, COP-washing, Peacewashing or Purplewashing, just to mentioned few of them. As the list of *washing suggests, the phenomenon is no more relegated to the environmental sphere, but it also encompasses social-related issues.

This is probably a consequence of the shift in companies' marketing commitment towards social issues. With the societal marketing orientation established since the beginning of the new millennium, companies have started to include social aspects in their reports and communications, addressing issues such as health and safety, employee relationships, philanthropy and charitable contributions (Gatti & Seele, 2014). Other drivers have contributed to the rise of corporate communication on social issues, including the shift toward increasingly stringent regulation on Corporate Social Responsibility (CSR) (Sheehy, 2015) and the global adoption of the United Nations' Sustainable Development Goals (SDGs), introduced in 2017, which address not only environmental concerns but also a broad range of social issues.

As in the environmental domain, this shift has led to practices that can be categorized under the umbrella of "socialwashing", raising concerns about the actual societal benefits companies claim to generate. The investigation of corporate questionable and misleading practices in the social domain is

far more limited compared to greenwashing, even though socialwashing, as greenwashing, might cause severe consequences for companies and the society. The aim of this exploratory research is to shed lights on whether and how socialwashing affects investor intentions. Although there is evidence that corporate misconducts in the social sphere negatively affect stock markets, less is known about investors' reactions to corporate socialwashing and its variations (Carberry, Engelen, & Van Essen, 2018). This study is thus a necessary step for expanding our knowledge on the consequences of corporate washing in various domains, and aims to raise corporate awareness of the risks they take when dealing with social issues. With this aim in mind, the study provides a direct comparison of socialwashing and greenwashing effects on investment intention by means of two experimental designs.

## 2. Socialwashing and greenwashing effects

Among the several benefits of sustainability marketing for companies, it has been documented its power in shaping investments. A positive sustainability corporate profile attracts investments (e.g. Waddok & Smith, 2000), as witnessed by the raise of Socially Responsible Investing (SRI), which refers to investors' interest in non-financial cues in corporate reporting. Notably, not only institutional investors (such as organizations) show an interest in company's non-financial performances, but also individual investors, who look for information about sustainability related activities relying on ESG and other aggregate indexes (Cellier et al., 2016) or sustainability reporting (Nath et al., 2013). Notably, the participation by individual investors in stock markets has grown in many countries starting from the 90s, thanks to technological developments and virtualized marketplaces (Aspara & Tikkanen, 2011). In March 2025, 88% of investors from a worldwide survey declared a moderate to strong interest for sustainable investing (Morgan Stanley, 2025). At the same time, globally, concerns about transparency, authenticity and greenwashing, are the top barriers to sustainable investment from individual investors (Morgan Stanley, 2023). So far, the literature has mostly investigated how sustainability related initiatives facilitate investments, and little is known about the consequences of corporate misleading communications on investment decisions.

Scandals, corporate crises and misconducts negatively affect stock exchange. This happens because investors make decisions regarding investments depending on forecasted cash flows. For instance, when a company faces a product harm crisis, the market responds by updating and adjusting the stock prices according to the expected future cash flow (Cleeren, Dekimpe, & van Heerde, 2017). Similarly, ethical misconducts and greenwashing have a negative effect on stock exchange returns (Carberry et al., 2018). However, not all the crises affect investments in the same way, since investment decisions are not only driven by rational motives, but emotions and heuristic thinking shape decisions too. Investors react more negatively to certain crises, misconducts or misleading communications. For example, compared to an environmental accident or misconduct, greenwashing is more detrimental for investments because it implies a deception to stakeholders, which violates the implicit contract between the company and its stakeholders, and worsen investor's confidence in the company (Gatti et al., 2021). In the short term, investors also react more negatively to expressive manipulation (i.e. when a company emphasizes green values, beliefs, and ideals, rather than conveying factual or performance-based information) than by selective disclosure (i.e. when the communication emphasizes only positive environmental information, neglecting other, more questionable information) (Li et al., 2024). However, over time, both forms of greenwashing lead to a decline in investors' willingness to invest.

The scope of the misleading communication may also influence stakeholders' reactions, e.g. being the environment or other human beings. Recent communications from brands emphasize the human-side of their company, inspired by recent advancements in marketing literature. Indeed, consumers tend to

connect with other individuals and prefer brands that make visible who are the persons behind the product (Fuchs et al., 2022). "Personizing" the artisan of a product allows the consumer to socially connect with them and recognizing the passion they put in their work (Fuchs et al., 2022; 2015). Recognizing that companies are not intangible entities, but groups of individuals who work to produce something has, therefore, social and emotional effects on stakeholders (Eichinger et al. 2022). However, this connection with other human beings may also determine negative effects. When the corporate behavior hurts human beings, such employees or other consumers, investors react more negatively (King & Soule, 2007). This effect can be explained by the self-categorization theory: individuals more easily identify with other humans, because they recognize more common attributes with other human beings compared to other life or non-life forms (e.g., Turner, Hogg, Oakes, Reicher, & Wetherell, 1987). This self-categorization as humans explains why individuals prefer products and corporate initiatives that help other individuals rather than animals or the environment (Lafferty & Edmonson, 2012; Auger, Devinney, Louviere, & Burke, 2008). Building on self-categorization theory, being individuals responsive to helping other human beings and sensitive regarding human conditions, we might expect a specular effect when corporate actions hurt or penalize other individuals. Therefore, we expect that misleading sustainability related communication involving human beings (socialwashing) affects more negatively intention to invest compared to misleading communication about the environment and animals (greenwashing). More formally:

$H_1$: *Socialwashing is more detrimental for investment intentions than greenwashing.*

Furthermore, we explain the more detrimental effect on investment of socialwashing compared to greenwashing because of the greater perceived severity of the misleading communication involving a social issue. As stated above, individuals tend to perceive commonalities with other human beings. Such perceived similarity increases the relevance of the social issue for the investor and triggers defensive behaviors. Indeed, individuals attribute more responsibility to a perpetrator of an abuse when the victim shares similarity with the observing subject (Shaver, 1970). Moreover, individuals tend to perceive such harm as more likely to occur in the future, consequently it is seen as more severe. Conversely, individuals tend to see the negative effects of a behavior as less relevant and severe if they do not recognize commonalities with the victim of the misbehavior. Therefore, investors by self-recognizing more with human victims of the socialwashing rather than the environmental damages related to greenwashing, would perceive the effect of socialwashing as more severe. Severity is particularly relevant in crisis management (Zhou & Ki, 2018), so that the higher the severity, the greater the negative effect of a crisis. Thus, we expect that the higher severity of socialwashing, explains the lower intention to invest after socialwashing. More formally:

$H_2$: *Socialwashing is perceived as more severe than greenwashing.*

In the context of private investors, previous studies also suggest that greenwashing has a more severe negative impact on investment intentions than corporate misbehavior not associated with misleading communication (i.e. a corporate misconduct) because greenwashing implies a lie to stakeholders (Gatti et al., 2021). In other words, misconducts are less detrimental to investment intentions than greenwashing. This is because green communications tend to raise stakeholders' expectations regarding a company's future behavior. Therefore, when a company is implicated in greenwashing, it is perceived as more blameworthy (Pizzetti et al., 2019). In such cases, stakeholders perceive a greater degree of psychological contract violation (Li-Hin and Blumberg, 2018), compared to a company that does not claim to be environmentally committed (Parguel et al., 2011). These dynamics partly explain the recent rise of the greenhushing phenomenon, whereby companies engage in environmentally sustainable actions and initiatives but choose not to communicate them, for fear of being accused of greenwashing

(Acuti et al., 2022). Given that greenwashing appears to have a more detrimental effect than an environmental misconduct not accompanied by green communication, opting not to disclose environmental efforts may be perceived as a more strategic decision. This is particularly true in light of the increasing risk of being accused of greenwashing—even unjustly.

While such dynamics appear to be supported by existing research on greenwashing (Gatti et al., 2021), this differential effect might disappear in the social context. Given the greater perceived severity of the harm caused by companies to other human beings, stakeholders may overlook the divergence between claims and actual behaviors (as it happens in socialwashing), and respond in a similar way to both socialwashing and social misconduct. The misleading communication (the "lie") may carry less weight in the social context: severity is so high that, even in the absence of deceptive communication, stakeholders' reactions remain strongly negative. We therefore hypothesize a differential effect of washing when it is related to the environment and social issues. More formally:

*$H_3$: Investors' intentions are more negatively affected by the misleading communication when the misconduct regards the environment (greenwashing vs environmental misconduct), compared to the social domain (socialwashing vs social misconduct).*

In the following sections we report two experimental studies that test our hypotheses.

## 3. Study 1

The aim of Study 1 was to test H1. Specifically, we compared socialwashing to greenwashing and test their effect on intention to invest. We expect to find lower intention to invest with socialwashing compared to greenwashing.

### 3.1 Participants and procedures

We employed a single factor (misleading communication: socialwashing vs. greenwashing) between-subjects design, involving 75 ($M_{age}$ = 33.4; 60% males) participants recruited from the U.S. sample of MTurk. Building on the literature on investment decisions (Oberecker & Diamantopolous, 2011; Delfino, Marengo, & Ploner, 2016; Fisher, 1993), we introduced the investment situation. First, we asked participants to imagine that a fictitious character who wants to invest a small amount of money on the stock exchange and asks suggestions to a friend who gained good profits from investing on a company that declares to be committed to sustainability. Second, we described the company and its sustainability profile; then we introduced the corporate misleading communication through an ad-hoc created newspaper article. The use of newspaper article to describe washing behaviors has been deemed suitable because of the relevance of media in shaping investment behaviors (Carberry et al., 2018). Socialwashing was manipulated by describing that the company was alleged of employing child labor and not verifying the age of its worker in its plantations. In the greenwashing condition, the company was accused of using of palm oil, which production caused deforestation, habitat degradation and animal threats. In both cases, the behavior was in open contradiction with the sustainability claims of the company.

After the scenarios, participants filled out questions regarding intention to invest (Elliott, Jackson, Peecher, & White, 2017, Cronbach α = .869); and, as control variables, investment situation credibility (Cronbach α = .694), and company description credibility (Cronbach α = .741) both from Dahlen and Lange (2006). Preliminary analyses showed that the investment situation (F= .007, p >.05; $M_{greenwashing}$ = 4.80(.97) vs. $M_{socialwashing}$ = 4.82(.98)) and the company (F= .276, p >.05; $M_{greenwashing}$ = 4.59(.87) vs. $M_{socialwashing}$ = 4.45(1.29)) were perceived equally credible between conditions. Attention and

manipulation checks were included in the questionnaire. Manipulation checks showed that participants correctly identified the involvement of the company in a social issue (for the socialwashing condition) and in environmental issues (for the greenwashing condition).

### 3.2 Findings

We found that the intention to invest varied depending on the scope of the corporate misleading communication. In line with our hypothesis 1, participants were less willing to invest in the socialwashing condition compared to greenwashing condition ($F= 7.632$, $p < .01$; $M_{socialwashing} = 2.31(1.12)$ vs. $M_{greenwashing} = 3.06(1.24)$).

The finding of study 1 support the idea that socialwashing is more detrimental for investment intentions compared to greenwashing. The next experiment aims at providing additional evidence to our finding and seeks to explain the effect of greenwashing through greater perceived crisis severity.

## 4. Study 2

The aim of Study 2 was to test H2 and H3. Employing an experimental design similar to Study 1, we examined the effect of socialwashing on perceived severity, and we compared it with a social misconduct. Greenwashing, compared to environmental misconduct, might be particularly detrimental for investments because of the lie that it implies (Gatti et al., 2021). However, we expect a lower effect of the corporate lie in the social domain. Indeed, in social domain the closeness with the victims augments the severity and decreases the intention to invest being the misleading communication present or not. We then expect that investors' intentions are more negatively affected by greenwashing compared to an environmental misconduct (not associated with an environmental misleading communication), but their intentions do not change in the social domain.

### 4.1 Participants and procedures

160 participants ($M_{age} = 33.7$; 52.2% male) took part in 2 (Misleading communication: present vs. not present) x 2 (scope: environmental vs. social) between-subjects design. Experimental conditions are illustrated in Figure 1.

| | | **Scope** | |
|---|---|---|---|
| | | ***Social issue*** | ***Environment*** |
| **Misleading communication** | *Present* | Socialwashing | Greenwashing |
| | *Absent* | Social Misconduct | Environmental misconduct |

**Figure 1:** Experimental conditions of Study 2

We used similar procedures and scenarios of previous experiment and the same measurements for intention to invest (Cronbach α = .841), and investment situation (Cronbach α = .782) and company credibility (Cronbach α = .799) as control variables. Moreover, we measured perceived crisis severity (Dahlen and Lange, 2006, Cronbach α = .904).

The manipulations of the environmental and social misconduct when the misleading communication was present (greenwashing and socialwashing conditions respectively) were the same of study 1. When the misleading communication was not present (environmental misconduct and social misconduct conditions), we provided a neutral description of the company (not related to sustainability) to kept constant the amount of text, describing the company as involved to improve technical skills. Then, we used the same harming events (use of palm oil vs. child labor) of the other two conditions.

Participants rated the investment situation (Interaction: F = 1.102, p =.295; $M_{greenwashing}$ = 4.94(1.13) vs. $M_{env\text{-}misconduct}$ = 5.18(1.15) vs. $M_{socialwashing}$ = 4.82(.98) vs. $M_{soc\text{-}misconduct}$ = 4.66(1.37)) and the company (Interaction: F = .002, p =.966; $M_{greenwashing}$ = 4.71(1.14) vs. $M_{env\text{-}misconduct}$ = 4.93(1.21) vs. $M_{socialwashing}$ = 4.45(1.29) vs $M_{soc\text{-}misconduct}$ =4.67(1.37)) as equally credible between conditions. Manipulation checks confirmed the effectiveness of the manipulations.

### 4.2 Findings

*Intention to invest.* We found a significant main effect of the misconduct (F = 28.122, p <.001): when it was about the social issue, the intention to invest was significantly lower compared to environmental issue ($M_{social}$ =2.08(1.06) vs. $M_{environmental}$ = 3.06(1.21)). We also found a significant interaction effect (F = 4.378, p <.05). Planned contrasts tests showed that socialwashing lowers intention to invest compared to greenwashing (t = 2.203, p <.05; $M_{socialwashing}$ = 2.21(.99) vs. $M_{greenwashing}$ = 2.79(1.18)). This result aligns with H1 and study 1. Between the two misconducts (absence of misleading communication), the social misconduct lowers intention to invest compared to the environmental misconduct (t = 5.399, p <.001; $M_{social\text{-}misc}$ =1.97(1.12) vs. $M_{env\text{-}misc}$ = 3.29(1.20)). The comparison between socialwashing and social misconduct (misleading communication not present) conditions was not significant. Conversely, we found that greenwashing was more detrimental on intention to invest than the environmental misconduct (t = 1.998, p <.05; $M_{greenwashing}$ = 2.79(1.18) vs. $M_{env\text{-}misconduct}$ = 3.29(1.20)).

*Perceived severity.* We found a significant effect of misconduct (F = 42.326, p <.001): the social misconduct was perceived as a more severe than the environmental misconduct ($M_{social}$ =2.75(1.31) vs. $M_{environmental}$ =4.24(1.52)). No other significant effects were found.

Results support H2 and H3. Socialwashing increases perceived severity, as well as decreases intentions to invest. Notably, a social misconduct is detrimental for intention to invest even when it does not imply a lie to stakeholders. Conversely, misconduct in the environmental domain affects more negatively investments when they are in opposition with green communication, i.e. when the company greenwashes.

## 5. Conclusion

Companies face severe damages when they cause harm to the environment or human beings. If the consequences on the customer base are witnessed by several studies, this paper adds evidence to the negative effects such events have on potential investors. Gaining a deeper understanding of variation

in private investors reactions across different contexts is essential given the increased involvement of individuals in stock markets (Aspara & Tikkanen, 2011) but also the greater relevance of unethical behavior for stock exchanges (Carberry et al., 2018).

Our study emphasizes how the involvement of other human beings has detrimental effects for companies. When companies misbehave regarding the good of other humans, investors are not eager to overlook and declare a lower intention to invest. Our findings suggest that this happens because investors perceived that socialwashing is a more severe event than greenwashing. In line with the extant literature, the more severe is the crisis, the lower the intention to invest since investors tend to forecast a more negative cash flow. A misconduct in the environment domain is detrimental for investments too, especially when it implies a betrayal of the environmental-related promises (i.e., greenwashing). When the company greenwashes, investors are less willing to invest compared to a situation when the company damages the environment, but its walk is not in opposition to its talk (i.e. environmental misconduct). When the harm is cause to individuals, investors react even more negatively, and do not differentiate between socialwashing and misconduct. While companies might be tempted of employing greenhusing to avoid greater scrutiny from stakeholders regarding their environmental performances, this practice to hide their intention might be less strategic and effective for what concerns social issues.

Future research might increase the external validity of our findings analyzing stock market exchanges after a real scandal, since a real misconduct might generate slightly different results compared to a fictitious one. Moreover, future studies should investigate the attribution of responsibility, since attributions are particularly relevant in this domain (Zhou and Ki, 2018)

## References


Acuti, D., Pizzetti, M., and Dolnicar, S. (2022). When sustainability backfires: A review on the unintended negative-side effects of product and service sustainability on consumer behaviour. Psychology & Marketing, 39(10), 1933-1945.

Aspara, J., & Tikkanen, H. (2011). Corporate marketing in the stock market: The impact of company identification on individuals' investment behavior. European Journal of Marketing, 45(9/10), 1446-1469.

Auger, P., Devinney, T.M., Louviere, J.J., & Burke, P.F. (2008). Do social product features have value to consumers? International Journal of Research in Marketing, 25, 183-191.

Carberry, E.J., Engelen, P.-J., & Van Essen, M. (2018). Which firms get punished for unethical behavior? Explaining variation in stock market reactions to corporate misconduct. Business Ethics Quarterly, 28(2), 119-151.

Cellier, A., Chollet, P., & Gajewski, J.-F. (2016). Do investors trade around social rating announcement? European Financial Management, 22(3), 484–515.

Cleeren, K, Dekimpe, M.G., & van Heerde, H.J. (2017). Marketing research on product-harm crises: A review, managerial implications, and an agenda for future research. Journal of the Academy of Marketing Science, 45, 593-615.

Dahlen, M., & Lange, F. (2006). A disaster is contagious: How a brand in crisis affects other brands. Journal of Advertising Research, 46(4), 388–397.

Delerm, F., Galmiche, A., & Levy, M. (2023). Healthwashing: Corporate communication strategies in a legal gray zone. Loyola Consumer Law Review, 36(1), 23–89.

Delfino, A., Marengo, L., & Ploner, M. (2016). I did it your way. An experimental investigation of peer effects in investment choices. Journal of Economic Psychology, 54, 113–123.

Delmas, M.A., & Cuerel Burbano, C.V. (2011). The drivers of greenwashing. California Management Review, 54(1), 64–87.

Eichinger, I., Schreier, M., & van Osselaer, S. M. (2022). Connecting to place, people, and past: How products make us feel grounded. Journal of Marketing, 86(4), 1-16.

Elliott, W.B., Jackson, K.J., Peecher, M.E., & White, B.J. (2014). The unintended effect of corporate social responsibility performance on investors' estimates of fundamental value. The Accounting Review, 89(1), 275–302.

Fisher, R.J. (1993). Social desirability bias and the validity of indirect questioning. Journal of Consumer Research, 20(2), 303-315.

Fuchs, C., Kaiser, U., Schreier, M., & van Osselaer, S. M. (2022). The value of making producers personal. Journal of Retailing, 98(3), 486-495.

Fuchs, C., Schreier, M., & Van Osselaer, S. M. (2015). The handmade effect: What's love got to do with it?. Journal of Marketing, 79(2), 98-110

Gatti, L., Pizzetti, M., & Seele,P. (2021). Green lies and their effect on intention to invest. Journal of Business Research, 127, 228-240

Gatti, L., & Seele, P. (2014). Evidence for the prevalence of the sustainability concept in European corporate responsibility reporting. Sustainability Science, 9, 89-102.

Guo, R., Zhang, W., Wang, T., Li, C. B., & Tao, L. (2018). Timely or considered? Brand trust repair strategies and mechanism after greenwashing in China – from a legitimacy perspective. Industrial Marketing Management, 72, 127-137.

King, B.G., & Soule, S.A. (2007). Social movements as extra-institutional entrepreneurs: The effect of protests on stock price returns. Administrative Science Quarterly, 52(3), 413-442.

Lafferty, B.A., & Edmondson, D.R. (2012). A note on the role of cause type in cause-related marketing. Journal of Business Research, 67, 1455-1460.

Li, T., Shu, X., & Liao, G. (2024). Does corporate greenwashing affect investors' decisions? Finance Research Letters, 67(A), 105877.

Lin-Hi, N., & Blumberg, I. (2018). The link between (not) practicing CSR and corporate reputation: Psychological foundations and managerial implications. Journal of Business Ethics, 150(1), 185–198.

Lyon, T.P., & Maxwell, J.W. (2011). Greenwash: Corporate environmental disclosure under threat of audit. Journal of Economics & Management Strategy, 20(1), 3-41.

Morgan Stanley. (2023). Retrieved from: https://www.morganstanley.com/content/dam/msdotcom/en/assets/pdfs/MSInstituteforSustainableInvesting-SustainableSignals-Individuals-2024.pdf

Morgan Stanley. (2025). Retrieved from https://www.morganstanley.com/content/dam/msdotcom/en/assets/pdfs/2025_Sustainable_Signals_Individual_Investors_2025_report.pdf

Nath, L., Holder-Webb, L., & Cohen, J. (2013). Will women lead the way? Differences in demand for corporate social responsibility information for investment decisions. Journal of Business Ethics, 118(1), 85–102.

Oberecker, E.M., & Diamantopoulos, A. (2011). Consumers' emotional bonds with foreign countries: Does consumer affinity affect behavioral intentions? Journal of International Marketing, 19(2), 45-72.

Parguel, B., Benoiˆt-Moreau, F., & Larceneux, F. (2011). How sustainability ratings might deter 'greenwashing': A closer look at ethical corporate communication. Journal of Business Ethics, 102(1), 15–28.

Patriotta, G., Gond, J., & Schultz, F. (2011). Maintaining legitimacy: controversies, orders of worth, and public justifications. Journal of Management Studies, 48(8), 1804–1836.

Pizzetti, M., Gatti, L., & Seele, P. (2019). Firms talk, suppliers walk: Analyzing the locus of greenwashing in the blame game and introducing 'vicarious greenwashing'. Journal of Business Ethics, 170, 21–38 (2021).

https://doi.org/10.1007/s10551-019-04406-2

Russo, F. (2023). Charity washing e il caso Chiara Ferragni-Balocco. InTime, retrieved from https://www.franzrusso.it/condividere-comunicare/charity-washing-caso-chiara-ferragni-balocco/.

Russo, M.V., & Harrison, N.S. (2005). Organizational design and environmental performance: Clues from the electronics industry. Academy of Management Journal, 48(4), 582–593.

Schmuck, D., Matthes, J., & Naderer, B. (2018). Misleading consumers with green advertising? An affect-reason-involvement account of greenwashing effects in environmental advertising. Journal of Advertising, 47(2), 127-145.

Shaver, K.G. (1970). Defensive attribution: Effects of severity and relevance on the responsibility assigned for an accident. Journal of Personality and Social Psychology, 14(2), 101.

Sheehy, B. (2015). Defining CSR: Problems and Solutions. Journal of Business Ethics, 131(3), 625–648.

Swaen, V., & Vanhamme, J. (2005). The use of corporate social responsibility arguments in communication campaigns: Does source credibility matter? Advances in Consumer Research, 32(1), 590–591.

Turner, J.C., Hogg, M.A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). Rediscovering the Social Group: A Self-categorization Theory. New York: Basil Blackwell.

Waddok, S., & Smith, N. (2000). Corporate responsibility audits: Doing well by doing good. Sloan Management Review, 41(2), 75-83.

Zhou, Z., & Ki, W-J. (2018). Does severity matter? An investigation of crisis severity from defensive attribution theory perspective. Public Relation

# Inclusive Marketing on a Fine Line: Is There a Case for Hushing? A Delphi-Based Inquiry

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## Abstract

Inclusive marketing is increasingly adopted by brands to align with diversity, equity, and inclusion values. However, growing criticism, ideological backlash, and accusations of wokewashing are prompting some firms to deliberately under-communicate their inclusive efforts—a phenomenon conceptualised as "hushing." Despite its practical relevance, hushing has received little scholarly attention. This study aims to address the gap by (1) defining hushing within the inclusive marketing domain, (2) integrating backlash theory to understand when and why brands remain silent, and (3) proposing methods to detect this phenomenon in marketplace communication. A Delphi methodology will be employed to engage a panel of experts—including consultants, brand managers, and scholars—with the aim of reaching consensus on the drivers, implications, and anticipated trajectories of hushing. The study is expected to advance theoretical understanding of strategic silence in brand activism and, once results are available, to offer practical guidance for organizations seeking to manage the risks of inclusive communication while remaining committed to social impact.

*Keywords: Inclusive marketing, hushing, wokewashing, consumer backlash, Delphi method, reputational risk.*

## 1. Research background

Inclusive marketing has evolved from a normative aspiration into a strategic imperative that reshapes how brands construct and communicate value in an increasingly plural society. Early conceptual work already framed diversity as a market resource (Urciuoli, 2003), and the last decade has seen an exponential growth of empirical studies that interrogate how the authentic representation of disability, body size, gender fluidity, ethnicity, and other intersecting identities can unlock new forms of brand equity and consumer engagement (Kim et al., 2024; Konings et al., 2024; Wang et al., 2025). Despite extant literature has grown in the last five years, the approach is mostly fragmented with only few attempts to provide a univocal and shared definition. Grieco (2024) focus on the composite nature of the concept, defining inclusive marketing as "*any marketing action undertaken by a company to address one or multiple audiences of underrepresented individuals with the purpose of providing access, empower or celebrate them through the elements of its product offerings or additional to it, that determines tangible and/or intangible output*" (Grieco, 2024, p.8). Tuli et al. (2025) stress its meaning stating that it "*transcends traditional boundaries by recognizing and valuing cultural, social, and individual differences, with marketing practices conveying perceptible points of differentiation that are responsive, meaningful, and accessible to all segments of society*" (Tuli et al., 2025, p.10-11).

A robust body of evidence shows that inclusive cues enhance brand warmth, credibility, and purchase intentions when consumers perceive the portrayal as genuine rather than tokenistic. Experimental work on disability-inclusive ads reports significant uplifts in both brand trust and willingness to pay (Wang et al., 2025; Qayyum et al., 2023). Parallel findings emerge in the plus-size and body-positivity domain, where size-inclusive visuals boost approach emotions and attitude toward the brand (Kim et al., 2024; Joo et al., 2021). These outcomes are not confined to a single format or sector, yet they span fashion, cosmetics, sport sponsorship, and digital retail environments. Beyond attitudinal shifts, inclusive marketing has demonstrable economic value (Chatzopoulou et al., 2024; Marceau et al., 2024).

Notwithstanding, the same literature cautions that mis-aligned or opportunistic executions can provoke backlash. Studies on tokenism in entertainment marketing (Podoshen et al., 2021) and on "rainbow-washing" in sport and social-media contexts (Diwanji et al., 2025) reveal negative spill-overs ranging from brand avoidance to activist consumer campaigns. These findings underscore the fine line between advocacy and appropriation. Inclusive marketing has become a prominent strategy for brands seeking to align themselves with values of diversity, equity, and social responsibility. While intended to appeal to a broader and more socially conscious consumer base, these initiatives often provoke ambivalent or negative reactions.

The risks associated to these initiatives might prevent companies from communicating their efforts towards inclusion. A similar phenomenon has started to happen concerning sustainability initiatives, leading scholars and managers to speak about green blushing or green hushing. Hilton (2025) defined this phenomenon as the deliberate under-reporting of environmental achievements to escape scrutiny or accusations of greenwashing. Guercini et al. (2025) explore green hushing in digital contexts, unveiling how it could be determined by the lack of a well-structured sustainability communication plan, criticalities in companies' internal coordination, hardship to find the proper KPIs to refer to, and issues to properly communicate with the target audiences. The application of this concept to the inclusive marketing domain is under question in this research. The starting point is twofold. On the academic side, extant contributions largely pinpoint to the challenges that open for companies who decide to embrace inclusion in their marketing strategies. Furthermore, the uncertainty about the actual output and the risk that the efforts made will not pay off, when even backlash. On the practitioner side, there have been signs of disengagement, with companies that have been traditionally committed with inclusive marketing, have suddenly reduced their efforts in this direction. For example, the Pride month 2025 has seen a decline in corporate sponsorships. Several major brands have scaled back or entirely withdrawn their support for Pride events, with approximately 25% of corporate donors either cancelled or reduced their contributions (Onclusion, 2025). It emerges that companies are increasingly choosing an internal-only approach, reducing rainbow-branded logos and overt advertising campaigns (Onclusion, 2025).

## 2. Research gap and purpose of the research

Given the outlined scenario, the purpose of the research is to understand whether there is a case for hushing in the field of inclusive marketing, that could be intended as the strategic under-communication or deliberate silence about a firm's initiatives to avoid stakeholder criticism, ideological backlash, or accusations of wokewashing.

This form of reputational risk management reflects a growing awareness among marketers that publicizing inclusive initiatives can, paradoxically, alienate segments of their consumer base who perceive such actions as politically motivated or inauthentic.

Despite its growing managerial relevance, hushing in the inclusive marketing domain has received virtually no scholarly attention. Understanding when, why and with what consequences brands choose silence rather than voice represents a critical gap at the intersection of inclusive marketing and risk management.

This research therefore aims to (1) formalise the construct of hushing in the inclusive marketing domain, (2) integrate backlash theory to predict when brands will remain silent, and (3) propose empirical approaches to detect and measure this phenomenon in marketplace communications.

## 3. Method

Given the nature of this objective, qualitative investigation has been considered the most appropriate method to delve into such a multidimensional and complex phenomenon. To this end the Delphi technique has been selected for its potential to develop understanding around emerging phenomena, and in particular when there is the need to forecast future trajectories of specific trends (Rowe and Wright, 2001).

The Delphi method is based on a systematic and iterative approach to theoretical generation. It consists of multiple rounds of interaction among individuals who possess in-depth knowledge of the topic under investigation, with the goal of reaching consensus on descriptive statements regarding the phenomenon studied (Gebhardt et al., 2022). In this way it leverages collective human intelligence to identify effective ways of addressing complex problems. The main characteristics of the Delphi method include the anonymity of experts, which can express their opinions freely; the iterative nature of the process, enabling experts to revise their views on the evaluated items throughout the rounds; external facilitation, which involves sharing the results of previous rounds with participants; the integration of quantitative analysis methods within the process, including the use of predefined thresholds for achieving consensus (Profillidis and Botzoris, 2019).

The first step is the identification of the panel. A key informant approach will be followed to select participants who can be considered as well-positioned to provide a comprehensive perspective on the topic of inclusive-hushing. In this sense a purposeful sampling technique will be applied to search for participants. Inclusion criteria will consider different background, characteristics and experience with the topic (Munir et al., 2025). Consistently the panel will include: (i) managers from consulting firms and creative agencies for their direct contact with brands and their role of market monitoring; (ii) managers from firms that have so far been considered as virtuous in their activities of inclusive marketing, for their expertise and direct involvement with the topic; (iii) scholars and academics who performed conceptual and empirical research on this topic who already have the opportunity to study inclusive marketing and its evolution in the scientific debate. Consistently with extant research, the panel size will be around 20/30 individuals, yet thematic saturation will be adopted as the criterion for performing the interviews (Munir et al., 2025).

Once the expert panel will be defined a set of iteration rounds will be conducted. The first one will be carried out through in-depth interviews, for which a semi-structured guide and a protocol will be developed and shared among the researchers. The interviews will be recorded and transcribed to be content analyzed with ad hoc software for data analysis. Furthermore, questionnaire formatted for Lickert scale responses will be developed basing on the output of the first round and sent out to the panelist for the subsequent rounds. According to Skulmoski et al. (2007), two or three iteration rounds are sufficient for most research to get data saturation.

## 4. Expected findings

The involvement of key informants through the Delphi analysis is seen as an effective choice to delve into a topic that, despite raising great interest, is controversial in the way it could actually bring value to the brands. Starting from the pitfalls and the risk of backlashing which emerge from extant literature, the goal is to shed light on panelist perspectives about the risk of hushing in the inclusion domain. The goal of this research is to understand the drivers that could lead companies to under-communicate their efforts towards inclusive marketing as well as proposing effective strategies to overcome this risk. The research is exploratory in nature, given the innovative lens through which the topic is analyzed, and it could open interesting avenues for future research. From a managerial perspective it has great potential to support those brands that are committed to the integration of inclusive instances into their marketing and communication strategies, as it could outline the best practices to strengthen the reliability and the effectiveness of their initiatives.

## References


Austin, C. G., Plouffe, C. R., & Peters, C. (2005). Anti-commercial consumer rebellion: Conceptualisation and measurement. Journal of Targeting, Measurement and Analysis for Marketing.

Chatzopoulou, E., Poulis, A., & Giovanis, A. (2024). Enhancing brand loyalty through LGBTQ+ influencers: A study on the impact of firm-generated content in inclusive marketing strategies. Corporate Communications.

Diwanji, V. S., Nguyen, N., Coelho, M. B., Burkett, M., Chaif, R. H., & Okocha, M. U. (2025). Pride, not prejudice: A cross-cultural big data analysis of consumer reactions to rainbow-washing in advertising. International Journal of Advertising.

Gebhardt, M., Spieske, A., Kopyto, M., & Birkel, H. (2022). Increasing global supply chains' resilience after the COVID-19 pandemic: Empirical results from a Delphi study. Journal of business research, 150, 59-72.

Grieco, C. (2024). Conceptualizing inclusive marketing: A synthesis of theory and practice. European Management Journal.

Hilton, J. (2025). An integrated analysis of greenhush. Innovation and Green Development, 4(2), 100222.

Joo, B. R., & Wu, J. (2021). The impact of inclusive fashion advertising with plus-size models on female consumers: The mediating role of brand warmth. Journal of Global Fashion Marketing.

Kim, S., & Yang, S. J. (2024). Size-inclusive advertising in the Asian fashion market: Female consumers' responses to a plus-size vs. thin-size model in South Korea. PLoS ONE.

Konings, F., Vranken, I., Cingel, D. P., Vandenbosch, L., & Lenne, O. D. (2024). Are diverse models really non-idealized? Investigating body positivity public feed posts of fashion and beauty brands on Instagram. Body Image.

Lee, Z., Syed Alwi, S. F., & Gambetti, R. (2024). The thousand faces of beauty: How credible storytelling unlocks disability representation in inclusive luxury fashion branding. Journal of Business Research.

Marceau, P., & Pons, F. (2024). Inclusive sponsorship activation and gender equity in sports: The case of Orange Company. Corporate Communications.

Munir, T., Jamal, R. M. A., & Watt, S. (2025). The transformative impact of integrating sustainable innovation and CSR: a Delphi study on business, market and societal change. European Journal of Innovation Management.

Onclusive (2025). Pride Month Pulse 2025. Retrieved from https://onclusive.com/it/risorse/white-paper/pride-month-nel-marketing/?uid=203drpritglmcsxyjedv&submissionGuid=034f9843-cd40-445d-9343-6978ece1e9ba

Podoshen, J. S., Ekpo, A. E., & Abiru, O. (2021). Diversity, tokenism, and comic books: Crafting better strategies. Business Horizons.

Profillidis, V. A., & Botzoris, G. N. (2019). Executive judgment, Delphi, scenario writing, and survey methods. Modeling of transport demand–analyzing, calculating, and forecasting transport demand. Amsterdam: Elsevier, 125-61.

Qayyum, A., Jamil, R. A., Shah, A. M., & Lee, K. (2023). Inclusive advertising featuring disability on Instagram: Effect on consumer well-being, brand engagement, and purchase intention. Journal of Retailing and Consumer Services.

Rowe, G., & Wright, G. (2001). Expert opinions in forecasting: the role of the Delphi technique. In Principles of forecasting: A handbook for researchers and practitioners (pp. 125-144). Boston, MA: Springer US.

Skulmoski, G.J., Hartman, F.T. and Krahn, J. (2007), "The Delphi method for graduate research", Journal of Information Technology Education: Research, Vol. 6 No. 1, pp. 1-21, Informing Science Institute. https://www.learntechlib.org/p/111405/

Tuli, N., Srivastava, V., & Kumar, H. (2025). Inclusive marketing: A review and research agenda. Journal of Business Research, 191, 115274.

Urciuoli, B. (2003). Excellence, leadership, skills, diversity: Marketing liberal arts education. Language and Communication.

Wang, J., & Wei, C. (2025). Does featuring people with disabilities help or hurt fashion marketing effectiveness? Journal of Marketing Research.

# The Influence of Mindfulness on the Attitude–Behaviour Gap in Sustainable Fashion Consumption in the Fast Fashion Industry

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## Abstract

This work-in-progress study explores the influence of mindfulness on the Attitude-Behaviour (A-B) gap in sustainable fashion consumption within the fast fashion industry, focusing on Indian consumers. While consumers increasingly express concern for sustainability, their behaviour often remains inconsistent with these values, a phenomenon known as the A-B gap. Drawing on the concept of mindfulness – defined as the awareness that arises from paying attention, on purpose, in the present moment, and non-judgmentally – this study investigates whether higher levels of mindfulness are associated with a smaller A-B gap. It further explores the internal and external barriers that even mindful consumers face in aligning their sustainability attitudes with actual behaviour. A qualitative research approach using semi-structured interviews will be employed for data collection and thematic analysis will be used to identify patterns related to mindfulness, consumer decision-making, and value-behaviour alignment. This study aims to contribute to literature by integrating mindfulness theory with sustainable consumption research and to offer practical insights for sustainability marketers and policymakers seeking to promote mindful, responsible consumer behaviour in the fast fashion sector.

*Keywords: Mindfulness, Attitude-Behaviour gap, Sustainable fashion consumption, Fast Fashion*

## 1. Introduction

The fast fashion industry (FFI) is characterised by rapid production cycles, low-cost labour, and high levels of consumption and disposal, leading to significant environmental and social consequences (Niinimäki et al., 2020). Despite increased consumer awareness of sustainability issues, many individuals continue to purchase fast fashion despite their ethical concerns, demonstrating an Attitude-Behaviour (A-B) gap (Joy et al., 2012). Existing research suggests that impulsivity, social and cultural influences, consumer scepticism, marketing influence, and habitual consumption patterns contribute to the A-B gap in sustainable fashion choices (Joy et al., 2012; Gadhavi & Sahni, 2020; Lu et al., 2022; Wei & Jung, 2022). However, mindfulness, a state of heightened present-moment awareness and

intentional decision-making (Kabat-Zinn, 2013), has been linked to reduced impulsivity and greater alignment between attitudes and behaviour (Bahl et al., 2016; Fischer et al., 2017). While mindfulness has been widely studied in the context of health and well-being, its role in bridging the A-B gap in sustainable fashion consumption remains underexplored.

This work-in-progress study seeks to address this gap by investigating whether mindfulness influences the A-B gap in the fast fashion context. Specifically, it explores whether consumers with higher mindfulness levels exhibit greater alignment between their sustainability attitudes and actual purchasing behaviour. The study also examines barriers that may prevent even mindful consumers from acting in accordance with their values. Adopting a qualitative research design, it uses semi-structured interviews with young adult consumers in India to uncover how mindfulness operates within real-world fashion consumption contexts. The Indian market offers a unique lens for this inquiry: it is a rapidly evolving consumer economy where affordability often drives purchasing decisions, yet it also disproportionately bears the environmental and social costs of fast fashion production. By situating the research in this context, the study not only contributes to sustainability and consumer behaviour literature but also provides culturally and economically relevant insights into the psychological mechanisms that may help bridge the gap between ethical intention and action.

## 2. Literature Review

### 2.1 The Attitude-Behaviour (A-B) Gap in Sustainable Fashion Consumption

The A-B gap refers to the inconsistency between what consumers believe or express as their values (attitudes) and what they actually do in practice (behaviour) (Vermeir & Verbeke, 2006). In the context of sustainable consumption, this gap occurs when consumers acknowledge the importance of sustainability but continue engaging in unsustainable behaviours (Johnstone & Tan, 2015). The A-B gap is particularly prevalent in the FFI, where consumers express concern for environmental and ethical issues but often fail to act on them (Joy et al., 2012; Joergens, 2006). Joergens also highlights that this gap is narrower in sectors like food, where health and sustainability align, but more pronounced in fashion and automobiles, where aesthetics and brand loyalty tend to override ethical considerations (Egbue & Long, 2012).

Several interrelated factors contribute to this persistent gap. Price sensitivity, convenience, and limited availability are key barriers to sustainable fashion consumption; while ethical alternatives are often perceived as costly and harder to access, fast fashion offers affordable, readily available options that appeal to budget-conscious consumers (Joergens, 2006; Joy et al., 2012; Wiederhold & Martinez, 2018). Cultural and social influence, and trend responsiveness, fuelled by peer pressure and digital media, drive rapid consumption cycles that deprioritise sustainability (Gadhavi & Sahni, 2020). Consumer scepticism around corporate sustainability claims and greenwashing contributes to a lack of trust and reduced motivation to engage in sustainable consumption (Lu et al., 2022; Wei & Jung, 2022). Impulsivity and marketing influence, through limited-time promotions, discounts, and influencer marketing, encourage spontaneous purchasing behaviour, often at odds with ethical intentions (Jacobs et al., 2018). A more recent study by Mathew and Spinelli (2025) further confirms the persistence of this gap in fast fashion, emphasising that despite strong sustainability attitudes, habitual buying, low emotional engagement, and cognitive dissonance frequently hinder sustainable action.

These challenges highlight the complexity of the A-B gap in sustainable fashion consumption and underscore the need to examine not only structural barriers but also internal psychological mechanisms

that influence consumer behaviour. Understanding these dynamics is crucial for developing interventions and strategies that can better align consumer attitudes with sustainable actions.

### 2.2 Mindfulness and Consumer Decision-Making

Mindfulness, defined by Kabat-Zinn (2013) as "the awareness that arises from paying attention, on purpose, in the present moment, and non-judgmentally", has emerged as a promising construct in understanding ethical and sustainable consumer behaviour. Its potential to enhance self-awareness, regulate impulsive tendencies, and align actions with personal values makes it particularly relevant to bridging the A-B gap in fast fashion consumption.

Bahl et al. (2016) conceptualise mindfulness as a counter to mindless consumption, proposing that it fosters ethical decision-making by disrupting automatic behaviours and promoting alignment between internal values and external actions. Fischer et al. (2017) support this by identifying pathways through which mindfulness enhances sustainable consumption: increased awareness of consequences, reduced impulsivity, and greater intrinsic motivation. Both studies position mindfulness as a self-regulatory tool that can help consumers resist social and marketing pressures that encourage unsustainable fashion consumption. Rosenberg (2004) and Armstrong (2021) offer philosophical and cultural insights. Rosenberg frames mindfulness as a critique of consumerism itself, arguing that it helps individuals detach from desire-driven, ego-based behaviours. Armstrong applies this critique to fashion, contrasting the impermanence and ego-focus of fast fashion with Buddhist principles of non-attachment and ethical living. They suggest that integrating mindfulness into fashion practices could foster more conscious and sustainable consumption behaviours. Mantzios et al. (2018) provide indirect support through their study on mindful eating, which found a negative relationship between mindfulness and fat and sugar consumption. Although focused on dietary behaviour, the findings suggest mindfulness can reduce impulsive consumption more broadly, including in the fashion domain. Stanszus et al. (2017) provide direct empirical evidence linking mindfulness training to sustainable consumption behaviour. Their BiNKA intervention, an adapted mindfulness-based course focused on consumption, demonstrated that mindfulness can disrupt automatic buying patterns, clarify values, and foster compassion.

Collectively, these studies offer a multidimensional understanding of how mindfulness can help align consumer attitudes with sustainable behaviour. By enhancing self-regulation, promoting ethical reflection, and challenging the cultural norms of consumption, mindfulness holds transformative potential for addressing the FFI's sustainability challenges.

## 3. Research Objectives

This study aims to examine the influence of mindfulness on the A-B gap in sustainable fashion consumption within the FFI. Specifically, it seeks to analyse whether higher levels of mindfulness are associated with greater alignment between sustainability attitudes and actual purchasing behaviour. Additionally, the research explores the internal and external factors that may prevent consumers from consistently acting in accordance with their pro-sustainability attitudes.

## 4. Methodology

This study will adopt a qualitative research approach, using semi-structured interviews to explore the role of mindfulness in reducing A-B gap.

Participants will be purposively selected from individuals in India who engage with fast fashion at varying frequencies, enabling comparison across different consumption levels. Data will be collected through open-ended interviews exploring consumers' level of mindfulness, sustainability attitudes, actual purchasing behaviour, and related barriers. Responses will be analysed thematically to identify patterns and connections between mindfulness, the A-B gap, and barriers to sustainable consumption.

## 5. Expected Outcomes

This study is expected to provide a clearer understanding of how mindfulness influences the A-B gap in sustainable fashion consumption within the FFI. It anticipates that participants with higher levels of mindfulness will generally exhibit a smaller A-B gap, demonstrating greater alignment between pro-sustainability attitudes and actual purchasing behaviour. However, it also considers the possibility that some participants may display minimal A-B gaps despite lower mindfulness levels, due to factors such as ingrained sustainable habits, minimal fashion engagement, or external constraints. Additionally, the study aims to identify key barriers that even mindful consumers face in translating their attitudes into consistent behaviour.

## 6. Research Limitations

As a qualitative study focused on Indian consumers, the findings will be context-specific and not intended for statistical generalisation. The relatively small sample size and use of self-reported data may introduce biases, including social desirability and recall bias.

## 7. Theoretical and Managerial Implications

This research contributes to sustainability and consumer behaviour literature by exploring mindfulness as a psychological mechanism that may bridge the A-B gap. It introduces a cognitive-behavioural lens to understanding ethical consumption, extending mindfulness research into a new domain - fast fashion. For sustainability marketers and fashion brands, the study offers actionable insights into how mindfulness traits can be activated or supported through communication strategies and product offerings. It can guide the development of marketing campaigns that appeal to consumer values, promote reflection, and reduce impulsive consumption.

## References

Armstrong, C. M. J. (2021). Fashion and the Buddha: What Buddhist economics and mindfulness have to offer sustainable consumption. Clothing and Textiles Research Journal, 39(2), 91-105.

Bahl, S., Milne, G. R., Ross, S. M., Mick, D. G., Grier, S. A., Chugani, S. K., ... & Boesen-Mariani, S. (2016). Mindfulness: Its transformative potential for consumer, societal, and environmental well-being. Journal of Public Policy & Marketing, 35(2), 198-210.

Egbue, O., & Long, S. (2012). Barriers to widespread adoption of electric vehicles: An analysis of consumer attitudes and perceptions. Energy Policy, 48, 717-729.

Fischer, D., Stanszus, L., Geiger, S., Grossman, P., & Schrader, U. (2017). Mindfulness and sustainable consumption: A systematic literature review of research approaches and findings. Journal of Cleaner Production, 162, 544-558.

Gadhavi, P., & Sahni, H. (2020). Analyzing the "mindfulness" of young Indian consumers in their fashion consumption. Journal of Global Marketing, 33(5), 417-429.

Jacobs, K., Petersen, L., Hörisch, J., & Battenfeld, D. (2018). Green thinking but thoughtless buying? An empirical extension of the value-attitude-behaviour hierarchy in sustainable clothing. Journal of Cleaner Production, 203, 1155-1169.

Joergens, C. (2006). Ethical fashion: myth or future trend? Journal of Fashion Marketing and Management: An International Journal, 10(3), 360-371.

Johnstone, M. L., & Tan, L. P. (2015). Exploring the gap between consumers' green rhetoric and purchasing behaviour. Journal of Business Ethics, 132, 311-328.

Joy, A., Sherry Jr, J. F., Venkatesh, A., Wang, J., & Chan, R. (2012). Fast fashion, sustainability, and the ethical appeal of luxury brands. Fashion Theory, 16(3), 273-295.

Kabat-Zinn, J. (2013). Full catastrophe living, revised edition: how to cope with stress, pain and illness using mindfulness meditation. Hachette UK.

Lu, X., Sheng, T., Zhou, X., Shen, C., & Fang, B. (2022). How does young consumers' greenwashing perception impact their green purchase intention in the fast fashion industry? An analysis from the perspective of perceived risk theory. Sustainability, 14(20), 13473.

Mantzios, M., Egan, H., Hussain, M., Keyte, R., & Bahia, H. (2018). Mindfulness, self-compassion, and mindful eating in relation to fat and sugar consumption: an exploratory investigation. Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity, 23, 833-840.

Mathew, M., & Spinelli, R. (2025). Decoding sustainable drivers: A systematic literature review on sustainability-induced consumer behaviour in the fast fashion industry. Sustainable Production and Consumption. 55, 132-145.

Niinimäki, K., Peters, G., Dahlbo, H., Perry, P., Rissanen, T., & Gwilt, A. (2020). The environmental price of fast fashion. Nature Reviews Earth & Environment, 1(4), 189-200.

Rosenberg, E. L. (2004). Mindfulness and consumerism. In T. Kasser & A. D. Kanner (Eds.), Psychology and consumer culture: The struggle for a good life in a materialistic world (pp. 107–125). American Psychological Association.

Stanszus, L., Fischer, D., Böhme, T., Frank, P., Fritzsche, J., Geiger, S., ... & Schrader, U. (2017). Education for Sustainable Consumption through Mindfulness Training: Development of a Consumption-Specific Intervention. Journal of Teacher Education for Sustainability, 19(1), 5-21.

Vermeir, I., & Verbeke, W. (2006). Sustainable food consumption: Exploring the consumer "attitude–behavioral intention" gap. Journal of Agricultural and Environmental ethics, 19, 169-194.

Wei, X., & Jung, S. (2022). Benefit appeals and perceived corporate hypocrisy: implications for the CSR performance of fast fashion brands. Journal of Product & Brand Management, 31(2), 206-217.

Wiederhold, M., & Martinez, L. F. (2018). Ethical consumer behaviour in Germany: The attitude-behaviour gap in the green apparel industry. International Journal of Consumer Studies, 42(4), 419-429.

# Luxury Fashion Brands Communication on Gender Issues and Corporate Activism: Action or Hype?

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## Abstract

As consumer expectations grow for brands to take meaningful stances on social and political issues, this study explores how the top nine luxury fashion brands are genuinely "walking the talk" in their advocacy for gender fluidity and inclusivity. Via the analysis of the top nine most valuable luxury fashion brands worldwide, we assess the authenticity of their corporate and brand activism through public messaging, internal policies, and sustainability initiatives. The research integrates a comprehensive review of literature on gender in the fashion industry with an in-depth analysis of each brand's organizational structure and people-centered strategies. It seeks to uncover whether these companies genuinely align their values with their advocacy or if their actions are primarily driven by branding and market positioning. The findings highlight the nuanced challenges luxury brands face in reconciling commercial objectives with authentic social responsibility. Ultimately, the study offers valuable insights into the shifting landscape of brand activism in the luxury sector and its potential to shape broader societal attitudes toward gender identity and inclusion.

*Keywords: People-oriented sustainability; Corporate Social Advocacy; Brand Activism; Luxury Fashion Brands; Gender inclusivity*

## 1. Research Aim and Background

Fashion companies are increasingly prioritizing environmental and social sustainability, though their efforts range from genuine initiatives to instances of greenwashing and woke-washing (Sobande 2019; Palakshappa, Bulmer, & Dodds 2024; Sterbenk et al. 2022). While luxury and sustainability have traditionally been viewed as opposing concepts (Muniz & Guzmán 2021), a growing number of luxury brands are now formalizing their commitments to ethical and social causes (Karaosman, Brun, & Morales-Alonso 2017). Within this evolving landscape, contemporary understandings of gender have become central to global cultural and societal discourse (Wilson et al. 2024). The growing involvement of luxury fashion brands in addressing—or deliberately avoiding—social issues reflects a broader, emerging trend in the industry (Bhagwat et al. 2020). Today's consumers increasingly expect brands to take meaningful positions on societal matters, a demand that is consistently highlighted in consumer research, industry practice, and academic literature, and defined as brand activism (Austin et al. 2019; Ahmadi & Ataei 2022; Palakshappa, Bulmer, & Dodds 2024).

Brand Activism actions typically represent a stronger stance than Corporate Social Responsibility (CSR) and Diversity, Equity, and Inclusion (DEI) initiatives, being more provocative and critical (Wettstein & Baur, 2016; Lee, Alwi, & Gambetti, 2024).

Authenticity is crucial to avoid inadequacy, accusations of whitewashing or scandals, as well as brands' decisions on which side of the social issue they choose to support, or cause cherry picking (Parguel et al. 2015; Sobande 2019, O'Donnell et al. 2023). Recent studies suggest that engaging in socio-political discourse is no longer optional—especially for brands that significantly influence global culture and public dialogue (Waymer & Logan, 2021).

In light of this shift, our study focuses on luxury fashion brands, examining their strategic approaches to corporate and brand activism. Specifically, we investigate whether these brands are genuinely embodying their stated values in response to evolving conversations around gender fluidity and inclusivity. The study attempts to respond to the following research question: *To what extent are these brands authentically engaging in gender-related activism, and how are they contributing to the broader discourse on gender identity and inclusion?*

## 2. Methodology

We conducted an analysis of the nine most valuable luxury fashion brands, as identified in Interbrand's 2024 annual ranking (Burberry, Cartier, Chanel, Dior, Gucci, Hermès, Louis Vuitton, Prada, Tiffany). Using the framework developed by Vrendenburg et al. (2020), which evaluates the depth and authenticity of corporate and brand engagement with social issues, we categorized each brand accordingly. These brands were chosen for their significant communicative power and their dual role in an industry characterized by both diversity and uniformity—an industry widely acknowledged for its influence on social discourse.

Our desk research examined their public communications, strategic messaging, and internal corporate structures to assess the sincerity of their involvement in gender inclusivity efforts. We examined the top nine global luxury fashion brands listed in Interbrand's 2024 ranking, analyzing their websites, annual and CSR reports, and press materials using gender-related keywords. This desk research targeted controlled, internal communication channels to evaluate the authenticity of their engagement with gender inclusivity. Adopting a micro-process-oriented approach, our research aligns with calls for activity-based branding analysis (Johnson, Melin & Whittington, 2003; Salvato, 2003), focusing on the everyday practices that shape organizational behavior (Helfat & Peteraf, 2015).

The analysis followed a two-stage process. First, we applied a "walking the talk" framework, partially based on Lerpold et al. (2015, 2019), to assess how brands translate gender inclusivity into governance, leadership, and workforce practices. Second, we used Vredenburg et al.'s (2020) brand activism taxonomy to categorize each brand's socio-political engagement—ranging from avoidance to authentic activism.

Furthermore, we created a comprehensive index based on 27 variables: 13 "talk" indicators (e.g., gender-related messaging, executive statements, policies) and 14 "walk" indicators (e.g., female representation, diversity roles). Variables were scored binary (0/1), with additional points for exceeding benchmarks (e.g., gender quotas over 50%). Each brand was independently assessed by two researchers, with cross-checks for accuracy. The dataset, covering over 5,000 pages from 2023–2024, offers a robust and current evaluation of luxury fashion's role in gender inclusivity.

## 3. Results

The content analysis of the collected material led to the definition of the 'ways of walking' for the nine luxury companies under analysis, meaning the concrete actions they have implemented in favour of gender issues, if any. Our investigation highlighted the most significant and frequently repeated actions undertaken by luxury brands regarding gender-related sustainability efforts. These actions are categorized under the following labels: internal policies, international agreements and pledges; mentoring; partnerships, charities, and foundations; rankings and certifications.

Luxury fashion brands are increasingly implementing internal and external initiatives to promote gender equality. Internally, companies like Chanel, Hermès, Gucci, Prada, and Tiffany & Co. have introduced policies such as appointing women to leadership roles, ensuring equal pay, expanding parental leave, and forming diversity councils and equity boards. Many brands also pursue certifications and participate in global indices like the Bloomberg Gender-Equality Index to measure progress.

Externally, brands support gender equality through mentoring programs (e.g., Dior's Women@Dior, Tiffany's African Brilliance Collective), international initiatives (e.g., Cartier's WJI 2030), and campaigns promoting female entrepreneurship (e.g., Cartier Women's Initiative). Charitable efforts, such as Gucci's Chime for Change and the Chanel Foundation, further demonstrate their commitment to empowering women and girls globally.

These actions reflect a broad and growing commitment by luxury brands to address gender issues through leadership, policy, advocacy, and philanthropy.

The study evaluates the gender-related brand activism of nine top luxury brands by combining communication efforts ("talk") and actual initiatives ("walk"), using a framework based on Vredenburg et al. (2020). Brands are categorized into four types: avoidance, silent activism, inauthentic activism, and authentic activism.

In continuing the analysis of gender-related brand activism among nine leading luxury brands, the study integrates both desk research and empirical data collection through a "walk-the-talk" methodology. This approach evaluates not only what brands communicate publicly about gender equality ("talk") but also the concrete actions they undertake ("walk"). The results are interpreted using the framework proposed by Vredenburg et al. (2020), which categorizes brand behavior into four types: brand activism avoidance, silent brand activism, inauthentic brand activism (often referred to as "woke-washing"), and authentic brand activism, where communication and action are meaningfully aligned.

Overall, the findings suggest that most of the brands under review demonstrate a relatively balanced approach, with comparable levels of communication and action. Among the standout performers are Burberry, Gucci, and Tiffany, which exhibit high scores in both communication and implementation. These brands can be described as "talking walkers"—companies that not only speak out on gender issues but also back their words with substantial initiatives. Their leadership in this space positions them as key actors in the evolving landscape of brand activism. In contrast, Prada and Hermès appear to adopt a more reserved stance. While they have taken some steps toward gender inclusivity, their public communication tends to focus on other themes, suggesting either avoidance or a form of silent activism. This indicates a potential gap between internal efforts and external messaging. Chanel, Dior, and Louis Vuitton are identified as being in a transitional phase. These brands have launched promising initiatives—such as partnerships and foundations aimed at supporting women—but their overall engagement still appears to be in the early stages. Interestingly, the presence of female CEOs at Chanel and Dior does not seem to significantly influence the depth or visibility of gender-related initiatives,

challenging assumptions about leadership and advocacy. Finally, Cartier presents a unique case, as it places strong emphasis on communication, often highlighting its commitment to gender issues. However, the corresponding actions do not yet fully match this narrative. While Cartier's efforts are not superficial enough to be labelled as "woke-washing," there is a clear need for better alignment between its messaging and its tangible contributions. Achieving this balance would enhance the brand's credibility and position it more firmly among its peers in the luxury sector.

From a broader perspective, the analysis reveals that most brands are more advanced in addressing gender diversity from a traditional, binary standpoint. This is reflected in the relatively narrow range of "walk" scores (between 5 and 8) in this area. However, when the focus shifts to genderless or non-binary inclusion, the differences become more pronounced, with scores ranging from 6 to 13. This suggests that while some brands are beginning to embrace more inclusive understandings of gender, others are still catching up.

## 4. Implications and conclusions

The analysis reveals that most fashion brands exhibit a "walk" dimension—prioritizing actual practices over mere communication—indicating a mature and cautious approach to brand management and social sustainability. While environmental sustainability is more established, social aspects like gender inclusivity are still developing. This "walk over talk" trend may reflect authentic brand activism and inclusive marketing strategies that require significant business model changes and impact the entire supply chain.

Theoretically, the study aligns with evolving research on gender in fashion, moving beyond product design to examine companies' strategic commitments to DEI and CSR. It emphasizes analysing formal declarations and implemented actions rather than promotional content, helping assess the authenticity of brand activism.
As a managerial contribution, this methodology offers insights for brands aiming to engage in social issues authentically. It highlights the importance of learning from best practices to avoid accusations of greenwashing and to build genuine connections with diverse audiences, especially through inclusive marketing.

A key limitation of the study is its small sample size, which, while representative, limits the generalizability of the findings across different industries and cultural contexts. Future research should broaden the scope to include less prominent brands, diverse sectors, and varied cultural settings to better understand how brand advocacy is practiced and perceived. Additionally, further studies could investigate the relationship between brand activism, consumer responses, and the actual social impact of such activism. This would help assess the true influence brands have in driving social change.

## Selected References

Bhagwat, Y., Warren, N. L., Beck, J. T., & Watson, G. F., IV. (2020). Corporate sociopolitical activism and firm value. *Journal of Marketing*, *84*(5), 1–21.

Cooke, A., Russell-Bennett, R., Wang, D., & Whyte, S. (2022). Branding beyond the gender binary. *Psychology & Marketing, 39*(8), 1621-1632.

Hartmann, P., Marcos, A., & Apaolaza, V. (2023). Past, present, and future of research on corporate social responsibility advertising. *International Journal of Advertising*, *42*(1), 87–95. doi:10.1080/02650487.2022.2121902

Johnson, G., Melin, L., & Whittington, R. (2003). Micro strategy and strategizing: Towards an activity-based view. *Journal of Management Studies, 40*(1), 3–22.

O'Donnell, N., Ma, Y., Lee, Y.-J., & Choi, M. (2023). Corporate social advocacy and brand authenticity: Evaluating the influences of promise types and value congruence. *Journal of Marketing Communications*, 1–17.

Vredenburg, J., Kapitan, S., Spry, A., & Kemper, J. A. (2020). Brands taking a stand: Authentic brand activism or woke washing?. *Journal of public policy & marketing*, *39*(4), 444-460.

# Eating with Your Eyes: Insights Into the Promotion of Healthy Foods via Instagram

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## Abstract

This research explores Instagram's role in promoting healthy food options. By capitalizing on the most scalable food hashtags (#food, #foodporn, #foodstagram, #instafood, #foodie, #healthyfood) this study identifies the centrality of visual product aesthetics and epicurean eating as determinants of experiential food pleasure for health-conscious consumers.

*Keywords: healthy food, Instagram, visual product aesthetics, epicurean eating, health consciousness, pleasure.*

### 1. Introduction

Instagram is considered among the most influential photo and video sharing social networks. A widely popular activity on Instagram is foodtography (Coary and Poor, 2016), in which users take photographs of their meals and share them with others, whether they are followers, friends, or family (Andersen et al., 2021). In current years there is a strong debate on healthiness and an increasing number of Gen Z consumers are becoming health conscious, also thanks to social media. Instagram has been identified by many as a vehicle to promote and support healthy behaviors (Chung et al., 2017) but the results have been mixed with positives (e.g. sport-related communities) and negatives (e.g. eating disorders) results. In general, research suggests that healthy eating can be promoted by focusing on the aesthetic of food images and by capitalizing on epicurean eating (Landry et al., 2018; Cornil and Chandon, 2016; Block et al., 2011), defined as "the enduring pleasure derived from the aesthetic appreciation of the sensory and symbolic value of the food" (Cornil and Chandon, 2016, p. 52). Epicurean eating promotes food pleasure derived from savoring in moderation, without excess, with a focus on not just taste but visuals (aesthetics) and identity as well (we are what we eat). This contributes to health consciousness, which has been defined as an "individual difference variable that measures how active the individual is in maintaining one's health" (Naylor, Droms, and Haws, 2009, p. 223).

Instagram posts operate according to algorithms which tend to show content to individuals based on their previous engagement patterns. If an individual looks for and engages more frequently with healthy lifestyle posts (e.g., healthy food), s/he is more likely to be shown similar or related content, which in

turn might reinforce positive health behaviors (Friedman, 2022). Our study tries to understand the key drivers of this effect. By focusing on Instagram and its visual and aesthetically pleasing oriented culture, this research explores centrality of visual product aesthetics (Bloch et al., 2003) as related to epicurean eating (Cornil and Chandon, 2016) and how it might predict experiential food pleasure for health-conscious consumers (Provencher et al., 2009). Figure 1 illustrates the hypothesized relationship among the variables of interest.

## 2. Methodology

After IRB approval, 200 GenZ consumers were invited to participate in an extra-credit opportunity for a large introductory marketing course. First, they were asked to access their Instagram account and were randomly assigned to one of the six most prominent hashtags (over 1 million posts) related to food: #food, #foodporn, #foodstagram, #instafood, #foodie, #healthyfood. Overall, the Instagram algorithm is designed to give users a personalized experience that reflects their interests and behaviors on the platform. By randomly assigning subjects to a particular hashtag, we rely on Instagram as a social media platform providing the most salient food images for the GenZ consumer participating in our study. Second, subjects participating in the study were asked to evaluate their Instagram food images in terms of experiential food pleasure (10 items scale adapted from PANAS). Questions related to health consciousness (7 item scale; Provencher et al., 2009), centrality of visual product aesthetics (11 items scale; Bloch et al., 2003), and epicurean eating (7 item scale; Cornil and Chandon, 2016) followed.

## 3. Findings

With a final sample of 170 GenZ consumers, we conducted a mediation analysis (PROCESS model 4, Hayes, 2017) with 5,000 bootstrap samples at 95 % confidence intervals to test our hypothesized framework according to the variables of interest (Figure 1). All the variables were continuous and mean-centered. According to the total effect model, health consciousness (Cronbach's alpha =.855) has a significant and positive relationship with experiential food pleasure (Cronbach's alpha =.936; $b = 0.5799$, $p < 0.001$). Moreover, when centrality of visual product aesthetics (Cronbach's alpha =.919) and epicurean eating (Cronbach's alpha =.874) are included in the model, this effect is still significant ($b=0.471$, $p < 0.001$). The effect of health consciousness on experiential food pleasure through centrality of visual product aesthetics was not significant [$b = 0.031$; BC CI (-0.031, 0.105)]. However, the indirect effect of epicurean eating was significant [$b=0.047$; BC CI (0.001, 0.106)]. In addition, the sequential effect of centrality of visual product aesthetics and epicurean eating was significant [$b=0.031$; BC CI (0.001, 0.068)].

Our findings suggest that consumers who are more health conscious are more likely to associate positive feelings with the food images they see on Instagram. The psychological variables that seem to explain the effect are centrality of visual product aesthetics and epicurean eating.

## 4. Conclusions

Our study suggests that centrality of visual product aesthetics affects perceptions of food pleasure driven by epicurean eating for health-conscious consumers. This provides further understanding on the effectiveness of food images on Instagram. Interventions aimed at promoting healthy options on Instagram need to take into consideration the existing beliefs, attitudes, and behaviors (e.g. health consciousness) of the specific target audience due to the fact that Instagram and hashtags provide targeted messages based on past preferences and engagement patterns on the platform. Instagram

offers great opportunities to reinforce existing behaviors (good and bad) but might not deliver as expected when change is sought. Our future studies aim to further investigate these findings by: considering a bigger sample, controlling for food images, considering the design features of the food images (differences in colors, shape etc), and comparing an epicurean vs. visceral eating approach. The hope is to present the results of these new potential studies and analyses by the time of the conference.

## References


Andersen, T., Byrne, D. V., & Wang, Q. J. (2021). How digital food affects our analog lives: The impact of food photography on healthy eating behavior. *Frontiers in Psychology*, *12*, 634261.

Block, L. G., Grier, S. A., Childers, T. L., Davis, B., Ebert, J. E., Kumanyika, S., ... & Bieshaar, M. N. G. (2011). From nutrients to nurturance: A conceptual introduction to food well-being. *Journal of Public Policy & Marketing*, *30*(1), 5-13.

Bloch, P. H., Brunel, F. F., & Arnold, T. J. (2003). Individual differences in the centrality of visual product aesthetics: Concept and measurement. *Journal of Consumer Research*, *29*(4), 551-565.

Chung, C. F., Agapie, E., Schroeder, J., Mishra, S., Fogarty, J., & Munson, S. A. (2017, May). When personal tracking becomes social: Examining the use of Instagram for healthy eating. In *Proceedings of the 2017 CHI Conference on human factors in computing systems* (pp. 1674-1687).

Cornil, Y., & Chandon, P. (2016). Pleasure as an ally of healthy eating? Contrasting visceral and Epicurean eating pleasure and their association with portion size preferences and wellbeing. *Appetite*, *104*, 52-59.

Coary, S., & Poor, M. (2016). How consumer-generated images shape important consumption outcomes in the food domain. *Journal of Consumer Marketing*.

Friedman, V. J., Wright, C. J., Molenaar, A., McCaffrey, T., Brennan, L., & Lim, M. S. (2022). The use of social media as a persuasive platform to facilitate nutrition and health behavior change in young adults: web-based conversation study. *Journal of Medical Internet Research*, *24*(5), e28063

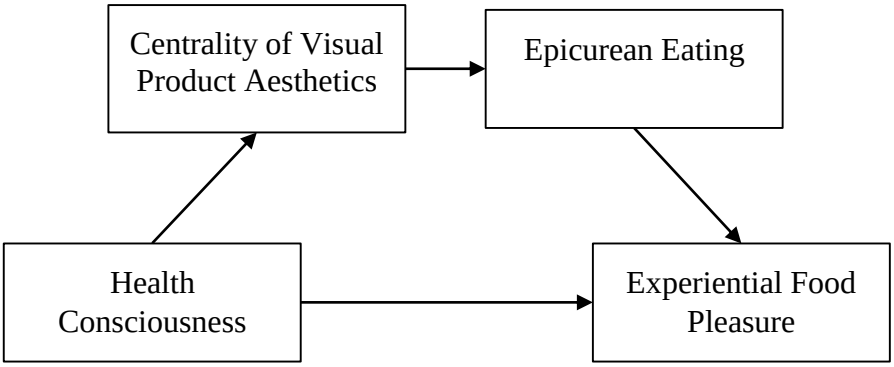
Landry, M., Lemieux, S., Lapointe, A., Bédard, A., Bélanger-Gravel, A., Bégin, C., ... & Desroches, S. (2018). Is eating pleasure compatible with healthy eating? A qualitative study on Quebecers' perceptions. *Appetite*, *125*, 537-547.

Naylor, R. W., Droms, C. M., & Haws, K. L. (2009). Eating with a purpose: Consumer response to functional food health claims in conflicting versus complementary information environments. *Journal of Public Policy & Marketing*, *28*(2), 221-233.

Provencher, V., Polivy, J., & Herman, C. P. (2009). Perceived healthiness of food. If it's healthy, you can eat more!. *Appetite*, *52*(2), 340-344.


## Appendix

**Figure 1:** Experiential Food pleasure on Instagram


Centrality of Visual Product Aesthetics
Epicurean Eating
Health Consciousness
Experiential Food Pleasure

# Fashion Activism Among Movements and Businesses: Insights from Italian Activist Entrepreneurs

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## Abstract

This paper explores the sustainability challenges in fashion and examines how activist entrepreneurship influences fashion activism. Using a qualitative approach, the research analyzes case studies involving activist entrepreneurs. The findings indicate three distinct pathways to achieving fashion activism.

*Keywords: sustainability; fashion activism; activist entrepreneurship; social movements*

## 1. Introduction and Theoretical Setting

The current global landscape is marked by instability and critical issues surrounding sustainability. The fashion industry is notably highlighted for its adverse effects, positioning it as a central player in the sustainability dilemma (Akrout and Guercini, 2022). This sector is deeply intertwined with various environmental, social, and economic concerns, such as the exhaustion of natural resources, the application of toxic chemicals, and the accumulation of textile waste (Islam *et al.*, 2021). Moreover, it is connected to social issues such as child labor, poor working conditions, unfair wages (Henninger *et al.*, 2016), and economic difficulties related to the relocation of production to low-wage areas (de Brito *et al.*, 2008). The rapid turnover of fashion trends, characteristic of the fast fashion model, significantly worsens the sustainability crisis in the fashion industry. Specifically, fast fashion companies are increasingly adopting a two-pronged strategy: shortening lead times and providing trendy merchandise as soon as trends emerge. This tactic fundamentally changes traditional production cycles. These businesses significantly reduce selling cycles and implement more frequent buying cycles by making smaller, more frequent purchases. Hence, consumers purchase more fashion products at lower prices (Pookulangara and Shephard, 2013).

In this framework, sustainable fashion—also known as green fashion, ethical fashion, or slow fashion—emerges as an alternative approach to fast fashion (de Oliveira Campos e*t al.*, 2023). Sustainability in the fashion industry manifests in various ways, such as the use of reused and recycled materials, the promotion of vintage and second-hand clothing, the adoption of vegan alternatives, the implementation of made-to-order production models, and the prioritization of fair, ethical, and environmentally responsible practices (Henninger *et al.*, 2017). Therefore, companies and consumers are becoming increasingly aware of sustainability issues in the fashion industry and the urgent need to address them. Many firms aim to make incremental changes to their business models, while new

ventures are being established with sustainable business models from the start (Runfola and Monteverde, 2023). Additionally, topics related to sustainable fashion consumption have gained significant traction in recent years (Dabas and Whang, 2022).

In the proposed scenario, another crucial topic arises with profound implications in the empirical world: fashion activism to approach sustainability. Specifically, "*fashion activism can imply individual or collective action and be embraced by social movements; in fact, activists generally do not take action just for their own benefit but are mostly driven by values of solidarity and by an ambition to bring about social change*"; fashion activism fights for "*social justice, environmental stewardship, economic prosperity and cultural regeneration*" (Mazzarella and Black, 2023, p. 234). In this paper, we connect fashion activism to activist entrepreneurship, focusing on individuals who are simultaneously activists and entrepreneurs in the fashion system for the sake of sustainability. Indeed, while this conceptualization might initially appear dissonant, research suggests possible intersections between activism and entrepreneurship (e.g., van den Broek *et al.*, 2012; Abebe *et al.*, 2020). Activist entrepreneurs engage in business activities while successfully fulfilling their role as activists, embracing a cause to advocate through efforts that extend beyond local boundaries; they connect with, or even create, communities of like-minded supporters (Monteverde *et al.*, 2024). Activist entrepreneurship can be linked to the concept of unconventional entrepreneurship (Guercini and Cova, 2018).

This research seeks to investigate how fashion activism is expressed through the lens of activist entrepreneurship. While existing literature has explored sustainability in fashion, it has largely overlooked the role of fashion activism in addressing sustainability challenges. Similarly, the study of activist entrepreneurship remains under-researched, necessitating more empirical work. This paper presents a novel perspective by examining how fashion activism and activist entrepreneurship can be integrated to promote sustainability. The exploratory goal of our research is paired with a qualitative methodological approach that focuses on case studies of three Italian activist entrepreneurs in the fashion industry.

## 2. Research Methodology And Case Studies Profile

Considering the exploratory nature of the research, this paper follows an inductive reasoning approach and adopts a qualitative methodology through multiple case studies (Eisenhardt, 1989). A thorough review of secondary data sources, including published interviews, news articles, corporate websites, social media content, and relevant online materials, informed the selection of activist entrepreneurs within the fashion industry. Specific criteria—primarily derived from existing literature—guided the selection of these activist entrepreneurs: i) they embrace and advocate for a cause related to sustainability in fashion; ii) they are surrounded by a community of followers supporting the same cause; and iii) they are founder-entrepreneurs of a sustainable fashion company, where profit is primarily viewed as a means to a greater purpose. We identified three activist entrepreneurs in Italy; for confidentiality, we refer to them as Alpha, Beta, and Gamma. The case studies draw from three sources of information for data gathering: in-depth, face-to-face, and semi-structured interviews with the activist entrepreneurs; desk research and secondary data; and online observation of primary social media platforms used by activist entrepreneurs, mainly Instagram and LinkedIn. We have successfully gathered data at all three levels for each of the three case studies.

*Alpha.* During his previous employment in the fashion industry, Alpha began to question the environmental and social impacts of the sector, a concern largely overlooked at the time. This critical reflection and subsequent involvement in non-profit organizations after leaving the industry led him to view his prior participation as an ethical lapse within a system he considered unsustainable. In 2015,

Alpha co-founded a sustainable fashion company with two colleagues in Italy. Initially conceived as a non-profit educational initiative, it has become a fashion brand. A key product is a t-shirt made from graphite, a non-toxic industrial waste. The company has consistently integrated educational programs into its operations, partnering with schools since its inception. Between 2018 and 2019, the company expanded its offerings to include design consultancy. In 2020, it further diversified by providing educational programs and courses for students while offering guidance and support to other fashion brands aiming to adopt sustainability. At the same time, during these years, Alpha intensified his activism efforts; he co-founded the Italian branch of the world's largest fashion activist movement and currently serves as Vice-President. He has also taken on key and influential roles in the European Commission, participating in extensive outreach activities. Alpha has led various online mobilizations to promote sustainable fashion, and since 2023, a television series has documented his travels to countries affected by Western fashion overconsumption. In 2024, Alpha published a book about responsible fashion.

*Beta.* After a career as an Export Manager in the German fashion industry, Beta founded a sustainable fashion company in Italy in 2012 after being exposed to the industry's darker side. Driven to create ethically produced, aesthetically pleasing products while respecting all living beings, she established a brand focused on animal welfare, a relatively novel concept at the time. This Italian handbag brand utilizes innovative plant-based materials like oranges, apples, cacti, corn, and other plant derivatives. Beta's commitment to animal welfare, evident in her self-identification as an agent for change and an animal activist, is reflected in the firm's production practices, prioritizing cruelty-free alternatives to animal leather. Beta fosters collaborations with animal rights movements worldwide as a spokesperson for animal rights. She volunteers and promotes awareness campaigns, including dedicated product lines within her fashion brand, focusing on sustainable fashion and prioritizing animal welfare. With a highly active online community, her fashion company presents itself as a social movement that welcomes all who share its aspirations and values. Beta is often invited to speak at various forums and events.

*Gamma.* Beginning in 2016, Gamma started to engage with sustainability as a consumer by critically examining her daily habits and purchasing decisions. Initially, Gamma focused on sustainability within the fashion industry, utilizing Instagram and YouTube to share information about slow fashion, the circular economy, and zero-waste concepts with her Italian audience. She is regarded as a true activist and a pioneer in various areas of sustainability in Italy. Gamma has built a strong online community that supports her activism for sustainability. Additionally, she is a driving force behind numerous online campaigns, using hashtags to mobilize her followers. She co-founded a social movement for responsible fashion in Italy, uniting a diverse coalition of brands, businesses, and industry experts. In 2021, Gamma published a book outlining virtuous behaviors for integrating sustainability into everyday life. From an entrepreneurial perspective, in 2018, Gamma founded a sustainable fashion brand for women, emphasizing eco-friendly fabrics, natural dyes, fair labor practices, and support for local artisans. In 2023, she also launched a zero-waste beauty brand. Gamma is frequently invited to lead online and in-person workshops on sustainable fashion. Moreover, in 2024, she became involved in a global network facilitated by an NGO to foster a deeper understanding of the climate crisis.

## 3. Findings and Concluding Remarks

According to this study's findings, the realization of fashion activism through the lens of activist entrepreneurship for sustainability occurs via three main pathways. Specifically, they involve activist entrepreneurs who advocate for sustainable fashion by strategically leveraging activist movements (either founded by them or connected with them) and their own companies. The first pathway involves the activist entrepreneur, the company, and the social movement. The sustainable fashion cause is

promoted through mutual reinforcement, where the activist community supports and integrates the company's practical efforts in sustainability. The second pathway emphasizes the relation between the business world, represented by the company, and the activist domain, represented by the social movement. Both elements are essential for promoting sustainable fashion and engaging diverse stakeholders in this discussion. The third pathway regards the activist entrepreneur and the activist company. As the sustainable fashion initiative becomes more integrated within the company, it increases calls to action, mobilization efforts, and dissemination activities. In this scenario, the company adopts a clear position via its brand, echoing the idea of brand activism (Vredenburg *et al.*, 2020). Conversely, entrepreneurs can position themselves as brands separate from companies to promote the sustainable fashion movement.

While providing interesting theoretical contributions, the paper also offers valuable managerial implications. With its high engagement, ability to create trends, capacity to shape marketing practices, and focus on sustainability, the fashion industry is a particularly relevant case study for understanding the interplay between activism and entrepreneurship. The advancement of fashion activism through activist entrepreneurship can inform practices in other sectors. Fashion can act as a catalyst for new sustainability trends driven by activism initiatives.

## References


Abebe, M. A., Kimakwa, S., & Redd, T. (2020). Toward a typology of social entrepreneurs: The interplay between passionate activism and entrepreneurial expertise. Journal of Small Business and Enterprise Development, 27(4), 509-530.

Akrout, H., & Guercini, S. (2022). Sustainability in fashion and luxury marketing: Results, paradoxes and potentialities. Journal of Global Fashion Marketing, 13(2), 91-100.

Dabas, C. S., & Whang, C. (2022). A systematic review of drivers of sustainable fashion consumption: 25 years of research evolution. Journal of Global Fashion Marketing, 13(2), 151-167.

de Brito, M. P., Carbone, V., & Blanquart, C. M. (2008). Towards a sustainable fashion retail supply chain in Europe: Organisation and performance. International Journal of Production Economics, 114(2), 534-553.

de Oliveira Campos, P., de Souza Lima, A. A. L., Ribeiro Costa, C. S., & da Costa, M. F. (2023). The influence of voluntary simplicity and environmental activism on sustainable fashion purchase intention. Journal of Fashion Marketing and Management, 27(2), 352-369.

Eisenhardt, K. M. (1989). Building theories from case study research. Academy of Management Review, 14(4), 532-550.

Guercini, S., & Cova, B. (2018). Unconventional entrepreneurship. Journal of Business Research, 92, 385-391.

Henninger, C. E., Alevizou, P. J., & Oates, C. J. (2016). What is sustainable fashion?. Journal of Fashion Marketing and Management, 20(4), 400-416.

Henninger, C. E., Alevizou, P. J., Goworek, H., & Ryding, D. (2017). Sustainability in fashion. A cradle to upcycle approach. Palgrave MacMillan.

Islam, M. M., Perry, P., & Gill, S. (2021). Mapping environmentally sustainable practices in textiles, apparel and fashion industries: A systematic literature review. Journal of Fashion Marketing and Management, 25(2), 331-353.

Mazzarella, F., & Black, S. (2023). Fashioning change: Fashion activism and its outcomes on local communities. Fashion Practice, 15(2), 230-255.

Monteverde, G., Runfola, A., & Cova, B. (2024). Activist entrepreneurship for a sustainable future: An integrative framework. Journal of Small Business & Entrepreneurship, 37(2), 294-319.

Pookulangara, S., & Shephard, A. (2013). Slow fashion movement: Understanding consumer perceptions—An exploratory study. Journal of Retailing and Consumer Services, 20(2), 200-206.

Runfola, A., & Monteverde, G. (2023). Something new, something sustainable! How network relationships shape sustainable new venture development. Journal of Business & Industrial Marketing, 38(12), 2811-2830.

van den Broek, T. A., Ehrenhard, M. L., Langley, D. J., & Groen, A. J. (2012). Dotcauses for sustainability: Combining activism and entrepreneurship. Journal of Public Affairs, 12(3), 214-223.

Vredenburg, J., Kapitan, S., Spry, A., & Kemper, J. A. (2020). Brands taking a stand: Authentic brand activism or woke washing?. Journal of Public Policy & Marketing, 39(4), 444-460.

# Communication Transparency and Inclusivity as Youth Priorities for Organizations in the Loss and Damage Fund Governance

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## Abstract

This research explores the awareness and perceptions of youth present at climate negotiations regarding the Loss and Damage fund, with particular attention to the role of the communication of organisations involved in its governance. Based on a qualitative approach, the study includes 168 interviews to youth participants to Youth4Climate (Rome) and COP28 (Dubai), four days of ethnographic observations, and a web listening analysis of more than 150.000 online contents. Results show a significant increase of youth's awareness after the announcement of the fund's operationalization at COP28 (+31%). However, youth's level of knowledge remains mainly general, suggesting the need for more transparent, clear, inclusive and accessible communication. Online platforms results being the main information source, despite they often lack reliability, exposing youth to the risk of disinformation like greenwashing. Transparency, inclusivity and coherence among communication and actions emerge as primary criteria to evaluate the legitimacy of the organisations involved in the fund's governance. The study contributes to enhance the debate regarding sustainability communication, highlighting the central role of youth as change makers, and proposing concrete recommendations for a more effective, transparent and inclusive communication from organisations involved in the Loss and Damage fund governance.

*Keywords: Loss and Damage, Transparency, Inclusivity, Sustainability Communication, Youth*

## 1. Introduction

This research is situated within the sustainability communication field, with a focus on transparency and inclusivity in the communication of organizations involved in Loss and Damage (L&D) fund governance, from the perspectives of youth attending climate negotiations. COP27 marked an essential moment in efforts to establish the L&D fund, with its operationalization milestone reached during the first day of COP28 (Shumba, 2024). As a result, after the negotiations, multiple critical elements

regarding L&D and the associated funding arrangements emerged, sparking public discussion. Within the climate change context, the voices of young activists have emerged as a powerful force advocating (UN, 2018). Therefore, this study aims to analyze the level of awareness of youth specifically regarding the L&D fund, exploring the strategic role of online platforms in creating and shaping their knowledge, as well as their perspectives. Furthermore, based on these perspectives, the research examines which elements youth prioritize when evaluating the organizations involved in the fund's governance, with attention to their communication practices and activities. The research hypothesizes that:

H1: The majority of youth at climate negotiations are expected to have become aware of the L&D fund, especially after its operationalization, due to the wide dissemination of information online. An increase in the depth of knowledge is expected when comparing the periods before and after this event, although the overall level of knowledge is anticipated to remain mostly general, with only a few youths demonstrating a low level, and an increase among those with deep knowledge.

H2: Youth are expected to prioritize elements such as transparency and inclusivity in the communication and activities of organizations involved in the L&D fund governance. These factors influence their perception of the organizations, shaping trust or suspicion of disinformation as greenwashing, and determining whether they support the involvement of the organization in the fund's governance.

## 2. Literature Review

The term L&D refers to the adverse consequences of climate change that persist despite efforts in mitigation and adaptation, impacting communities at both an economic and non-economic level (Burkett, 2014; UNEP, 2024). Despite this, ambiguity regarding the term still remains, which brings scholars to be concerned about problems regarding clarity, liability, and inclusivity within the fund governance, which consequently brings difficulties in international communication and collaboration (Shumba, 2024). Therefore, it is relevant that the actors involved in its governance communicate effectively to guarantee accessibility to information and inclusion. L&D can be categorized within the area of climate justice (Rao, 2022), which more and more is linked to human rights, human development, and climate change (Porter et al., 2020), as well as to climate finance (Zakour, 2024). Among the different stakeholders, youth have particularly shown to prioritize human rights in the climate change agenda (Gasparri et al., 2022), and to bring climate justice at the core of their public debate (Buhre, 2025; Trott, 2024). After the youth organization of Fridays For Future, which quickly gained international attention (Sanson & Bellemo, 2021) after conducting the largest climate mobilization in history (Sanson et al., 2019), youth became officially recognized as agents of change (UN, 2018). Studies have shown how their role in negotiations delegation can bring positive outcomes, (United Nations Joint Framework Initiative on Children, Youth, and Climate Change, 2010; Campisi et al., 2023) highlighting the importance in understanding their perspectives and opinions comncerning topics included in the negotiations agenda setting. Currently, in the literature, research regarding youth involvement and perceptions related to L&D is still very limited. Therefore, this study aims to enrich this field by analyzing youth awareness and knowledge of L&D, as well as by understanding if their priorities in terms of communication of the L&D fund by organizations involved in its governance are aligned with the most critical problems of the fund.

## 3. Methodology

The research relies on a qualitative analysis with in-depth interviews with 168 total participating young activists from all countries at Youth4Climate (Y4C) in Rome (56 interviews) and COP28 (112

interviews), representative of both genders and under 34 years old. Furthermore, four-day ethnographic observations were conducted, including immersive interaction and mystery observations, of four working groups into which youth were divided during the Y4C events, and four side- events with youth participating as delegates to discuss and negotiate at COP28. Finally, web listening was conducted across online conversations on different channels, including social media, news channels, blogs, and specific online forums on climate change, covering 150,000 contents from October 2021 to February 2024 delivered in all languages. The software adopted was 'The Signal 2' by Buzztech2. The system of queries and tagging covered a wide selection of topics related to climate change.

## 4. Results

61% of participants at Y4C declared that they were aware of L&D, while at COP28 92% declared it. More specifically, the amount of youth with a low level of knowledge regarding the L&D has increased from 13% (Y4C) to 23% (COP28); the one with general knowledge from 13% (Y4C) to 34% (COP28); while those with a deep knowledge remained stable at 35%. In parallel, the online analyses shows a spike in the volume of posts shared mentioning the L&D fund during COP28, with more than 10.000 posts per day, compared to those during COP27 (more than 7.000) and COP26 (more than 2.000). The annual average among COP27 and COP28 was about 500 posts per day. This trend reflects what has been reported by youth declaring to hear and discuss L&D especially or sometimes only during COPs, highlighting the relevance of enhancing continuative communication during the entire year. Furthermore, the online sentiment analysis shows a prevalence of negative sentiment in the daily posts (more than 6.000 posts per day), followed by those with positive sentiment (more than 5.000 posts per day) and in conclusion by those with a neutral tone (more than 1.000 posts per day). Moreover, during the interviews, youth underlined communication transparency, accountability, and inclusivity as the main criteria through which they evaluate the actors involved in the L&D fund governance. These elements have been accounted as crucial for all the actors involved: from the fund host to financial contributors as philanthropists or public sectors, and intergovernmental organizations. For what concerns the host of the fund, the World Bank, 63% of youth expressed were not satisfied with the choice of giving it the role; 13% remained neutral to this choice; while 24% supported it. Critics are mainly focused on the low perception of communication transparency, inequalities, and accountability, mainly due to past actions, such as deals with oil companies, and communication strategies, which made them skeptical of greenwashing. Among the organizations suggested as an alternative to host the fund, the Warsaw International Mechanisms, the Green Climate Fund, and the Caribbean Development Bank have been mentioned. Among the actors involved as financial contributors, philanthropy is seen as very positive, but not very involved in the context of financial investments. Differently, the private sector is perceived in a more controversial way: six youth out of ten oppose its participation within the fund's governance, denouncing phenomena like greenwashing and youthwashing. Youth supporting its involvement acknowledge that, despite these issues, the private sector has the financial capacity and high expertise to support the fund. In particular, insurance companies have been described as entities that earn profit from losses and damages. Indeed, despite 68% of youth considering them useful tools to build resilience, eight youth out of ten do not support their involvement in the fund. This would be accepted only in case of financial contribution through donations without a direct economic earn, guided by transparency, inclusion, and accountability. Finally, intergovernmental organizations, such as UN agencies, are considered by the interviewers as reliable actors, able to guarantee transparent communication and real commitment in emergency situations, making their communication and actions aligned and authentic. The collaboration among these entities and governments is received positively, and their involvement in the L&D fund governance is recommended.

## 5. Conclusions

This study has deepened the level of awareness and knowledge of youth present at climate negotiations regarding the L&D mechanisms and fund, and the criteria through which they evaluate the actors involved in its governance, with particular attention to the role of their communication. Based on the data gathered, an increment in the youth awareness of the L&D after the announcement of its operationalization at COP28 has been noted (+31%). Nevertheless, as hypothesized, the level of general knowledge has increased, but in-depth knowledge had no change, which partially confirms the first hypothesis (H1). Data suggests that the awareness and knowledge gathered by youth was primarily through online sources like news and social media, rather than from more reliable and informative sources. This might be the result of what was reported by Shumba (2024), meaning that the ambiguity and unclear understanding of the L&D fund governance communication contribute to obstacles in the full comprehension from the public, especially among youth who are less engaged in traditional communication and technical language, while they are more engaged in digital communication based on accessible language (Hoover & Clark, 2013). This lack of accessibility, inclusion, and transparency is an element of youth disengagement. Additionally, as observed by Gasparri et al. (2022), youth show a strong interest in climate justice themes like L&D, and the online sentiment is generally negative or positive shows strong emotional engagement. Despite this, interest is not necessarily accompanied by the correct and effective tools that enable youth to distinguish between reliable content and disinformation causing a threat. To address this challenge, it is essential that organizations involved within the L&D fund adopt sustainable and inclusive communication strategies that are more transparent and all-encompassing. Making information and content more accessible, clear, and engaging enhances the understanding of the fund, and reinforces the trust of youth with those organizations. Results show that transparency, inclusivity, and coherence among communication and actions are prioritized by youth as elements taken into consideration to assess actors involved in the L&D fund governance, confirming the second hypothesis (H2). Their communication effectiveness is perceived as directly linked to their legitimacy. In the case of the World Bank, even among the youth who supported its nominee as fund host, the necessity for communication improvement in terms of alignment among communication and activities emerged. On the contrary, organizations with minor resources but considered more authentic and transparent resulted as significantly more appreciated, showing that communication reputation matters as much as, or even more, than the technical capabilities from the eyes of youth. The same criteria has been applied to the private sector. Despite recognizing the financial capacity as well as the expertise that could provide a benefit, youth evaluate positively only the organizations that demonstrate real commitment, with coherent and inclusive communication, and avoid greenwashing. This research contributes to enriching the area still to be better developed regarding youth perception of L&D and the communication of organizations involved. Moreover, it is relevant to note the limitations of this study. The research relies on a limited sample that is not representative, making analysis in a very specific temporal context, and taking into account only online media. The research also relies on perceptions, giving the risk of possible personal biases. Therefore, future studies could expand the sample to include a more diverse group of youth, in addition to a longitudinal approach to explore how youth awareness and perceptions evolve over time in response to communication efforts. Finally, studies can integrate qualitative or mixed approaches to improve representation. In conclusion, the research contributes to enriching the sustainability communication area, proposing a new critical lecture on the role of transparency and inclusivity as key factors in building trust among youth. Additionally, it enforces the academic debate related to the role of youth as change makers and to be more included in climate discussions. Finally, the study gives concrete indications to organizations involved in the L&D fund governance, suggesting strategies of

communication more effectively to engage with youth in a significant way, contrasting disinformation and improving their own legitimacy and reputation.

## References


Buhre, F. (2025). Dissensus rhetoric in youth climate justice activism. Environmental Communication, 1–17.

Burkett, M. (2014). Loss and damage. Climate Law, 4(1–2), 119–130.

Campisi, J., Hird-Younger, M., Morton, E., Pataxó, H., Quispe, F. R., Romero Nina, S. R., & Sandroni, L. T.(2023). Overlooked no more: Empowering youth voices in global climate-change negotiations. Journal of Science Policy & Governance, 22(2).

Gasparry, G., Imbago-Jácome, D., Lakhani, H., Yeung, W., & El Omrani, O. (2022). Adolescents and youth are prioritising human rights in the climate change agenda. BMJ.

Hoover, S. M., & Clark, L. S. (2013). Children and media at the dawn of the digital age. In M. Lövheim (Ed.), Media, religion and gender: Key issues and new challenges (pp. 75–92). Routledge.

Porter, L., Rickards, L., Verlie, B., Bosomworth, K., Moloney, S., Lay, B., & Pellow, D. (2020). Climate justice in a climate changed world. Planning Theory & Practice, 21(2), 293–321.

Rao, A. S. (2022). The overdue climate justice of loss and damage. Journal of International Affairs, 75(1), 389–402.

Sanson, A., & Bellemo, M. (2021). Children and youth in the climate crisis. BJPsych Bulletin, 45(4), 205–209.

Sanson, A. V., Van Hoorn, J., & Burke, S. E. L. (2019). Responding to the impacts of the climate crisis on children and youth. Child Development Perspectives, 13(4), 201–207.

Trott, C. D. (2024). "It can't just be the younger people": Exploring young activists' perspectives on intergenerational tensions and solidarities for climate justice. Journal of Community & Applied Social Psychology, 34(6).

United Nations Joint Framework Initiative on Children, Youth, and Climate Change. (2010). Youth participation in the UNFCCC negotiation process: The United Nations, young people, and climate change. United Nations.

United Nations. (2018). Youth2030, working with and for young people. United Nations.

Zakour, C. (2024). Loss & Damage Youth Grant-Making Council – A climate justice case study. The Round Table, 113(4), 361–373.

# Dipendenze Strategiche e Radicamento Territoriale: Nuove Dimensioni della Resource Dependence Theory nel Settore Culturale-Creativo

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## Abstract

Lo studio esplora come le organizzazioni culturali e creative gestiscono la dipendenza da risorse critiche per rafforzare la propria sostenibilità e legittimazione, attraverso un'analisi qualitativa di 22 buone pratiche estratte dal progetto ECO ART – Digital REvolution for Sustainability. Utilizzando la Resource Dependence Theory (RDT) come quadro teorico di riferimento, l'indagine evidenzia come le risorse critiche si estendano oltre l'economico, includendo dimensioni reputazionali, digitali, territoriali e civiche. In particolare, emerge il ruolo strategico della dipendenza territoriale-reputazionale e della partecipazione comunitaria, nonché l'importanza delle alleanze con università e partner tecnologici per ridurre l'incertezza e rafforzare l'autonomia progettuale. I risultati contribuiscono a un arricchimento teorico della RDT, integrando paradigmi di governance collaborativa e sostenibilità multisfaccettata, e offrono indicazioni operative per le imprese culturali impegnate nella doppia transizione digitale e ambientale. È nel presente che il passato trova voce e il futuro prende forma: un ponte fatto di azioni quotidiane, alleanze e sperimentazioni, che trasformano ogni consiglio in un cambiamento tangibile e duraturo, orientato a un domani più sostenibile.

*Keywords: Cultural and Creative Industries, Resource Dependent Theory, Reputation, Best Practice, Sustainability*

## 1. Introduzione

Nel cuore della transizione ecologica e digitale, le Industrie Culturali e Creative (ICC) stanno ridefinendo il proprio ruolo non solo come motori di creatività, ma come laboratori di innovazione sostenibile. Le organizzazioni culturali si trovano oggi a operare in ambienti fortemente interdipendenti, caratterizzati da scarsità di risorse pubbliche, pressione reputazionale e vincoli normativi sempre più stringenti. In tale contesto, emerge con chiarezza la necessità di comprendere come queste organizzazioni gestiscano le proprie dipendenze da risorse critiche esterne, in particolare nei settori della cultura, del digitale e della sostenibilità. Tale riflessione si inserisce pienamente nel dibattito proposto dalla presente conferenza, che invita a rileggere le esperienze passate per affrontare

le sfide future, valorizzando il ruolo strategico dell'innovazione e del marketing nella costruzione di modelli culturali più resilienti e sostenibili.

La *Resource Dependence Theory* (Pfeffer & Salancik, 1978) offre un quadro interpretativo utile per analizzare il comportamento strategico delle organizzazioni in condizioni di vincolo ambientale. Tuttavia, gran parte della letteratura RDT si è concentrata su imprese profit, trascurando l'applicazione sistematica del modello ai settori non profit e culturali, dove le risorse sono spesso intangibili, relazionali o istituzionali. Inoltre, non è ancora del tutto esplorato come le pratiche organizzative contemporanee traducano le strategie di riduzione della dipendenza in progetti operativi capaci di generare valore sociale, reputazionale o territoriale.

Alla luce di tali considerazioni, il presente contributo si propone di analizzare un insieme di buone pratiche culturali, digitali e ambientali, al fine di comprendere quali siano le principali risorse critiche da cui le organizzazioni dipendono, e in che modo esse attivino strategie di mitigazione coerenti con la RDT.

La domanda di ricerca che guida il lavoro è la seguente:

*In che modo le organizzazioni culturali, digitali e ambientali gestiscono le proprie dipendenze da risorse critiche, e quali strategie adottano per ridurre la vulnerabilità strutturale, alla luce della Resource Dependence Theory?*

Attraverso l'analisi di 22 buone pratiche specificamente selezionate, si intende contribuire alla discussione teorica sulla RDT ampliandone l'applicabilità al settore culturale e non profit, con particolare attenzione alla rilevanza delle risorse immateriali, alla funzione delle reti collaborative e all'adozione di strumenti digitali e partecipativi come leve di autonomia e proponendo la rilevanza di una dimensione territoriale – reputazionale quale risorsa strategica e condivisa per la creazione di valore.

## 2. Background teorico

La definizione fondativa delle ICC proposta dal Department for Culture, Media and Sport (DCMS, 1998; 2001) le identifica come industrie basate su creatività, abilità e talento, con potenziale economico attraverso la valorizzazione della proprietà intellettuale. Tuttavia, questa visione si è evoluta: secondo l'UNESCO, le ICC sono oggi considerate attori chiave per lo sviluppo sostenibile, grazie alla loro capacità di innovare, rigenerare territori e promuovere coesione sociale (Parekh, 2024) La ricerca sulle peculiarità delle Industrie Culturali e Creative ha evidenziato caratteristiche strutturali distintive che rendono tutt'altro che scontato lo studio di tale settore. Come sottolineato da Imperiale et al. (2021), basandosi su un'ampia revisione della letteratura consolidata (Borisova 2018; Lazzaro 2018; Madgerova e Kyurova 2019), emergono quattro caratteristiche fondamentali che configurano sfide manageriali e organizzative di ordine differente rispetto ad altri settori economici: la natura del prodotto, la dimensione organizzativa, la struttura organizzativa e il carattere imprenditoriale. La natura del prodotto culturale e creativo presenta una complessità ontologica unica nel panorama economico. A differenza di altri tipi di beni, i prodotti culturali e creativi incorporano valori non utilitaristici, quali qualità estetiche, spirituali, sociali, storiche e simboliche (Throsby 2001, pp. 28-29). Questa natura multivaloriale implica che l'utilità del prodotto dipende dalla capacità del consumatore di codificare e decodificare il valore, generando incertezza sia nei processi produttivi che nelle dinamiche di mercato (Townley et al. 2009). Un secondo elemento distintivo è rappresentato dal cosiddetto "missing middle" nella struttura dimensionale del settore. Le imprese operanti nelle ICC si polarizzano tra "big players" (multinazionali di grandi dimensioni) e organizzazioni micro e piccole, con queste ultime che

costituiscono la maggioranza del tessuto imprenditoriale. Queste entità spesso operano in forme notfor-profit o come imprese sociali, frequentemente sotto forma di freelancer (Imperiale et al. 2021). Questa caratteristica strutturale genera attività che possono operare in un range di modalità formali e informali, for-profit e not-for-profit, statali e commerciali, posizionandosi tra produzione e consumo e risultando spesso in interdipendenze lavorative complesse (Pratt 2009). Il "missing middle" ha implicazioni significative per l'adozione di innovazioni tecnologiche, poiché le piccole organizzazioni spesso mancano delle risorse necessarie per investimenti tecnologici significativi, mentre le grandi multinazionali potrebbero non riflettere le dinamiche innovative tipiche del settore creativo locale. Le ICC sono caratterizzate da un workflow temporaneo e non permanente (Benhamou 2003), integrato con una struttura prototipale basata su progetti. Il processo creativo è plasmato da ispirazione, talento, vitalità e impegno dei lavoratori culturali e creativi, emergendo da flussi di conoscenza e operativi complessi che rendono il lavoro in queste imprese altamente volatile. Jeffcutt e Pratt (2002) hanno definito le ICC come "chart businesses", evidenziando come assumano "forme organizzative diverse in tempi diversi e per tecnologie e industrie diverse", dimostrandosi "molto efficaci nel produrre prodotti e mercati per la novità" (Jeffcutt e Pratt 2002, p. 8). Questa fluidità organizzativa presenta sia opportunità che sfide per il settore e la sua filiera. Infine, il quarto elemento critico è rappresentato dalla generale carenza di competenze imprenditoriali trasversalmente a tutti i settori delle ICC. I creativi spesso mancano delle risorse necessarie per trasformare le loro idee innovative in proposte di business sostenibili. Essi trovano difficoltà nell'instaurare relazioni di fiducia reciproche e con istituzioni di Higher Education and Research (HE&R). Inoltre, mostrano frequentemente inadeguatezza nelle competenze di networking, elemento invece fondamentale per incrementare l'expertise cross-settoriale e promuovere opportunità trasversali. Conseguentemente, le ICC risultano spesso isolate o eccessivamente dipendenti dalle risorse pubbliche, affrontando difficoltà nello sviluppare strutture sostenibili e nel guadagnare visibilità di mercato, il che conduce alla sfida ultima di ottenere investimenti (Imperiale et al. 2021). La letteratura evidenzia una controversia fondamentale riguardo all'estensione con cui queste caratteristiche ostacolino o promuovano la sostenibilità delle ICC. Da un lato, la piccola dimensione e la precarietà dei lavoratori culturali pongono evidentemente importanti sfide di sostenibilità. Dall'altro lato, questi stessi fattori sono determinanti nel forgiare l'innovatività delle ICC, grazie all'apprendimento interattivo indotto dalla mobilità dei lavoratori creativi in vari progetti e team, così come alla capacità delle ICC di resistere ai cambiamenti indotti dalle crisi economiche rispetto alle performance di altri settori. A causa delle loro caratteristiche intrinseche, le ICC tendono normalmente a localizzare le loro attività in grandi agglomerati urbani, a detrimento di aree periferiche dove non riescono a trovare le condizioni ideali per start-up e crescita. Tuttavia, secondo una posizione divergente, la localizzazione al di fuori degli "hub creativi" potrebbe talvolta apportare altri vantaggi in termini di attaccamento personale e radicamento sociale degli individui creativi, costi generali e operativi più bassi, networking locale e supporto (Comunian et al. 2010). Questa tensione territoriale ha implicazioni dirette per l'implementazione di innovazioni tecnologiche, che potrebbero fungere da equalizzatori geografici, permettendo alle ICC localizzate in aree periferiche di accedere a mercati globali e reti collaborative internazionali.

La Resource Dependence Theory (Pfeffer & Salancik, 1978) rappresenta un paradigma fondamentale per comprendere come le organizzazioni gestiscano la propria sopravvivenza e autonomia in ambienti caratterizzati da incertezza e scarsità di risorse. Secondo la RDT, le organizzazioni non sono entità isolate, ma sistemi aperti che dipendono da risorse critiche esterne – materiali, finanziarie, simboliche o relazionali – il cui controllo è spesso concentrato in mani altrui. Questa dipendenza genera asimmetrie di potere e vulnerabilità strutturale, che le organizzazioni cercano di mitigare attraverso strategie di adattamento, negoziazione e cooptazione.

Negli ultimi anni, la RDT ha conosciuto una fase di rinnovato interesse e applicazione empirica, anche in settori non tradizionali come le industrie culturali e creative (ICC), le organizzazioni digitali e le iniziative ambientali. In questi contesti, le risorse critiche non sono solo materiali o finanziarie, ma includono legittimità istituzionale, capitale simbolico, accesso a reti collaborative, visibilità pubblica e competenze digitali (Biermann & Harsch, 2016; Ozturk, 2021). Una recente revisione bibliometrica della letteratura RDT ha evidenziato come la teoria sia stata frequentemente utilizzata per analizzare le strategie di sopravvivenza e adattamento in ambienti complessi, ma anche come vi sia una carenza di studi empirici che ne testino esplicitamente i concetti fondamentali, soprattutto in ambiti culturali e creativi (Ozturk, 2021) Tuttavia, la sua applicabilità a organizzazioni che operano in ecosistemi ad alta incertezza e interdipendenza – come quelle culturali, digitali e ambientali – è oggi sempre più riconosciuta.

In particolare, la RDT si rivela utile per analizzare come queste organizzazioni gestiscano la dipendenza da attori dominanti (es. enti pubblici, piattaforme digitali, fondazioni, policy makers) e attivino strategie di adattamento, innovazione e resilienza, riconfigurando le proprie relazioni di potere e rafforzando la propria autonomia in un ecosistema in continua evoluzione.

## 3. Metodologia

Per rispondere alla domanda di ricerca, è stata adottata una metodologia qualitativa fondata sull'approccio del case study esplorativo (Yin, 2018). Tale approccio si è rivelato particolarmente adeguato per indagare fenomeni complessi, ad alta variabilità contestuale e non ancora pienamente formalizzati sul piano teorico, come quelli relativi alla gestione delle dipendenze organizzative in ambito culturale e creativo. Il case study consente infatti un'analisi profonda e contestualizzata, soprattutto in presenza di confini labili tra fenomeno e contesto, e quando l'oggetto dell'analisi è inserito in un ecosistema relazionale ricco di interdipendenze.

Il contesto empirico di riferimento è costituito dal programma ECO ART – Digital REvolution for Sustainability, iniziativa finanziata nell'ambito del Piano Nazionale di Ripresa e Resilienza (PNRR), Missione 1 – Digitalizzazione, innovazione, competitività, cultura e turismo, Investimento 3.3 "Capacity building per gli operatori della cultura per gestire la transizione digitale e verde", Sub-investimento 3.3.3, Azione B1 (cd. *TOCC B1*). Il programma è promosso da un partenariato composto dall'Università degli Studi di Urbino Carlo Bo, dall'Università Politecnica delle Marche, da SID S.r.l., dalla Fondazione Arte della Seta Lisio e da Marchingegno S.r.l.___7. L'obiettivo generale dell'intervento è quello di rafforzare le competenze degli operatori culturali nella gestione della transizione digitale e ambientale, promuovendo l'integrazione di criteri sociali, ecologici e inclusivi nella progettazione e produzione culturale.

La selezione dei casi studio si è basata sull'elenco delle buone pratiche raccolte e sistematizzate nell'ambito del programma ECO ART. A partire da una popolazione iniziale di oltre 40 pratiche mappate, è stato selezionato un campione ragionato di 22 casi, secondo criteri teorico-metodologici di coerenza con la RDT, disponibilità informativa e varietà tipologica. In particolare, sono stati privilegiati i casi in cui le dinamiche di dipendenza da risorse critiche – materiali, simboliche, reputazionali e

territoriali – risultassero chiaramente articolate, e in cui fossero osservabili strategie di mitigazione attiva delle suddette dipendenze.

La raccolta dei dati è avvenuta attraverso un processo di triangolazione tra fonti documentali interne al progetto (schede descrittive, materiali di mappatura disponibili su piattaforma su richiesta), analisi di

contenuti digitali accessibili pubblicamente (siti web ufficiali, presentazioni, articoli, interviste e video), e codifica qualitativa secondo un approccio abductive-oriented. Tale triangolazione ha permesso di costruire una matrice interpretativa comparata in grado di identificare pattern ricorrenti nelle forme di gestione delle dipendenze, offrendo così una base solida per la discussione teorica e la riflessione sulle implicazioni manageriali.

## 4. Risultati e commento

L'analisi ha interessato un campione selezionato di 22 buone pratiche, estratte da un insieme più ampio di oltre 40 progetti, con l'obiettivo di garantire un'adeguata rappresentatività in termini di contenuti, tipologie organizzative, territori e target sociali. La selezione è stata guidata da criteri di varietà tematica (cultura, digitale, sostenibilità), rilevanza strategica (impatto reputazionale e innovativo) e coerenza rispetto ai presupposti teorici della Resource Dependence Theory (RDT). Le pratiche individuate si collocano lungo tre assi principali: iniziative culturali e territoriali (22 casi), pratiche digitali e di innovazione (10 casi), e infine pratiche ad orientamento ambientale o civico (8 casi). Per ciascun caso, sono state identificate la risorsa critica su cui si fonda la sopravvivenza o la crescita dell'iniziativa, il grado di scarsità o di concentrazione del controllo su tale risorsa, la forma di dipendenza che ne deriva e la strategia adottata per mitigarne gli effetti. Il quadro teorico di riferimento è quello elaborato da Pfeffer e Salancik (1978), secondo cui le organizzazioni sono entità sociali interdipendenti, inserite in un contesto ambientale da cui traggono risorse materiali, simboliche e istituzionali necessarie alla loro continuità. In tale contesto, le pratiche esaminate forniscono un osservatorio privilegiato per comprendere le modalità concrete con cui le organizzazioni culturali, sociali e civiche affrontano la vulnerabilità derivante da risorse esogene, assumendo strategie di adattamento e cooptazione. L'esame dei casi selezionati, tabella 1 in calce al manoscritto, mostra come le risorse oggi considerate critiche non siano più limitate alle dimensioni economiche o materiali, ma includano risorse reputazionali, sociali, digitali e ambientali. In particolare, numerose organizzazioni operanti nel settore museale e culturale hanno ridefinito il proprio campo d'azione attorno alla valorizzazione di pubblici vulnerabili, come giovani, donne e persone con disabilità. Tali segmenti, storicamente marginali nei modelli museali tradizionali, costituiscono oggi un asset strategico in quanto veicolano accesso a fondi pubblici dedicati, riconoscimento istituzionale e crescente legittimazione sociale. In termini di dipendenza, ciò si traduce in una pressione verso la trasformazione delle pratiche di governance, attraverso meccanismi di cooptazione di rappresentanti nei board, co-disegno di percorsi esperienziali e attivazione di dispositivi di accountability inclusiva.

Un secondo asse interpretativo riguarda la crescente rilevanza delle tecnologie digitali, che diventano risorsa cruciale non solo per la comunicazione e l'accesso al pubblico, ma anche per la produzione culturale stessa. Le pratiche che incorporano intelligenza artificiale, realtà aumentata, app e ambienti virtuali dimostrano una chiara consapevolezza della propria dipendenza da competenze e infrastrutture esterne. In risposta, tali organizzazioni implementano strategie di alleanza con enti universitari, partenariati tecnologici o outsourcing selettivo, con l'obiettivo di ridurre l'incertezza operativa, aumentare l'autonomia progettuale e garantirsi un vantaggio reputazionale rispetto alla concorrenza. Rispetto alla formulazione originaria della RDT, queste dinamiche suggeriscono una estensione teorica volta a includere le competenze digitali come asset intangibile ma strutturalmente centrale nei contesti contemporanei. La terza direttrice emersa dall'analisi riguarda le pratiche che valorizzano risorse territoriali, culturali e ambientali. Ecomusei, festival rurali e reti artigianali evidenziano forme di dipendenza legate alla scarsità di flussi turistici autonomi, alla debolezza strutturale della governance locale o alla difficoltà di mantenere il controllo sulla narrazione culturale. In questi contesti, le strategie di risposta si fondano su logiche di rete, collaborazione istituzionale e valorizzazione partecipativa dei

saperi locali. Tali pratiche evidenziano una forma di adattamento strategico che privilegia la densità relazionale e la coesione territoriale come strumenti per aumentare la resilienza organizzativa, rafforzare il capitale simbolico e accedere a circuiti di finanziamento multilivello.

L'analisi condotta conferma come la Resource Dependence Theory (RDT) costituisca un quadro utile per comprendere le strategie adottate dalle organizzazioni culturali e creative nel gestire risorse critiche, ma al contempo evidenzia la necessità di un ampliamento teorico per includere dinamiche specifiche del settore delle industrie culturali e creative (ICC) (Benghozi & Salvador, 2016a; Throsby, 2001; Lazzaro, 2018). In questo ambito, le risorse chiave non sono solo materiali o finanziarie, ma anche sociali, simboliche e ambientali, con particolare rilievo per la dipendenza territoriale-reputazionale, che si manifesta come una forma complessa di relazione con il contesto locale (Imperiale, Fasiello & Adamo, 2021; Salvador & Benghozi, 2023). Inoltre, musei e iniziative (Uffizi, Explora, Museo Ferragamo, Wien Museum) attivano programmi per giovani, donne, disabilità: queste categorie diventano risorse strategiche. L'organizzazione dipende dalla loro partecipazione per legittimità, fondi, audience e nel gestire la dipendenza tali istituzioni culturali sviluppano practice inclusive e governance partecipativa. Questa dipendenza territoriale è caratterizzata da una scarcity non tanto economica quanto culturale e simbolica, poiché il valore si fonda sull'embeddedness in un ecosistema sociale e sulla costruzione condivisa dell'identità locale, un aspetto che la RDT classica non considera completamente (Granovetter, 1985; Casciaro & Piskorski, 2005). Le organizzazioni culturali, come gli ecomusei o i consorzi artigianali, costruiscono alleanze e reti partecipative che fungono da meccanismi di governance collaborativa e legittimazione, riflettendo anche i principi della triple bottom line (Elkington, 1997), che integra sostenibilità economica, sociale e ambientale. Inoltre, le ICC devono gestire la crescente rilevanza delle tecnologie digitali, che rappresentano risorse intangibili e altamente specializzate, la cui scarsità richiede alle organizzazioni di sviluppare partnership strategiche con università, centri di ricerca e attori tecnologici (Benghozi & Salvador, 2016b; Jeffcutt & Pratt, 2002). Questa dipendenza dalle competenze digitali e dall'innovazione tecnologica amplia il campo di applicazione della RDT, suggerendo la necessità di includere asset immateriali e dinamiche di innovazione continua come fattori critici per la resilienza e il vantaggio competitivo delle imprese culturali (Madgerova & Vyara, 2019).

Infine, l'importanza del capitale sociale e civico, attraverso la partecipazione comunitaria e la co-gestione delle risorse ambientali e culturali, sottolinea il ruolo cruciale della fiducia sociale e della responsabilità collettiva nel rafforzare la legittimità organizzativa e ridurre la vulnerabilità derivante da risorse esterne limitate (Benhamou, 2003; DCMS, 1998; Townley, Beech & McKinlay, 2009). In questo contesto, le università emergono come nodi chiave nella rete di risorse, fornendo conoscenza specialistica, legittimazione istituzionale e mediazione tra attori diversi, confermando la rilevanza delle alleanze interdisciplinari e multi-stakeholder nel panorama contemporaneo delle ICC (Salvador & Benghozi, 2023). Queste configurazioni richiedono una rilettura della RDT in chiave relazionale (Casciaro & Piskorski, 2005), in cui l'interdipendenza si gioca non solo sul controllo diretto delle risorse, ma sulla gestione del significato condiviso e sulla costruzione simbolica dell'identità territoriale. L'autonomia organizzativa, in questo senso, si misura nella capacità di "mediare" il territorio come discorso culturale, piuttosto che semplicemente utilizzarlo come contesto fisico o amministrativo. In termini di implicazioni manageriali, è cruciale per le ICC posizionarsi come organizzazioni autentiche, profondamente radicate nel contesto locale e percepite come socialmente rilevanti.

La valorizzazione delle risorse informali e simboliche, quali memorie collettive, identità culturali e narrazioni (storytelling), si configura come un fattore competitivo strategico. Tali risorse non solo contribuiscono a differenziare l'offerta culturale, ma rappresentano anche leve fondamentali per la

mobilitazione di comunità, la costruzione di reti collaborative e l'accesso a finanziamenti pubblici e privati, che premiano l'innovazione sociale e culturale.

Inoltre, le ICC devono consolidare il proprio ruolo come agenti di innovazione culturale e sociale all'interno dei territori in cui operano, sfruttando il capitale territoriale non come mero spazio geografico, ma come un ambiente relazionale e simbolico dove si negozia la reputazione, la legittimità e, più in generale, le condizioni di sopravvivenza e sviluppo. Questo implica una gestione attenta delle relazioni con stakeholder locali, istituzioni e comunità, in una logica di governance collaborativa e partecipativa.

La reputazione, pertanto, deve essere considerata non un mero riflesso della performance economica, ma un driver strategico centrale, capace di influenzare in modo determinante la sostenibilità a lungo termine dell'organizzazione. Per le ICC, dunque, la gestione della reputazione territoriale e della dimensione simbolica rappresenta una priorità manageriale imprescindibile, che richiede competenze trasversali, visione strategica e capacità di innovare i modelli organizzativi e di governance tradizionali.

## 6. Conclusioni

Le evidenze emerse dall'analisi delle 22 buone pratiche culturali, digitali e ambientali selezionate consentono di rispondere in modo articolato alla domanda di ricerca iniziale, ovvero: in che modo le organizzazioni culturali, digitali e ambientali gestiscono le proprie dipendenze da risorse critiche, e quali strategie adottano per ridurre la vulnerabilità strutturale, alla luce della Resource Dependence Theory? I risultati mostrano che tali organizzazioni, operanti spesso in condizioni di alta incertezza e scarsità di risorse, attivano strategie multilivello di adattamento e influenza, tra cui l'alleanza con università e reti civiche, la valorizzazione reputazionale del territorio e la cooptazione di attori tecnici per compensare dipendenze digitali. La RDT si dimostra un quadro interpretativo ancora utile, ma necessita di essere estesa per includere forme di dipendenza da risorse immateriali e simboliche, quali la legittimazione culturale, il capitale relazionale e la visibilità pubblica. L'analisi suggerisce l'esistenza di una *Resource Dependence Theory territoriale-reputazionale*, dove il controllo delle risorse non si esprime solo in termini strutturali, ma anche attraverso la capacità di incidere su processi di significazione, inclusione e narrazione identitaria.

Tuttavia, lo studio presenta alcuni limiti. La natura qualitativa ed esplorativa dell'analisi, unita a una selezione non esaustiva delle buone pratiche, non consente generalizzazioni né l'identificazione di nessi causali forti tra configurazioni strategiche e performance organizzativa. Inoltre, l'adozione di fonti secondarie e descrittive può aver condotto a una sovra rappresentazione delle dimensioni più visibili o istituzionalizzate delle pratiche. In termini teorici, resta da esplorare in modo più sistematico l'interazione tra RDT e altre prospettive, come la teoria dell'embeddedness o le logiche istituzionali ibride, in particolare nei contesti a vocazione culturale e civile. Per future ricerche, si propone di approfondire, attraverso metodi misti o studi di caso longitudinali, il ruolo delle dipendenze reputazionali e territoriali nelle imprese culturali e creative, analizzando come queste si evolvano nel tempo e si traducano in strutture di governance, forme di resilienza e modelli di sostenibilità. Sul piano teorico, l'estensione della RDT verso una prospettiva più dinamica e relazionale può offrire contributi significativi per comprendere le strategie di sopravvivenza e innovazione nelle organizzazioni orientate al valore culturale e sociale, in ambienti ad alta complessità e interdipendenza.

Considerazione finale e in parte svincolata dal focus del progetto, le ICC – soprattutto quelle più piccole e radicate nei territori – dimostrano che è possibile innovare senza perdere l'anima, coniugando tradizione, tecnologia e sostenibilità.

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## Bibliografia

Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120. https://doi.org/10.1177/014920639101700108 Benghozi P.-J., Salvador E. (2016b) "How and where the R&D takes place in creative industries? Digital investment strategies of the book publishing sector", Technology Analysis & Strategic Management, vol. 28, n. 5, pp. 568-582.

Benghozi, P.-J., & Salvador, E. (2016a). Managing innovation in creative industries: A review. *Creativity and Innovation Management*, 25(3), 351–369. https://doi.org/10.1111/caim.12153

Benghozi, P.-J., & Salvador, E. (2023). Hidden innovation in cultural and creative industries. *International Journal of Arts Management*, 25(2), 45–60.

Benhamou, F. (2003). Artists' labour markets. A handbook of cultural economics, 6975.

Biermann, F., & Harsch, M. (Eds.). (2016). *Resource dependence and global environmental governance*. MIT Press.

Borisova, V. (2018) Essential Characteristics and Market of the Creative Industries' Product. Economic Alternatives 1: 113–22.

Comunian, R., Chapain, C., & Clifton, N. (2010). Location, location, location:

Exploring the complex relationship between creative industries and place. *Creative Industries Journal*, 3(1), 5–10. https://doi.org/10.1386/cij.3.1.5_1

DCMS, (1998), Creative Industry Task Force Report, London, Department for Culture, Media and Sport.

DCMS, (2001), Green Paper: Culture and Creativity: the Next 10 Years.

Elkington, J. (1997). The triple bottom line. Environmental management: Readings and cases, 2, 49-66.

Imperiale, F., Fasiello, R., & Adamo, S. (2021). Sustainability Determinants of Cultural and Creative Industries in Peripheral Areas. *Journal of Risk and Financial Management*, *14*(9), 438. https://doi.org/10.3390/jrfm14090438

Jeffcutt, P., & Pratt, A. (2002). Managing creativity in the cultural industries. Creativity and innovation management, 11(4), 225-233.

Komorowski, M., & Lewis, J. (2023). Cultural resilience and sustainability in the post-pandemic era. *International Journal of Cultural Policy*, 29(1), 1–17. https://doi.org/10.1080/10286632.2022.2101234

Lazzaro, E. (2018) Cultural and creative Entrepreneurs. In Culture, Innovation and the Economy. Edited by Biljana Mickov and James E. Doyle. London: Routledge, pp. 33– 37.

Madgerova, R., and Vyara K. (2019) Specifics of entrepreneurship in the field of cultural and creative industries. Entrepreneurship VII: 103–23

Ozturk, A. (2021). A bibliometric analysis of resource dependence theory: Current status and future directions. *Management Decision*, 59(6), 1357–1377. https://doi.org/10.1108/MD-06-2020-0763

Parekh, R., & Trabucco, D. (2024). Recent progress in integrating BIM and LCA for sustainable construction: A Review. International Journal of Science and Research Archive, 13(1), 907-932.

Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations: A resource dependence perspective*. Harper & Row.

Pratt, A. C. (2009). Policy transfer and the field of the cultural and creative industries: What can be learned from Europe?. In Creative economies, creative cities: AsianEuropean perspectives (pp. 9-23). Dordrecht: Springer Netherlands.

Salvador E., Benghozi P.-J., (2023) "The evolving place of the Cultural and Creative industries in the public policy orientation: What can we learn from the Communications of the European Commission?", « Réséaux », vol. 2-3, n. 238-239, pp. 283-328. Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic Management Journal*, 18(7), 509–533. https://doi.org/10.1002/(SICI)1097-0266(199708)18:7<509::AID-SMJ882>3.0.CO;2-Z

Throsby, D. (2001) Economics and Culture. Cambridge: Cambridge University Press Townley, B., Beech, N., & McKinlay, A. (2009). Managing in the creative industries: Managing the motley crew. Human relations, 62(7), 939-962.

Yin, R. K. (2017). Case study research and applications: Design and methods. Sage publications.

**Tabella 1.** Analisi delle buone pratiche secondo il concetto di dipendenza e scarsità e strategia adottata per rafforzare la sostenibilità

| **Buona Pratica** | **Risorsa Critica** | **Dipendenza e Scarsità** | **Strategia RDT adottata** | **Riflessione teorica centrata** |
|---|---|---|---|---|
| AmoRomeo | Comunità LGBTQ+, networking social | Rete e comunità limitate | Alleanze, branding inclusivo | Rafforza dipendenza dalla community per legittimità e contenuti usergenerated. |
| Cartiera (es. Cartiera Latina) | Spazi creativi in heritage | Spazi storici rari | Partnership pubblico-priva to | Cooptazione istituzionale per accesso a spazi e finanziamenti. |

| | | | | |
|---|---|---|---|---|
| Climate Museum | Pubblico attivo sul clima | Interesse e fondi specifici | Board specializzati, advocacy | Usa board tematici per legittimazione e lobbying politico-ambient ale. |
| Ecomuseo Miniere Gorno | Saperi locali, turismo industriale | Patrimonio unico | Reti, MoU con istituzioni | Rete territoriale per accesso a visitatori e finanziamenti UE. |
| Eticae | Responsabilit à sociale | Donatori e network etico | Joint ventures, eventi cobranding | Si integra con attori etici per risorse di reputazione. |
| Explora – Museo Bambini | Pubblico famiglie/giov ani | Coinvolgime nto familiare limitato | Co-progettazio ne, focus group | Governance partecipata per ridurre dipendenza da pubblico target. |
| Uffizi (giovani, donne, disabilità) | Turismo internazional e, inclusività | Pubblico nichilizzato | Programmi, board inclusivi | Ridefinisce il board sulle spinte inclusione come risorsa strategica. |
| Gestione patrimonio mondiale | Fondi UNESCO, pubblico globale | Contributi condizionati | Lobbying, cogestione | Strategie politiche e board per mantenere cofinanziamenti. |

| | | | | |
|---|---|---|---|---|
| GMast (genetica?) | Ricerca scientifica | Capitale specialistico limitato | Collaborazioni universitarie | Alleanze per accedere a dati e competenze. |
| Oro di Sciacca | Saperi artigianali, turismo | Know-how limitato | Reti locali, certificazioni | Rete di consorzi per controllo filiera e reputazione. |
| Mart Moderno | Arte moderna, tecnologie espositive | Offerta artistica diversificata | Joint-venture, board | Collaborazioni per garantire flussi artistici e innovazione. |
| Museo Ferragamo | Moda, diversità | Pubblico giovane, inclusività | Programmi educativi | Strategie digital-inclusion e per legittimità nei segmenti target. |
| Montelago Festival | Cultura live, territorio | Località esclusiva | Sponsorship, network | Alleanze con enti locali per accesso spazi e pubblico. |
| Pesca sostenibile | Giovani, risorse marine | Marketing sostenibile nichilizzato | Educazione, partnership scuole | Gestione risorsa umana locale per leadership ambientale. |
| Puliamo il mondo – Urbino | Giovani, comunità | Impegno civico incostante | NGOs, università | Coalizione per risorse umane e capital sociale green. |
| Teatro Mondaino | Spettatori locali | Audience limitata | Sponsorship, community | Cooptazione tramite sponsor locali e istituzionali. |
| ZOOM – Museo Bambini | Pubblico giovanile | Limitate risorse familiari | Crowdfunding, board spendoriented | Approccio partecipativo per aumentare autonomia finanziaria. |
| Wien Museum | Inclusività | Risorse culturali digitali | Programmi board inclusivo | Estende board per includere esperti tecnologie e inclusione. |

| | | | | |
|---|---|---|---|---|
| Buone Pratiche Digital: #iziTRAVELSicilia, AI-telier, MOOCs, Dhekalos, ecc. | Tecnologia, audience online | Competenza tech limitata | Partnership accademiche, outsourcing | Diversifica fonti digitali per ridurre dipendenza tech; delega a partner. |
| Festività digital-green: Autocompostaggio, ECOFESTE, MAS Siena, ecc. | Risorse ambientali locali | Capacità diffusa | Co-gestione civica | Creazione di reti civiche che partecipano e gestiscono risorse ambientali. |
| Musei accessibili (disabilità, donne, giovani) | Pubblico vulnerabile | Servizi inclusivi carenti | Funding dedicato, board attento | Cooptazione governance e staff per garantire accesso e fondi dedicati. |

Elaborazione degli autori

# Diversity on Display? Internal and External Coherence in DEI Communication Among Leading Companies in Italy

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## Abstract

Diversity, equity and inclusion (DEI) have become important topics for corporate reputation and employee engagement. However, DEI communication can expose organizations to reputational risks when customers perceive a misalignment between words and actions. This study investigates how the 20 most virtuous companies operating in Italy — recognized as Best Workplaces for DEI by Great Place to Work in 2024 — communicate their DEI commitments across different external channels that include LinkedIn, their corporate websites and CSR reports. Employee perceptions were analyzed using Glassdoor reviews. The study aimed to evaluate the consistency, authenticity and strategic integration of diversity, equity and inclusion (DEI) messaging, and to examine its relationship with employees' perceptions. The analysis emphasizes the importance of consistency across channels, inclusive language and credible storytelling, while highlighting the limitations of performative communication. The combination of qualitative analysis and content comparison made it possible to assess the effectiveness and internal consistency of DEI communication. The results only partially confirm the five hypotheses drawn from the existing literature. In fact, multichannel integration and storytelling can improve the credibility of communication, but this is not always reflected in organizational practice. The analysis also identified a pool of companies that adopt a low-profile strategy, i.e., they decide to communicate little on these issues despite DEI values being an integral part of their organizational culture. This suggests a strategy that embodies the tension between protecting reputation and meeting the demand for transparency from target audiences.

This study contributes to DEI communication research by integrating discursive, strategic and perceptual dimensions.

*Keywords: DEI, DEI communication, Italian companies, Great Place to Work, authenticity, organizational identity, employee perception, employee satisfaction*

## 1. Introduction

In the first few months of Donald Trump's second US administration, there was much talk of Diversity, Equity, and Inclusion (DEI). The concept was accompanied by fierce criticism, which led to significant cuts in DEI programs (Ng et al. 2025, White House, 2025).

However, the promotion of diversity, equity, and non-discrimination is a fundamental principle of human rights (United Nations General Assembly, 2015) and is recognized as one of the guiding values of the European Union (EU, 2024). The approach adopted by European and international legislators therefore differs greatly from the divisive rhetoric described in recent months by the US government; rather, it moves towards an inclusive conception of organizations, as proposed by Shore et al. (2011), who describe inclusion as a process in which "individuals are treated as insiders in the work group when they conform to organizational/dominant culture norms and downplay uniqueness." What the authors and legislators describe, therefore, is a way to promote talent in a supportive organizational environment in which everyone can fully express themselves. This polarized landscape raises a key question for contemporary organizations: how to communicate DEI authentically and effectively, without risking reputational backlash or being accused of 'diversity washing.'

From a business perspective, DEI represents a real competitive advantage (Bourke, 2018; Gallup, 2022). A study by McKinsey & Company (2023) found that companies with greater gender and ethnic diversity in their management teams are more likely to achieve better financial results than their less diverse counterparts, showing that diverse and inclusive organizations tend to be more innovative and perform better. Diversity of perspectives and experiences stimulates creativity and problem-solving, resulting in improved decision-making and stronger results (Hundschell et al., 2021). Companies with a strong DEI culture are able to attract and retain the best talent, thereby increasing their competitiveness in the market (Deloitte, 2024; Seijts and Milani, 2022). DEI, therefore, is not only an ethical principle but also a crucial strategic factor that contributes to the success and sustainability of the organization. Adopting this kind of DEI practices can improve business performance, employee satisfaction, reputation, and innovation, thereby creating a more equitable and productive work environment (Ferraro et al., 2023).

Thanks to the literature review and the empirical analysis of collected data, a framework to guide companies in DEI communication was developed with a specific focus on the authenticity and effectiveness of communication strategies.

This study focuses on the top 20 Italian companies included in the 2024 Best Workplaces for Diversity, Equity & Inclusion ranking (Great Place to Work Italy, 2024). Organizations were selected based on the following criteria: a minimum of 50 employees and past collaboration with Great Place to Work between 1 May 2023 and 15 April 2024. The ranking is constructed using 25 items from the Trust Index questionnaire to evaluate the experiences of individuals belonging to four key demographic categories: organizational level, gender, age, and contractual status (full-time/part-time). These items were used to calculate the Diversity, Equity & Inclusion Index, which determines each company's position in the ranking.

This study begins with a review of the literature aimed at identifying the key variables for constructing an effective DEI message. Then, the Great Place to Work Diversity, Equity and Inclusion ranking (2024) made it possible to identify the twenty companies to focus on for analysis. External communication, company websites, LinkedIn profiles and the content of sustainability reports (CSR) were taken into consideration to enrich the analysis and provide a more complete overview. Finally,

an assessment of the consistency between the stated message and internal perception was conducted by analyzing employee opinions published on the Glassdoor platform. The present study has some contextual and methodological limitations such as the companies' location (Italy), the period examined (1 year) and the lack of impact measurements such as retention or internal demographics.

## 2. Review of the literature

The growing importance of DEI issues within corporate strategies has stimulated considerable scientific research aimed at investigating how organizations communicate their DEI commitment to external stakeholders. On the one hand, DEI communication is a key strategic tool for building a company's reputation, brand identity, and stakeholder trust. On the other hand, it raises significant concerns for companies and may lead them to refrain from communicating their initiatives in order to avoid backfire phenomena (Illia et al., 2013; Baker et al., 2022; Martin et al., 2024).

### 2.1 Channels

Companies that decide to communicate their DEI commitment do so through various channels. The most common include:

Institutional websites, where DEI policies, employee testimonials, and measurable results are often found in the 'about us' or 'social responsibility' section (Mundy, 2019; Ravazzani et al., 2023);

ESG or CSR reports, which are formal tools for communicating DEI practices and metrics (Gray et al., 1995; Adams, 2002);

Social media platforms, which enable participatory and narrative communication through visual campaigns and storytelling (Verk, 2021) and promote dialogue and inclusion (Boulouta & Pitelis, 2014);

Public events and partnerships, such as participation in Pride or adherence to the Diversity Charter (Noh et al., 2024).

Integrating different types of channels helps to make communication more effective and credible (Judd & McKinnon, 2021).

One of the essential prerequisites for effective DEI communication is segmenting the target audience in order to tailor messages to the needs and expectations of different stakeholders by focusing on a specific audience (Dobbin & Kalev, 2016; Ozdemir et al. 2023). In particular, some studies show that each group experiences exclusion and inclusion in different ways and, therefore, a highly personalized message is needed on these issues (Nishii & Leroy 2022; Holvino et al., 2004). In any case, the content of the DEI message must be clear, consistent, and transparent (Alhouti et al., 2016) because this increases the value of authentic storytelling (Pless & Maak, 2004).

### 2.2 Content

Regarding content, personal stories and testimonials are powerful tools that reinforce the credibility of a company's perceived commitment to DEI (Byrne, 2022), while consumer-facing brands that integrate DEI narratives into their strategic messaging, especially when they highlight employee voices, tend to be perceived more positively (Mills Cox, 2025).

In fact, in the contemporary context of corporate communication, employees are no longer simply an internal audience of Diversity, Equity and Inclusion (DEI) policies, but are emerging as key players in

the co-construction of the company's reputation and public identity. In this sense, the literature is increasingly emphasizing the active role of workers in shaping the organization's external perception, particularly through individual and collective narratives, articulated across various formal and informal communication channels (Bisel, 2010; Frandsen & Johansen, 2011). On these occasions, their testimonies are perceived as more authentic by other users and therefore not only enrich the narrative but also legitimize it. However, when the aspirational image does not correspond to the internal reality, the risk of backlash increases (Walwema & Bay, 2023). Other studies show that the dissonance between institutional narratives and the daily experiences of employees can trigger skepticism, even accusations of diversity washing (Nishii, 2013; Baker et al., 2022).

The content of the message, which must be clear, transparent, and consistent with corporate values and other initiatives, is another important element. In particular, it is fundamental to pay attention to this aspect to avoid reputational damage caused by accusations of 'greenwashing' or 'diversity-washing', eroding the organization's credibility and reducing stakeholder engagement (Baker et al., 2022). In addition, messages must be emotionally engaging, capable of evoking positive emotions and building a strong bond with stakeholders. The importance of telling authentic and personal stories to enhance the perception of these initiatives and strengthen the emotional connection with the public has been emphasized in recent research (Pless & Maak, 2004, 2019). Moreover, transparency and consistency in DEI messaging are considered essential to avoid accusations of hypocrisy and to maintain stakeholder trust (Byrne, 2022).

To summarise, the authenticity and credibility of the organization are fundamental to the success of these strategic initiatives. To this end, companies can use testimonials and real stories (Ferdman & Deane 2014) or obtain certifications from recognized bodies (McCandless et al., 2022).

Precisely because of the reputational problems that miscommunication in the DEI field can cause, it is advisable for organizations to continuously monitor their communications. This ensures that the organization's public image remains aligned with its values and actions (Avery & McKay, 2010).

### 2.3 Language

Another important point to consider in DEI communication is language, whose terms must be chosen carefully and represent elements of justice in themselves (Williams, 2023; Nguyen et al., 2020). In the corporate sphere, language can build or inhibit the participation of represented groups; therefore, adopting inclusive pronouns, non-binary identity references, and giving space to marginal narratives avoids tokenism and supports equity. The need to adapt messages to the local cultural context, paying attention not only to language but also to visual choices, has been highlighted in recent literature (Wolfgruber et al., 2022; Walwema & Bay, 2023).

### 2.4 Feedback

Feedback from the public also plays an essential role in analyzing the effectiveness of communication strategies, as collecting and analyzing feedback provides a better understanding of public perceptions and reactions. This input helps to adapt strategies based on the results obtained, thus ensuring the success of DEI initiatives (Nishii & Leroy, 2022; Nishii, 2013). Furthermore, creating structured feedback mechanisms enables open and constructive dialogue between the organization and its stakeholders (Podsiadlowski et al., 2013). Scholars (Bernstein et al., 2020; Kaplan and Donovan, 2016) support the idea that responding quickly to feedback and adapting strategies accordingly can increase stakeholder trust and engagement, improving the perception of DEI initiatives.

## 2.5 Communication in Diversity, Equity, and Inclusion

In summary, the literature review identified the following variables as most important for the implementation of effective DEI communication strategies:

Clarity and consistency of messages to reinforce the perception of authenticity and facilitate understanding of DEI values while avoiding ambiguities that can lead to mistrust or accusations of 'diversity washing' (Alhouti et al., 2016; Baker et al., 2022).

Perceived authenticity as an increasingly important aspect (Illia et al., 2025) in the construction of social messages, which can be aided by the contribution of personal narratives from different stakeholders (Pless & Maak, 2004; Byrne, 2022).

The appropriateness of communication channels, which should integrate different platforms to improve coverage and engagement (Judd & McKinnon, 2021).

Adaptation to the target audience is also important, as DEI communication is most effective when it is targeted and sensitive to the specificities of the audience (Dobbin & Kalev, 2016; Nishii & Leroy, 2022). In particular, different represented groups need personalised, inclusive, and sensitive language (Nguyen et al. 2020; Williams, 2023) in order to strengthen identification and avoid tokenism.

The presence of metrics and verifiable quantitative data reinforce the credibility of the DEI message and demonstrate a concrete commitment (Gray et al., 1995; Adams, 2002).

Stakeholder engagement and feedback allow strategic adjustments and strengthen engagement (Nishii, 2013; Podsiadlowski et al., 2013).

Reputation and media coverage are important because public perception of DEI commitment influences the legitimacy and effectiveness of communication (Avery & McKay, 2010).

## 2.6 The strategy of silence

Alongside explicit and proactive forms of communication, a strategic silence is emerging in corporate communication processes, particularly on reputationally sensitive issues such as diversity, equity, and inclusion. In certain political and cultural contexts, companies may deliberately choose not to expose themselves publicly, or to adopt a muted communication strategy, in order to avoid the risk of backlash, media controversy, or polarizing reactions from stakeholders (Crane & Glozer, 2016; Illia et al., 2013). Silence, in this sense, is not an absence of communication, but rather a deliberate form of organizational identity and reputation management. This strategy is particularly evident in socio-political contexts perceived as hostile or polarized, where the adoption of an explicit DEI narrative can generate accusations of ideologization or unsolicited activism. Some organizations, while pursuing concrete inclusion and diversity initiatives, prefer not to emphasize them in public channels, opting for a low-profile communication strategy or focusing on technical, neutral, or low-visibility language (Walwema & Bay, 2024). In these cases, the choice of silence is a form of risk-averse DEI communication (Berkelaar et al., 2022), aimed at preserving reputational capital by avoiding exposure on divisive value issues. However, this strategy can have ambivalent consequences: while it reduces the immediate risk of negative reactions, it can compromise the perception of authenticity and transparency, making the involvement of internal and external stakeholders less effective (Pless & Maak, 2004; Nishii, 2013). For this reason, balancing visibility and caution is one of the main challenges in contemporary DEI communication today.

It is important to emphasize that the early months of 2025 have been particularly significant for diversity, equity and inclusion matters. Following the US elections in 2025 and the inauguration of the Trump administration, DEI began to polarize public debate, even in Europe. To understand the influence of these events, an exploratory analysis was conducted using Media Cloud, focusing on content published from January 2025 onwards. It was found that newspapers published a significantly higher number of articles than in previous years: the word 'DEI' was mentioned 1,750 times in January 2025, which is a 90% increase compared to all previous years (average 912). However, this greater visibility is not matched by more articulated content because most of the articles are generic and lack focus on specific initiatives (e.g. gender gap, disability, generational inclusion, etc.). The aim of this study is to understand whether Italian companies have reacted to this new context by aligning with American positions on DEI.

According to the literature review presented, and considering this scenario the following research question is raised:

How do these companies communicate their commitment to Diversity, Equity & Inclusion (DEI) through external channels, and how consistent is this communication with employees' internal perceptions?

To answer this question, the study analyzed whether:

**H1.** Employees perceive companies that communicate DEI issues clearly, consistently, and authentically more positively.

**H2.** Personal testimonials, storytelling and concrete data posted on LinkedIn and corporate websites are associated with highly credible DEI communication.

**H3.** Companies with greater variety and integration of channels (e.g., LinkedIn, website, CSR) communicate their DEI commitment more effectively.

**H4.** There is a significant discrepancy between external DEI narratives (e.g. LinkedIn and websites) and internal employee perceptions, particularly in cases of 'diversity washing.'

**H5.** Companies that use inclusive language adapted to the Italian cultural context in their social media posts achieve higher digital engagement (e.g. more likes and shares on LinkedIn).

## 3. Methodology

In terms of methodology, the research takes a qualitative, multi-case approach, based on a sample of twenty Italian companies that were classified as 'Best Workplaces for Diversity, Equity & Inclusion' in Italy by Great Place to Work in 2024. Specifically, the ranking includes companies operating in Italy with at least 50 employees that collaborated with Great Place to Work between 1 May 2023 and 15 April 2024.

The websites, LinkedIn pages, CSR reports, internal policy documents, and Glassdoor reviews of these companies were examined. The inclusion of multiple types of documents strengthens the methodological foundation of this study, as using a diverse set of sources allows for a more nuanced and layered analysis of how organizations construct, communicate, and perform their DEI strategies. Document analysis is particularly effective when used in combination with other qualitative methods or sources, allowing researchers to corroborate evidence and capture different facets of the same phenomenon (Bowen, 2009). Each type of document brings a unique discursive layer that contributes

to a more comprehensive understanding of how Diversity, Equity and Inclusion (DEI) is framed within organizations.

In order to evaluate whether the communication meets the criteria of clarity, consistency, inclusiveness, presence of metrics, and personal narratives, a grid of indicators was developed based on a DEI Glossary (H1 and H2).

In addition, a "channel fit" set was created by calculating the degree of channel integration and the presence or absence of communication between platforms. This made it possible to assess the variety and strategic use of the different channels (H3). Thanks to the review and feedback from Glassdoor, it was possible to detect alignment or dissonance between the external DEI narrative and internal employee experiences (H1 and H4). The data were examined in a quantitative (e.g. sentiment, ratings) and qualitative (e.g. recurring themes of inclusion or exclusion) way. Furthermore, LinkedIn engagement metrics (likes, comments, shares) were analyzed to assess audience response to DEI-oriented posts using inclusive language and culturally adapted narratives (H5).

Reviews were examined both quantitatively (e.g., sentiment, ratings) and qualitatively (e.g., recurring themes of inclusion or exclusion). Moreover, LinkedIn engagement metrics (likes, comments, shares) were collected to assess audience response to posts using inclusive language and culturally adapted narratives. This provided empirical evidence for H5.

A qualitative approach was chosen to capture the depth and complexity of DEI communication practices, which often involve implicit meanings, symbolic choices, and culturally embedded narratives that are not easily quantifiable (Eisenberg, 2007).

Triangulation, as a methodological strategy, involves taking different perspectives on an issue under study, substantiating these views by combining linked methods and theoretical approaches, ultimately extending the validity of findings by integrating diverse data sources (Flick, 2018). This approach enables a more comprehensive understanding of complex phenomena by compensating for the weaknesses of single methods because results gained from one type of source can be validated or contradicted by another, leading to new insights.

### 3.1 Methods

The comparative case study method is adopted as it allows for the systematic identification of similarities and differences across multiple organizational contexts (George & Bennett, 2005). This approach helps to understand how different companies approach diversity, equity and inclusion (DEI) matters. By comparing multiple cases, contradictions and potential discrepancies between stated intentions and actual perceptions or outcomes can be detected. The approach also enables theoretical generalisation, helping us to understand how DEI is communicated, enacted and perceived within organizational settings.

To gather the data, scraping techniques were employed to extract publicly available information from three main sources: company websites, LinkedIn pages, and employee-generated reviews on Glassdoor. These platforms were selected for their relevance in shaping both the external image, and the perceived internal climate of organizations. Specifically:

LinkedIn was analyzed to assess corporate communication of DEI-related content, including posts, hashtags, campaigns, and leadership discourse.

Websites were examined for mission statements, policy documents, and dedicated DEI sections.

Glassdoor offered valuable qualitative data from employees' perspectives. This triangulation of sources enhances the validity of the findings by allowing for cross-verification and the identification of gaps or alignments between institutional narratives and individual experiences. Web scraping allows for consistent and replicable collection of large volumes of textual, and visual data, capturing how companies describe their DEI commitments across different digital environments. LinkedIn was used to analyze the language and visibility of DEI-related content within corporate posts and profiles, while Glassdoor reviews provided access to the employee perspectives on workplace inclusiveness.

Data were collected over the past 12 months, cleaned, organized into case files, and then systematically compared through thematic analysis.

Using scraping as a technique within a comparative case framework enables patterns to be traced across organizations while retaining sensitivity to context. This pairing of method and technique enables a grounded, data-rich exploration of how diversity, equity and inclusion (DEI) is performed, narrated and contested in the digital sphere by the twenty most virtuous Italian companies.

### 3.2 Analysis

A DEI dictionary has been created, collecting 89 Italian and English words taken from the analyzed literature and the Media Cloud website[29].

Posts from LinkedIn published in June 2024 and June 2025 have been scraped for all 20 companies in the last year (June 2024 to June 2025). The words used in these posts have been compared to the dictionary, and DEI-related posts have been counted. All metrics relating to engagement (shares, comments and likes) have been counted to assess audience interest in DEI-related posts. The researchers conducted a search for DEI-related posts to assess whether there were references to specific audiences related to diversity, equity and inclusion.

The companies' websites were analyzed to monitor content related to diversity, equity and inclusion (DEI), identifying the sections in which these topics were mentioned. The analysis also covered the types of images used.

The number of clicks required to access this information was counted. A thorough website analysis was conducted to ascertain whether they held a 'Best Place to Work for DEI' certification or a comparable designation. A comprehensive search was conducted for references to specific DEI-related target audiences.

The CSR reports, where available (12 out of 20 companies), were analyzed, and DEI-related terms and audience references were examined.

The Glassdoor platform was manually scraped to create a dataset containing all the available reviews for the companies (18 out of 20). The same time period used for LinkedIn (June 2024 to June 2025) was applied here. Due to the focus of this research on the Italian market and the absence of location specifications in the reviews, the Italian language filter has been selected. For each review of every company, the following information has been reported: the date; the overall rating given; the title; whether the review was flagged or excluded for three items (Recommend, CEO approval rating and

[29] https://www.mediacloud.org/

Commercial forecast); the list of advantages and disadvantages pointed out by employees; advice for TLs; and the score for the six dimensions investigated by Glassdoor (Culture and Values, Diversity, Equity and Inclusion, Work/Life Balance, Senior Executives, Salary and Benefits, and Career Opportunities). For each company's Glassdoor page, the overall rating of the reviews during the specified time period is reported, as well as the percentage of reviews giving 1, 2, 3, 4 or 5 stars, the percentage of reviews explicitly recommending the company, and the average score for each of the six dimensions. These values were then compared to the general score given by all Italian reviews without a date filter. Furthermore, it has been highlighted, as reported by Glassdoor, whether the overall value was below or above the average score for the company compared to other companies of the same size and in the same industry.

As employees are the primary stakeholders in DEI (Ravazzani et al., 2023), companies were consulted directly, albeit in an exploratory manner[30]. The following areas were investigated: which figures in companies are responsible for DEI; the focus areas; the initiatives implemented or planned; the objectives; how long they have been working on these issues; whether there has been a turnaround following the new American positions; the concrete, quantifiable results attributable to their commitment; the obstacles eventually encountered; the commitment of top management to every initiative; the main challenges; and the quantifiable results achieved.

## 4. Findings

The top 20 Italian companies recognized for their commitment to Diversity, Equity & Inclusion by Great Place to Work (GPTW 2024) were selected to conduct a qualitative analysis that explored how these organizations communicate DEI. In particular, the following channels were analyzed: LinkedIn, institutional websites, sustainability reports (CSR), and the Glassdoor platform.

This analysis made it possible to construct a communication quality index based mainly on two dimensions - narrative consistency across channels and perceived authenticity - which were then compared and analyzed. In particular, narrative elements such as storytelling, personal testimonials, and inclusive language were identified for the LinkedIn channel. Texts, specific indicators (e.g., turnover, minority percentages in the company, gender gap) and policies were extracted and analyzed from company websites and CSR reports. The comparison between narrative and objective data made it possible to generate an indirect indicator of perceived authenticity.

A comparative analysis was conducted for each company, starting with the content published on LinkedIn, where narrative elements such as storytelling, personal testimonials, and inclusive language were identified. At the same time, concrete data, indicators, and policies related to DEI were extracted from company websites and CSR reports. The alignment between narrative and objective data represented an indirect indicator of perceived authenticity.

Three key parameters were then considered to evaluate DEI communication:

**Multichannel presence**, i.e., the existence of DEI-themed content on all channels examined (LinkedIn, website, CSR report, and Glassdoor). This attitude was taken as an indicator of transparency and structured commitment.

**Communicative consistency**, calculated as a summary of the narrative Corresponding author between the different channels. Based on topic convergence, consistency of values and the presence

[30] Only five of the twenty companies that were invited to take part in the research have replied.

of any contradictions or misalignments between channels, a qualitative score (High, Medium, and Low) was assigned.

**Perceived authenticity**, calculated using indicators such as the language used, personalization, and the concreteness of the content across different channels.

Based on the results across these three variables, the effectiveness of DEI communication was calculated and classified as High, Medium, and Low. The comparison of these variables allowed us to validate the research hypotheses.

**Consistency and internal perception (H1 and H4):** Companies with higher Glassdoor ratings, both in terms of perceived inclusive climate and authentic representation, are those that adopt a clear, consistent, and integrated strategy (e.g., Cisco, American Express, DHL). Companies that show low consistency in their reports or highlight negative employee feedback show signs of narrative dissonance that could damage their reputation in the long term.

**Authenticity and storytelling (H2):** The inclusion of personal testimonials and the use of storytelling enhance the credibility of communication. On LinkedIn, posts that combine narrative elements with concrete metrics (e.g., ServiceNow, Webranking) achieve greater engagement and are consistent with an authentic perception of DEI commitment.

**Channel variety and integration (H3):** Companies that use at least three channels in an integrated way (e.g., Cisco, DHL, Mondelez) demonstrate more effective communication, reinforcing their DEI message and reaching different audiences.

**Inclusive language and digital engagement (H5):** Companies that use inclusive or gender-neutral language, inclusive graphics, and first-person content score higher on LinkedIn (e.g., AbbVie, Hilton).

**Low-profile strategies:** The analysis also reveals a trend that has been labeled low-profile strategies. In these cases, companies (e.g., Agile Lab, Unfix, Skylabs) communicate little or, in some cases, nothing at all about DEI issues. This choice seems to be motivated by a desire to avoid backlash in politicized contexts. While this strategy may well avoid reputational damage, it also means that the commitment is less recognizable to external stakeholders.

## 5. Discussion

The results partially confirm the hypotheses and have significant managerial implications.

In line with the literature review, narrative consistency and authenticity are two key dimensions of corporate communication in the field of DEI. Indeed, the data confirm that, in order to be effective, communications must be confirmed by internal perceptions and validated by real experiences. Without this alignment, companies risk compromising their credibility (Baker et al., 2022). In addition, storytelling and the ability to humanize communication through real-life stories promote user engagement. Finally, the presence of concrete data increases the credibility of the message (Adams, 2002; Gray et al., 1995). The value of multichannel communication and strategic integration is also confirmed (Judd & McKinnon, 2021). Furthermore, the analysis shows that effectiveness does not depend solely on the number of channels activated, but on their consistency and coordination. Finally, there are also cases of companies that decide not to communicate their DEI initiatives in order to avoid reputational damage (low-profile strategy). This option, while legitimate, can weaken the perception of commitment and leave room for suspicions of 'diversity avoidance.'

The most novel aspect of the analysis is provided by Glassdoor, which was used as a test for authenticity. In this sense, when comparing perceived external and internal communication, this study shows how Glassdoor can serve as a proxy for detecting misalignments and as an indirect measure of authenticity.

## 6. Conclusion

This study provides a comprehensive overview of how the 20 companies on the 'Best Workplaces for DEI Italy' list (Great Place to Work, 2024) communicate their commitment to diversity, equity and inclusion (DEI) across multiple channels.

The research aimed to assess the coherence, authenticity, and strategic integration of

DEI messaging, and examined its relationship with employees' internal perceptions. To this end, a qualitative content analysis was conducted, comparing material from

LinkedIn, the corporate website, the CSR report, and employee feedback on Glassdoor. The analysis revealed a fragmented communication landscape, with some companies demonstrating authentic DEI content and others showing significant variability. These findings emphasize the importance of aligning corporate DEI messaging with employee experiences and ensuring communication strategies are multichannel, consistent, transparent, and culturally contextualized.

Reviewing the literature and conducting an empirical analysis of the collected data provided valuable insights for companies on how to communicate DEI matters effectively.

The study also highlights three core dimensions that are important for companies to consider: narrative coherence across platforms, perceived authenticity by internal stakeholders, and the strategic integration of communication channels. It emphasizes the importance of coherence for companies that maintain consistency across multiple channels, aligning internal experiences with external narratives about diversity, equity and inclusion (DEI). Using inclusive language is often associated with greater engagement on platforms such as LinkedIn, although the relationship is not straightforward. Consequently, companies are generally viewed more positively by employees. The results confirm that using multiple communication channels is ineffective unless supported by coherence and content that aligns with actions and initiatives.

DEI initiatives are therefore essential for building trust and engagement with different audiences. However, communication alone is insufficient; it must be embedded in authentic practices and supported by the feedback. In terms of theoretical and managerial contributions, the findings suggest the need for a more integrated and reflexive approach to communication. This could help to bridge the gap between external representation and internal reality, as well as anticipating reputational risks.

In terms of managerial implications, the findings offer actionable insights. Firstly, multichannel communication is essential, as is ensuring that the various messages on LinkedIn, websites and CSR reports are aligned, in order to be perceived as authentic and coherent by stakeholders. However, variety of channels alone is not sufficient; it must be supported by clear and consistent language in order to build trust. Secondly, organizations should be aware of the reputational risks associated with both overexposure and under-communication. Thirdly, authentic employee narratives across channels can enhance perceived legitimacy, making the employee voice a relevant asset for corporate reputation. Communication strategies should be structurally aligned with organizational identity and leadership behavior.

Finally, the five interviews conducted to explore the issue revealed a range of perspectives that can be categorised into eight main areas relating to DEI. These areas and the specific initiatives relating to them are outlined below. Given the shared commitment of all five companies, the most innovative and unusual initiatives are reported.

Parenting and maternity support: company nursery (currently being implemented by Galileo), flexible working hours, extended paternity leave of one month (utilised by 100% of new fathers), and a return-to-work programme with a support intern (Mondelez). Pink parking spaces reserved for pregnant women or parents with children (Teleperformance).

Caregiving: flexible working hours (Mondelez).

Charity and social responsibility: collaboration with Project Next for refugee/migrant mentoring activities and selection processes that have led to the direct recruitment of 14 people (Mondelez); the TP for Inclusion initiative, an annual project now in its fourth edition, addressing issues such as empowerment, racism and disability (Teleperformance). Cultural events with a strong social focus, such as theatre in prison with the Pugliese Association, or awareness-raising activities, such as cooking with children with cancer (Teleperformance). Free training initiatives for young people in the area, such as the Server Security course, to bridge the gender gap in technical fields, and to encourage women to pursue non-traditional technical careers (Vianova). Support for 'Ragazze Digitali' (Digital Girls), with summer camps for female students (Webranking).

Gender equality: Women in Management programme (Mondelez), Gender pay gap eliminated or in the process of being eliminated (Mondelez, Teleperformance), Establishment of a Gender Equality Committee (Teleperformance), Increase in the percentage of women in senior roles (Teleperformance), support for women: breast cancer screening is currently being implemented at Galileo; a protocol has been established with an anti-violence centre to support women leaving abusive situations and fleeing violence, including through job placement at Teleperformance.

LGBTQ+ community: participation in Pride (Mondelēz), collaboration with

Arcigay (Mondelēz), inclusive recruitment guidance with supporting policies

(Mondelēz), establishment of an LGBTQ+ rights committee (Teleperformance), and collaboration with LGBTQ+ rights associations (Teleperformance).

Mental health: free psychological support for employees (Teleperformance), which is also open to their families (Mondelez). Training on mental health and well-being for managers (Mondelez).

Welfare in the broad sense: smart working was already in place before the pandemic in 2018 (Mondelez and Webranking); flexibility with a short working week (Mondelez); flexible holidays (Mondelez); and the elimination of clocking in (Mondelez since 1998); short working week with Friday afternoons off (Mondelez); 100% agile working contract with no obligation to be present (Vianova); flexible hours for most departments (Vianova); internal growth supported by coaching and development-oriented assessments (Webranking); internal growth of managers, many of whom are under 30 years old; cultivation of a culture of listening with an internal feedback and peer evaluation programme, implementation of an internal social media platform for communication and engagement; structuring of teams with small groups to encourage listening; welfare platform with flexible budget that can be used for personal and family needs.

For all these companies, the commitment of senior management was essential to implementing their initiatives, given that they were operating within a shared corporate culture. The reason there has not been a turning point since the USA took its new position is that there is a deep belief in DEI.

In addition to greater satisfaction, some companies achieved concrete results, such as: ● A birth rate higher than the national average (Mondelez, Vianova);

Employee responses to internal surveys reaching 98% satisfaction (Teleperformance);

Absenteeism reduced from around 10–12% to 3% (Teleperformance);

Retention and talent acquisition with a turnover rate of less than a third of the industry average (Webranking);

High retention, even in a context of strong market demand for personnel.

As the most virtuous companies in Italy in this area, it is clear that these dimensions are crucial for developing a people-centred plan to achieve concrete results.

## 7. Limitations and future research

The present study is not without its limitations. Firstly, the research focuses exclusively on a small group of companies in Italy, which limits the generalizability of the results and renders them potentially specific to the country's culture. Secondly, the sources utilized to explore the discursive and narrative dimensions of DEI do not permit the direct measurement of organizational impacts such as performance, retention or internal demographics. Consequently, companies do not utilize all channels equally, nor do they all have access to them. For instance, only 12 out of 20 companies have a CSR report, and two companies do not have a Glassdoor review page. Furthermore, companies on Glassdoor do not have the same number of reviews on the platform. Thirdly, the sample primarily consists of organizations that are already engaged in DEI activities, which may introduce a selection bias favoring the most exemplary or committed companies. In conclusion, the study is based on a limited one-year period, which restricts the findings to company practices and communication strategies within that period.

Future research could include a more heterogeneous sample of organizations to capture a wider range of communicative strategies and potential misalignments, not only Italian cases. Moreover, the utilization of internal organizational data has the potential to yield more profound insights into the nexus between external communication and actual practices. Additionally, longitudinal studies would provide invaluable insights into the evolution of DEI narratives in response to political shifts over time.

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## References


Adams, C. A., & Abhayawansa, S. (2022). Connecting the COVID-19 pandemic, environmental, social and governance (ESG) investing and calls for 'harmonisation'of sustainability reporting. Critical perspectives on accounting, 82, 102309.

Alhouti, S., Johnson, C. M., & Holloway, B. B. (2016). Corporate social responsibility authenticity: Investigating its antecedents and outcomes. Journal of business research, 69(3), 1242-1249.

Avery, D. R., & McKay, P. F. (2010). Doing diversity right: An empirically based approach to effective diversity management. International review of industrial and organizational psychology 2010, 25, 227-252.

Baker A., Larcker D.F., McClure C.G., Saraph D., Watts E.M., (2022). Diversity Washing. Journal of accounting research, XXX2024.

Bernstein, R. S., Bulger, M., Salipante, P., e Weisinger, J. Y. (2020). From diversity to inclusion to equity: A theory of generative interactions. Journal of Business Ethics, 167, 395-410.

Bisel, R. S. (2010). A communicative ontology of organization? A description, history, and critique of CCO theories for organization science. Management Communication Quarterly, 24(1), 124-131.

Boulouta, I., & Pitelis, C. N. (2014). Who needs CSR? The impact of corporate social responsibility on national competitiveness. Journal of business ethics, 119, 349-364.

Bourke, J. (2018), "The diversity and inclusion revolution: eight powerful truths", Deloitte Review, 22.

Burnett, L., & Aguinis, H. (2024). How to prevent and minimize DEI backfire. Business Horizons, 67(2), 173-182.

Byrne, Z. S. (2022). Understanding employee engagement: Theory, research, and practice. Routledge.

Crane, A., & Glozer, S. (2016). Researching corporate social responsibility communication: Themes, opportunities and challenges. Journal of management studies, 53(7), 1223-1252.

Deloitte. (2024, October 10). 2024 Deloitte annual Diversity, Equity & Inclusion Maturity Index. Deloitte Italia. https://www.deloitte.com/it/it/services/consulting/research/2024-deloitte-annual-diver sity-equity-inclusion-maturity-index.html

Dobbin, F., e Kalev, A. (2016). Why Diversity Programs Fail. Harvard Business Review,94(7), 52-60

European Commission. (n.d.). Diversity and inclusion. https://commission.europa.eu/about/service-standards-and-principles/modernising-eur opean-commission/diversity-and-inclusion_en

Ferdman, B. M., e Deane, B. (2014). Diversity at work: The practice of inclusion.

Ferraro, C., Hemsley, A., e Sands, S. (2023). Embracing diversity, equity, and inclusion (DEI): Considerations and opportunities for brand managers. Business Horizons, 66(4), 463-479.

Frandsen, F., & Johansen, W. (2011). The study of internal crisis communication: Towards an integrative framework. Corporate Communications: An International Journal, 16(4), 347-361.

Gallup. (2023, June 13). State of the global workplace: 2023 report.
https://www.gallup.com/workplace/349484/state-of-the-global-workplace.aspx

George, A. L., & Bennett, A. (2005). Case studies and theory development in the social sciences. mit Press.

Gray, R., Kouhy, R., & Lavers, S. (1995). Corporate social and environmental reporting: a review of the literature and a longitudinal study of UK disclosure. Accounting, auditing & accountability journal, 8(2), 47-77.

Great Place to Work Italia. (n.d.). Diversity, equity e inclusion. Retrieved June 29, 2025, from https://www.greatplacetowork.it/diversity-equity-e-inclusion/
Holvino, E., Ferdman, B. M., e Merrill-Sands, D. (2004). Creating and Sustaining Diversity and Inclusion in Organizations: Strategies and Approaches. In M. S. Stockdale e F. J. Crosby (Eds.), The Psychology and Management of Workplace Diversity (pp. 245-276). Blackwell Publishing.

Hundschell, A., Razinskas, S., Backmann, J., & Hoegl, M. (2022). The effects of diversity on creativity: A literature review and synthesis. Applied Psychology, 71(4), 1598-1634.

Illia L., Zyglidopoulos S.C., Romenti S, Rodríguez-Cánovas B., González del Valle Brena A., (2013). Communicating Corporate Social Responsibility to a Cynical Public. MitSloan Management Review. Spring 2013. Vol. 54, No. 3.

Illia, L., Ballester-Ripoll, R., & Clausen, A. K. (2025). Fabricating CSR authenticity: The Illusory Truth Effect of CSR communication on social media in the AI era. Public Relations Review, 51(3), 102588.

Judd, K., & McKinnon, M. (2021). A systematic map of inclusion, equity and diversity in science communication research: Do we practice what we preach?.
Frontiers in Communication, 6, 744365

Kaplan, M., e Donovan, M. (2016). Inclusion dividend: Why investing in diversity & inclusion pays off. Routledge.

Martin U.M., Thapa U., Arguinis H. (2024). Punishing the good? How to minimize an unfair CSR-Washing label. Business Horizons, 67, 199 - 207.

McCandless, S., Bishu, S. G., Gomez Hernandez, M., Paredes Eraso, E., Sabharwal, M., Santis, E. L., e Yates, S. (2022). A long road: Patterns and prospects for social equity, diversity, and inclusion in public administration. Public Administration, 100(1), 129-148

McKinsey&Company (2023). Diversity matters even more: The case for holistic impact. 5 December. www.mckinsey.com

Mills Cox, B. (2025). Aligning CSR, DEI, and Public Relations: Analyzing Top Consumer Brands and Their Implementation of DEI Practices. Howard Journal of Communications, 1-16.

Mundy, D. E. (2019). Diversity and inclusion: A core public relations mandate. In Public Relations (pp. 29-42). Routledge.

Ng, E., Fitzsimmons, T., Kulkarni, M., Ozturk, M. B., April, K., Banerjee, R., & Muhr, S. L. (2025). The anti-DEI agenda: navigating the impact of Trump's second term on diversity, equity and inclusion. Equality, Diversity and Inclusion: An International Journal, 44(2), 137-150.

Nguyen, Ninh, and Lester W. Johnson. 2020. Consumer behaviour and environmental sustainability. Journal of Consumer Behaviour 19: 539–41

Nishii L.H., Leroy H. (2022). A multi-level framework of inclusive leadership in organizations. Group & Organization Management, Vol. 47(4) 683–722

Nishii L.H., Leroy H. (2022). A multi-level framework of inclusive leadership in organizations. Group & Organization Management, Vol. 47(4) 683–722

Nishii, L. H. (2013). The benefits of climate for inclusion for gender-diverse groups. Academy of Management journal, 56(6), 1754-1774.
Noh, Y., Coleman, A., & Kim, D. Y. (2024, May). The effects of special events on attendees' Diversity, Equity, and Inclusion (DEI) experience: Festival pride, prior experience, and COVID-19. In Journal of Convention & Event Tourism (Vol. 25, No. 3, pp. 165-186). Routledge.

Ozdemir S., Fernandez de Arroyab J.C., Sena V., Gupta S. (2023) Stakeholder diversity and collaborative innovation: Integrating the resource-based view with stakeholder theory. Journal of Business Research 164, 113955.

Pless, N. M., Maak, T. (2004). Building an Inclusive Diversity Culture: Principles, Processes and Practice. Journal of Business Ethics 54: 129–147.

Pless, N. M., Maak, T. (2019). Good Dividens. Chapter: Responsible Leadership.
First edition. Routledge
Podsiadlowski, A., Gröschke, D., Kogler, M., Springer, C., & Van Der Zee, K. (2013). Managing a culturally diverse workforce: Diversity perspectives in organizations. International Journal of Intercultural Relations, 37(2), 159-175.

Ravazzani, S., Mazzei, A., Butera, A., Fisichella, C., CERC Centre for Employee
Relations and Communication, & WG_EC Working Group Employee Communication. (2023). Diversity, equity & inclusion. Stato dell'arte nelle aziende italiane. FrancoAngeli Open Access.

Seijts, G. H., e Milani, K. Y. (2022). The application of leader character to building cultures of equity, diversity, and inclusion. Business Horizons, 65(5), 573-590.

Shore, L. M., Randel, A. E., Chung, B. G., Dean, M. A., Holcombe Ehrhart, K., & Singh, G. (2011). Inclusion and diversity in work groups: A review and model for future research. Journal of management, 37(4), 1262-1289.

The White House. (2025, January 21). Ending radical and wasteful government
DEI programs and preferencing.
https://www.whitehouse.gov/presidential-actions/2025/01/ending-radical-and-wastefu l-government-dei-programs-and-preferencing/

United Nations General Assembly. (2002). Human rights and cultural diversity:
Resolution adopted by the General Assembly. Refworld.
https://www.refworld.org/docid/3f4f1d714.html

Verk, N., Golob, U., & Podnar, K. (2021). A dynamic review of the emergence of corporate social responsibility communication. Journal of Business Ethics, 168, 491-515.

Walwema, J., & Bay, J. (2024). The Rhetorical Function of Corporate DEI Reports. Business and Professional Communication Quarterly, 87(1), 34-59.

Williams, E. L., Watkins-Hayes, C., & Cole, J. B. (2023). Difference Does Make a Difference: The Struggle for Diversity and Inclusion in American Higher Education.
In Speechifying: The Words and Legacy of Johnnetta Betsch Cole (pp. 106-113). Duke University Press.

Wolfgruber, Daniel & Einwiller, Sabine & Brockhaus, J., 2021. "Let's talk about diversity & inclusion: Fostering an inclusive work environment through communication," Communication Insights 11, Academic Society for Management & Communication – An initiative of the Günter Thiele Foundation, Leipzig.

# Choose and Reject: Emotional Framing in Sustainable Consumption — A Qualitative Perspective

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## Abstract

This study investigates how consumers emotionally frame sustainable consumption decisions through two decision strategies: choosing (actively selecting sustainable options) and rejecting (deliberately avoiding unsustainable ones). The research asks how these strategies shape consumers' emotional experiences and sense of identity.

Using a qualitative research design, we conducted in-depth interviews with thirty Italian consumers from Generations Z, Y, and X. Each selected one image symbolizing sustainability, which triggered narrative reflections on identity, emotion, and how they framed their sustainable behavior as either choosing or rejecting. The first findings reveal that choosing strategies to evoke pride, aspiration, and hedonic well-being while rejecting strategies that foster moral coherence, empowerment, and eudaimonic well-being. However, even sustainable choices may generate frustration or dissonance when actions feel externally imposed or economically constrained. Both strategies, when perceived as authentic, support self-congruity and well-being. The study contributes to consumer research by highlighting symbolic and emotional dimensions of sustainability-related decisions. Practical implications suggest supporting inclusion (choose) and exclusion (reject) paths through autonomy-enhancing interventions and identity-relevant communication.

*Keywords: consumer well-being; frustration; authentic decision strategies*

## 1. Theoretical Background

### 1.1 Framing Sustainable Consumption: Choose vs. Reject

In the context of sustainable consumption, the structure of decision-making has gained growing relevance. Specifically, the distinction between "choosing" and "rejecting" options (Shafir, 1993) affects consumer behavior and its symbolic and emotional implications. Goodman and Reczek (2021) show that choose strategies (actively selecting a sustainable option) and reject strategies (actively excluding an unsustainable one) activate different psychological mechanisms. Choosing is associated with approach motivations, positive affect, and aspirational self-expression; rejecting, instead, is tied to avoidance motivations, moral positioning, and more explicit social signaling (Sokolova & Krishna, 2016; Nan et al., 2023). The reject frame often leads to stronger perceived integrity and may reduce

cognitive dissonance when consumers aim to stay loyal to their ethical beliefs (Besharat et al., 2021). Thus, scholars (Chandrashekar et al., 2021) argue that these two modalities are not neutral but contribute differently to constructing moral identity. Rejecting dominant unsustainable products—especially in front of others—can act as a powerful reputational cue, reinforcing social identity and moral self-worth (Nan et al., 2023). Moreover, the psychological cost of rejecting may be higher, but so is its reward in terms of coherence and perceived authenticity. Understanding how the choose/reject framing shapes consumers' inner experience is essential to designing interventions that increase sustainable behavior frequency, emotional engagement, and value congruence with sustainable choices (Pegan et al., 2025).

### 1.2 Consumer Well-being in Sustainable and Anti-consumption Practices

Consumer well-being (CWB) has moved beyond material satisfaction to include psychological, existential, and identity-related dimensions (Sirgy & Lee, 2008; Resnik, 2022). Psychological research distinguishes between hedonic well-being—defined by pleasure, life satisfaction, and the absence of negative emotions (Diener et al., 2010)—and eudaimonic well-being, grounded in authenticity, personal growth, and purposeful living (Ryff, 1989; Ryan & Deci, 2001). Within this second tradition, well-being arises from feeling good and acting in alignment with one's true self. In this view, sustainable consumption can be enriching when perceived as autonomous, morally coherent, and socially meaningful (Aydin, 2010; Bhardwaj et al., 2024). One of the most influential constructs in this domain is self-congruity: the perceived match between consumer actions and their actual or ideal self-image (Sirgy, 1985; Kumagai, 2024). When sustainable choices are congruent with the ideal self, they activate positive emotions such as pride and self-worth, contributing to a sense of meaningful agency and subjective well-being (Han et al., 2018). This has been confirmed empirically in the Brand-Sustainability-Self Congruence (BSSC) model, which links sustainability-oriented brand identification to well being via emotional resonance and self-validation (Kumagai, 2024).

Furthermore, intrinsic motivation plays a crucial role. According to the Self Determination Theory (Deci & Ryan, 1985), only when sustainable actions are internally motivated—rather than driven by guilt or social pressure—do they lead to authentic and enduring well-being (Liu et al., 2022). In contrast, externally imposed sustainability norms may produce frustration or emotional ambivalence, particularly when access to information or viable alternatives is limited (Gelbrich, 2010; Azemi et al., 2020). Sustainable consumption becomes a source of well-being when it is not merely instrumental but expressive of moral agency, self-determination, and coherent identity. This understanding is further expanded by integrating perspectives from spirituality and cultural psychology (Pegan et al., 2023). Minton et al. (2022) emphasize how deeply internalized spiritual or cultural values act as interpretive frameworks that give ethical consumption a transcendent dimension. When sustainability is perceived as a spiritual or communal act—not just an individual preference—it contributes more robustly to long-term psychological well-being and social connection. Finally, anti-consumption practices—such as voluntary simplicity, ethical boycotting, or collaborative consumption—can enhance well-being by enhancing control, coherence, and purpose (Balderjahn et al., 2023; Lee & Ahn, 2016). These practices reflect not deprivation but deliberate alignment with higher values. In this context, rejecting becomes a symbolic and transformative act, reinforcing moral identity, reducing stress, and fostering personal empowerment.

## 2. Methodology

This study explores how consumers emotionally frame sustainable consumption choices by examining how the decision structure—choosing versus rejecting—is perceived to impact personal well-being. Its original contribution lies in linking these decision strategies to emotional states through a qualitative, participant-driven approach that foregrounds symbolic and identity-relevant aspects of sustainable behavior.

To address this goal, the study relies on 30 semi-structured in-depth interviews with Italian consumers from Generations X, Y, and Z. Participants were purposively selected to ensure diversity in gender, socio-economic background, and levels of engagement with sustainability. To explore the emotional and symbolic dimensions of sustainable consumption, the qualitative interviews began with a visual elicitation task used as the entry point of each interview. Each participant was asked to search online for one image that, in their view, best represented sustainable consumption. Participants were asked to explain why they chose the image, what it represented, and how it connected to their experiences and values (Table 1). The image thus acted as a symbolic anchor for their broader narrative, enabling insight into the emotional and moral dimensions of their behavior. All interviews were transcribed and thematically coded using an abductive, iterative approach. Coding reliability was ensured through team triangulation and stepwise refinement. The analysis focused on choosing vs. rejecting strategies, as the participants framed, related to emotional tone, coherence, and subjective well-being.

## 3. Key Findings and Discussion

Table 1 presents some illustrative examples from the thirty interviews, linking each selected image with the meaning ascribed by the participant, the decision strategy (choose or reject), the associated emotional state, and a representative quote. Choose strategies were associated with approach motivations and aspirational self-expression. Participants who selected images depicting reusable, durable, or locally sourced items (e.g., glass jars, Levi's jeans) often described their choices as coherent with their ideal selves. These decisions were not merely functional or ecological but served as tools for self-construction and pride. One respondent said, "It makes me feel good to choose those products like I am becoming the person I want to be" (R11). In this sense, choosing strategies evoked hedonic well-being— satisfaction, positive affect, and identity affirmation—particularly when choices aligned with one's aspirational image, echoing Kumagai's (2024) Brand Sustainability–Self Congruence framework.

| ***Image selected*** | ***Meaning Ascribed by Respondents*** | ***Strategy*** | ***Emotional State*** | ***Original Quote*** |
|---|---|---|---|---|
| Bulk products in glass jars | Symbol of conscious, consumption; "minimal waste" as an expression of lifestyle alignment | Choose | Pride, coherence | *"It is not just that there is no plastic—you can tell there is a different, more careful way of doing things." (R11)* |
| Fast fashion with red X | A depiction of what to reject, expressing a stance against unethical behavior and distancing from mainstream norms | Reject | Integrity, empowerment | *"I stopped buying from that brand. I liked their stuff, but it does not align with what I believe in." (R03)* |

| | | | | |
|---|---|---|---|---|
| Levi's jeans | Associated with longevity and conscious durability, they are sustainable because "they last forever." | Choose | Satisfaction, authenticity | *"I immediately thought of Levi's… I have had mine for years. Better to pay more and make it last." (R07)* |
| Amazon cart canceled | Small but powerful gesture of restraint used to express agency and refusal in a digital context | Reject | Control, meaningful selfregulation | *"I felt empowered not clicking 'Buy now.' It is small, but it felt meaningful." (R18)* |
| Organic product with a high price | Elicit frustration symbolizes the conflict between ethical intention and economic limitation. | Choose under constraint | Moral discomfort, frustration | *"I would love to choose better, but often I just cannot afford it. It makes me feel stuck." (R25)* |
| Instagram post with second-hand fashion | Emblem of social signaling linked to recognition and social validation in peer groups | Reject (public) | Validation, image-building | *"When I tell my sister I went vintage instead of fast fashion, she looks at me differently." (R14)* |
| Farmer's market with reusable bags | Evokes communal belonging and slow consumption; often described as a sensory and relational experience | Choose/Reject hybrid | Peace, meaning, connectedness | *"Shopping there feels like I am part of something—like I am not alone in caring." (R21)* |

**Table 1:** Illustrative Consumer Narratives Linking Sustainable Choices to Emotional Meaning (Selected Examples from a 30-Interview Dataset)

In contrast, reject strategies were linked to avoidance motivations, moral evaluation, and identity protection. Respondents often selected images such as crossed-out fast fashion logos or screenshots of canceled online purchases to express their refusal of unsustainable options. Rejecting such products conveyed moral clarity, empowerment, and self consistency—especially when the rejected option was dominant or socially accepted. As one respondent noted: "I stopped buying from that brand. I liked their stuff, but it does not align with what I believe in" (R03). These narratives are consistent with framing theory

(Goodman & Reczek, 2021; Sokolova & Krishna, 2016), where rejection intensifies moral self-signaling and strengthens reputational positioning. Notably, when reject decisions were made in visible or social contexts, such as those involving second-hand fashion shared on Instagram, participants described a further layer of social signaling and identity reinforcement. In these cases, rejection operated not only as a moral stance but also as a reputational asset.

The findings also reveal ambivalent or emotionally taxing experiences, particularly when participants selected images that reflected ethical intention constrained by external barriers—such as the high cost of organic products. In these cases, even choosing sustainable options generated frustration, guilt, or dissonance, especially when choices felt imposed rather than autonomous. This supports the Self-Determination Theory (Deci & Ryan, 1985), which posits that well-being arises when behaviors are internally motivated and aligned with one's values (Pegan et al., 2025). Conversely, externally pressured or guilt-driven choices were linked to negative affect and diminished agency (Gelbrich, 2010; Azemi et al., 2020).

While less frequent, some participants framed their sustainable practices in spiritual or communal terms, evoking belonging and transcendence (Pegan et al., 2023). The image of a farmer's market with reusable bags, for instance, was described as evoking "a sense of being part of something bigger" (R21), aligning with recent studies on spiritual motivations in ethical consumption (Minton et al., 2022).

## 4. Conclusion, implications and future research

Our first qualitative evidence shows that sustainable consumption is a dynamic process in which choosing and rejecting are symbolic acts that co-produce identity and emotion over time. Choosing affirms the self and an ideal identity (a primarily hedonic form of well being), whereas rejecting enacts ethical integrity and moral commitment (eudaimonic fulfillment). Yet emotions are not uniformly positive: alongside pride and authenticity, participants report ambivalence—frustration, guilt, and sacrifice—suggesting that sustainable action is best read as an ongoing, reflective negotiation of values. Conceptually, we propose a prospective, process-oriented perspective that traces how choose/reject strategies interact and how "dynamic coherence" unfolds longitudinally across contexts. Managerially, this implies designing choice architectures that enable inclusion (making sustainable options easy to choose) and strategic exclusion (empowering consumers to refuse unsustainable ones), reinforcing autonomy and identity. Policy should likewise favor autonomy-supportive messaging over mandates or guilt appeals so that actions feel self determined. Future research should extend these insights across settings and time, and examine how AI systems—chatbots, recommenders, algorithmic filters—shape the emotional and moral framing of sustainable choices. Given participants' ambivalent references to TikTok, Instagram, ethical apps, and ChatGPT, a key question is whether AI can be designed to support consumer autonomy, moral coherence, and sustainable well being.

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## References

Aydin, N. (2010). Subjective well-being and sustainable consumption. The International Journal of Environmental, Cultural, Economic and Social Sustainability, 6(5). Azemi, Y., Ozuem, W., & Howell, K. E. (2020). The effects of online negative word-of- mouth on dissatisfied customers: A frustration–aggression perspective. Psychology & Marketing, 37(4), 564-577.

Balderjahn, I., Hoffmann, S., Huttel, A. (2023). How empowerment and materialism contribute to anti-consumers' well-being. European Journal of Marketing, 57(4), 1186-1218.

Besharat, A., Romero, M., & Haws, K. (2021). Customizing calories: How rejecting (vs. selecting) ingredients leads to lower calorie estimation and unhealthier food choices. Journal of Retailing, 97(3), 424-438.

Bhardwaj, P., Kalro, A. D. (2024). Consumer well-being - A systematic literature review and research agenda using TCCM framework. International Journal of Consumer studies, 48(1), e12991

Chandrashekar, S. P., Weber, J., Chan, S. Y., Cho, W. Y., Chu, T. C. C., Cheng, B. L., & Feldman, G. (2021). Accentuation and compatibility: Replication and extensions of Shafir (1993) to rethink choosing versus rejecting paradigms. Judgment and Decision Making, 16(1), 36-56.

Deci, E. L., Ryan, R. M. (1985). The general causality orientations scale Self determination in personality. Journal of research in personality, 19(2), 109-134.

Diener, R. (2010). New well-being measures: Short scales to assess flourishing and positive and negative feelings. Social indicators research, 97, 143-156.

Gelbrich, K. (2010). Anger, frustration, and helplessness after service failure: coping strategies and effective informational support. Journal of the Academy of Marketing Science, 38(5), 567-585.

Goodman, J. K., & Reczek, R. W. (2021). Choosing what to choose from: Preference for inclusion over exclusion when constructing consideration sets from large choice sets. Journal of Behavioral Decision Making, 34(1), 85-98.

Han, J., Jun, M., Kim, M., Key, S. (2018). Influence of congruency between ideal self and brand image on Sustainable Happiness. Sustainability, 10(11), 4076. Kumagai, K. (2024). Assessing the predictive validity of brand-sustainabilityself congruence on consumer behavior and subjective well-being. Asia Pacific Journal of Marketing and Logistics, 36(11), 2907-2930.

Lee, M. S., Ahn, C. S. Y. (2016). Anti-consumption, materialism, and consumer well- being. Journal of Consumer Affairs, 50(1), 18-47.

Liu, A., Baines, E., Ku, L. (2022). Slow fashion is positively linked to consumers' well being: evidence from an online questionnaire study in China. Sustainability, 14(21), 13990.

Minton, E. A., Tan, S. J., Tambyah, S. K., Liu, R. L. (2022). Drivers of sustainability and consumer well-being: An ethically-based examination of religious and cultural values. Journal of Business Ethics, 175, 167-190.

Nan, L. X., Park, S. K., & Yang, Y. (2023). Rejections are more contagious than choices: how another's decisions shape our own. Journal of Consumer Research, 50(2), 363- 381.

Pegan, G., Del Missier, F., & De Luca, P. (2023). Antecedents of green purchase choices: towards a value-oriented model. Journal of Cleaner Production, 399, 136633.

Pegan, G., Marzi, G., & Ranfagni, S. (2025). Pathways to Sustainable Consumption Apps Adoption: Extending UTAUT2 With Personal Values and Behaviors. Business Strategy and the Environment. Business Strategy and the Environment, 1–24 https://doi.org/10.1002/bse.70005

Ryan, R. M., Deci, E. L. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. Annual review of psychology, 52(1), 141-166.

Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. Journal of personality and social psychology, 57(6), 1069.

Resnik, S. (2022). A Qualitative Study of Mindfulness, Sustainable Consumption and Consumer Well-Being and their Interrelationships. Economic and Business Review, 24(4), 260-277.

Shafir, E. (1993). Choosing versus rejecting: Why some options are both better and worse than others. Memory & cognition, 21(4), 546–556.

Sirgy, M. J. (1985). Using self-congruity and ideal congruity to predict purchase motivation. Journal of business Research, 13(3), 195-206.

Sirgy, M. J., Lee, D. J. (2008). Well-being marketing: An ethical business philosophy for consumer goods firms. Journal of Business Ethics, 77, 377-403.

Sokolova, T., & Krishna, A. (2016). Take it or leave it: How choosing versus rejecting alternatives affects information processing.JournalofConsumerResearch,43(4),614-635

# Scrolling for Truth: Generation Z's Perception of CSR Credibility

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## Abstract

This exploratory study analyses how Generation Z evaluates corporate social responsibility communication, emphasizing authenticity, credibility, and media engagement. Based on two focus group of Italian university students aged 19 to 25, the study looks at the influence of digital media, testimonial trustworthiness, and the consistency between corporate messaging and actual behaviour. The findings show that, despite Gen Z is ethically aware and expects companies to engage in activism, they also prioritize practical factors like price and convenience. Participants distinguish between genuine and superficial CSR efforts, rewarding companies that demonstrate long-term commitment while criticizing opportunistic actions. Social media platforms, particularly Instagram and TikTok, emerge as the key sources of CSR content for this generational cohort. However, participants consider that the effectiveness of communication hinges on the alignment of the message and its perceived intent rather than the platform used. This study adds to existing literature on digital natives and CSR, offering insights for companies seeking to create effective CSR communication strategies that appeal to this socially conscious and media-literate generation.

*Keywords: GenZ · Perceived credibility · Corporate social efforts · Focus Group · CSR Communication*

## 1. Introduction

Companies' social role has evolved to encompass broader Corporate Social Responsibility (CSR) frameworks (Pelikánová & MacGregor, 2019), designed to encourage prosocial behaviours including altruism, characterized as individuals' willingness to sacrifice personal resources for others' benefit without anticipating external compensation (Bar-Tal, 1986), while advancing collective collaboration and societal progress (Fehr & Fischbacher, 2005).

This proliferation of CSR initiatives, however, has led to increasing scrutiny from stakeholders who question the credibility of such claims. Nevertheless, the expansion of CSR reporting and communication strategies has coincided with growing consumer doubt about the genuineness and reliability of corporate assertions (Skard & Thorbjørnsen, 2014; Lock & Seele, 2016). This doubt, commonly named as "greenwashing" or "woke-washing," poses considerable obstacles for organizations seeking to successfully convey their CSR activities to their audiences.

In digital communication contexts, the perceived credibility of CSR messaging becomes even more central, as consumers navigate a landscape saturated with promotional content and growing distrust (Rim & Dong, 2018; Wathen and Burkell, 2002).

Scholars have conducted comprehensive investigations into the complex nature of digital message trustworthiness (Dabholkar, 2006; Dou et al., 2012). Consumers continuously assess the trustworthiness of corporate communication, with research indicating that perceived credibility plays a pivotal role in shaping consumer decision-making processes, particularly in electronic commerce contexts, where CSR messages are frequently conveyed (Awad & Ragowsky, 2008).

These discoveries carry substantial implications for organizations involved in CSR communication activities. Companies that fail to convey credible CSR messages may struggle to engage with ethically aware consumers, particularly those from younger demographics who demand congruence between brand claims and behaviour (Alizadehrad & Maglakelidz, 2020; LaBarbera, 1982).

At the heart of this challenge lies the concept of trustworthiness, which represents a comprehensive set of perceptions that audiences form about a message source (Bettinghaus, 1969). As such, trustworthiness emerges as a multifaceted and vital component of organizational communication, particularly when addressing sensitive social and environmental responsibilities.

Key elements, such as message tone, choice of spokesperson, platform used, and visual style, have been found to influence CSR credibility, particularly among Gen Z audiences highly attuned to inconsistency and performative activism (Cammarota & Branca, 2025). It appears that, for optimal CSR communication effectiveness, organizations must thoughtfully examine the relationship between communication style and the channel used to engage diverse stakeholder groups.

Despite a growing body of research on CSR communication and consumer trust, existing literature tends to focus either on general consumer attitudes or on isolated communication variables (e.g., platform or message type). There is a lack of empirical insight into how the interplay between communication tone, source credibility, content framing, and channel selection affects perceived authenticity and trustworthiness among Gen Z audiences.

This study addresses this gap by starting to explore how young consumers evaluate CSR message credibility and which communicative elements enhance or hinder trust, using a qualitative focus group approach.

The purpose of this work seeks to explore whether Generation Z, a demographic particularly noted for its elevated awareness of social and environmental concerns (Jain et al., 2014; Dabija et al., 2019), values corporate social communication and incorporates it into their buying behaviors and brand selections. The research specifically aims to identify the information channels Generation Z utilizes to learn about companies' social involvement, along with determining which communication approaches they view as most trustworthy and prefer to interact with. To address this objective, we propose these research questions.

RQ 1 *When does CSR communication appear credible to Gen Z?*

RQ 2 Specifically, *which elements (platform, testimonial, tone, content) may enhance or undermine credibility?*

The first research question is rooted in Source Credibility Theory (Hovland, et al., 1953), which posits that the persuasiveness of a message is strongly influenced by the perceived trustworthiness and

expertise of the source. In the context of CSR communication, this theory is particularly salient, as stakeholders, especially younger consumers, evaluate not only the content of the message but also the authenticity and reliability of the sender. According to Ohanian (1990), credibility encompasses trustworthiness, expertise, and attractiveness, all of which contribute to the reception and impact of corporate communication. Generation Z, with its sophisticated media literacy and critical stance toward brand-generated content (Djafarova & Bowes, 2021), represents a uniquely challenging audience whose perception of CSR credibility hinges on both the moral integrity and perceived competence of the organization.

The second question draws upon persuasion theory and particularly the Elaboration Likelihood Model (ELM) proposed by Petty and Cacioppo (1986). ELM explains how message recipients process persuasive communication via either a central or peripheral route, depending on their involvement and motivation. For Generation Z, the medium (e.g., TikTok vs. LinkedIn), the tone (formal vs. conversational), and the type of messenger (peer vs. celebrity) function as peripheral cues that heavily influence the processing of CSR messages. Studies have shown that user-generated content (UGC) and testimonial authenticity act as amplifiers of message credibility, especially in environments saturated with marketing content (Djafarova & Bowes, 2021). Additionally, message framing and stylistic choices affect emotional engagement and ethical resonance, which are key dimensions for Gen Z audiences (Francis & Hoefel, 2018).

## 2. Literature review

### 2.1 CSR Communication

CSR communication refers to the strategic dissemination of information concerning a company's social and environmental initiatives, aimed at informing, engaging, and influencing stakeholders (Morsing & Schultz, 2006).

The success of CSR communication now hinges largely on its perceived credibility among target audiences. CSR credibility represents how believable, authentic, and consistent stakeholders find a company's social and environmental claims when compared to its actual values and behaviors (Kim & Ferguson, 2019). This complex concept incorporates multiple dimensions including trustworthiness, expertise, and goodwill, shaping how stakeholders view and respond to brands.

According to some recent literature, contemporary consumers approach corporate sustainability claims with considerable skepticism, a phenomenon extensively documented (Lock & Seele, 2016; Skard & Thorbjørnsen, 2014). This skepticism has elevated CSR credibility to a position of critical importance. As society becomes more attuned to social inequality, environmental destruction, and corporate ethical failures, consumers apply increasingly rigorous standards when evaluating organizational communications. The emergence of terms like "greenwashing" and "woke-washing" reflects widespread recognition that companies often manipulate ethical messaging for reputation management while avoiding substantive reforms (Delmas & Burbano, 2011; Cammarota & Branca, 2025). Modern stakeholders evaluate CSR communication not merely on what companies say, but on whether those messages reflect genuine behavioral change and sustained commitment.

Research demonstrates that credible CSR communication serves as a bridge for closing information gaps between organizations and their stakeholders (Du et al., 2010), building both trust and reputation over time.

The authenticity and consistency of CSR messaging have become fundamental requirements for meaningful stakeholder engagement, particularly among younger, digitally native consumers who possess sophisticated tools for fact-checking corporate claims. Understanding how specific demographic groups, particularly Generation Z, assess CSR credibility therefore represents both a timely research opportunity and a practical necessity for developing more effective communication strategies.

### 2.2 CSR Message Credibility

CSR message credibility extends beyond content to encompass the perceived trustworthiness of both the source and the communication channel. Drawing on Source Credibility Theory (Hovland & Weiss, 1951; Ohanian, 1990), credibility is understood as a function of three key dimensions: expertise, trustworthiness, and goodwill. In the context of CSR communication, this theory provides a valuable framework for understanding how stakeholders evaluate not just the message itself, but the messenger and medium through which it is conveyed.

Digital trust research reveals that online users evaluate information by examining both the messenger's identity and the platform where they encounter it (Wathen & Burkell, 2002; Dabholkar, 2006). This principle directly applies to CSR communication, where the messenger and medium significantly influence how audiences perceive message authenticity.

Generation Z demonstrates particularly sophisticated media literacy skills and exhibits notable skepticism toward traditional brand-generated content (BGC). Therefore, Djafarova and Bowes (2021) demonstrate that this demographic assign greater credibility to user-generated content (UGC), including peer reviews, influencer endorsements, and authentic behind-the-scenes material, which they perceive as more genuine, unfiltered, and emotionally compelling. In contrast, formal brand communications such as polished CSR reports or carefully crafted marketing campaigns often trigger suspicion, particularly when they appear overly manufactured or contradict the company's broader track record.

Platform selection plays an equally crucial role in determining message credibility. Visual platforms like Instagram and TikTok, characterized by their immediacy and interactive features, have become primary channels for reaching younger audiences with CSR content. However, success on these platforms depends on achieving alignment between message tone, messenger authenticity, and perceived organizational sincerity rather than simply adapting content format (Lim, 2020). Traditional corporate channels such as company websites or LinkedIn, while potentially informative, often fail to resonate with Gen Z audiences seeking genuine social and ethical dialogue, as these platforms are perceived as formal and disconnected from authentic conversation.

These communication dynamics highlight the strategic imperative for organizations to carefully select credible messengers and authentic contexts when sharing CSR initiatives. Organizations that fail to consider these factors risk not only diminished message impact but also active audience rejection and potential damage to their reputation.

### 2.3 GenZ and CSR perception

Generation Z (individuals born between 1995 and 2010) represents the first true cohort of digital natives, having grown up in an environment shaped by constant exposure to the internet, social media and mobile technologies (Francis & Hoefel, 2018). This generation displays a distinctive set of values and behaviours that fundamentally influence their relationship with brands and their expectations

towards corporate communication (Francis & Hoefel, 2018). A key element in their approach to consumption is the pursuit of authenticity and ethical consistency: Gen Z consumers expect brands to "practice what they preach", valuing transparency, inclusiveness, and alignment between corporate actions and communicated values (Francis & Hoefel, 2018).

In terms of media habits, Gen Z exhibits an intensive use of social platforms as primary channels for information and engagement. Studies show that Instagram and TikTok have become particularly influential environments where younger consumers encounter corporate content, form opinions, and engage with brand narratives (Djafarova & Bowes, 2021). However, this generation also shows a critical stance towards traditional BGC, often perceiving it as lacking in authenticity. Conversely, UGC and peer recommendations are considered more trustworthy and influential in shaping attitudes and behaviours (Djafarova & Bowes, 2021).

Regarding CSR, Gen Z demonstrates a high level of awareness and sensitivity. Compared to previous generations, Gen Z consumers more frequently evaluate companies based on their CSR initiatives and are more likely to reward or punish brands accordingly (Kim & Austin, 2019).

Notably, they tend to attribute higher credibility to CSR initiatives that are integrated into core business practices, such as socially responsible production processes, rather than to philanthropic activities perceived as peripheral or reactive (Kim & Austin, 2019). Furthermore, the mode of communication plays a crucial role: proactive, transparent, and multi-channel CSR communication resonates more positively with Gen Z, whereas reactive or inconsistent messaging may elicit scepticism (Kim & Austin, 2019).

These characteristics underline the importance of investigating not only the level of CSR awareness among Generation Z consumers, but also *through which channels* they access CSR-related information and how they assess the credibility of different communication sources. The exploratory focus group study presented in this article is designed precisely to address these questions, aiming to contribute to the understanding of how brands can effectively engage Gen Z audiences in the domain of CSR communication.

While previous studies have outlined Gen Z's general expectations toward CSR communication, little empirical work has explored the conditions under which CSR messages are perceived as credible by this cohort, especially in terms of platform choice, tone, and testimonial coherence. This research seeks to address this gap through an exploratory focus group study.

## 3. Methodology

Considering the exploratory nature of the study we adopted a qualitative research approach, employing two focus groups to start exploring Gen Z consumers' perceptions, attitudes, and reactions towards different forms of CSR communication and their perception of the CSR activities.

Focus groups are a qualitative research technique that involves gathering small, diverse groups of participants to engage in guided discussions about specific topics under the facilitation of a trained moderator (Krueger & Casey, 2015; Morgan & Spanish, 1984; Powell & Single, 1996).

This method was deemed particularly appropriate as it allows for the observation of interactive dynamics among participants and enables the capture of subtle nuances, shared meanings, and social influences that might not emerge in individual interview settings (Morgan, 1997; Kitzinger, 1995). The strength of focus groups lies in their ability to capture group dynamics and social interactions, where

participants can build upon each other's responses, challenge different viewpoints, and collectively explore complex issues in depth (Stewart & Shamdasani, 1990).

Data collection occurs through audio recordings of the sessions, which were subsequently transcribed and analyzed using thematic analysis (Powell & Single, 1996).

The empirical study was conducted through two focus group sessions on May and June 2025, composed of twelve participants. The sessions were held in a virtual environment via online video call, a modality that ensured participation from a geographically diverse pool while maintaining interactive engagement among participants. The target sample consisted of Generation Z consumers, selected because this demographic segment is particularly sensitive to social and environmental issues, highly engaged with digital media, and exhibits distinctive patterns of attitude and behaviour towards corporate responsibility communication compared to older cohorts. Moreover, Gen Z represents a critical audience for companies aiming to build long-term stakeholder relationships and to foster brand advocacy in the evolving socio-digital landscape.

Following Braun & Clarke's reflexive thematic analysis (2006), coding was conducted by the first author as the sole analyst. In this approach, inter-coder reliability is not considered a measure of quality; instead, transparency, reflexivity, and the coherence of the interpretive narrative are emphasized.

This exploratory phase is intended to provide valuable insights and to serve as a foundation for subsequent studies and for the development of a future research agenda.

### 3.1 Analysis Method

The analysis process followed a systematic approach to ensure rigor and validity. The focus group sessions were recorded and transcribed to capture participants' exact words and expressions. The transcribed data then underwent thematic content analysis to identify recurring patterns, themes, and insights related to consumers' perceptions of CSR communication (Braun & Clarke, 2006).

The analysis is guided by two complementary theoretical frameworks. Attribution theory (Heider, 1958) helps interpret how consumers attribute intentions and motivations to companies based on their CSR communications, particularly examining whether CSR efforts are perceived as genuine or opportunistic. Signalling theory (Spence, 1973) provides insights into how different communication tones and channels serve as signals that influence consumer perceptions of corporate authenticity and commitment to social responsibility. These theoretical lenses enable a deeper understanding of the underlying psychological processes that shape consumer responses to CSR messaging.

The empirical material was generated through two focus group sessions, involving a total of 12 participants aged between 19 and 25 years. The groups were composed of 6 females and 6 males. This sample allowed the study to capture a degree of homogeneity in terms of generational background, while also ensuring diversity of perspectives within the groups.

## 4. Findings

As an exploratory investigation into how Generation Z perceives and interprets CSR communication, the focus group yielded six interrelated themes that might shed light on the evaluative processes activated by this audience.

These preliminary findings contribute to bridging theoretical insights with emerging empirical patterns, especially within the framework of source credibility and signalling theory.

First, participants displayed a strong emphasis on the perceived congruence between corporate values and communicative behaviours, indicating that authenticity is evaluated based on the alignment with core business practices and the coherence between corporate actions and the social issues addressed, rather than on isolated or declarative statements.

The second preliminary theme that emerged during our focus group is testimonial credibility. Generation Z views influencers as a key filter in evaluating CSR messages, showing a distinct preference for spokespersons who are genuinely connected and linked to the cause, rather than those perceived as driven by commercial interests.

A third theme concerns the role of emotional engagement, as participants prefer CSR messages that combined visual immediacy with affective resonance, particularly on platforms such as TikTok and Instagram.

Fourth, skepticism towards institutionalized formats, such as CSR reports or official LinkedIn posts, was widespread, pointing to a generational expectation for accessibility and conversational tone.

In parallel, the fifth theme highlights the importance of perceived effort and continuity: one-off initiatives were often dismissed, while long-term, embedded CSR practices gained trust.

Lastly, the groups show an ability to detect perceived opportunism or "signalling incongruence," especially when companies appeared to adopt activist stances disconnected from their operational realities.

***Responsible Business: A Multidimensional Concept***

Participants across both focus groups understood responsible business as a multifaceted concept encompassing two distinct yet complementary dimensions. The first dimension centers on value-driven activism, where responsibility extends beyond traditional CSR to include awareness of environmental, social, and territorial impacts, as well as active engagement in broader societal issues such as LGBTQAI+ rights or positions on global conflicts.

*"A responsible company asks itself how it treats its employees, how it produces, and what kind of message it transmits to its clients." (P2)*

*"To me, it's also responsible if it voluntarily engages in social causes, takes a stance, for example, on Palestine and Israel, or racism." (P5)*

This might indicates a shift from a compliance-based view of CSR to one that includes value-driven activism and alignment with societal debates.

On the other hand, participants emphasized a more process-oriented perspective: a responsible company was expected to ensure coherence across the entire value chain, from working conditions to product quality, packaging, and post-sale practices.

*"For me, a responsible company is one that takes care of 100% of the process, from employees to sales to the final customer, and even after-sales." (P12)*
*"If a firm has been polluting for years but I see that it is genuinely working to reduce emissions, then I start perceiving it as more responsible." (P11)*

This evidence suggests that the notion of responsibility oscillates between two complementary dimensions for our GenZ sample: value-driven activism, where companies are expected to take positions on salient societal debates, and managerial-process responsibility, which focuses on the transparency, quality, and fairness of production and distribution systems. Together, these perspectives reflect a generational understanding of CSR that is simultaneously normative and operational, extending significantly beyond traditional regulatory compliance frameworks.

### *Identity Alignment as a Key Driver of Brand Preference*

Personal identification with a cause strongly influenced participant attitudes toward brands, with emotional resonance and shared values proving decisive in generating brand affinity. This effect was particularly pronounced when CSR initiatives reflected participants' lived experiences and personal identities.

*"If I belong to a certain community and I see a company that supports it, it's natural that I'm more drawn to it." (P6)*

*"If the company fights for a cause that touches me, I feel like part of a family." (P8)*

These responses highlight the significant potential of identity-based marketing strategies that authentically connect corporate values with consumer experiences.

However, insights from the second focus group revealed important nuances to this dynamic, emphasizing trust and authenticity as essential preconditions for successful identity alignment. Participants expressed widespread skepticism toward corporate claims they perceived as inflated, unverifiable, or purely promotional, suggesting that value alignment cannot be achieved without underlying credibility.

*"When I read 'we reduced emissions by 90%,' I don't believe it anymore. For me it's just marketing, there should be an external committee to verify those numbers." (P10)*

*"I trust more the reviews on YouTube by people who are not sponsored, rather than the official post of the company." (P9)*

These findings demonstrate that identity-based marketing proves effective only when coupled with perceived authenticity and independent validation. Shared values must be matched by credible communication practices; otherwise, alignment risks being undermined by consumer suspicions of opportunism or greenwashing. The data suggests that while emotional connection through shared identity remains a powerful driver of brand affinity, it requires a foundation of verified, transparent corporate behavior to achieve lasting impact.

### *Value-Behaviour Inconsistency and Consumer Guilt*

Despite demonstrating high awareness of ethical issues, participants across both groups openly admitted to a significant value-action gap in their purchasing behaviour. Practical considerations such as convenience, price, and product availability frequently overrode ethical considerations, even when consumers possessed clear knowledge of problematic corporate practices.

*"We say we care, but then we keep ordering from Amazon after reading about the workers' conditions." (P3)*

*"Even I, who am very sensitive to social issues, still buy from companies that aren't that committed." (P5)*

*"Let's be honest: we're selfish consumers. We buy what we need without thinking too much." (P8)*

This pattern of inconsistency was further reinforced: participants acknowledged continuing to purchase from brands associated with scandals or questionable practices when convenience or affordability took precedence. The inconsistency appeared particularly pronounced in different product categories, with participants applying varying ethical standards depending on the purchase context.

*"For agro-food products I check the labels, but for clothing I keep buying even if I know the company isn't very ethical." (P11)*

*"I avoid fast fashion when I can, but honestly sometimes it's the only affordable option." (P13)*

This cognitive dissonance reveals that ethical awareness does not automatically translate into ethical consumption patterns. Instead, the findings underscore the significant impact of structural and situational constraints, including price barriers, limited accessibility, and the absence of credible alternatives, that fundamentally limit the effectiveness of CSR as a standalone behavioural driver. The data suggests that while consumer guilt is present and acknowledged, it proves insufficient to alter entrenched consumption routines without complementary institutional support or the presence of visible, trustworthy ethical cues at the point of purchase.

### *Social Media as Primary Source of CSR Information*

Participants across both focus groups overwhelmingly identified social media,particularly Instagram and TikTok, as the most effective channels for CSR communication. Traditional sources such as sustainability reports or LinkedIn posts were perceived as inaccessible and passive, failing to engage younger consumers effectively.

*"If a company only publishes a CSR report, I assume they're not targeting young people like me." (P5)*

*"On Instagram, the content comes to me. I don't need to look for it. That makes a huge difference." (P2)*

This preference was primarily driven by content visibility and ease of access, with participants emphasizing that pop-ups, packaging cues, and short-form posts had significantly more impact than formal documents or detailed reports.

However, insights from the second focus group revealed important nuances regarding platform credibility. While visibility and accessibility remained valued, participants demonstrated sophisticated awareness that not all channels carry equal credibility. Some viewed LinkedIn and traditional media as more authoritative sources, whereas TikTok was frequently associated with superficial messaging and greenwashing tactics.

*"If a company communicates on TikTok, I assume it's just greenwashing. On LinkedIn or in the press, I take it more seriously." (P2)*

Conversely, other participants argued that credibility depends less on the medium itself and more on the underlying reputation of the company, noting that authentic messages can be effectively adapted across different platforms to reach distinct audience segments.

*"The social channel doesn't matter,the key is whether the company itself is credible." (P4)*

YouTube emerged as a particularly significant channel, especially through long-form reviews by smaller, independent creators. These were perceived as significantly more trustworthy than polished corporate posts or sponsored influencer endorsements, reflecting participants' preference for authentic, unbiased perspectives.

*"I trust more the YouTube reviews from people with few subscribers, because they're less influenced by deals with companies." (P5)*

These findings demonstrate that while social media platforms remain the primary source of CSR information for younger consumers, their effectiveness is critically mediated by perceptions of credibility, strategic platform selection, and the alignment of content format with consumer expectations for authenticity and accessibility.

### *Credibility, Coherence, and the Role of Influencers*

Generation Z participants demonstrated a sophisticated understanding of social responsibility that extends beyond environmental concerns to encompass accountability across entire production chains. However, this awareness was coupled with widespread skepticism toward corporate claims, which were frequently perceived as inflated or misleading.

This skepticism shaped participants' information-seeking behaviors, with trust appearing significantly higher when information originated from independent sources rather than corporate channels. Micro-influencers and non-sponsored reviews were particularly valued for their perceived authenticity and freedom from commercial influence.

*"I trust more the YouTube reviews from people with few subscribers, because they're less influenced by company deals." (P5)*

*"I rely more on what people I know personally say than on influencers." (P3)*

Central to participants' evaluation of brand authenticity was the requirement for coherence between corporate values and chosen brand ambassadors. Misalignment between a company's stated principles and its influencer partnerships was viewed as particularly damaging to credibility, with overexposure or contradictory messaging quickly undermining trust.

*"You can't say you're sustainable and then have your products promoted by influencers who shop at Shein." (P1)*

*"If an influencer promotes sustainability but also does Zara haul videos, they lose credibility." (P4)*

To address authenticity concerns, some participants proposed innovative solutions that would increase transparency in corporate communications. They suggested that companies could strengthen credibility by providing influencers and content creators with direct access to production processes, thereby reducing suspicions of scripted or superficial messaging.

*"Big creators should be invited to the company to see how materials are chosen and how people work. Showing the behind-the-scenes makes it more credible." (P4)*

Participants also drew important distinctions between different types of public figures, demonstrating nuanced understanding of messenger credibility. Artists and established public figures were perceived as more trustworthy than commercial influencers, owing to their long-term reputation and typically non-promotional stance.

*"Art lasts. Influencers don't. An artist can deliver a social message more authentically." (P2)*

These findings reveal that for Generation Z consumers, credibility stems from consistency across three key dimensions: the message, the messenger, and the medium. Any misalignments or perceived opportunism rapidly undermine trust, while transparency, independence, and authentic voice significantly enhance it. This suggests that effective CSR communication requires careful attention to both content and messenger selection, with authenticity serving as the fundamental prerequisite for meaningful engagement.

***Preferred CSR Content: Visual, Authentic, and Evidence-Based***

Participants across both focus groups demonstrated clear preferences for visual and concrete CSR content, particularly favouring behind-the-scenes videos, employee interviews, and infographics featuring verifiable data. Authenticity, transparency, and simplicity emerged as essential attributes of effective CSR communication, with participants consistently rejecting abstract claims in favour of tangible evidence.

*"I'd like to see videos showing what the company actually does, not just statements like 'we're sustainable'." (P2)*

*"Show me an image with strong impact and verifiable data,then I pay attention." (P6)*

*"Let the employees speak, show the production processes,that's what builds trust." (P3)*

The second focus group provided additional insights that emphasized the importance of process-based storytelling. Participants expressed strong preferences for content that traces the entire value chain, from material selection through packaging to distribution, as a means of demonstrating responsibility through concrete practices rather than abstract promises.

*"Show the production process, the packaging, even how shipments are made, if they use green transport or not." (P5)*

Beyond visual storytelling, participants consistently highlighted the critical role of external validation in building credibility. Certified data and third-party verification were regarded as necessary safeguards against greenwashing, with some participants explicitly calling for independent oversight of corporate CSR claims.

*"When I read "we reduced emissions by 90%," I don't believe it. There should be an independent committee checking those numbers." (P2)*

*"… so first, I check whether there are any labels, that is, whether there are brands, certifications, and so on." (P4)*

Credibility was further enhanced through first-hand testimonies, whether from employees directly sharing their workplace experiences or independent content creators documenting company practices. This personal dimension was seen as crucial for humanizing corporate communications and establishing authentic connections.

*"I like when a CEO or an employee explains things on YouTube, putting a face on the company makes it more credible." (P4)*

These findings collectively indicate that Generation Z consumers privilege CSR content that is visual, verifiable, and rooted in lived practices. Their preferences reflect a sophisticated demand for evidence-based communication where authenticity and transparency converge to counteract widespread

skepticism toward corporate sustainability claims. Effective CSR communication for this demographic requires moving beyond declarative statements to provide concrete, independently verified evidence of responsible practices throughout the entire value chain.

## 5. Discussion

The preliminary results of the focus group provide compelling insights into how Generation Z perceives and engages with CSR, offering both confirmation and expansion of existing academic literature. Participants articulated a multifaceted understanding of CSR, not confined to philanthropic gestures or reputational tactics, but grounded in ethical coherence, identity resonance, and social engagement. This supports Francis and Hoefel's (2018) characterization of Gen Z as a "truth-seeking" cohort that expects brands to demonstrate clear, consistent alignment between values and actions, especially on divisive societal issues such as climate justice, diversity, and equity.

A salient finding concerns the demand for relational authenticity, a desire to see one's values and identity reflected in the brand's CSR positioning. Participants consistently expressed appreciation for companies that engage in causes they personally relate to, suggesting that CSR is not merely assessed on normative or utilitarian grounds, but through the lens of identity-based evaluation. This complements Kim and Austin's (2019) assertion that Gen Z grants credibility to CSR when it is integrated into core business functions, such as ethical supply chain practices or inclusive workplace policies, rather than through detached or reactive philanthropy.

At the same time, the focus group revealed a persistent value-action gap. Despite high levels of ethical awareness and normative expectations, participants often admitted to making consumption choices driven by price, convenience, or habit. This contradiction, already documented by Carrington et al. (2010), appears not as a result of apathy, but of critical ambivalence, a reflexive negotiation between moral ideals and structural constraints. Interestingly, participants did not trivialize this dissonance; instead, they acknowledged it with irony or guilt, displaying a nuanced consumer consciousness that oscillates between aspiration and realism.

The role of digital media emerged as central to how Gen Z encounters, evaluates, and disseminates CSR-related information. Consistent with Djafarova and Bowes (2021), participants identified Instagram and TikTok as their primary platforms for discovering corporate initiatives. However, rather than responding to formal CSR campaigns, their attention is shaped by algorithmic curation and peer endorsement mechanisms. Traditional communication formats, such as CSR reports or LinkedIn posts, were dismissed as inaccessible or misaligned with their media consumption habits, underscoring the importance of tailoring message tone and format to the platform's social dynamics.

This behaviour aligns with the Source Credibility Theory (Hovland et al., 1953; Ohanian, 1990), which posits that the effectiveness of a message is significantly influenced by the perceived trustworthiness and expertise of the source. Participants expressed skepticism toward influencers perceived as overly commercial or misaligned with the values they claimed to support. In contrast, they attributed greater credibility to 'authentic voices', such as artists or public intellectuals. who were perceived as intrinsically motivated and value-consistent. This preference reflects growing influencer fatigue and heightened awareness of performative activism and greenwashing (Lim, 2020). Ultimately, for Gen Z, authenticity cannot be fabricated through marketing tactics; it must emerge from a congruent alignment between the messenger's identity, the message content, and the brand's actual behavior.

These preliminary findings portray Generation Z as ethically attuned, media-literate, and highly discerning in their reception of CSR communication. While CSR is not the primary driver of purchasing behaviour, it constitutes a powerful secondary filter through which brand legitimacy is evaluated. For CSR strategies to be effective with this cohort, they must be credible, transparent, identity-relevant, and narratively engaging. Companies should move beyond promotional rhetoric and embrace a dialogical, evidence-based approach that acknowledges the moral and cognitive sophistication of Gen Z consumers.

## 6. Conclusion and Limitation

This exploratory study offers a view of how a little sample of young consumers engage with corporate social responsibility communication, revealing both high ethical expectations and critical evaluative capabilities. Participants demand authenticity, transparency, and alignment between a company's stated values and its operational behavior. Rather than accepting CSR claims at face value, they assess the intentionality behind corporate messaging and differentiate between genuine activism and performative gestures.

At the same time, findings highlight a persistent value-action gap: despite endorsing ethical consumption, participants often prioritize affordability and convenience, illustrating the tension between normative ideals and market realities. This contradiction, however, does not indicate apathy, it reflects the structural constraints within which Gen Z constructs its consumer identity.

Digital platforms, particularly TikTok and Instagram, emerge as dominant arenas for CSR engagement. Yet, effectiveness is not defined by platform alone, but by the credibility of the messenger and the perceived congruence between message and action.

This study is based on a single focus group composed of a small and homogeneous sample of Generation Z participants, which may limit the generalizability of the findings. While the qualitative approach enabled in-depth exploration of perceptions and discourses, it does not capture the full diversity of views across different geographic, socioeconomic, or cultural segments within the Gen Z cohort. Additionally, the presence of researchers during the discussion may have influenced participants' responses due to social desirability bias. Future research should incorporate larger and more diverse samples, as well as mixed-method approaches, to validate and expand on these preliminary insights expanding this analysis through comparative or longitudinal methods, deepening our understanding of CSR perception in evolving digital and cultural contexts.

### References

Adams, C., & Zutshi, A. (2004). Corporate social responsibility: why business should act responsibly and be accountable. Australian accounting review, 14(34), 31-39.

Alcañiz, E. B., Cáceres, R. C., & Pérez, R. C. (2010). Alliances between brands and social causes: The influence of company credibility on social responsibility image. Journal of business ethics, 96, 169-186.

Alizadehrad, Z., & Maglakelidz, E. (2020). The Influence of CSR Awareness on Consumer Behavior Through Trustworthiness: The New Approach. European Journal of Behavioral Sciences, 3(2), 1-22.

Awad, N. F., & Ragowsky, A. (2008). Establishing trust in electronic commerce through online word of mouth: An examination across genders. Journal of management information systems, 24(4), 101-121.

Bar-Tal, D. (1986). Altruistic motivation to help: Definition, utility and operationalization. Humboldt Journal of Social Relations, 3-14.

Bettinghaus, E. P., & Baseheart, J. R. (1969). Some specific factors affecting attitude change. Journal of Communication, 19(3), 227-238.

Bigné, E., Currás-Pérez, R., & Aldás-Manzano, J. (2012). Dual nature of cause-brand fit: Influence on corporate social responsibility consumer perception. European Journal of Marketing, 46(3-4), 575-594.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative research in psychology, 3(2), 77-101.

Brown, T. J., & Dacin, P. A. (1997). The company and the product: Corporate associations and consumer product responses. Journal of marketing, 61(1), 68-84.

Cammarota, A., & Branca, G. (2025). Generation Z consumers' perspective: how and why should (not) brands engage in activism?. Italian Journal of Marketing, 1-30.

Carrington, M. J., Neville, B. A., & Whitwell, G. J. (2010). Why ethical consumers don't walk their talk: Towards a framework for understanding the gap between the ethical purchase intentions and actual buying behaviour of ethically minded consumers. Journal of business ethics, 97, 139-158.

Cha, J. (2025). Predictors of the Credibility of Social Media as a News Outlet: An Examination of the Influences of Social Media Contacts, Source Perceptions, and Media Use. International Journal on Media Management, 1-26.

Connelly, B. L., Certo, S. T., Reutzel, C. R., DesJardine, M. R., & Zhou, Y. S. (2025). Signaling theory: state of the theory and its future. Journal of management, 51(1), 24-61.

Connors, S., Anderson-MacDonald, S., & Thomson, M. (2017). Overcoming the 'window dressing'effect: Mitigating the negative effects of inherent skepticism towards corporate social responsibility. Journal of business ethics, 145, 599- 621.

Crane, A., & Glozer, S. (2016). Researching corporate social responsibility communication: Themes, opportunities and challenges. Journal of management studies, 53(7), 1223-1252.

Dabholkar, P. A. (2006). Factors influencing consumer choice of a" rating Web site": An experimental investigation of an online interactive decision aid. Journal of Marketing Theory and Practice, 14(4), 259-273.

Dabija, D. C., Bejan, B. M., & Dinu, V. (2019). How sustainability oriented is Generation Z in retail? A literature review. Transformations in Business & Economics, 18(2).

Dean, D. H. (2003). Consumer perception of corporate donations effects of company reputation for social responsibility and type of donation. Journal of advertising, 32(4), 91-102.

Delmas, M. A., & Burbano, V. C. (2011). The drivers of greenwashing. California management review, 54(1), 64-87.

Djafarova, E., & Bowes, T. (2021). 'Instagram made Me buy it': Generation Z impulse purchases in fashion industry. Journal of retailing and consumer services, 59, 102345.

Dou, X., Walden, J. A., Lee, S., & Lee, J. Y. (2012). Does source matter? Examining source effects in online product reviews. Computers in Human Behavior, 28(5), 1555-1563.

Du, S., Bhattacharya, C. B., & Sen, S. (2010). Maximizing business returns to corporate social responsibility (CSR): The role of CSR communication. International journal of management reviews, 12(1), 8-19.

Eberle, D., Berens, G., & Li, T. (2013). The impact of interactive corporate social responsibility communication on corporate reputation. Journal of business ethics, 118, 731-746.

Etter, M., Ravasi, D., & Colleoni, E. (2019). Social media and the formation of organizational reputation. Academy of management review, 44(1), 28-52.

Fehr, E., & Fischbacher, U. (2005). Human altruism–proximate patterns and evolutionary origins. Analyse & Kritik, 27(1), 6-47.

Francis, T., & Hoefel, F. (2018). True Gen': Generation Z and its implications for companies. McKinsey & Company, 12(2), 1-10.

Golob, U., Verk, N., Ellerup-Nielsen, A., Thomsen, C., Elving, W. J., & Podnar, K. (2017). The communicative stance of CSR: Reflections on the value of CSR communication. Corporate Communications: An International Journal, 22(2), 166-177.

Gosselt, J. F., van Rompay, T., & Haske, L. (2019). Won't get fooled again: The effects of internal and external CSR ECO-labeling. Journal of business ethics, 155, 413-424.

Heider, F. (1958). The psychology of interpersonal relations. Wiley.

Hovland, C. I., Janis, I. L., & Kelley, H. H. (1953). Communication and persuasion.

Hur, W. M., Kim, H., & Woo, J. (2014). How CSR leads to corporate brand equity: Mediating mechanisms of corporate brand credibility and reputation. Journal of Business Ethics, 125, 75-86.

Inversini, A., & Derchi, G. B. (2024). Corporate social responsibility on social media: a scoping review of the literature. Journal of Information, Communication and Ethics in Society, 22(4), 434-452.

Jain, V., Vatsa, R., & Jagani, K. (2014). Exploring generation Z's purchase behavior towards luxury apparel: A conceptual framework. Romanian Journal of Marketing, (2), 18.

Kim, S. (2011). Transferring effects of CSR strategy on consumer responses: The synergistic model of corporate communication strategy. Journal of Public Relations Research, 23(2), 218-241.

Kim, S., & Austin, L. (2020). Effects of CSR initiatives on company perceptions among Millennial and Gen Z consumers. Corporate Communications: An International Journal, 25(2), 299-317.

Kim, Y., & Ferguson, M. A. (2019). Are high-fit CSR programs always better? The effects of corporate reputation and CSR fit on stakeholder responses. Corporate Communications: An International Journal, 24(3), 471-498.

Kitzinger, J. (2005). Focus group research: using group dynamics to explore perceptions, experiences and understandings. Qualitative research in health care, 1, 56-70.

Knight, H., Haddoud, M. Y., & Megicks, P. (2022). Determinants of corporate sustainability message sharing on social media: A configuration approach. Business Strategy and the Environment, 31(2), 633-647.

Krueger, R. A., & Casey, M. A. (2015). Focus group interviewing. Handbook of practical program evaluation, 506-534.

LaBarbera, P. A. (1982). Overcoming a no-reputation liability through documentation and advertising regulation. Journal of Marketing Research, 19(2), 223-228.

Lee, S. Y., Zhang, W., & Abitbol, A. (2019). What makes CSR communication lead to CSR participation? Testing the mediating effects of CSR associations, CSR credibility, and organization–public relationships. Journal of business ethics, 157, 413-429.

Liu, L., Lee, M. K., Liu, R., & Chen, J. (2018). Trust transfer in social media brand communities: The role of consumer engagement. International Journal of Information Management, 41, 1-13.

Lock, I., & Seele, P. (2016). The credibility of CSR (corporate social responsibility) reports in Europe. Evidence from a quantitative content analysis in 11 countries. Journal of cleaner production, 122, 186-200.

Lublóy, Á., Keresztúri, J. L., & Berlinger, E. (2025). Quantifying firm-level greenwashing: A systematic literature review. Journal of Environmental Management, 373, 123399.

Madar, A., Huang, H. H., & Tseng, T. H. (2013). Do ethical purchase intentions really lead to ethical purchase behavior? A case of animal-testing issues in shampoo. International Business Research, 6(7), 102.

Maignan, I. (2001). Consumers' perceptions of corporate social responsibilities: A cross-cultural comparison. Journal of business ethics, 30, 57-72.

Martínez, P., Herrero, Á., & García-de los Salmones, M. D. M. (2020). Determinants of eWOM on hospitality CSR issues. In Facebook we trust?. Journal of Sustainable Tourism, 28(10), 1479-1497.

Miras-Rodríguez, M. D. M., Bravo-Urquiza, F., & Escobar-Pérez, B. (2020). Does corporate social responsibility reporting actually destroy firm reputation?. Corporate Social Responsibility and Environmental Management, 27(4), 1947-1957.

Mohr, L. A., Webb, D. J., & Harris, K. E. (2001). Do consumers expect companies to be socially responsible? The impact of corporate social responsibility on buying behavior. Journal of Consumer affairs, 35(1), 45-72.

Morgan, D. L. (1997). Focus groups as qualitative research (Vol. 16). Sage.

Morgan, D. L., & Spanish, M. T. (1984). Focus groups: A new tool for qualitative research. Qualitative Sociology, 7(3), 253–270.

Morsing, M., & Schultz, M. (2006). Corporate social responsibility communication: stakeholder information, response and involvement strategies. Business ethics: A European review, 15(4), 323-338.

Muttakin, M. B., Khan, A., & Azim, M. I. (2015). Corporate social responsibility disclosures and earnings quality: are they a reflection of managers' opportunistic behavior?. Managerial Auditing Journal, 30(3), 277-298.

Newell, S. J., & Goldsmith, R. E. (2001). The development of a scale to measure perceived corporate credibility. Journal of business research, 52(3), 235-247.

Newhagen, J., & Nass, C. (1989). Differential criteria for evaluating credibility of newspapers and TV news. Journalism quarterly, 66(2), 277-284.

Ohanian, R. (1990). Construction and validation of a scale to measure celebrity endorsers' perceived expertise, trustworthiness, and attractiveness. Journal of advertising, 19(3), 39-52.

Orazi, D. C., & Chan, E. Y. (2020). "They did not walk the green talk!:" How information specificity influences consumer evaluations of disconfirmed environmental claims. Journal of Business Ethics, 163, 107-123.

Pelikánová, R. M., & MacGregor, R. (2019, June). The impact of the new EU trademark regime on entrepreneurial competitiveness. In Forum Scientiae Oeconomia (Vol. 7, No. 2, pp. 53-70).

Pérez, A. (2019). Building a theoretical framework of message authenticity in CSR communication. Corporate Communications: An International Journal, 24(2), 334-350.

Pérez, A., & Rodríguez del Bosque, I. (2015). Corporate social responsibility and customer loyalty: exploring the role of identification, satisfaction and type of company. Journal of Services Marketing, 29(1), 15-25.

Petty, R. E., Cacioppo, J. T., Petty, R. E., & Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion (pp. 1-24). Springer New York.

Pflugrath, G., Roebuck, P., & Simnett, R. (2011). Impact of assurance and assurer's professional affiliation on financial analysts' assessment of credibility of corporate social responsibility information. Auditing: A Journal of Practice & Theory, 30(3), 239-254.

Pivato, S., Misani, N., & Tencati, A. (2008). The impact of corporate social responsibility on consumer trust: the case of organic food. Business ethics: A European review, 17(1), 3-12.

Pomering, A., & Dolnicar, S. (2009). Assessing the prerequisite of successful CSR implementation: are consumers aware of CSR initiatives?. Journal of business ethics, 85, 285-301.

Powell, R. A., & Single, H. M. (1996). Focus groups. International journal for quality in health care, 8(5), 499-504.

Rahman, I., Park, J., & Chi, C. G. Q. (2015). Consequences of "greenwashing": Consumers' reactions to hotels' green initiatives. International Journal of Contemporary Hospitality Management, 27(6), 1054-1081.

Rim, H., & Dong, C. (2018). Trust and distrust in society and public perception of CSR: a cross-cultural study. Social responsibility journal, 14(1), 1-19.

Schweiger, W. (2000). Media credibility,experience or image? A survey on the credibility of the World Wide Web in Germany in comparison to other media. European journal of communication, 15(1), 37-59.

Sen, S., & Bhattacharya, C. B. (2001). Does doing good always lead to doing better? Consumer reactions to corporate social responsibility. Journal of marketing Research, 38(2), 225-243.

Skard, S., & Thorbjørnsen, H. (2014). Is publicity always better than advertising? The role of brand reputation in communicating corporate social responsibility. Journal of Business Ethics, 124, 149-160.

Spence, M. (1978). Job market signaling. In Uncertainty in economics (pp. 281-306). Academic Press.

Stewart, D. W., & Shamdasani, P. N. (2014). Focus groups: Theory and practice. Sage publications.

Suki, N. M., Suki, N. M., & Azman, N. S. (2016). Impacts of corporate social responsibility on the links between green marketing awareness and consumer purchase intentions. Procedia Economics and Finance, 37, 262-268.

Tian, Z., Wang, R., & Yang, W. (2011). Consumer responses to corporate social responsibility (CSR) in China. Journal of business ethics, 101, 197-212.

Wang, R., & Huang, Y. (2018). Communicating corporate social responsibility (CSR) on social media: How do message source and types of CSR messages influence stakeholders' perceptions?. Corporate communications: An international journal, 23(3), 326-341.

Wathen, C. N., & Burkell, J. (2002). Believe it or not: Factors influencing credibility on the Web. Journal of the American society for information science and technology, 53(2), 134-144.

# How B Corp Leaders Communicate and Implement Sustainability Strategies: Evidence from the Italian Context

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## Abstract

In recent decades, the roles of companies have undergone profound changes, evolving from a vision focused solely on profit, based on shareholder interest, to a vision that takes into account the interests of all stakeholders of the company. In line with this approach, the non-profit organization B Lab aims to recognize the positive impact of companies on multiple stakeholders through the B Corp certification. Within B Corps, a fundamental role is played by the leader, who with their vision guides the company to adopt sustainability strategies and inspires employees to share these values. Through a qualitative study based on semi-structured interviews, this exploratory research aims to investigate how B Corp leaders effectively communicate sustainability strategies to employees, to align internal stakeholders and ensure successful strategy implementation. In line with transformational leadership theory, our analysis shows that leaders adopt a role model within the company, transmitting their vision and actively involving employees in sustainability strategies by using direct communication based on face-to-face meetings and moments of dialogue. Interesting, our results also suggest that longer employee tenure may discourage employees' adoption of B Corps strategy due to a higher resistance to change. In addition, the higher the employees' position within the company, the greater their understanding and acceptance of the strategy, also due to their closer relationship with the leader.

*Keywords: B Corp, stakeholder theory, transformational leadership theory, innovation resistance, stakeholder engagement, sustainable management and marketing*

## 1. Introduction

In recent decades, the perception of the role of the company in society has undergone profound changes, generating a wide debate in literature (Gazzola and Mella, 2016; Sjåfjell and Taylor, 2019). The shareholder-centricity dominated economic and managerial thought for years, proposing a business model that aimed exclusively at maximizing profit for shareholders (Friedman, 1970; Hiller, 2013). However, over the years, management and business literature has highlighted the limitations of the profit-maximization model (e.g. Smith and Rönnegard, 2016). As a result, business theories have evolved towards alternatives perspectives, as the stakeholder theory (ST) which extends the responsibility of the company beyond shareholders to all those who have an interest in the company,

namely stakeholders (Freeman and Reed, 1983). This change led companies to rethink their strategies, considering the interests of multiple subjects and the environmental and social impact as well as the economic one (Haigh and Hoffman, 2012). The development of new business models based on the concepts of Corporate Social Responsibility (CSR) and sustainable development, has favored the integration of ESG (environmental, social, governance) practices into business strategies (Marcon et al., 2023; Baron, 2007). One of the results of this paradigm shift has been the emergence of purpose-driven companies: companies that aim to integrate social and sustainable practices into their strategies, initially through CSR and later through ESG criteria (Ventura, 2022, 2023; Lyon et al., 2024). In this context, B Corps, for-profit companies certified by the non-profit organization B Lab, emerge as organizations committed to meeting rigorous standards of performance, transparency and accountability, and placing social and environmental sustainability at the center of their business model (Villela et al., 2021; Gazzola et al., 2023). By adopting the legal form of benefit corporation, B Corps are required by law to consider the impact of their actions and decisions on five key areas: Governance, workers, community, environment, and customers (Diez-Busto et al., 2022; Richardson and O'Higgins, 2019).

In the context of B Corp, a crucial role is played by their leaders, who are responsible for designing and implementing sustainable strategies that consider the interests of all stakeholders (Kirst et al., 2021; Yaslioglu and Erden, 2018). It is essential that these leaders promote values consistent with the corporate mission and align employees and other internal stakeholders to these values to ensure effective implementation of sustainable strategies (Boeske, 2023; Ibn-Mohammed et al., 2024). The characteristics required of B Corp leaders reflect those typical of transformational leaders, who inspire employees to transcend self-interest and commit to achieving shared goals (Averina et al., 2023; Jiatong et al., 2022).

Previous literature on B Corp leadership has primarily focused on the motivations behind the decision to pursue B Corp certification, shedding light on the underlying principles that drive the adoption of sustainable strategies (e.g. Harjoto et al., 2018; Pollmeier et al., 2024; Stubbs, 2017). However, limited attention has been paid to how these strategies are communicated internally (Mion and Loza Adaui, 2020). Given the critical role of leaders in inspiring employees to align their personal values with those of the organization (Bommer et al., 2005), it becomes essential to investigate how corporate sustainability strategies are communicated to internal stakeholders and what may favor internal strategy acceptance and implementation. Accordingly, this exploratory study addresses two main objectives. First (objective a), it examines how B Corp leaders, acting as transformational leaders, use communication and personal behavior to promote a shared vision of sustainability and to inspire employees to align their individual values with those of the company. Second (objective b), the study investigates potential barriers and factors that may hinder or facilitate employees' acceptance and adoption of B Corp strategies. Indeed, the existing literature suggests that, despite leaders' efforts to communicate sustainability strategies effectively, employees may encounter various obstacles, such as changes in work routines, increased workload, or misalignment between personal and corporate values, that challenge their engagement with and implementation of B Corp principles (Lee et al., 2023).

## 2. Theoretical background

According to the transformational leadership theory, organizations' leaders should inspire followers to transcend their own self-interest in pursuit of a greater common good (Burns, 1978; Bass, 1985). In the corporate context, leaders align their values with those of the company and through their behavior inspire employees to do the same (Bommer et al., 2005). Burns (1978) and Bass (1985), who first introduced and thereafter refined the transformational leadership theory, identified four areas through which leaders motivate followers: intellectual stimulation, idealized influence, individualized consideration, and inspiring motivation (Bass and Riggio, 2006; Avolio and Bass, 2004). It contrasts with the transactional leadership theory, which supports a model of leadership based on rewards and punishments, with limited scope for inspiration and motivation for employees (Yaslioglu and Erden, 2018). Transformational leaders serve as role models within the company, communicating directly with employees to convey their values and ideas to create and share their vision and common goals (Yaslioglu and Erden, 2018). This behavior has several positive aspects within the company. It creates a sense of trust in employees, increasing their motivation and leading them to perform beyond expectations. It also contributes to the creation of an inclusive and positive work environment, which promotes employee growth and well-being, increasing commitment and reducing burnout (Nguon, 2022; Braun et al., 2013). This environment also promotes the development of innovative ideas and behaviors and increases job satisfaction (Podsakoff et al., 1996; Afsar and Masood, 2018). The actions of transformational leaders also help to reduce resistance to change by employees, as open and direct communication helps to resolve many doubts and fears employees have about change and facilitates organizational transitions (Chukwuma and Zondo, 2024). This leadership style appears particularly well-suited for the introduction and communication of sustainable strategies within B Corps, especially given the holistic and multi-goal nature of B Corp strategies. Indeed, the complexity of sustainability strategies requires employees to be intrinsically aligned with the company's long-term and diverse objectives. Leaders of purpose-driven companies often share the qualities of transformational leaders and in this regard are sometimes called disruptive, since they challenge the status quo by introducing revolutionary innovations (Ibn-Mohammed et al., 2024; Manu, 2022). This leadership style allows companies to align all internal stakeholders with the pursuit of social and environmental goals alongside profit and create a supportive and motivating environment to face the challenges that may arise.

One criticism of this theory concerns the lack of clarity about the processes by which leaders influence followers (Yukl, 1999). In addition, innovation resistance theory (Ram, 1987) suggests that different types of barriers make people resist the adoption of innovations. Those barriers are also relevant in the context of sustainable strategies, which are often perceived as disruptive due to their challenge to the status quo (Ram and Sheth, 1989). Employees may oppose change for various reasons: they may fear the consequences of introducing an innovation, such as losing their job or changing their work practices; they may perceive a misalignment between their values and those of the company; or they may feel distant from change itself because they perceive it as little relevant to their daily tasks (Lee et al., 2023).

In this context, by focusing on the internal communication dynamics between B Corp leaders and employees, this study aims to identify the key challenges, barriers, and enablers influencing the internal understanding and adoption of sustainability strategies within certified B Corp.

## 3. Methodology

This exploratory study adopts a qualitative research design to investigate the two primary objectives previously mentioned: (a) understanding how B Corp leaders communicate sustainability strategies to

employees, and (b) exploring factors that could support or hinder the employees' understanding and adoption of B Corp strategies.

Given the dual-perspective approach—focusing on both leaders and employees—two distinct respondent groups were considered. The first group comprised B Corp leaders, specifically CEOs or managers responsible for the design and implementation of sustainability strategies in B Corps headquartered in Italy. Interviews with this group aimed to explore the methods and effectiveness of internal communication of sustainability goals, as well as how leaders influence employee alignment and engagement through their behavior and vision.

The second group consisted of employees working within the same organizations as the interviewed leaders. Interviews with employees were designed to capture their perceptions of how sustainability strategies are communicated and implemented, to identify potential resistance to change, and to assess whether discrepancies exist between leader and employee perspectives—particularly regarding the perceived timing and urgency of implementation.

A total of 15 semi-structured interviews were conducted with B Corp leaders via Google Meet and Microsoft Teams during November and December 2024. Each interview lasted approximately 60 minutes, was audio-recorded with participants' consent, transcribed, and anonymized to ensure confidentiality.

In addition to the 15 B Corp leaders' interviews, 24 interviews with employees were conducted asynchronously via email. Due to scheduling constraints and personal preferences, not all employees were available for real-time interviews. To maintain consistency and comparability across responses, all employee participants were provided with the same set of questions and asked to return their written answers. These email interviews were conducted in December 2024.

Data were analyzed using the Gioia Methodology (Gioia et al., 2013), a structured approach to qualitative thematic analysis that emphasizes the systematic development of first-order concepts, second-order themes, and overarching aggregate dimensions. This method supported the generation of grounded theoretical insights while ensuring analytical transparency and rigor throughout the coding and interpretation process.

## 4. Conclusions and Implications for Theory and Practice

By addressing how B Corp leaders communicate sustainability strategies to employees, and the potential barriers to B Corp implementation as perceived by employees, this study contributes to the application of transformational leadership and innovation resistance theories to the B Corp context.

The results obtained show that leaders adopt a role model within the company, transmitting their vision and actively involving employees in sustainability strategies. They prefer direct communication, through personal meetings and moments of dialogue, in line with what is supported by Yaslioglu and Erden (2018). The behaviors described by B Corp leaders are aligned with what is expressed by the transformational leadership theory, confirming the intuition that B Corp leaders usually adopt a transformational leadership style.

The size of the small-medium enterprise, owned by most of the interviewed companies, allows leaders to work closely with employees, co-creating sustainability strategies and reducing misalignments.

The analysis also suggests that some leaders experience resistance to change from employees. In particular, older employees with longer organizational tenure may sometimes express resistance to B Corp strategy. In line with innovation resistance theory, functional and psychological barriers were identified to explain this behavior. The interviewed leaders indicated that cultural barriers are the most relevant obstacles for contemporary organizations. This issue seems worsened by age and education: older employees were not trained to consider sustainability in their work tasks and decisions. Therefore, leaders sometimes find it difficult to demonstrate the value of sustainability projects, which often have long-term outcomes that are not directly measurable in economic terms. As a result, sustainability related projects may not appear to be a priority, especially when they do not have an immediate impact. Accepting and implementing a sustainable business perspective requires involvement and commitment, demanding a substantial shift in mindset for some team members. The situation tends to be easier with younger employees and new hires, who are often more sensitive to sustainability related issues and do not need to change well-established work practices. Differences in the perception of sustainability strategies are also linked to employees' roles within the company. Those in decision-making positions typically have a clearer understanding of these strategies, due to greater access to information and more frequent and personal contact with the leader. In contrast, employees in more operational roles often require more time to fully assimilate them. Nevertheless, the leader's inspirational approach contributes to fostering a positive work environment and a shared sense of purpose within the organization. This was confirmed by employees, as in all six companies where the perceptions of leaders and employees were compared, a strong alignment of vision emerged.

This study has implications for practitioners, as it provides valuable insights to B Corp leaders and managers who want to effectively communicate the corporate strategy and vision to employees.

The main limitation of the study is probably related to the restricted focus on B Corps headquartered in Italy, which could give rise to cultural bias. Moreover, although anonymity was guaranteed, our data collection could have been affected by social desirability bias, particularly relevant in sustainability marketing and management studies.

While this explorative research provided valuable insights, there is the need for further studies, both qualitative and quantitative, with a larger sample and with B Corps in other countries, in order to confirm the validity of our results and to further investigate dynamics related to internal communication and employees' acceptance of B Corp strategy. Future research could also analyze the alignment between internal and external communication of sustainability strategies and the role of B Corp leaders in shaping external stakeholders' dialogue. Additionally, the impact of this communication on relationship dynamics and the perceived relationship quality in the whole supply chains is a promising venue for future research.

**References available upon request.**

# Sustainability Communication or Missed Opportunity? Evidence from Italian SMEs in the Wood-Furniture Industry

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## Abstract

Digital sustainability communication is an increasingly strategic priority for businesses. This study examines how Italian SMEs in the wood-furniture sector address this challenge through their websites. Using the OSEC model on a sample of 54 firms, the research assesses the effectiveness of their sustainability communication. Preliminary findings reveal a strong focus on technical aspects of the website, with major gaps in content quality, transparency, and stakeholder engagement. Theoretically, the study extends the use of the OSEC model to a previously unexplored sector, confirming its relevance for SMEs. Managerially, it stresses the need for integrated digital strategies that enhance transparency and stakeholder dialogue.

*Keywords: sustainability communication; SMEs; OSEC model; wood-furniture sector.*

## 1. Introduction and Background

The Italian wood-furniture sector, a pillar of Made in Italy, is characterised by a strong artisanal tradition and an industrial district-based production model (Becattini, 1987). Comprising highly specialised small and medium-sized enterprises (SMEs) (Becattini, 1987), the sector confirmed its resilience in 2024, with a production turnover of €51.6 billion and exports totalling €19.4 billion (FederlegnoArredo, 2025).

The sector consists of two main segments: the wood macro-system, focused on raw materials and semi-finished products, and the furniture macro-system, which includes furniture and home accessories (FederlegnoArredo, 2020). The latter is particularly emblematic of Italian craftsmanship, blending aesthetics, functionality, and cultural identity (FederlegnoArredo, 2020). Within this segment, several specialised sub-sectors address diverse market needs: home furnishings, office furniture, lighting, and bathroom furnishings.

In the 21st century, regulatory and social changes have made environmental sustainability and the circular economy strategic priorities for businesses (Baratta et al., 2023), driven by growing consumer awareness, particularly among Millennials and Generation Z (Kapferer & Michaut-Denizeau, 2020). The wood-furniture sector, which is heavily dependent on material resources, is particularly involved in this transition (Jaeger & Upadhyay, 2020). However, SMEs still face significant organizational, cultural, and financial obstacles (Tura et al., 2019), accentuated by a perception of sustainability as a cost (Barbaritano & Savelli, 2020) and a fragmented European regulatory framework (Kazancoglu et

al., 2021). In this context, corporate websites play a key role in communicating sustainable commitment, thanks to their ability to offer transparency, updatability, and engagement (Wanderley et al., 2008), which are essential elements for strengthening reputation in the sector (Barbaritano, 2019). Against this background, the present study examines how Italian wood-furniture companies communicate sustainability and circular economy practices through their websites. The study pursues the following research objectives: (RQ1) to explore how websites convey sustainability-related information and values; (RQ2) to identify the features of effective and authentic online communication; (RQ3) to assess the transparency, consistency, and quality of sustainability reporting in relation to circular economy principles.

A qualitative approach is employed to analyse the digital communication strategies of Italian wood-furniture firms, evaluating their effectiveness, authenticity, and consistency, while also identifying potential signs of greenwashing.

## 2. Methodology

The sample was selected through purposive sampling (Campbell et al., 2020) from the FederlegnoArredo portal, focusing on the *Furniture* macro-system. Sector filters identified 538 companies in relevant segments for this study: bathroom furniture, office furniture, home accessories, kitchens, wooden components, furniture, movable partitions, seating, and bedding systems. The sample was further refined by selecting SMEs (annual turnover < €50 million; < 250 employees) (European Union, 2003) with export shares over 25%, reducing it to 81 firms. This export threshold was included given that the sector is expected to represent Made in Italy internationally, making export capacity a relevant indicator of market positioning. Final screening, based on website and product catalogue analysis, applied three inclusion criteria: (i) production of wood-based products; (ii) active corporate website. The final sample comprises 54 companies.

Website analysis followed the OSEC model (Orientation, Structure, Ergonomics, Content) (Siano et al., 2016), which assesses sustainability communication across 18 sub-dimensions and 64 indicators, using dichotomous coding (1 = present; 0 = absent). Final scores aggregate values across dimensions. The model evaluates: *Orientation* (mission/vision on sustainability); *Structure* (organisational features and stakeholder engagement tools); *Ergonomics* (usability, accessibility, interactivity); and *Content* (scope and quality of sustainability information, communication principles). It also detects potential greenwashing by assessing consistency with verifiable content (TerraChoice, 2010).

## 3. Preliminary results

The preliminary results concern eight SMEs in the sample, the first two with the highest turnover in each system in the wood-furniture sector. **Table 1** shows descriptive information about the sample.

| **Company** | **System** | **Turnover (million)** | **Company employees** | **Export share (%)** |
|---|---|---|---|---|
| *So.Ve.T. Societa Vetraria Trevigiana srl* | Lighting system; Furniture system | €2.5- €5 | 33 | 75-100 |

| | | | | |
|---|---|---|---|---|
| *Sigma L2 Paolo Granchi SRL* | Lighting system; Furniture system | €1-€2.5 | 8 | 75-100 |
| *Scarabeo Ceramiche SRL* | Bathroom furniture system | €5- €10 | 68 | 75-100 |
| *Pedini SPA* | Bathroom furniture system; Furniture system | €13-€25 | 63 | 75-100 |
| *Moroso SPA* | Office furniture system; Furniture system | up to €500.000 | 123 | 75-100 |
| *I 4 mariani SPA* | Office furniture system; Furniture system | €5-€10 | 49 | 75-100 |
| *Status srl* | Furniture system | €2.5-€5 | 20 | 100 |
| *Tonon e C. spa* | Furniture system | €5-€10 | 36 | 100 |

**Table 1**: Main characteristics of companies

Analysis of the websites of the eight SMEs using the OSEC model reveals an overall lack of performance in sustainability communication. Total OSEC scores ranged from 17.19% to 45.31%, confirming that the wood-furniture sector is still in the early stages of adopting structured and effective digital communication on sustainability (**Table 2**).

| **Company** | **Dimensions** | | | | **Total OSEC score** |
|---|---|---|---|---|---|
| | **Orientation** | **Structure** | **Ergonomics** | **Content** | |
| *So.Ve.T. Societa Vetraria Trevigiana srl* | 16.67% | 5.88% | 63.16% | 0% | 21.88% |
| *Sigma L2 Paolo Granchi SRL* | 0% | 0% | 63.16% | 0% | 18.75% |
| *Scarabeo Ceramiche SRL* | 33.33% | 11.76% | 73.68% | 4.55% | 29.69% |
| *Pedini SPA* | 33.33% | 5.88% | 63.16% | 4.55% | 25% |

| | | | | | |
|---|---|---|---|---|---|
| *Moroso SPA* | 100% | 23.52% | 68.42% | 27.27% | 45.31% |
| *I 4 mariani SPA* | 0% | 5.88% | 52.63% | 0% | 17.19% |
| *Status srl* | 0% | 13.64% | 63.16% | 18.18% | 26.69% |
| *Tonon e C. spa* | 50% | 0% | 68.42% | 31.82% | 35.94% |

**Table 2**: OSEC scores of sample companies

The dimension scores reveal significant disparities. *Ergonomics* is the strongest dimension (52.63%–73.68%), reflecting good usability and navigation. In contrast, *Content* and *Structure* are weak: many companies score below 20% for Content, with critical gaps in visibility, authenticity, and completeness, while Structure lacks adequate stakeholder engagement tools and communication practices. *Orientation* shows mixed results, with only some companies including explicit sustainability references in their mission and vision. All companies analysed report total OSEC scores below 50%, indicating an overall lack of compliance with sustainability communication standards (Siano et al., 2016). Moroso SPA leads (45.31%) with strong Orientation, followed by Tonon e C. spa (35.94%) and Scarabeo Ceramiche SRL (29.69%), which perform well in Ergonomics. Other companies show modest, consistent results, with fair Ergonomics but very low Orientation and Content scores, reflecting fragmented communication. The poorest performers, I 4 Mariani SPA (17.19%) and Sigma L2 Paolo Granchi SRL (18.75%), display major deficiencies across all dimensions, particularly in Orientation and Structure.

## 4. Discussion and Conclusion

Digital communication on sustainability in the wood-furniture sector is still underdeveloped and fragmented. Companies tend to focus on technical aspects such as ergonomics and website navigability, neglecting more strategic dimensions such as sustainable storytelling (Orientation), organizational transparency (Structure), and content quality (Content). This shortcoming compromises the credibility and authenticity of communication, as already noted in other sectors by Siano et al. (2016) and San Miguel et al. (2021). The analysis confirms the absence of integrated communication strategies, with little attention paid to governance, stakeholder engagement, and the use of the web as a tool for dialogic sustainability. Furthermore, sustainability content is often generic, unverifiable, and disconnected from the core business, exposing companies to the risk of greenwashing (Siano et al., 2016).

From a theoretical perspective, the study addresses the still largely unexplored topic of digital communication on sustainability, which is crucial today in order to respond to demands for transparency and regulatory pressures. The focus on SMEs is particularly relevant, given their greater difficulty in adopting and communicating sustainable practices due to structural and resource constraints (Upadhyay et al., 2021). The work also extends the application of the OSEC model, previously used in the energy and fashion sectors (Siano et al., 2016; San Miguel et al., 2021), to the wood-furniture sector, a pillar of Made in Italy (Becattini, 1987). On the managerial side, there is a need for an integrated approach to sustainable communication, based on authentic narratives and participatory governance tools, guided by principles of clarity, consistency, and transparency, to strengthen stakeholder trust and improve corporate positioning.

While providing an initial overview, this study is limited by the relatively small sample size and the use of a model adapted primarily to corporate websites. Future research could extend the analysis to include e-commerce channels, social media platforms, and multi-stakeholder reporting frameworks, in line with the methodological evolution proposed by San Miguel et al. (2021).

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## References

Baratta, A., Cimino, A., Longo, F., Solina, V., & Verteramo, S. (2023). The Impact of ESG Practices in Industry with a Focus on Carbon Emissions: Insights and Future Perspectives. *Sustainability*, *15*(8), 6685.

Barbaritano, M., Bravi, L., & Savelli, E. (2019). Sustainability and Quality Management in the

Italian Luxury Furniture Sector: A Circular Economy Perspective. *Sustainability*, *11*(11), 3089.

Barbaritano, M., & Savelli, E. (2020). Design and sustainability for innovation in family firms.

A case study from the italian furniture sector. *Piccola Impresa/Small Business*, *1*.

Becattini, G. (Ed.). (1987). *Mercato e forze locali: il distretto industriale*. il Mulino.

Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D., & Walker, K. (2020). Purposive sampling: Complex or simple? Research case examples. *Journal of Research in Nursing*, *25*(8), 652–661.

Ellen MacArthur Foundation (2013). *Towards a Circular Economy-Economic and Business Rationale for an Accelerated Transition*; Ellen MacArthur Foundation: Cowes, UK.

European Union (2003). *Raccomandazione della Commissione, del 6 maggio 2003, relativa alla definizione delle microimprese, piccole e medie imprese* [2003/361/CE]. Available at: http://data.europa.eu/eli/reco/2003/361/oj/ita. Accessed on: June 18, 2025.

FederlegnoArredo (2020). La filiera Legno-Arredo italiana in *Rapporto FederlegnoArredo 2020*, (4° ed). Available at: https://www.federlegnoarredo.it/ContentsFiles/CAP%203.pdf. Accessed on: June 18, 2025.

FederlegnoArredo (2025). Preconsuntivi 2024 filiera legno-arredo: fatturato a 51,6 miliardi di euro. Available at:

https://www.federlegnoarredo.it/ContentsFiles/PRECONSUNTIVI%202024%20FILIERA%20LEGNOARREDO.pdf. Accessed on: June 18, 2025.

Jaeger, B., & Upadhyay, A. (2020). Understanding barriers to circular economy: Cases from the manufacturing industry. *Journal of Enterprise Information Management*, *33*(4), 729–745.

Kapferer, J-N., & Michaut-Denizeau, A. (2020). Are millennials really more sensitive to sustainable luxury? A cross-generational international comparison of sustainability consciousness when buying luxury. *Journal of Brand Management*, *27*(1), 35–47.

Kazancoglu, I., Sagnak, M., Kumar Mangla, S., & Kazancoglu, Y. (2021). Circular economy and the policy: A framework for improving the corporate environmental management in supply chains. *Business Strategy and the Environment*, *30*(1), 590–608.

SanMiguel, P., Pérez-Bou, S., Sádaba, T., & Mir-Bernal, P. (2021). How to Communicate Sustainability: From the Corporate Web to E-Commerce. The Case of the Fashion Industry. *Sustainability*, 13(20), 11363.

Siano, A., Conte, F., Amabile, S., Vollero, A., & Piciocchi, P. (2016). Communicating Sustainability: An Operational Model for Evaluating Corporate Websites. *Sustainability*, *8*(9), 950.

TerraChoice (2010). The Sins of Greenwashing Home and Family Edition. Ottawa, Canada: Underwriters Laboratories.

Tura, N., Hanski, J., Ahola, T., Ståhle, M., Piiparinen, S., & Valkokari, P. (2019). Unlocking circular business: A framework of barriers and drivers. *Journal of Cleaner Production*, *212*, 90–98.

Upadhyay, A., Laing, T., Kumar, V., & Dora, M. (2021). Exploring barriers and drivers to the implementation of circular economy practices in the mining industry. *Resources Policy*, *72*, 102037.

Wanderley, L. S. O., Lucian, R., Farache, F., & de Sousa Filho, J. M. (2008). CSR information disclosure on the web: a context-based approach analysing the influence of country of origin and industry sector. *Journal of business ethics*, *82*, 369-378.

# Regenerating Salento: How to Turn an Agri-Environment Crisis Into a Place Branding Opportunity

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## Abstract

The Salento landscape has been reshaped by the outbreak of Xylella fastidiosa, which has caused the eradication of a centuries-old crop and caused environmental, social, and cultural effects that go beyond the loss of agricultural output. While current technical and policy discussions emphasise replanting resistant olive cultivars, literature on resilience warns that monocultures remain inherently susceptible to future shocks. This calls for a diversification strategy, both agronomic and narrative, that can replace or complement the olive tree's long-standing iconography with new symbols linked to emerging value chains and place attributes. This study investigates how consumers evaluate a hypothetical collective brand associated with new products from Salento and the extent to which they are willing to purchase them. An online survey administered to residents, former residents, and tourists measures place attachment, environmental values, perceived authenticity, regenerative value, purchase intention, and willingness to pay. A structural model tests whether authenticity and regenerative value mediate the relationship between these antecedents and consumer propensity to buy. The expected results will contribute to the literature on place branding in contexts of agro-environmental crisis and the definition of marketing guidelines for cooperatives and policy makers engaged in the regeneration of Salento.

*Keywords: Xylella, Place Branding, Agricultural Resilience, Regenerative Value, Purchase Intention*

## 1. Introduction

The first outbreak of *Xylella fastidiosa* subsp. *pauca* in Salento was recorded in 2013, and the bacterium has continued to advance along the peninsula ever since (Saponari et al., 2019). In a landscape dominated almost exclusively by centenarian old olive groves, the rapid extinction of trees has caused a double loss: the economic foundation of many farms and a key component of the region's natural capital - a pillar of both environmental quality and tourist appeal. The abrupt interruption of the

enduring "olive tree landscape" narrative (Sardaro et al., 2022) underscores the deep interdependence among agriculture, landscape, culture, and place branding.

Most of literature in the field has focused on the bacterium's epidemiology, vector distribution, diagnostic protocols, therapeutic approaches, and the identification of tolerant cultivars (Serio et al., 2024). Only recently, attention has turned to the crisis's structural underpinnings: excessive crop specialisation has eroded ecological resilience, leaving the production system exposed to biotic and climatic shocks (Lin, 2011). Agroecological research shows that crop diversification enhances long term stability, land use efficiency, and the protection of ecosystem services (Altieri & Nicholls, 2017). Landscape-ecology studies further demonstrate that *Xylella* invasion reshapes cultural and tourism services, highlighting the urgency of integrated regeneration strategies (Valente, 2024).

The results of recent landscape-economics studies indicate that local residents place a high value on multifunctional restoration of olive areas and recognise the benefits of a more varied agricultural mosaic that combines production, biodiversity, and recreational use (Frem et al., 2021). At the same time, place-branding literature investigates how territories strongly associated with a single product can redefine their value proposition when that product becomes a symbol of crisis (Zenker & Braun, 2014).

An unanswered marketing research question is posed by this paradigm shift: Can a region whose international reputation was built on olives and olive oil reinvent itself through new products born of diversified, regenerative farming systems? Put differently, is the intangible value generated by joint efforts of agronomists, entrepreneurs, and local communities transferable to markets and perceived by consumers as a credible promise of quality and sustainability? Can the engagement sparked by new products and a refreshed territorial image translate into sufficient willingness to buy and willingness to pay to support this transition? The present study addresses these questions by analyzing the relationships among users' place attachment, environmental values, perceived authenticity, and regenerative value, and by assessing whether and to what extent consumers are willing to purchase and pay a premium for products that embody the rebirth of the Salento landscape.

## 2. Methodological Framework

### 2.1 Identification Of The Study Area

The Salento peninsula in the Apulia Region (southern Italy) is the study area, which extends to 220,790 ha (Figure 1). *Xylella fastidiosa* has caused the most impact on the provinces of Brindisi, Taranto, and Lecce since 2013. This phitosanitary emergencies turn out to be letal for the iconic olives groves of Salento, many of them centenary and millennial trees protected by a special Regional law established in 2007, the n.14/2007 devoted to "The protection and valorization of the landscape of the monumental olive trees of Puglia". Although the whole of Salento remains the epicenter of the epidemic, the most recent surveillance documents a clear advance towards the north of the infected zone (Osservatorio Fitosanitario della Regione Puglia, 2024).




**Figure 1:** Study area represented by the Salento Peninsula in southern Italy

## 2.2 Questionnaire and measures

The questionnaire was administered online to an initial sample of 100 adult respondents, divided into residents in Salento, former residents and tourists. The first part investigates familiarity with Salento and the *Xylella* epidemic. After a careful analysis of the literature, the most useful scales to investigate the subject matter of the study were selected. The first section analyzes consumers' *green values* (Haws et al., 2014) (6 items, Likert scale 1-7) - the stable orientation to make environmentally friendly consumption choices, the environmental propensity conditions, the opening towards products born from regenerative practices. The second section analyzes the two dimensions of place attachment by Boley et al. (2021): *place identity* (3 items, Likert scale 1-7) - to what extent the Salento is part of the consumer's sense of self; *place dependence* (3 items, Likert scale 1-7) - how much Salento meets better than other places its objectives. The symbolic value of regeneration is rooted in users' place identity, and the scale describes how much the brand can rely on emotions and functionality attributed to the place.

The stimulus includes the following scenario: a cooperative of farmers from the Salento that has started to regenerate the lands affected by Xylella by introducing diversified crops (arboreal and herbaceous crops in general) together with resistant olive varieties.

Diversified crops ensure biodiversity, sustainable land use and resilience to shocks. The products have the territorial mark "Salento Rigenera", which certifies their local origin and, in particular, the provenance of former olive groves destroyed by *Xylella*. Third section analyzes how the social and environmental initiatives at the basis of "Salento Rigenera" are genuine and not opportunistic, considering the *perceived authenticity* scale (CSR-A) by Alhouti, Johnson & Holloway (2016) (6 items, Likert scale 1-7). Section 4 combines standard green value indicators with specific *post-Xylella* statements (biodiversity, landscape rebirth) an ad hoc scale was created for the evaluation of perceived regenerative value (4 items, Likert scale 1-7) and the Woo & Kim (2019) *green perceived value* scale (4

items, Likert scale 1-7) which analyzes the environmental, cultural and economic benefits attributed to regenerative products. In Section 5, attitudes (3 semantic differentials scale from 1 to 7 points) i.e. the affective-cognitive evaluation of the product concept, and the buying intention (WTB) (3 items, Likert scale 1-7) that investigates the pre-phase behaviour crucial for estimating market potential. Section 6 analyses the willingness to pay (WTP), giving a discreet choice between 7 levels of surcharge (0 >50 %) for "Salento Rigenera" oil compared to 500 ml of standard EVO oil at €7.00. Finally, the last section consists of background variables such as purchasing habits, political orientation and sociodemographic data, allowing control over heterogeneity.

## 3. Preliminary Results

The purpose of this study is to analyze a balanced sample of 200 respondents; at present, a balanced sample of 100 respondents is available, and preliminary results from basic descriptive statistics have been obtained. A strong correlation emerges between those who are firmly convinced that climate change is occurring and their purchasing propensity. The WTP sustainable premium price is approximately 20–30%. No significant differences are observed in purchasing propensity across age groups, while gender differences are evident, with female respondents showing higher propensity. Former residents display the strongest inclination to purchase. Place attachment does not significantly affect willingness to buy (WTB) or willingness to pay (WTP). The findings may contribute to the theory of postcrisis place branding, offering practical guidance for local cooperatives, consortia, and policymakers engaged in the transition toward more resilient agricultural systems.

## References


Alhouti, S., Johnson, C. M., & Holloway, B. B. (2016). Corporate social responsibility authenticity: Investigating its antecedents and outcomes. Journal of Business Research, 69(3), 1242–1249.

Altieri, M. A., & Nicholls, C. I. (2017). The adaptation and mitigation potential of traditional agriculture in a changing climate. Climatic Change, 140, 33–45.

Boley, B. B., Strzelecka, M., Yeager, E. P., Ribeiro, M. A., Aleshinloye, K. D., Woosnam, K. M., & Mimbs, B. P. (2021). Measuring place attachment with the abbreviated place attachment scale (APAS). Journal of Environmental Psychology, 74, 101577.

Frem, M., Santeramo, F. G., Lamonaca, E., El Moujabber, M., Choueiri, E., La Notte, P., Nigro, F., Bozzo, F., & Fucilli, V. (2021). Landscape restoration due to Xylella fastidiosa invasion in Italy: Assessing the hypothetical public's preferences. NeoBiota, 66, 31–54.

Haws, K. L., Winterich, K. P., & Naylor, R. W. (2014). Seeing the world through greentinted glasses: Green consumption values and responses to environmentally friendly products. Journal of Consumer Psychology, 24(3), 336–354.

Koschate-Fischer, N., Diamantopoulos, A., & Oldenkotte, K. (2012). Are consumers really willing to pay more for a favorable country image? A study of country-of-origin effects on willingness to pay. Journal of International Marketing, 20(1), 19–41.

Lin, B. B. (2011). Resilience in agriculture through crop diversification: Adaptive management for environmental change. BioScience, 61(3), 183–193.

Lusk, J. L., & Polzin, S. (2022). Consumer food insights (Report). Center for Food Demand Analysis and Sustainability, Purdue University.

Morelli, M., García-Madero, J. M., Jos, Á., Saldarelli, P., Dongiovanni, C., Kovacova, M., Saponari, M., Baños Arjona, A., Hackl, E., Webb, S., & Compant, S. (2021). Xylella fastidiosa in olive: A review of control attempts and current management. Microorganisms, 9(8), 1771.

Osservatorio Fitosanitario della Regione Puglia. (2024, March 14). Aggiornamento dell'area delimitata a Xylella fastidiosa sottospecie pauca ST53 (Determinazione n. 18). Bollettino Ufficiale della Regione Puglia, 24, 19321–19329.

Saponari, M., Giampetruzzi, A., Loconsole, G., Boscia, D., & Saldarelli, P. (2019). Xylella fastidiosa in olive in Apulia: Where we stand. Phytopathology, 109(2), 175–186.

Sardaro, R., Roselli, L., Fucilli, V., Maringelli, G., & De Gennaro, B. (2022). Assessment of the economic impact from extreme events: The case of Xylella fastidiosa in the olive growing of Salento (Southern Italy). In Economics and engineering of unpredictable events (pp. 33–48). Routledge.

Serio, F., Imbriani, G., Girelli, C. R., Miglietta, P. P., Scortichini, M., & Fanizzi, F. P. (2024). A decade after the outbreak of Xylella fastidiosa subsp. pauca in Apulia (Southern Italy): Methodical literature analysis of research strategies. Plants, 13(11), 1433.

Valente, D., Lovello, E. M., Chirizzi, R., & Petrosillo, I. (2024). Multiscale effects of Xylella fastidiosa on landscape services. Land, 13(12), 2087.

Woo, E., & Kim, Y. G. (2019). Consumer attitudes and buying behavior for green food products: From the aspect of green perceived value (GPV). British Food Journal, 121(2),

320–332.

Zenker, S., & Braun, E. (2014). Rethinking the measurement of place brands. In Rethinking place branding: Comprehensive brand development for cities and regions (pp. 211– 223). Springer International Publishing.

# Track 10
# Services Marketing

Coordinators: Alessia Anzivino & Cristina Mele

In un lungo processo di evoluzione, gli studi di marketing dei servizi hanno per primi esplorato campi fondamentali del management contemporaneo, dall'importanza delle relazioni con i clienti al ruolo del personale e dell'ambiente (servicescape), alla centralità delle esperienze nella proposizione di valore, ai processi di co-creation. Il progresso delle tecnologie ha fortemente trasformato la trama eterogenea che costituisce la service industry, ma non ha fatto venire meno il carattere identitario di imprese il cui "prodotto" è in larga misura un atto, un'azione, una prestazione, una combinazione di conoscenze e competenze "incorporate" nelle persone, ovvero vendere un'esperienza con la promessa di un risultato.

È l'elemento condiviso da imprese molto differenti, dalle imprese globali della consulenza o della revisione alle aziende a raggio locale che forniscono servizi pubblici, dalle agenzie di pubblicità alle software house, dai piccoli studi di design alle grandi catene alberghiere, dalla sanità alla finanza, ai trasporti. Una varietà di settori che condividono però un approccio al marketing fondato sulla creazione di valore attraverso l'interazione personale fra l'impresa e il cliente e che non hanno mai smesso di fornire agli studiosi elementi di innovazione da esplorare e indagare.

L'obiettivo di questa sezione è quello di incoraggiare studi e ricerche in grado di applicare il marketing approach alla progettazione e alla gestione dei servizi con una prospettiva teorico-pratica in grado di coinvolgere manager e studiosi. Ci si propone di accogliere contributi che, nella prospettiva di marketing, propongano lavori di ricerca su: service design, service management, value co-creation, serviscape/context, service innovation, experiential marketing, Transformative Service Research (TSR), social innovation.Si suggerisce di contestualizzare i lavori di ricerca anche tramite casi pratici applicati ai comparti in cui sono coinvolte le imprese e le organizzazioni comprese nello Steering Committee della SIM.

Service marketing has long explored key areas of modern management—customer relationships, employee roles, servicescape, value co-creation, and experiential marketing. Technological progress has transformed the service industry, yet its core remains centered on delivering actions, expertise, and experiences that promise outcomes.

This section welcomes research applying a marketing approach to service design and management, aiming to engage both scholars and practitioners. Topics of interest include value co-creation, service innovation, experiential marketing, service design, servicescape, and Transformative Service Research (TSR). Contributions are encouraged to include practical cases from sectors represented in the SIM Steering Committee.

# Realigning value misalignments in digital public services trough servant leadership

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## Abstract

This paper develops a conceptual model to address value co-destruction in digital public services, focusing on misalignments between institutional service templates and the situated performances of users and frontline professionals. These misalignments, particularly salient in standardized, mandatory digital interfaces, can hinder engagement, reduce perceived relevance, and compromise public value outcomes.

The study is conceptual in nature and proposes an interdisciplinary model that integrates insights from public value theory, value co-destruction, and servant leadership. It introduces servant leadership not merely as a leadership style, but as a normative and operational logic that fosters institutional responsiveness, emotional attunement, and participatory alignment within service ecosystems.

The model advances a purpose-driven orientation for public service organizations and illustrates its application through two scenario-based cases involving older adults navigating digital public services. These examples demonstrate how leadership principles—such as humility, empowerment, interpersonal acceptance, and stewardship—can recalibrate service design to better reflect diverse user capabilities, preferences, and values.

This study contributes to service research by repositioning leadership as a relational infrastructure for co-creation, rather than a solely managerial function. It offers actionable insights for public managers seeking to restore public value under conditions of digital complexity and fragmentation.

The paper's originality lies in advancing a purpose-driven, leadership-enabled framework for addressing value co-destruction in public services—aligned with contemporary governance logics and the OECD Good Practice Principles for Public Service Design and Delivery in the Digital Age.

*Keywords: value co-destruction; public value; servant leadership; digital public services; value co-creation; well being.*

## 1. Introduction

The design and delivery of public services are undergoing a profound transformation, driven by digital innovation and a redefinition of the relationship between the state and its citizens. While the adoption of digital technologies has improved efficiency, personalization, and responsiveness, it has also revealed the limitations of traditional governance models—most notably New Public Management (NPM), which has been critiqued for prioritizing outputs over outcomes, fostering bureaucratic detachment, and contributing to service fragmentation (Dunleavy et al., 2006).

In response, the paradigm of New Public Governance (NPG) reframes public service provision as a collaborative, network-based process involving multiple stakeholders, including public institutions, civil society, and citizens (Osborne, 2006; Rhodes, 1997). Central to NPG is the emphasis on interdependence, participation, and the co-creation of public value (Osborne, 2010; Benington, 2011), with citizens increasingly seen as co-designers and co-producers of services (Voorberg et al., 2015; Torfing et al., 2019).

Although public services aim to generate collective value, they frequently produce unintended effects that contribute to value co-destruction (Engen et al., 2021). Recent research has highlighted that co-creation and co-destruction are not binary opposites, but rather interdependent outcomes of complex multi-actor interactions—particularly salient in digitally mediated services (Skålén & Trischler, 2024). Within this perspective, misalignments between design intentions ("templates") and lived service experiences ("performances") emerge as a critical source of public value erosion (Echeverri & Skålén, 2011). Poorly contextualized or overly standardized digital service interfaces often exacerbate these misalignments, disproportionately affecting vulnerable groups (Craig et al., 2025; Vinarski Peretz & Kidron, 2023). While numerous empirical studies have investigated these dynamics in context-specific settings, most focus on micro-level interactions and lack a broader strategic and conceptual framing. With few exceptions (e.g., Skålén & Trischler, 2024), higher-order theoretical perspectives on how to realign service design and performance in complex public ecosystems remain underdeveloped.

To address this gap, the present paper proposes a purpose-driven approach to mitigating value misalignments in digital public services—placing collective well-being and citizen inclusion at the center of service design. The conceptual model embodies this purpose-driven orientation as both a normative and operational stance (Gartenberg., 2022; Carballo., 2023; Ribeiro et al., 2024; Lyon et al., 2025; Von Ahsen & Gauch., 2022), enacted through servant leadership (Greenleaf, 1977), which we conceptualize as the key enabling mechanism for aligning service templates with users' lived experiences.

Grounded in values such as empowerment, humility, authenticity, and stewardship, servant leadership fosters participatory conditions and relational trust—essential to bridging the gap between institutional templates and the lived experiences of users (Van Dierendonck, 2011; Liden et al., 2008).

By linking the systemic sources of value co-destruction (Skålén & Trischler, 2024) with the operational logic of servant leadership, this paper offers a conceptual contribution that helps translate normative purpose into adaptive service strategies. It identifies mechanisms through which public service providers can reduce the misalignment between design and performance, ultimately supporting the reconfiguration of digital service ecosystems around public value co-creation, understood as multidimensional well-being (ISTAT, 2024; Hartley et al., 2017), and enabled by inclusive, ethical, and citizen-centered governance logics. To illustrate these dynamics, the paper presents two scenario-based examples that highlight typical misalignments and how servant leadership principles may help realign service experiences in practice.

## 2. Literature Background

This section reviews the literature, on value co-destruction in public services, public value and servant leadership, which collectively inform the conceptual foundation of the proposed model.

### 2.1 Value Co-destruction in public service

Service scholars increasingly examine the concept of value co-destruction in public services to develop a more rigorous understanding of its relational and systemic dimensions (Shah et al., 2021). While earlier contributions tend to conceptualize co-destruction as analytically distinct from value co-creation (Echeverri & Skålén, 2011; Luo et al., 2019), more recent accounts emphasize their mutual constitution within complex service interactions (Skålén & Trischler, 2024). Value co-destruction may emerge from resource misuse, whether intentional or resulting from a poor contextual fit between technologies, procedures, or tools and the service environment (Plé & Chumpitaz Cáceres, 2010; Vafeas et al., 2016), as well as from expectation misalignment, where service actors interpret roles, goals, or relational obligations divergently, leading to misunderstanding and dissatisfaction (Smith, 2013).

This perspective suggests that value co-destruction is not solely due to structural deficiencies or procedural inefficiencies; rather, it originates more fundamentally in the erosion of relational infrastructure that is, the collapse of shared interpretations, aligned expectations, and mutual sense-making among actors engaged in the service process. As argued by Rossi & Tuurnas (2021) and Van de Walle (2016), such breakdowns are not confined to isolated moments but may surface at any stage of public service delivery, thereby challenging conventional linear or dyadic models of interaction.

While not a constitutive element per se, materials, such as digital systems, forms, interfaces, or broader technological infrastructures, serve as carriers of procedures and shape how understandings and engagements are enacted. Their role becomes particularly critical in e-service contexts, where interactions are increasingly mediated and structured by technological artefacts (Voorberg et al., 2015; Lusch & Nambisan, 2015). When these material configurations are overly rigid, poorly designed, or insufficiently responsive to contextual variability, they are often associated with low perceived usefulness or limited ease of use, which may diminish users' willingness or ability to engage meaningfully with the service (Davis, 1989). This, in turn, can intensify misalignments among the core elements of practice. In such cases, materials become not merely enablers but active contributors to relational breakdowns, undermining the internal coherence of practice and giving rise to value co-destruction (Skålén and Trischler, 2024).

A central mechanism through which these misalignments materialize is the template–performance mismatch. According to Skålén and Trischler (2024), value co-destruction occurs when institutional templates, standardized, top-down service designs embedded in routines, protocols, and formal procedures, fail to resonate with the situated performances of users and frontline professionals, who enact services contextually based on local knowledge, lived experience, and normative commitments.

These mismatches are often intensified by rigid, technocratic models of service delivery that overlook situational complexity, and by tensions between competing value dimensions such as individual versus collective benefit, or procedural compliance versus adaptive responsiveness.

Crucially, the PVCPs framework emphasizes that templates and performances are mutually constitutive. Templates structure expectations and provide a basis for action, but they do not deterministically prescribe practice. Performances, in turn, are not passive executions but active interpretations that can reproduce, challenge, or reshape existing templates over time. This dynamic is

particularly salient in complex inter-organizational governance networks, where fragmented coordination, overlapping mandates, and ambiguous accountability structures increase the likelihood of misalignment (Klijn & Koppenjan, 2014; Naveed & Salman, 2020). Understanding value co-destruction in these contexts requires a perspective that accounts not only for the functional dimensions of service delivery, such as quality, accessibility, and efficiencybu, t also for broader concerns related to public trust, institutional legitimacy, and societal well-being (Naveed, 2025). These dimensions are fundamentally linked to the normative concept of public value, which offers a framework for evaluating the legitimacy and impact of public service systems (Rutgers & Overeem, 2014).

### 2.2 Public Value

Despite its growing prominence in public management and service research, the concept of public value remains theoretically contested and empirically elusive. As Rutgers and Overeem (2014, p. 808) observe, "*there is neither a simple, fixed, or exact meaning of public value, nor a conclusive way to recognize it*." Originally formulated by Moore (1995) as a normative framework to guide public managers in aligning public action with socially valued outcomes, public value emerged as a response to the instrumental rationality of New Public Management. This early formulation emphasized managerial discretion and authorizing environments as key levers in determining public benefit. However, more recent perspectives have expanded this view by foregrounding the collective, negotiated, and participatory nature of value creation, involving citizens, communities, institutions, and elected officials in deliberative and co-productive processes that transcend hierarchical models (Benington, 2011; Von Heimburg et al., 2021; Skålén & Trischler, 2024). This paradigmatic shift has also redefined the scope and function of public value. No longer confined to performance metrics or political legitimacy, it is increasingly understood as multidimensional societal well-being—economic, social, environmental, and institutional—co-created through both the internal functioning of public administrations and their external impact on society (ISTAT, 2024). This dual perspective distinguishes between internal public value, generated through organizational, infrastructural, and digital capacities, and external public value, referring to tangible benefits experienced by citizens, businesses, and stakeholders.

In public services, the value experienced by an actor is not necessarily a direct consequence of their personal contribution, but may emerge indirectly through interactions that also benefit those unable to contribute actively (Skålén & Trischler, 2024). This relational and inclusive understanding of value creation has important implications for how leadership is conceived in the public sphere—pointing toward models, such as servant leadership, that emphasize care, reciprocity, and the empowerment of others.

### 2.3 Servant leadership

Servant leadership, originally introduced by Greenleaf (1970), has garnered increasing attention in public management research as an ethically grounded and relational model of leadership centered on the commitment to serve others and promote the common good (Coetzer et al., 2017; Van Dierendonck, 2011). Although rooted in private sector thinking, the model has been progressively adapted to the public domain, where growing complexity, citizen-centered governance, and legitimacy pressures require leadership approaches that move beyond command-and-control logics (Spears, 1996; Pillay & Kikasu, 2024). In contrast to conventional leadership frameworks, servant leadership emphasizes the ethical empowerment, development, and inclusion of others, placing humility, active

listening, and accountability at the heart of institutional action (Liden et al., 2008, 2014). This orientation is particularly relevant in digital public services, where responsiveness, contextual sensitivity, and trust are essential to aligning service design with user experience (Voorberg et al., 2015). Van Dierendonck (2011) articulates six interrelated dimensions that shape this leadership style: empowerment involves fostering trust and autonomy by enabling others to grow; humility reflects the leader's ability to value others' contributions while accepting personal responsibility; authenticity is expressed through integrity, transparency, and self-awareness; interpersonal acceptance entails empathy and the capacity to forgive, creating a psychologically safe environment; providing direction ensures a coherent vision that aligns institutional goals with individual capabilities; and stewardship affirms the leader's responsibility not only to the organization but to the wider community. Together, these dimensions form a leadership model oriented toward long-term value creation and shared responsibility. Within this configuration, the principle of community building becomes particularly salient. As initially conceptualized by Spears (1996) and later reaffirmed by Van Dierendonck (2011), community building refers to the cultivation of inclusive, trust-based, and cooperative environments. It reflects the broader societal orientation of servant leadership, which extends beyond the immediate organization to embrace collective well-being as an institutional priority. Servant leadership therefore aligns closely with the normative foundations of public service. Both are grounded in the ethos of care, inclusion, and service to others. From this perspective, servant leadership does not merely complement public service values; it actively reinforces them by offering a practical and moral compass that guides public administrators in managing complex demands and in shaping institutional action toward the prioritization of enduring public value and societal well-being (Pillay & Kikasu, 2024).

## 3. Methodology

This study is conceptual in nature and employs a 'break-out' literature review approach, designed to transcend disciplinary silos and stimulate theoretical advancement through cross-domain integration (Gruner & Minunno, 2024). In line with this methodology, flexibility in article selection is maintained to support dynamic engagement with diverse conceptual traditions and enable deeper theoretical synthesis.

The research process was articulated in three phases.

First, a selection of influential and widely cited contributions was identified across three key research streams: value co-destruction in public service (Skålén & Trischler, 2024; Echeverri & Skålén, 2011), public value (Moore, 1995; Benington, 2011) and servant leadership (Van Dierendonck, 2011; Liden et al., 2008, 2014; Coetzer et al., 2017). In the second phase, these bodies of literature were examined to distill their core conceptual insights and theoretical trajectories. The third phase involved a cross-stream reading aimed at identifying underexplored connections and potential complementarities. While each of these streams is well-developed in its own right, their integration,pa rticularly in relation to digital public service, remains limited and conceptually fragmented.

To this end, the paper puts forward a conceptual model that brings together insights from the three domains and suggests that leadership, especially in its servant-oriented form, may provide a valuable lens for understanding and addressing the misalignments that contribute to value co-destruction in digital public service context.

### 3.1 Conceptual model

The conceptual model proposed (Figure 1) conceives value formation within the public service context, focusing on how misalignments between service templates (design intentions) and performances (situated enactments) can be strategically realigned. The model draws upon recent literature on value co-destruction in public services (Skålén & Trischler, 2024; Echeverri & Skålén, 2011), public value (Moore, 1995; Benington, 2011), and servant leadership (Van Dierendonck, 2011; Liden et al., 2008, 2014; Coetzer et al., 2017).

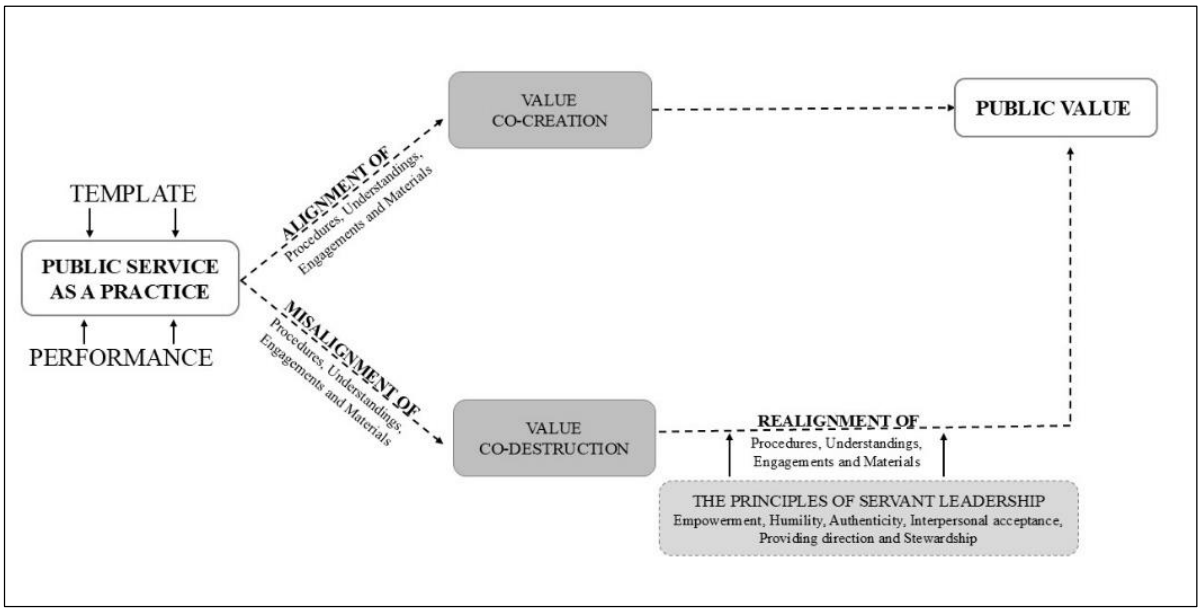



**Figure 1:** The conceptual model (Source: authors'elaboration)

At its foundation, the model builds on the framework of public value co-creation practices (PVCPs), as developed by Skålén and Trischler (2024), which conceptualizes public services as structured around the dynamic relationship between templates and performances. Templates refer to institutionalized service designs embedded in procedures and systems, while performances reflect the contextual enactment of these designs by users and professionals.

Within this interactional space, value co-creation and co-destruction emerge as contingent and dynamic outcomes. Co-creation occurs when alignment between service templates and user performances enables effective resource integration and mutual benefit. In contrast, persistent misalignments can disrupt service experiences and progressively undermine usability, trust, and perceived legitimacy, leading to value co-destruction (Echeverri & Skålén, 2011; Skålén & Trischler, 2024). Such breakdowns often arise when institutional templates, such as standardized digital interfaces, procedural routines, or normative assumptions, fail to reflect the contextual realities of users and professionals. Misalignments may involve conflicting understandings, emotionally disengaging interactions, inaccessible materials, or rigid procedures that disregard users' diverse capabilities and situational needs.

The proposed model advances this view by introducing servant leadership as a key enabler of purpose-driven realignment. By operationalizing principles such as empowerment, humility, authenticity, interpersonal acceptance, providing direction, and stewardship (Van Dierendonck, 2011), servant leadership enhances the system's responsiveness to misalignments and its capacity to recalibrate practices in line with user needs and lived experiences. This approach supports the restoration of coherence across service elements and fosters renewed conditions for public value co-creation.

Following this logic, two illustrative examples drawn from the literature on digital public services—particularly concerning older users—are presented to demonstrate how value misalignments can arise and be strategically addressed. Older adults remain among the demographic groups most vulnerable to the unintended consequences of digitalization (Caridà et al., 2025). They frequently encounter barriers that are cognitive, physical, or related to low digital self-efficacy (Chan & Chen, 2014; Wu et al., 2025). A core issue lies in the common design assumption that all users are digitally fluent and rational adopters of technology (Mustainah & Haryono, 2025). This perspective neglects critical psychological, motivational, and usability-related constraints (Lee & Coughlin, 2015). These challenges are particularly acute in mandatory digital interactions where technology anxiety, unintuitive interface design, and insufficient user support can significantly undermine engagement and lead to withdrawal from digital services (Caridà et al., 2025; Charmarkeh, 2017).

### 3.2 Conceptual model: illustrative scenarios

*Template–performance misalignment*

*Scenario 1: procedural and linguistic barriers.*

A senior citizen seeks to book a medical appointment online through a regional healthcare platform. Although the individual owns a smartphone and uses digital tools regularly for personal purposes, the portal requires complex identification steps, including a digital ID and CAPTCHA verification. Moreover, the interface uses highly formal and bureaucratic language. Despite initial attempts, the senior is unable to complete the process due to a lack of clarity and escalating frustration, ultimately opting for a telephone-based workaround.

This brief examples illustrate a procedural and material misalignment, where the design fails to accommodate cognitive load, linguistic accessibility, and user tolerance thresholds contributing to disengagement and reinforcing a sense of exclusion.

*Scenario 2. relational and motivational barriers.*

A senior citizen is technically proficient and fully capable of managing digital platforms but chooses to avoid using them for public services. When asked to complete an online renewal of a welfare benefit, they express concerns over privacy, distrust in institutional systems, and a strong preference for in-person interaction. In this case, the digital template is functionally accessible, yet a misalignment of understandings and engagements occurs; the service assumes uniform willingness to adopt digital tools, overlooking emotional and relational dimensions such as trust, perceived value, and user identity. The result is not service failure in a technical sense, but a relational disconnection that equally contributes to value co-destruction.

Both examples illustrate how even minor misalignments, whether material, procedural, cognitive, or emotional, can compound over time, undermining service engagement and diminishing perceived value. In these contexts, materials and procedures are not merely neutral carriers of institutional logic;

they become active mediators of user experience and, when poorly contextualized, can function as mechanisms of exclusion (Skålén & Trischler, 2024), particularly when they fail to reflect the diverse needs, expectations, and capacities of the public.

*Template–performance realignment trough servant leadership*

*Scenario 1: realignment trough humility, empowerment, providing direction, and emotional recognition.*

In the first case, where procedural complexity and inaccessible language prevent a senior from booking a medical appointment, realignment is enabled by several core principles of servant leadership: humility, empowerment, providing direction, and emotional recognition. Importantly, these are not limited to the actions of individual leaders but reflect an organizational orientation that prioritizes listening, inclusion, and responsiveness across all levels of the service system.

In this scenario, a public service organization shaped by servant leadership might initiate participatory sessions with older users to surface concrete barriers in the digital interaction process. By doing so, it enacts humility and empowerment, recognizing the experiential knowledge of users as a legitimate foundation for redesign. These co-creative settings mirror what Vargo et al. (2008) describe as socially embedded environments where value is produced through shared meaning-making and mutual learning, rather than one-directional delivery.

As insights from these engagements are translated into action, procedural revision, such as simplifying authentication protocols and adapting interface language, ensures that user needs inform service delivery. The principle of providing direction plays a crucial role here, maintaining coherence with institutional goals while adapting practices to lived realities.

Simultaneously, the organization's commitment to active listening and emotional recognition reframes user frustration not as resistance, but as an expression of cognitive overload and exclusion. These affective states can be directly addressed through co-creation processes. In turn, participatory redesign processes allow older adults to contribute to the development of more intuitive and inclusive materials. This collaborative engagement fosters shared accountability and relational learning (Acar et al., 2023; Mergel et al., 2025), reactivating user trust and involvement.

These interactions also activate social support (Park et al., 2019), reinforcing belonging, esteem, and emotional safety—dimensions especially relevant for those facing digital uncertainty (Liu et al., 2020; Farr, 2019). As Cutrona and Russell (1990) emphasize, such support emerges not from system design alone, but from the relational infrastructure built through co-creative practice.

*Scenario 2: realignment through interpersonal acceptance, authenticity, and stewardship.*

In the second scenario, where a digitally competent older adult disengages due to distrust, privacy concerns, and a preference for human interaction, realignment is enabled by servant leadership principles such as interpersonal acceptance, authenticity, and stewardship. These principles shift the logic of engagement from mandating digital compliance to fostering relational inclusion, allowing for the re-engagement of users through psychological safety and inclusive communication. This approach recognizes that public value is not solely technical or functional, but also deeply experiential and emotional, shaped by trust, recognition, and perceived control. (Meynhardt., 2009)

Servant leadership, in this context, opens space for co-creation by legitimizing user hesitations and enabling individuals to voice their concerns, negotiate meaning, and participate in redesign processes that reflect their lived realities (Suyeon & Nabatchi, 2018).

By leveraging authenticity, institutional actors respond not with scripted or standardized solutions, but with genuine openness to relational complexity. In doing so, they demonstrate interpersonal acceptance by affirming the emotional legitimacy of user disengagement and reframing it not as resistance, but as a valuable expression of lived experience.

Through the design of hybrid service pathways, such as maintaining in-person alternatives or integrating human-mediated digital support, servant leadership reflects stewardship, prioritizing long-term inclusion over short-term efficiency. This approach helps reduce technology anxiety and lowers barriers to digital participation by ensuring emotionally safe, low-pressure environments where users can ask questions, receive feedback, and co-develop improvements (Verschuere et al., 2018; Robert et al., 2020).

These socially embedded contexts foster perceived social support, a key enabler of meaningful engagement. As Park et al. (2019) conceptualize, social support functions as an operant resource activated through co-creative interactions. Emotional, informational, esteem-based, and network-related forms of support (Cutrona & Russell, 1990) are not intrinsic to the service design, but instead emerge through interpersonal dynamics particularly those enabled by servant-oriented leadership.

In addition, such interactions build self-efficacy and stimulate individual capacity-building (Acar et al., 2023), leading not only to improved service encounters but also to a broader transformation in how older users relate to digital public services. This is especially critical for maintaining sustained engagement and ensuring that services remain inclusive, participatory, and aligned with contextual realities.

Across both scenarios, servant leadership functions not merely as an interpersonal orientation but as a strategic and ethical infrastructure for institutional responsiveness. Through co-creative mechanisms, it facilitates adaptive recalibration by enabling emotional connection, building trust, and supporting user competence (Vargo et al., 2008; Liu et al., 2020; Skålén & Trischler, 2024). These outcomes form the building blocks of public value co-creation, particularly in contexts of rapid digital transformation.

## 4. Discussion and conclusion

This paper presents a conceptual framework that applies servant leadership principles to address misalignments between design expectations and actual performance in digital public services, with the ultimate goal of restoring public value. By integrating insights from the literature on public value (Moore, 1995; Benington, 2011), value co-destruction (Skålén & Trischler, 2024; Echeverri & Skålén, 2011), and servant leadership (van Dierendonck, 2011; Liden et al., 2008, 2014; Coetzer et al., 2017), this paper advances a purpose-driven orientation for public service organizations.

This orientation moves beyond the traditional focus on outputs to support a reconceptualization of service delivery as part of a digital ecosystem grounded in inclusion, emotional attunement, and multidimensional well-being (ISTAT, 2024; van Dierendonck, 2011; Skålén & Trischler, 2024).

At the core of the framework lies the idea that value co-destruction often stems from persistent misalignments between institutional templates and the lived experiences of both service users and frontline professionals (Echeverri & Skålén, 2011; Skålén & Trischler, 2024). These misalignments

manifest in inaccessible technologies, rigid procedures, and emotionally detached interactions, especially evident in mandatory digital interfaces, where users are compelled to engage regardless of trust, digital literacy, or personal preferences (Craig et al., 2025). Fragmented communication flows, divergent value orientations, and unclear role expectations further amplify co-destructive dynamics (Smith, 2013; Klijn & Koppenjan, 2014).

Addressing these issues requires more than technical adjustments. It calls for an institutional shift inspired by servant leadership, whose principles, empowerment, interpersonal acceptance, and clear direction (Van Dierendonck, 2011), combined with core public service values such as accountability, transparency, and ethical commitment (Pillay & Kikasu, 2024), provide both normative guidance and operational tools for better aligning service models with lived performances. By fostering trust, mutual understanding, and shared responsibility, servant leadership helps create a cultural environment conducive to value co-creation (Voorberg et al., 2015), in line with the OECD Good Practice Principles for Public Service Design and Delivery in the Digital Age (OECD, 2022).

For example, interpersonal acceptance, linked to autonomy and personal growth, enables empathetic responses to user disengagement (Pillay & Kikasu, 2024), while accountability and transparency clarify expectations and strengthen the coherence between service design and implementation. Empowerment and stewardship encourage meaningful participation and support the sustainability of service innovations (Echeverri & Skålén, 2011; Acar et al., 2023).

These dynamics can activate social support (Park et al., 2019), a mechanism that, as widely documented in the literature on digital public services for older adults (caridà et al., 2025), fosters emotional safety, user competence, and digital self-efficacy (Liu et al., 2020; Cutrona & Russell, 1990).

Beyond the individual level, servant leadership has the potential to mitigate systemic sources of co-destruction. By fostering value-driven direction and cultivating a climate of trust and shared responsibility, it may support adaptive sense-making and constructive dialogue among institutional actors—particularly in contexts characterized by fragmented coordination or opaque communication channels (Klijn & Koppenjan, 2014; Naveed & Salman, 2020). In such settings, the combination of empowerment, interpersonal acceptance, and ethical responsibility could contribute to streamlining communication, reinforcing accountability, and enhancing responsiveness to context. Furthermore, principles such as empathy, stewardship, and service orientation may play a crucial role in restoring public trust in times of digital acceleration. Rather than merely improving individual interactions, servant leadership could support institutional legitimacy and adaptability, potentially enhancing well-being not only for current users but also for future generations (Van Dierendonck, 2011; Peterlin et al., 2015; Beehner, 2020). Leadership, in this view, entails the orchestration of diverse actors and the engagement of stakeholders (Caridà et al., 2022) within the public sphere to manage tensions, align coalitions, and orient competing interests toward shared goals such as the creation of public value, shaped by ongoing struggles between ideas and interests (Hartley et al., 2019). In this sense, servant leadership is not merely a tool for restoring internal motivation or collaboration, as traditionally portrayed; rather, it redefines governance as purpose-driven and citizen-centered.

As underscored by Pillay and Kikasu (2024), it reinforces the citizen's central role in public value creation and reaffirms the ethical responsibility of public institutions to listen, adapt, and act with integrity. Leadership, therefore, is not solely an organizational function; it is a societal mandate aligned with the broader aims of democratic public service.

## 5. Main implications

At the theoretical level, the model offers an integrative contribution by bridging three strands of literature, servant leadership, value co-destruction, and public value, which have often been examined in isolation despite their underlying conceptual affinities. In doing so, it advances current understandings of co-creation by introducing servant leadership orientation as a critical factor shaping service performance and responsiveness. Importantly, servant leadership principles are not merely managerial traits, but are conceptualized here as institutional and cultural arrangements (Caridà et al., 2022; Edvardsson et al., 2014) that enable public value co-creation and support the recovery of misalignments between service templates and user performances. These principles, such as empowerment, humility, authenticity, and stewardship, act as institutional arrangements that inform the normative foundations of action within public service ecosystems (Ojasalo and Kauppinen, 2024). Rather than relying on hierarchical command structures, they cultivate the cultural conditions that enable adaptive practices to emerge spontaneously through co-creation, emotional recognition, and collaborative learning. In this way, servant leadership reconfigures public service ecosystem, enabling a shift from compliance-driven procedures toward trust-based, inclusive, and context-sensitive public service delivery.

For public managers and policy makers, the study underscores the importance of fostering ethical, participatory, and purpose-driven leadership in public administration. This includes promoting healthy organizational climates (Northouse, 2018), strengthening internal and external communication, and ensuring relational accountability across levels of governance. The model suggests that embedding servant leadership principles into decision-making processes can help build citizen trust, encourage co-creation, and support evaluation approaches that move beyond standard performance metrics to assess relational quality, well-being, and inclusion. In doing so, it may contribute to addressing the persistent misalignment between service design and actual performance, enabling more sustainable and equitable digital public services. Furthermore, by promoting emotionally attuned and user-centered interactions, this leadership approach can also enhance the public image of digital services and, by extension, public sector branding (Leijerholt et al., 2019). It may help counteract widespread perceptions of public administration as inefficient or unresponsive, instead positioning it as a trustworthy and value-generating presence in citizens' everyday lives (Wæraas & Byrkjeflot, 2012; Christensen & Lægreid, 2005; Osborne et al., 2013).

## References

Acar, L., Steen, T. & Verschuere, B. (2023). Public values? A systematic literature review into the outcomes of public service co-creation, Public Management Review, 1–33.

Beehner, C.G. (2020). Servant leadership as a pathway to a sustainable future. In Dhiman S., Marques J. (Eds.), New horizons in positive leadership and change: A practical guide for workplace transformation, (pp. 65–82). Springer

Benington, J. (2011). From private choice to public value. In Benington J., Moore M. (Eds.), Public value: Theory and practice, (pp. 31–49). Springer

Carballo, R.E. (2023). Purpose-driven transformation: a holistic organization design framework for integrating societal goals into companies. Journal of Organization Design, 12(4), 195-215.

Caridà A., Varrone N., Bellassi B. (2025). Does Seniors' Co-Creation Enhance Acceptance of Digital Public Services? A Conceptual Model. Sinergie–SIMA 2025 Management Conference – Tertiarization & Sustainability: New Challenges for Management in the Digital Era, 12–13 giugno, Università degli Studi di Genova, Italia. ISBN 978-88-94-7136-7-1

Caridà, A., Colurcio, M., Edvardsson, B. & Pastore, A. (2022). Creating harmony through a plethora of interests, resources and actors: the challenging task of orchestrating the service ecosystem. Journal of Service Theory and Practice, 32(4), 477-504.

Chan, K. & Chen, A.H.S. (2014). Gerontechnology acceptance by elderly Hong Kong Chinese: A senior technology acceptance model (STAM), Ergonomics, 57(5), 635–652.

Charmarkeh, H. & Lagacé, M. (2017). Seniors and technologies: Issues of inclusion and exclusion, Canadian Journal of Communication, 42(2), 189–194.

Christensen, T. & Lægreid, P. (2005). Trust in government: The relative importance of service satisfaction, political factors, and demography. Public performance & management review, 28(4), 487-511.

Coetzer, M.F., Bussin, M. & Geldenhuys, M. (2017). The functions of a servant leader. Administrative Sciences, 7(1), 5.

Craig, A., Lawford, H., Miller, M., Chen-Cao, L., Woods, L., Liaw, S.T. & Godinho, M.A. (2025). Use of Technology to Support Health Care Providers Delivering Care in Low-and Lower-Middle-Income Countries: Systematic Umbrella Review. Journal of Medical Internet Research, 27.

Cutrona, C.E. & Russell, D.W. (1990). Type of social support and specific stress: Toward a theory of optimal matching. In Sarason B.R., Sarason I.G., Pierce G.R. (Eds.), Social support: An interactional view (pp. 319–366). John Wiley & Sons.

Davis, F.D. (1989). Technology acceptance model: TAM. In Al-Suqri, M.N., Al-Aufi, A.S. (Eds), Information Seeking Behavior and Technology Adoption (pp. 205–219).

Dunleavy, P., Margetts, H., Bastow, S. & Tinkler, J. (2006). New public management is dead—long live digital-era governance. Journal of public administration research and theory, 16(3), 467-494.

Echeverri, P. & Skålén, P. (2011). Cocreation and codestruction: A practice-theory based study of interactive value formation. Marketing Theory, 11(3), 351–373.

Edvardsson, B., Kleinaltenkamp, M., Tronvoll, B., McHugh, P. & Windahl, C. (2014). Institutional Logics Matter when Coordinating Resource Integration, Marketing Theory 14(3), 291–309.

Engen, M., Fransson, M., Quist, J. & Skålén, P. (2021). Continuing the development of the public service logic: a study of value co-destruction in public services. Public Management Review, 23(6), 886-905.

Farr, M. (2019). Participatory governing through co-production and co-design. In Governance Analysis (pp. 152–172). Edward Elgar Publishing

Gartenberg, C. (2022). Purpose-driven companies and sustainability. In Handbook on the Business of Sustainability (pp. 24-42). Edward Elgar Publishing.

Greenleaf, R.K. (1970). The servant as leader. Indianapolis: The Robert K/Greenleaf Center.

Greenleaf, R.K. (1977). Servant leadership: A journey into the nature of legitimate power and greatness. New York: Paulist Press.

Gruner, R.L. & Minunno, R. (2024). Theorizing across boundaries: How to conduct a 'breakout' literature review. International Journal of Management Reviews, 26(3), 331–343.

Hartley, J., Alford, J., Knies, E. & Douglas, S. (2017). Towards an empirical research agenda for public value theory. Public Management Review, 19(5), 670–685.

Hartley, J., Sancino, A., Bennister, M. & Resodihardjo, S. L. (2019). Leadership for public value: Political astuteness as a conceptual link. Public Administration, 97(2), 239-249.

Klijn, E. & Koppenjan, J. (2014). Complexity in governance network theory. Complexity, Governance and Networks, 1(1), 61–70.

Lee, C. & Coughlin, J. F. (2015). Perspective: Older adults' adoption of technology: An integrated approach to identifying determinants and barriers. Journal of Product Innovation Management, 32(5), 747–759.

Leijerholt, U., Biedenbach, G. & Hultén, P. (2019). Branding in the public sector: A systematic literature review and directions for future research. Journal of Brand Management, 26, 126-140.

Liden, R. C., Wayne, S. J., Liao, C. & Meuser, J. D. (2014). Servant leadership and serving culture: Influence on individual and unit performance. Academy of Management Journal, 57(5), 1434–1452.

Liden, R.C., Wayne, S.J., Zhao, H. & Henderson, D. (2008). Servant leadership: Development of a multidimensional measure and multi-level assessment. The Leadership Quarterly, 19(2), 161–177.

Liu, S., Xiao, W., Fang, C., Zhang, X. & Lin, J. (2020). Social support, belongingness, and value co-creation behaviors in online health communities, Telematics and Informatics, 50, 101398.

Luo, J.G., Wong, I.K.A., King, B., Liu, M.T. & Huang, G.Q. (2019). Co-creation and co-destruction of service quality through customer-to-customer interactions: Why prior experience matters. International Journal of Contemporary Hospitality Management, 31(3), 1309–1329.

Lusch, R.F. & Nambisan, S. (2015). Service Innovation: A Service-Dominant Logic Perspective, MIS Quarterly, 39(1), 155-171.

Lyon, F., Stubbs, W., Dahlmann, F. & Edwards, M. (2025). From "business as usual" to sustainable "purpose-driven business": Challenges facing the purpose ecosystem in the United Kingdom and Australia. Business and Society Review, 130, 198-221.

Mergel, I., Edelmann, N. & Haug, N. (2025). Co-production phases in the development and implementation of digital public services, Perspectives on Public Management and Governance, 8(2), 93-105.

Meynhardt, T. (2009). Public value inside: What is public value creation? International Journal of Public Administration, 32(3–4), 192–219.

Moore, M.H. (1995). Creating public value: Strategic management in government. Harvard University Press.

Mustainah, M., Haryono, D. & Nuraisyah, N. (2025). Strategies to improve the quality of public services with artificial intelligence (AI) in Indonesia. Qubahan Academic Journal, 5(1), 429–446.

Naveed, S. (2025). Value co-destruction in complex public service networks: Exploring the dynamics of value creation and destruction. Australian Journal of Public Administration, 1–21.

Naveed, S., & Salman, Y. (2020). Debate: Governance networks for public service delivery—Panacea or puzzle? Public Money & Management, 41(1), 14–16.

Northouse, P.G. (2018). Leadership: Theory and practice (8th ed.). Sage Publications.

OECD (2022). OECD Good Practice Principles for Public Service Design and Delivery in the Digital Age, OECD Public Governance Policy Papers, No. 23, OECD Publishing, Paris.

Ojasalo, J., & Kauppinen, S. (2024). Public value in public service ecosystems. Journal of nonprofit & public sector marketing, 36(2), 179-207.
Osborne, S.P. (2006). The New Public Governance?. Public Management Review, 8(3), 377–387.

Osborne, S.P. (2010). Introduction The (New) Public Governance: a suitable case for treatment?. In The new public governance? (pp. 17-32). Routledge.

Osborne, S.P., Radnor, Z. & Nasi, G. (2013). A new theory for public service management? Toward a (public) service-dominant approach. The American Review of Public Administration, 43(2), 135–158.

Park, J., Tolea, M.I., Arcay, V., Lopes, Y. & Galvin, J.E. (2019). Self-efficacy and social support for psychological well-being of family caregivers of care recipients with dementia with Lewy bodies, Parkinson's disease dementia, or Alzheimer's disease, Social Work in Mental Health, 17(3), 253–278.

Peterlin, J., Pearse, N. & Dimovski, V. (2015). Strategic decision making for organizational sustainability: The implications of servant leadership and sustainable leadership approaches. Economic and Business Review, 17(3), 1.

Pillay, S. S. & Kikasu, E. T. (2024). Servant leadership style: A key to effective good governance and sustainable public service delivery in Africa. Open Journal of Political Science, 14, 52–80.

Plé, L. & Chumpitaz Cáceres, R. (2010). Not always co-creation: Introducing interactional co-destruction of value in service-dominant logic. Journal of Services Marketing, 24(6), 430–437.

Rhodes, R. (1997). Understanding Governance, Policy Networks, Governance, Reflexivity and Accountability. Buckingham: Open University Press.

Ribeiro, M.F., Costa, C.G.D. & Ramos, F.R. (2024). Exploring Purpose-Driven Leadership: Theoretical Foundations, Mechanisms, and Impacts in Organizational Context. Administrative Sciences, 14(7), 148.
Robert, G., Donetto, S. & Williams, O. (2020). Co-designing healthcare services with patients. In Osborne, S.P., Radnor, Z., Strokosch, K. (eds) The Palgrave Handbook of Co-Production of Public Services and Outcomes, (pp. 313–333).Cham: Springer.
Rossi, P. & Tuurnas, S. (2021). Conflicts fostering understanding of value co-creation and service systems transformation in complex public service systems. Public Management Review, 23(2), 254–275.

Rutgers, M. R. & Overeem, P. (2014). Public values in public administration: Recognizing public value. Journal of Public Administration Research and Theory, 24(3), 806–812.

Shah, S.H.H., Noor, S., Ahmad, B.A., Butt, A.S. & Shen, L. (2021). Retrospective view and thematic analysis of value co-creation through bibliometric analysis. Total Quality Management & Business Excellence, 1–25.

Skålén, P. & Trischler, J. (2024). Public services as practices: Towards a framework for understanding co-creation and co-destruction of private and public value. Public Management Review, 1-20.

Smith, A. (2013). The value co-destruction process: A customer resource perspective. European Journal of Marketing, 47(11/12), 1889–1909.

Spears, L. (1996). Reflections on Robert K. Greenleaf and servant-leadership. Leadership & Organization Development Journal, 17(7), 33–35.

Suyeon J. & Nabatchi, T. (2018). Co-production, co-creation, and citizen empowerment. In Co-production and Co-creation. London, (pp. 231–239). Routledge.

Torfing, J., Sørensen, E. & Røiseland, A. (2019). Transforming the public sector into an arena for co-creation: Barriers, drivers, benefits, and ways forward, Administration & Society, 51(5), 795–825.

Vafeas, M., Hughes, T. & Hilton, T. (2016). Antecedents to value diminution: A dyadic perspective. Marketing Theory, 16(4), 469–491.

Van de Walle, S. (2016). When public services fail: A research agenda on public service failure. Journal of Service Management, 27(5), 831–846.

Van Dierendonck, D. (2011). Servant leadership: A review and synthesis. Journal of Management, 37(4), 1228–1261.

Vargo, S.L., Maglio, P.P. & Akaka, M.A. (2008). On value and value co-creation: A service systems and service logic perspective. European Management Journal, 26(3), 145–152.

Verschuere, B., Vanleene, D., Steen, T. & Brandsen, T. (2018). Democratic co-production: Concepts and determinants. In Brandsen, T., Steen, T., Verschuere, B. (eds) Co-Production and Co-Creation: Engaging Citizens in Public Services (pp. 243–251), New York: Routledge.

Vinarski Peretz, H. & Kidron, A. (2023). Employee work engagement and organizational engagement within the hybrid work model. In Academy of Management Proceedings, 1. Briarcliff Manor, NY: Academy of Management.

Von Ahsen, A. & Gauch, K. (2022). Opportunities and challenges of purpose-led companies: An empirical study through expert interviews. Corporate Reputation Review, 1-14.

Von Heimburg, D., Ness, O. & Storch, J. (2021). Co-creation of public values: citizenship, social justice, and well-being. In Thomassen A.O., Jensen J.B., Processual perspectives on the co-production turn in public sector organizations (pp. 20-41). IGI Global Scientific Publishing.

Voorberg, W.H., Bekkers, V.J. & Tummers, L.G. (2015). A systematic review of co-creation and co-production: Embarking on the social innovation journey, Public Management Review, 17 (9), 1333–1357.

Wæraas, A. & Byrkjeflot, H. (2012). Public sector organizations and reputation management: Five problems. International public management journal, 15(2), 186-206.

Wu, C.C., Chen, C.T., Huang, K.C. & Chou, Y.Y. (2025). Determinants of chatbot adoption among older adults: An extended TAM approach using PLS-SEM, Information Development.

# Una nuova prospettiva sulle relazioni tra cliente e dipendente: il gradiente relazionale

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## Abstract

Le relazioni tra clienti e dipendenti di prima linea (FLE) sono una parte fondamentale degli incontri di servizio. Questo lavoro mira a consolidare le tipologie di relazioni esistenti tra cliente e FLE. Questo lavoro introduce il concetto di Gradiente Relazionale, un continuum di livelli di relazione con intensità diverse, modellate dal tipo di connessione emotiva, dalla reciprocità e dal contenuto dello scambio. È stato condotto uno studio Delphi per valutare il consenso degli esperti sul gradiente e confermare il nostro quadro teorico. Introduciamo un modello scalabile per descrivere diversi tipi di relazioni e offriamo una nuova interpretazione dei pilastri della teoria dello scambio sociale, aggiungendo diversi livelli di connessione emotiva. Questo modello ci aiuta a comprendere la granularità delle relazioni tra FLE e clienti, con implicazioni per il miglioramento delle interazioni di servizio, della soddisfazione dei clienti e del benessere dei dipendenti.

*Keywords: gradiente relazionale; relazioni cliente-dipendente; teoria dello scambio sociale; reciprocità; connessione emotive*

## 1. Introduzione

Le relazioni tra cliente e dipendenti di prima linea (FLE) sono al centro delle interazioni di servizio e gli studiosi di marketing se ne interessano da tempo. Tradizionalmente, la ricerca ha esaminato il modo in cui le relazioni influenzano il comportamento dei consumatori e i risultati organizzativi (Gwinner et al., 1998), dimostrando che le relazioni sono più efficaci quando sono costruite con una persona piuttosto che con un'organizzazione o la tecnologia (Giebelhausen et al., 2014). Queste relazioni hanno anche un impatto sul benessere, sulla motivazione e sulla creatività dei FLE (PerrySmith & Shalley, 2003). È ormai assodato che tra clienti e FLE esistono relazioni qualitativamente distinte (Price & Arnould, 1999). Sebbene siano state identificate varie tipologie di relazioni, la letteratura rimane frammentaria e la ricerca manca di un quadro completo che catturi la natura progressiva di queste interazioni. Pertanto, nonostante le intuizioni emerse dalla ricerca, rimane una domanda cruciale: Quali tipi di relazioni instaurano i FLE con i clienti e come variano queste relazioni? L'obiettivo di questo lavoro è di consolidare le diverse relazioni cliente-FLE in un quadro unificato. Basandoci sulla teoria dello scambio sociale (SET; Blau, 1964) presentiamo un nuovo costrutto concettuale, il Gradiente Relazionale, che cerca di ridefinire e approfondire la nostra comprensione di queste relazioni. La SET

è una teoria multidisciplinare diffusa in diversi campi, come la psicologia sociale, l'antropologia e il management. Essa spiega le dinamiche relazionali tra dipendenti e colleghi, leader, organizzazioni e clienti. Il principio fondamentale della SET afferma che tutte le interazioni dipendono dalle azioni di entrambi gli attori e che gli scambi sociali possono evolvere in relazioni di alta qualità solo se entrambi gli attori rispettano le regole dello scambio. La SET distingue gli scambi economici da quelli sociali e introduce la norma della reciprocità come regola fondamentale per costruire relazioni durature e di qualità. Allo stesso modo, il Gradiente Relazionale descrive un continuum di livelli di relazione con intensità diverse. Il movimento lungo il continuum è funzione di tre dimensioni: il tipo di connessione emotiva nella relazione sperimentato dalle due parti, il tipo di reciprocità e il contenuto dello scambio.

La connessione emotiva è definita come un senso di immediata compatibilità o incompatibilità nella relazione, in cui l'interazione può sembrare giusta o sbagliata. Riflette la misura in cui il FLE o il cliente si sente emotivamente attaccato o distaccato e la misura in cui l'individuo prova specifici sentimenti positivi o negativi verso l'altro (Batra et al., 2012). Molte relazioni – commerciali e non – sono caratterizzate da diversi gradi di connessione emotiva. Quest'ultima può, ad esempio, definire la forza dei legami in un network (Perry-Smith & Shalley, 2003) e delle amicizie commerciali (Price & Arnould, 1999). Tuttavia, in letteratura manca una chiara definizione dei vari gradi di connessione emotiva e di come queste definiscano ciascun tipo di relazione. La reciprocità si riferisce alla norma sociale che regola gli scambi: quando si dà qualcosa, si deve ricevere qualcosa in cambio (Cropanzano & Mitchell, 2005). Essa può essere rappresentata lungo un continuum che va dalla reciprocità negativa a quella generalizzata. La reciprocità negativa, nota anche come norma della ritorsione, implica una risposta immediata e di valore equivalente al danno ricevuto. Al centro del continuum troviamo la reciprocità bilanciata, in cui i benefici sono immediatamente ed equivalentemente restituiti (Guo et al., 2017). Infine, la reciprocità generalizzata prevede che le risposte non siano dirette ed equivalenti ma si basino su una preoccupazione generale per i bisogni degli altri. Sebbene la reciprocità sia considerata un elemento fondamentale degli scambi sociali, essa è legata ai comportamenti e alle norme che regolano le relazioni, trascurando le componenti emotive. In questi casi, possiamo trovare anche la reciprocità attrattiva, considerata un principio fondamentale delle relazioni sociali (Malloy & Albright, 1990). La forma più semplice di attrazione corrisponde alla simpatia. Tuttavia, comprende anche l'attrazione fisica e l'attrazione sociale. Nelle interazioni cliente-FLE, l'attrazione non implica necessariamente romanticismo o amicizia, ma piuttosto simpatia o considerazione positiva. Ciò include la reciprocità presunta - la convinzione che l'attrazione di una persona sia ricambiata - e la reciprocità effettiva - il comportamento osservabile che indica che l'attrazione che si prova per un'altra persona è ricambiata (Kenny et al., 2006). Durante le prime fasi, le relazioni si possono basare su una reciprocità presunta, ma i legami più profondi richiedono una reciprocità effettiva, cioè una concreta dimostrazione che convalidi il sentimento.

La SET distingue tra scambi economici e sociali. Tutti gli incontri di servizio implicano una componente economica, ma ciò che varia lungo il gradiente proposto è il peso della componente sociale. In particolare, distinguiamo tra scambi sociali e antisociali. Gli scambi sociali si basano su contributi volontari e non contrattuali, come affetto, rispetto o informazioni personali. Questi scambi generano benefici simbolici e si basano su obblighi non contrattuali e si fondano su un'aspettativa di reciprocità futura. Gli scambi antisociali, invece, si manifestano quando una delle due parti arreca danno all'altra, ad esempio attraverso aggressioni verbali, ingiustizie o mancanza di rispetto (Groth & Grandey, 2012). Nel contesto dei servizi, una relazione può contenere simultaneamente elementi economici, sociali e antisociali. Nella zona intermedia del gradiente prevalgono motivazioni economiche; con l'emergere di connessioni emotive, si aggiungono contenuti sociali. Agli estremi, la relazione può assumere una natura prevalentemente sociale o antisociale.

## 2. Metodologia

### 2.1 Studio 1: Studio Delphi

Data la natura concettuale del lavoro, è stato condotto uno studio Delphi per validare la struttura del Gradiente Relazionale. Il metodo Delphi, finalizzato a ottenere consenso tra esperti (Keeney et al., 2011), è stato condotto con nove accademici esperti in relazioni cliente-FLE e gestione dei servizi. Lo studio si è articolato in tre round di sondaggi anonimi. Nei primi due, gli esperti hanno valutato il loro accordo rispetto alle dimensioni e alle tipologie relazionali; nel terzo, hanno giudicato la coerenza tra ogni tipologia e la dimensione associata. In ogni fase, gli esperti hanno motivato le loro risposte tramite domande aperte. Tutte le dimensioni e tipologie relazionali che hanno superato la soglia di consenso del 75% sono spiegate nel prossimo paragrafo.

#### *Il Gradiente Relazionale*

Definiamo il gradiente relazionale un continuum di relazioni cliente-FLE, che va dalle relazioni avverse alle amicizie commerciali. All'estremità inferiore del continuum si trovano le relazioni avverse, cioè quelle caratterizzate da interazioni antagonistiche ripetute o episodiche. Sentimenti di ostilità caratterizzano la connessione emotiva tra le due parti, che può portare alla cosiddetta "spirale dell'inciviltà", in cui il comportamento negativo di una parte si scontra con una reciprocità negativa (Groth & Graandey, 2012). L'interazione si limita alle attività transazionali, ma spesso viola le norme sociali e può includere comportamenti controproducenti (Groth & Grandey, 2012). Seguono, sul continuum, gli scambi commerciali, relazioni puramente commerciali e incentrate sugli aspetti funzionali della transazione. Non comportano alcuna connessione emotiva: il FLE svolge i suoi compiti, il cliente paga e la reciprocità è immediata ed economicamente motivata. Gli scambi commerciali possono evolvere in rapporti. Il rapporto può nascere da una singola interazione positiva (Gremler & Gwinner, 2000). Si basa su una valutazione affettiva positiva dell'interazione e sulla percezione di una connessione tra le due parti. Le interazioni multiple, invece, possono portare a diventare conoscenti, poiché la familiarità e il riconoscimento reciproco si sviluppano nel tempo (Johnson & Selnes, 2004). La conoscenza può essere dedotta quando gli individui si distinguono personalmente e si riconoscono reciprocamente. La relazione è caratterizzata da un senso di simpatia e ci si aspetta una reciprocità bilanciata e una presunta attrazione reciproca. L'ultimo livello del continuum è rappresentato dall'amicizia commerciale. Questo tipo di relazione comprende affetto, lealtà e doni reciproci, il tutto dentro i confini del rapporto commerciale (Price & Arnould 1999). Le amicizie commerciali sono caratterizzate da una reciprocità generalizzata, da un mix di contenuti economici e sociali e da un impegno affettivo, ossia il legame emotivo che genera senso di appartenenza, identificazione con l'altro e la convinzione che la relazione meriti di essere coltivata nel tempo (Morgan & Hunt, 1994).

### 2.2 Studio 2: Modello Simplex

Per misurare il Gradiente Relazionale, condurremo uno studio empirico basato sull'ipotesi che il gradiente segua una struttura a modello simplex (Bagozzi et al., 2012), in cui la forza della relazione tra i tipi di relazione diminuisce con l'aumentare della distanza concettuale. Useremo la modellazione a equazioni strutturali (SEM) per stimare un path model in cui ciascun tipo di relazione è connesso ai tipi adiacenti. Ogni relazione sarà rappresentata come un fattore di secondo ordine, definito da tre fattori di primo ordine che riflettono le dimensioni del gradiente. I dati verranno raccolti tramite un sondaggio online rivolto a clienti e FLE, basato su brevi scenari che descrivono diverse tipologie di relazione, seguiti da scale per misurarne le dimensioni sottostanti.

## 3. Discussione E Conclusione

Concepire le interazioni cliente–FLE come un continuum offre una prospettiva dinamica, capace di cogliere l'evoluzione naturale delle relazioni. In quest'ottica, concetti come l'amicizia commerciale o il rapporto non rappresentano che un punto lungo uno spettro più ampio. Non tutte le interazioni, infatti, evolvono positivamente: molte restano superficiali, altre degenerano. I modelli esistenti tendono a semplificare eccessivamente questa varietà, trascurando la complessità relazionale tipica degli incontri di servizio. Il gradiente relazionale mostra che la qualità delle relazioni può variare in profondità e direzione, coerentemente con una vasta letteratura sul comportamento organizzativo che documenta il crescente problema delle relazioni negative (Grandey & Groth, 2012). Integrare le dimensioni sociali ed emotive nel paradigma economico delle interazioni consente di cogliere meglio le diverse forme relazionali. Il quadro teorico proposto estende la teoria dello scambio sociale incorporando il ruolo delle connessioni emotive e della reciprocità attrattiva. Il nostro lavoro ha come obiettivo di concettualizzare e confermare la struttura del gradiente, pertanto, in futuro, la ricerca potrebbe approfondire i suoi antecedenti e le sue conseguenze, esplorando i meccanismi che favoriscono la progressione relazionale. È plausibile che variabili tradizionalmente associate alla qualità della relazione – come l'impegno o la lealtà – assumano significati e impatti diversi in base alla tipologia relazionale (es. Morgan & Hunt, 1994). Da un punto di vista pratico, il gradiente può guidare strategie relazionali personalizzate. Esso arricchisce la formazione e lo sviluppo professionale, fornendo un linguaggio e una maggiore consapevolezza per gestire situazioni relazionali, il lavoro emotivo e i rischi di eccessivo o scarso coinvolgimento. Il gradiente può facilitare l'allineamento tra design dei servizi e obiettivi relazionali, permettendo di configurare ruoli e flussi di lavoro in base al tipo di relazione desiderata. Alcuni contesti richiedono legami più superficiali per preservare i confini professionali, mentre altri beneficiano di legami più profondi. Inoltre, questo strumento legittima e chiarisce la gestione delle relazioni negative, consentendo alle organizzazioni di monitorarle proattivamente per tutelare il benessere dei dipendenti e prevenire escalation. In sintesi, il Gradiente Relazionale aiuta le organizzazioni a gestire le relazioni in modo strategico e differenziato, riconoscendo che non tutti i legami sono uguali e non tutti vanno sviluppati nello stesso modo.

## References


Bagozzi, R. P., Bergami, M., Marzocchi, G.L., Morandin, G. (2012). Customer-Organization Relationships: Development and Test of a Theory of Extended Identities. J. Appl. Psychol. 97(1), 63-76

Batra, R., Ahuvia, A., & Bagozzi, R. P. (2012). Brand love. J. Mark., 76(2), 1-16.

Blau, P. M. (1964). Justice in Social Exchange. Sociol. Inq., 34(2), 193–206.

Cropanzano, R., & Mitchell, M. S. (2005). Social Exchange Theory: An Interdisciplinary Review. Journal of Management, 31(6), 874–900.

Giebelhausen, M., Robinson, S. G., Sirianni, N. J., & Brady, M. K. (2014). Touch versus Tech: When Technology Functions as a Barrier or a Benefit to Service Encounters. J.Mark., 78(4),113-124.

Gremler, D. D., & Gwinner, K. P. (2000). Customer-Employee Rapport in Service Relationships. J. Serv. Res., 3(1), 82–104.

Groth, M., & Grandey, A. (2012). From bad to worse: Negative exchange spirals in employee– customer service interactions. Org. Psychol. Rev., 2(3), 208–233.

Guo, L., Gruen, T. W., & Tang, C. (2017). Seeing relationships through the lens of psychological contracts: The structure of consumer service relationships. J. Acad. Mark. Sci., 45(3), 357-376.

Gwinner, K. P., Gremler, D. D., & Bitner, M. J. (1998). Relational Benefits in Services Industries: The Customer's Perspective. J. Acad. Mark. Sci., 26(2), 101–114.

Johnson, M. D., & Selnes, F. (2004). Customer Portfolio Management: Toward a Dynamic Theory of Exchange Relationships. J. Mark., 68(2), 1–17.

Keeney, S., Hasson, F., & McKenna, H. P. (2011). The Delphi technique in nursing and health research. Wiley-Blackwell.

Kenny, D. A., West, T. V., Malloy, T. E., & Albright, L. (2006). Componential Analysis of Interpersonal Perception Data. Pers. Soc. Psychol. Rev., 10(4), 282–294.

Malloy, T. & Albright, L. (1990). Interpersonal perception in a social context, J.Pers.Soc.Psychol., 58(3), 419-428.

Morgan, R. M., & Hunt, S. D. (1994). The Commitment-Trust Theory of Relationship Marketing. J. Mark., 58(3), 20–38.

Perry-Smith, J. E., & Shalley, C. E. (2003). The Social Side of Creativity: A Static and Dynamic Social Network Perspective. Acad. Manag. Rev., 28(1), 89.

Price, L. L., & Arnould, E. J. (1999). Commercial Friendships: Service Provider-Client Relationships in Context. J. Mark., 63(4), 38.

# Investigating Acceptance and Rejection of Service Robots in Educational Settings

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## Abstract

Service robots are increasingly used in educational contexts for their ability to provide personalised and engaging learning experiences. Despite their potential benefits, their adoption faces challenges, including technical, logistical, and ethical barriers, as well as scepticism from users. This study investigates factors influencing service robot acceptance in education, expanding the Service Robot Acceptance Model (sRAM) to include contextual dimensions. Findings from field research in primary and university settings reveal that functional, socio-emotional, relational, and contextual factors play key roles in shaping acceptance, offering insights for future research and practical applications.

*Keywords: service robot, educational settings, acceptance model, value-in-context, context congruence.*

### 1. Introduction

Recent advancements in the adoption of technology, particularly in high-interaction settings such as educational environments, increasingly necessitate an understanding of students' intentions to use these technologies, alongside their levels of acceptance or rejection (Fussell & Truon, 2022; Terblanche et al., 2023). Service robots, in particular, have been gaining prominence in educational contexts due to their potential benefits (Fisk et al., 2022). Defined by Wirtz et al. (2018) as "system-based autonomous and adaptable interfaces that interact, communicate, and deliver services to customers, service robots in education offer personalised and tailored experiences for students (Belpaeme et al., 2018). These robots are often perceived as more engaging and enjoyable compared to traditional methods (Kidd & Breazeal, 2004; Köse et al., 2015). Notably, they may generate psychological and behavioural benefits, particularly when students trust the robot. This trust can alleviate feelings of anxiety and inadequacy, as students feel less judged than they might in interactions with human operators (Mennens et al., 2024). Despite these advantages, integrating service robots into educational settings is not without challenges.Technical limitations, shifts in educational practices, and logistical and ethical concerns present significant obstacles (Belpaeme et al., 2018).

Furthermore, scepticism among both students and educators regarding the adoption of these technologies highlights the need to identify and address the factors influencing robot acceptance (Bilquise et al., 2024; Roy et al.,2022). To this end, the present study seeks to explore the factors driving students' acceptance and rejection of service robots in education. Employing the Service Robot

Acceptance Model (sRAM) proposed by Wirtz et al. (2018) as a foundation, this research aims to expand the model by incorporating context-specific dimensions. The study adopts an abductive approach to provide deeper insights into the dynamics of service robot acceptance in educational environments.

## 2. Literature review

### 2.1. Service robots in education

Service robots are advanced technological systems engineered to function independently or in partnership with human operators. While manifesting in both tangible and digital formats (Wirtz et al., 2018), researchers have established consensus regarding four fundamental characteristics that influence user acceptance: embodiment, morphology, autonomy and assistive role (Čaić et al., 2019). The core functionality of service robots centres on facilitating interactive dialogue and delivering services (Wirtz et al., 2018). They can process and respond to spoken instructions and questions instantaneously (Wirtz et al., 2021) and can fulfil diverse functions, from practical assistance to providing companionship (Henkel et al., 2020).

Building on these foundational principles, educational service robots emerge as a specialised subset tailored to learning environments. These robots can take on a variety of roles, including tutor, peer learner, teaching assistant, social facilitator, motivator, and learning companion (Kanda et al., 2012). Scholars have validated their efficacy in enhancing both cognitive and affective domains. (Belpaeme et al., 2018). The physical presence of service robots is particularly advantageous, as students show greater compliance with physically present robots compared to virtual systems (Konijn et al., 2020). These robots also possess emotional and social skills that foster student engagement (Mondi et al., 2021), while their tangible embodiment stimulates creativity (Kim & Tscholl, 2021). However, limited attention has been given to the challenges associated with the adoption and rejection of service robots in educational contexts, with much of the existing research relying on broader models of technology acceptance.

### 2.2. Acceptance of service robots

Several scholars have used traditional technology acceptance models to assess users' acceptance of service robots (Li & Wang, 2022). Two of the most cited are the Technology Acceptance Model (TAM) by Davis (1989) and the Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003). TAM posits that perceived utility and ease of use determine a user's intention to use a system. The UTAUT model synthesises several theories, predicting use based on performance expectancy, effort expectancy, social influence, and facilitating conditions. However, when applied to studies on robot acceptance, these models face certain limitations, as robots are inherently more complex than other technological devices like computers (Flandorfer, 2012). In other words, accepting robots differs from accepting other technical innovations because users do not always perceive robots like other technologies (De Graaf et al., 2015). To address this, scholars developed specific models or questionnaires, including the Godspeed Questionnaire (Bartneck et al., 2009), the Almere Model (Heerink et al., 2010), and the Negative Attitude Toward Robots Scale (NARS) (Syrdal et al., 2009). Another model specifically designed for robotic agents is that proposed by Wirtz and colleagues (2018). The authors conceptualised customers' intentions to use or adopt robotic agents during service experiences by integrating cognitive beliefs, social influences, and relational contexts. Their study introduced the sRAM (Service Robot Acceptance Model), which extends TAM by distinguishing between functional dimensions, socio-emotional dimensions and relational dimensions. Despite the

diversity of models proposed by scholars, research has predominantly focused on human-centric factors influencing robot acceptance; additional empirical research is needed to clarify the role of the specific service context in shaping users' acceptance of robotic agents.

## 3. Research design

This study employed an abductive research process, requiring the researcher to move "back and forth" between empirical observations and theoretical insights (Dubois & Gadde, 2002). Abduction focuses on uncovering new concepts for unexpected phenomena that existing knowledge cannot account for (Kennedy & Thornberg, 2018), as creativity is essential to move beyond the constraints of deduction and induction (Kovács & Spens, 2005). To investigate the role of context in educational service robot acceptance, the ABii robot, developed by Van Roboticas, was implemented in two distinct educational contexts: a primary school with 31 children aged 5 to 9 years and a university with 34 students aged 18 to 23 years. In the school, ABii delivered lessons on social-emotional learning, while at the university, lessons focused on innovative technologies in service contexts. Data collection strategies included participant observation and informal interviews (Musante & DeWalt, 2010). These unstructured interviews relied on the researcher's recall and the extensive use of field notes (Bernard, 2011). For data analysis, an abductive thematic analysis was employed (Thompson, 2022). Twenty-two codes were delineated, including acceptance, rejection, and positive and negative versions for usefulness, ease of use, social norms, humanness, social interactivity, social presence, enjoyment, trust, rapport, and context. After coding, the data were organised into a co-occurrence table. The analysis examined the frequency of code usage and the interconnections among codes to identify key relationships.

## 4. A theoretical model for the acceptance of educational service robots

Through an abductive process that moves from literature review to empirical research, we propose a model that identifies key factors in the acceptance or rejection of an educational service robot. The proposed model builds upon the sRAM framework by Wirtz and colleagues (2018) by incorporating the role of value-in-context and context congruence. In the following sections, we examine the components of the proposed model, including the functional, socio-emotional, and relational dimensions, as well as context-related elements.

### 4.1. Functional

The findings suggest the important role played by functional elements in shaping acceptance or rejection of the service robot. These elements concern perceived usefulness, ease of use, and subjective social norms. In terms of perceived usefulness, children regarded the robot as an effective tool for acquiring socio-emotional skills, particularly for managing difficult emotional states. University students also expressed opinions on its utility; some found it useful for complex topics, while others doubted its utility compared to more common technologies.

*"I liked ABii because it helped me understand how to stay calm when I have a problem with a friend or when I have a problem at school".* (#child 3)

The ease of use emerged as a crucial factor contributing to the overall positive reception. Children quickly grasped ABii's lesson structure, which made their learning experience more intuitive. Similarly, university students appreciated its user-friendly design, highlighting its straightforward interface and seamless navigation. Notably, neither group reported significant challenges or frustrations, emphasizing ABii's effectiveness in catering to diverse age groups and learning contexts.

*"We did not have any problems using the robot... it is very intuitive"* (#student 27)

Subjective social norms also played a pivotal role in fostering acceptance of the robot. For children, the approval of parents and the encouragement or acceptance from their peers were key factors in shaping positive attitudes towards using the robot. This social validation made the interaction not only engaging but also more widely embraced within their immediate social circles. For university students, the use of robots in educational contexts was seen as a legitimate and progressive approach, aligning with the broader trend of integrating technology into learning. This perception of social acceptability further reinforced their openness to and acceptance of robot-mediated learning experiences.

*"Certainly, many students might find it interesting and stimulating to have lessons with this type of robot".* (#student 9)

### 4.2. Social-emotional

The robot generated reactions that went beyond simple functional evaluations, with acceptance depending on socio-emotional factors like perceived humanness, social interactivity, social presence, and perceived enjoyment. Many participants attributed human-like traits to ABii, and children, in particular, were drawn to its social capabilities, generating a strong sense of social presence.

*"ABii looks like a character from a cartoon I often watch. I greeted him, and he turned his head toward me and looked at me".* (#child 24)

While children generally found the robot's social interactivity engaging and satisfactory, some university students raised concerns regarding its responsiveness to communicative stimuli. These students noted that the robot occasionally struggled to respond dynamically or adapt to conversational cues, which affected their overall experience.

*"I think the robot could perhaps be programmed to respond better to other vocal inputs as well, so it would be a bit more interactive".* (#student 21)

Finally, perceived enjoyment proved to be a significant factor in the positive reception of ABii. Many participants expressed delight in the robot's celebratory dances and cheerful responses, describing them as highly entertaining and uplifting. These playful elements not only enhanced the overall learning experience but also created an engaging atmosphere that encouraged continued interaction with the robot.

*"It is very fun when ABii starts dancing because we all get up in the class and start dancing together".* (#child 6)

### 4.3. Relational

The relational dimension is defined by the level of trust users place in robotic systems and their ability to establish meaningful connections. In this context, learners demonstrated a general trust in the suggestions provided by ABii, perceiving them as reliable and valuable. Furthermore, participants reported feeling safe and comfortable during interactions, indicating that the robot successfully fostered a sense of psychological security and approachability.

*"I was calm during the robot's explanations, and the topics it covered were very thorough, so I believe the robot is reliable".* (#student 34)

As interactions progressed, participants reported a notable improvement in the fluidity of their engagement with the robot. This enhanced interaction fostered a sense of familiarity and rapport, leading many to perceive the robot as more than just a technological tool. Instead, they began to regard it as a study companion, reflecting the emergence of a personal connection and an increasing sense of relational affinity.

*"At first I had doubts, but in the end I found the robot likeable and friendly".* (#student 26)

### 4.4. Context

The acceptance of the educational service robot has depended on the value learners perceive within their specific contexts of use. Value-in-context highlights that value creation relies on integrating various resources and actors, shaped by contextual factors. This concept emphasises the importance of temporal, spatial, and network dynamics in the value creation process. In this study, the robot addressed specific educational purposes for students, who recognised its value within their contexts of use and evaluated it as more (or less) effective compared to alternative technological solutions commonly used in learning environments, such as computers and electronic whiteboards. This varying degree of preference arose from the robot's ability to combine educational content delivery with social interaction and responsiveness to specific needs. Consequently, the value generated through user-robot interaction depended on the contextual alignment of the robot's capabilities with the characteristics of the surrounding environment and the needs the robot could satisfy for learners at that specific time and in that particular situation.

*"I think ABii is more useful for learning new things than a computer or electronic whiteboards".* (#child 4)

*"I think that in a university context ABii is useful and that, with some improvements, It could satisfy different types of student needs…"* (#student 14)

Value considerations also depend on students' emotional responses to the robot, particularly its ability to meet their expectations. These are shaped by prior experiences with other technologies or human interactions, as well as by the inherent needs generated by the context itself. Such expectations led to judgments about the appropriateness of the robot's behaviour and capabilities for that specific context of use. From this perspective, context congruence emerged as a critical factor in the students' acceptance of the robot.

*"I think ABii is very useful to use at school because it helped me understand what to do in many situations when I am at school, and it tells me things that are not written in school books"* (#child 19)

*"I think ABii is a good example of an educational robot, but I expected a robot that had more improvisation skills and perhaps could respond better to external stimuli"* (#student 29)

## 5. Discussion

While acknowledging the importance of factors closely tied to user perceptions of robots, this work introduces a fresh perspective to service robot acceptance research by proposing the role of context as a novel dimension in shaping the acceptance or rejection of educational service robots. We expanded the sRAM model by Wirtz and colleagues (2018) by incorporating two additional features: value-in-context and context congruence. This study makes three significant contributions.

First, we highlight the importance of broadening discussions about service robot acceptance beyond purely functional, socio-emotional, and relational aspects (Wirtz et al., 2018; Heerink et al., 2010; Van

Doorn et al., 2017). We emphasise the critical need to examine the role of the service context in which user-robot interactions occur. Our findings suggest that even when users respond similarly across functional, socio-emotional, and relational dimensions, their usage intentions may still differ significantly. The service context, and how users perceive it, plays a fundamental role in shaping their overall perception of the service robot and mediating the influence of the three dimensions mentioned above.

Second, the proposed model underscores the role of value-in-context (Mele et al., 2020; Vargo, 2009), a novel dimension that enriches the original sRAM framework. Service robots operate in diverse environments characterised by varying resources, dynamics, and challenges. Learners exhibit diverse needs within their educational settings, and a variety of contextual factors can influence the extent to which the same resource meets those needs. In our study, learners' perceptions of the robot varied based on how it was perceived to address specific needs at a particular time and place, within the specific set of resources characterising the surrounding environment. Additionally, students evaluate how well the robot fulfils their requirements compared to other resources available in their context. For instance, some university students who are already accustomed to using AI programs and chatbots for learning perceived the educational robot as outdated. Conversely, children who did not use such AI tools, but only electronic whiteboards in their classroom, found the same robot highly beneficial. The concept of value-in-context highlights the intricate interplay between humans, robots, and environments, emphasising the unique boundaries that these networks create. These dynamics, combined with the learner's perception of the educational service robot, play a critical role in determining the acceptance or rejection of such robotic resources.

Finally, we contribute to the literature on educational service robot acceptance by introducing the role of context congruence. The evaluation of an educational service robot's acceptance or rejection arises from an understanding of what learners need and seek in specific circumstances, as well as how the robot's capabilities are perceived as aligning with the educational context in question. While children found the ABii robot suitable for school use, some university students expressed doubts about its appropriateness in their setting. Although recognised as a valuable technological tool, it was seen as inadequate for addressing the complexity of university environments. Additionally, while children's expectations were largely met, university students generally expected greater interactivity and adaptability to diverse user needs. From this perspective, the concept of context congruence acted as a mechanism enabling value-in-context to emerge. Further research is needed to elucidate the relationship between value-in-context and context congruence and to understand better their influence on the acceptance or rejection of service robots in educational and other service contexts.

## References

Bartneck, C., Kulić, D., Croft, E., & Zoghbi, S. (2009). Measurement instruments for the anthropomorphism, animacy, likeability, perceived intelligence, and perceived safety of robots. International journal of social robotics, 1, 71–81.

Belpaeme, T., Kennedy, J., Ramachandran, A., Scassellati, B., & Tanaka, F. (2018). Social robots for education: A review. Science robotics, 3(21), eaat5954.

Bernard, H. R. (2011). Research Methods in Anthropology: Qualitative And Quantitative Approaches. New York: Rowman Altamira.

Bilquise, G., Ibrahim, S., & Salhieh, S. E. M. (2024). Investigating student acceptance of an academic advising chatbot in higher education institutions. Education and Information Technologies, 29(5), 6357–6382.

Čaić, M., Mahr, D., & Oderkerken-Schröder, G. (2019). Value of social robots in services: social cognition perspective. Journal of Services Marketing, 33(4), 463-478.

Davis, F. D. (1989). Technology acceptance model: TAM. Al-Suqri, MN, Al-Aufi, AS: Information Seeking Behaviour and Technology Adoption, 205, 219.

De Graaf, M. M., Allouch, S. B., & Klamer, T. (2015). Sharing a life with Harvey: Exploring the acceptance of and relationship-building with a social robot. Computers in human behaviour, 43, 1-14.

Dubois, A., & Gadde, L. E. (2002). Systematic combining: an abductive approach to case research. Journal of Business Research, 55(7), 553–560.

Flandorfer, P. (2012). Population ageing and socially assistive robots for elderly persons: the importance of sociodemographic factors for user acceptance. International journal of population research, 2012(1), 829835.

Fussell, S. G., & Truong, D. (2022). Using virtual reality for dynamic learning: An extended technology acceptance model. Virtual Reality, 26(1), 249–267.

Heerink, M., Kröse, B., Evers, V., & Wielinga, B. (2008). The influence of social presence on acceptance of a companion robot by older people. Journal of Physical Agents, 2(2), 33–34.

Henkel, A. P., Čaić, M., Blaurock, M., & Okan, M. (2020). Robotic transformative service research: deploying social robots for consumer well-being during COVID-19 and beyond. Journal of Service Management, 31(6), 1131–1148.

Kanda, T., Shimada, M., & Koizumi, S. (2012, March). Children learning with a social robot. In Proceedings of the seventh annual ACM/IEEE international conference on Human-Robot Interaction (pp. 351–358).

Kennedy, B.L. & Thornberg, R. (2018). "Deduction, induction, and abduction", in Flick, U. (Ed.), The SAGE Handbook of Qualitative Data Collection, Sage Publications, London, pp. 49–64.

Kidd, C. D., & Breazeal, C. (2004, September). Effect of a robot on user perceptions. In 2004 IEEE/RSJ international conference on intelligent robots and systems (IROS)(IEEE Cat. No. 04CH37566) (Vol. 4, pp. 3559–3564). IEEE.

Konijn, E. A., & Hoorn, J. F. (2020). Robot tutor and pupils' educational ability: Teaching the times tables. Computers & Education, 157, 103970.

Köse, H., Uluer, P., Akalın, N., Yorgancı, R., Özkul, A., & Ince, G. (2015). The effect of embodiment in sign language tutoring with assistive humanoid robots. International Journal of Social Robotics, 7, 537-548.

Kovács, G., & Spens, K. M. (2005). Abductive reasoning in logistics research. International journal of physical distribution & logistics management, 35(2), 132-144.

Li, Y., & Wang, C. (2022). Effect of customer's perception on service robot acceptance. International Journal of Consumer Studies, 46(4), 1241-1261.

Mele, C., Spena, T. R., Tregua, M., Laddaga, C., Ranieri, A., Ruggiero, A., & Gargiulo, R. (2020, August). Understanding robot acceptance/rejection: The SAR model. In 2020, the 29th IEEE International Conference on Robot and Human Interactive Communication (RO-MAN) (pp. 470-475). IEEE.

Mennens, K., Becker, M., Briker, R., Mahr, D., & Steins, M. (2025). I Care That You Do not Share: Confidentiality in Student-Robot Interactions. Journal of Service Research, 28(1), 57-77.

Mondi, C. F., Giovanelli, A., & Reynolds, A. J. (2021). Fostering socio-emotional learning through early childhood intervention. International Journal of Child Care and Education Policy, 15(1), 1–43.

Musante, K., & DeWalt, B. R. (2010). Participant observation: A guide for fieldworkers. Rowman Altamira.

Roy, R., Babakerkhell, M. D., Mukherjee, S., Pal, D., & Funilkul, S. (2022). Evaluating the intention for the adoption of artificial intelligence-based robots in the university to educate students. IEEE Access, 10, 125666–125678..

Thompson, J. (2022). A guide to abductive thematic analysis. The Qualitative Report, 27(5), 1410–1421.

Wirtz, J., Patterson, P. G., Kunz, W. H., Gruber, T., Lu, V. N., Paluch, S., & Martins, A. (2018). Brave new world: service robots on the frontline. Journal of Service Management, 29(5), 907–931.

# Innovation at the Edge of Chaos: Frictions in the Education Ecosystem in the Age of GenAI

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## Abstract

This paper investigates how universities are approaching the integration of Generative AI (GenAI) within teaching practices, focusing on the ongoing transformation of the broader educational service ecosystem. Drawing from a qualitative, exploratory study grounded in the Gioia methodology, we analyze institutional policies, experiential practices, and stakeholder perceptions—along with reflexive insights from an AI agent (ChatGPT)—to explore how GenAI is framed, encouraged, or restricted. While universities engage in multiple missions—teaching, research, and third mission—this study deliberately focuses on teaching, a domain where contradictions are most visible, and where the tensions triggered by GenAI unfold with greater immediacy, according to both faculty and students that have been interviewed. The paper argues that the higher education service ecosystem is approaching a state of "edge of chaos," a condition of free complexity in which roles, norms, and value creation practices are being redefined or the ecosystem will collapse. The contribution offers theoretical and managerial insights on how universities might navigate this liminal state to remain relevant and generative actors in the future education ecosystem.

*Keywords: Generative AI, higher education, service ecosystems, frictions, institutional innovation, marketing*

## 1. Introduction

The emergence of Generative AI (GenAI) in higher education is not merely a technological innovation, but a profound institutional disruption that challenges the traditional structures, norms, and value systems of academic work. As GenAI tools enter university classrooms, they blur the line between students' own work and AI-generated assistance—raising new questions about what counts as learning, authorship, and intellectual honesty. In this landscape, universities are called upon to rethink their pedagogical models and regulatory frameworks while navigating a fluid and unstable environment.

Recent literature in marketing and management emphasizes that innovation should be understood not simply as the adoption of new tools, but as the outcome of processes of sensemaking, institutional negotiation, and value co-creation (Vargo & Lusch, 2016; Vargo et al., 2022; Greenwood et al., 2011). In educational contexts, GenAI disrupts not only teaching practices but the foundational logics that

structure educational services. It is therefore crucial to investigate how universities observe, regulate, and make sense of GenAI in ways that reflect their strategic positioning in an evolving ecosystem.

This paper adopts a service ecosystems perspective (Vargo & Lusch, 2016) to explore how GenAI is being interpreted and negotiated by universities. While GenAI has implications for research and third mission activities, this study focuses on teaching because it currently represents the most visible, contested, and regulated domain—thus offering a privileged lens to observe adaptive dynamics and institutional responses. We interpret this evolving scenario as a threshold condition—what Kauffman (1993) describes as the "edge of chaos"—where established academic norms are questioned daily in classrooms, and where faculty often express both enthusiasm and hesitation, sometimes within the same conversation.

Through the qualitative analysis of institutional policies, interviews with academic stakeholders, and insights from an AI agent (ChatGPT), this paper aims to uncover how universities interpreted as higher education ecosystems are navigating this uncertain landscape. Our objective is twofold: first, to explore the meanings and practices that surround GenAI in the higher education; and second, to examine the role of emerging tensions as indicators of possible institutional transformation (Polese et al., 2021) and leverages to exploit.

In line with the SIM Conference 2025 call for papers, we contribute to the debate on educational service innovation by highlighting how systemic complexity and institutional change intersect in the GenAI era. Our logic of inquiry adopts an "inverted funnel" trajectory: we begin with a broad ecosystemic view of higher education, before zooming in on the domain of master's programs and marketing-oriented curricula, which provide a fertile terrain for observing innovation challenges in GenAI-driven teaching and new universities' value propositions.

## 2. Theoretical Framework

This study builds on three key conceptual pillars that allow us to interpret the adoption of GenAI in higher education as a systemic and institutional phenomenon: the service ecosystem perspective, the notion of tensions and frictions, and the concept of free complexity.

Recent scholarly work has begun to explore the transformative role of Generative AI (GenAI) in higher education, particularly in relation to teaching and learning practices, academic integrity, and the evolving role of educators. Mollick and Mollick (2023) provide empirical insights into how GenAI can be used productively in classroom contexts, illustrating both its pedagogical affordances and its risks. Despite these emerging contributions, much of the existing literature remains either normative or tool-focused, lacking a systemic understanding of how universities as complex service ecosystems make sense of and integrate GenAI. This study addresses this gap by framing GenAI adoption not merely as a pedagogical challenge, but as a site of institutional friction and potential transformation.

### Service ecosystems and educational co-creation

Within the framework of Service-Dominant Logic (Vargo & Lusch, 2008; 2016), the university can be interpreted as a service ecosystem (Visvizi et al., 2023) in which heterogeneous actors (faculty, students, institutions, technologies) co-create educational value through interactions regulated by institutional logics (rules, norms, cultural meanings). GenAI, in this scenario, acts as a disruptive element that alters the relational dynamics and the value configuration (Edvardsson et al., 2014; Akaka et al., 2013). It redefines the ways in which teaching, learning, and assessment are carried out—not as a neutral tool, but as a socio-technical actor embedded in the co-creation process (Chandler & Vargo, 2011).

### Frictions: transformative tensions in complex systems

We use the term frictions (Hahn et al., 2015; Smith & Lewis, 2011) to refer to the tensions— latent or explicit—that emerge between conflicting logics, goals, expectations, and practices. These may take the form of dilemmas, trade-offs, or paradoxes (Jarzabkowski et al., 2013; Andriopoulos & Lewis, 2009). In an educational ecosystem integrating GenAI, frictions may arise around issues such as:

- innovation versus control;
- student autonomy versus evaluation standards;
- technological efficiency versus pedagogical authenticity;
- inclusiveness versus standardization.

Far from being dysfunctions, these frictions can serve as entry points for organizational learning (Farjoun, 2010) and institutional transformation (Zietsma & Lawrence, 2010).

### Free complexity and the edge of chaos

As highlighted in complexity theory (Mason, 2008; Davis & Sumara, 2006), educational systems exhibit emergent, non-linear properties (Vargo et al., 2022). In this context, GenAI acts as a catalyst for such emergent behavior, amplifying uncertainty but also enabling creative reconfiguration. Drawing on Anzivino et al. (2025) and De Toni et al. (2023), we refer to "free complexity" as a dynamic state in which institutional roles, norms, and practices are fluid and contested. This is not simply a zone of entropy, but a liminal space where transformation becomes possible.

Importantly, complexity here is not just a condition. It is inherent to service ecosystems (Gummesson et al., 2019) and it is both an enabler and an inhibitor of change. When properly leveraged, it fosters creativity and systemic evolution; when unmanaged, it risks pushing the system toward fragmentation or collapse. This duality positions higher education at the "edge of chaos" (Kauffman, 1993), where frictions signal not dysfunction, but the potential for institutional metamorphosis.

## 3. Methodology

The research design of this study is qualitative and exploratory, in line with the emerging and complex nature of the phenomenon under investigation (Creswell & Poth, 2016). The aim is not to produce generalizations, but to gain in-depth understanding of how universities are observing, regulating, and reinterpreting the integration of GenAI in teaching during what could be defined as a pre-institutional phase (Zietsma & Lawrence, 2010).

Data collection included:

- Document analysis of ten guidelines published between 2023 and 2025 by Italian and international universities and institutions, including Harvard University, University of Cambridge, ETH Zürich, National University of Singapore, University of Bologna, University of Padua, Jisc (UK), and the UNESCO guidelines (2024);
- Eight semi-structured interviews with faculty members, students, and instructional designers at an Italian university, with specific attention to marketing and management programs where the relevance of GenAI is perceived as particularly significant;

- A reflexive conversation with ChatGPT, considered not only as an enabling technology but as a computational actor with narrative memory of the frictions, practices, and questions it receives daily from students and faculty.

The analysis was conducted using the inductive model proposed by Gioia, Corley, and Hamilton (2013), which enables a progressive conceptual representation of the phenomenon through three levels: first-order concepts (grounded in data), second-order themes (interpretive patterns), and aggregate dimensions (theoretical categories).

This approach was chosen for its ability to capture the depth and dynamism of sensemaking processes (Weick, 1995), especially in contexts marked by institutional plurality and growing complexity (Greenwood et al., 2011). The combined use of policy documents, interviews, and computational reflection supports triangulation (Flick, 2004) and enables the exploration of an evolving ecosystem, capturing not only what is said, but also what is absent, implicit, or ambiguous: regulatory silences, experiential hesitations, and cognitive ambivalences.

A distinctive methodological feature of this study is the inclusion of a reflexive dialogue with ChatGPT, not merely as a tool, but as a repository of the everyday dilemmas voiced by students and faculty. In one such session, the AI was asked whether co-creation compromises learning. Its answer mirrored the ambivalence we observed in human interviews: helpful, yet unsettling in its neutrality. While not human, this "actor" functions as a proxy for capturing ambient tensions in the education ecosystem. Its narrative memory offers insights into how GenAI is perceived and problematized at scale—an unusual but revealing perspective on the edge-of-chaos state we aim to understand.

In this way, the chosen methodology does not merely describe emerging practices, but interprets them as signals of a broader metamorphosis of the educational institution as a whole (Anzivino et al., 2025).

## 4. Preliminary Results and Discussion

Preliminary findings suggest the emergence of frictions in four main areas (see figure 1):

- Regulatory frictions: Some institutions adopt restrictive policies, such as banning GenAI in exam settings—even when students report using similar tools informally during coursework. One student remarked, "They told us not to use AI in the exam, but never explained why it's okay for homework. It's confusing." These inconsistencies suggest that regulation is often reactive and fails to address the nuances of actual use. Rules are often reactive and more oriented toward risk avoidance than value co-creation.

- Cognitive frictions: Both students and faculty express uncertainty about what constitutes authentic learning in the age of GenAI. Faculty and students alike ask: is co-writing with AI still learning, or is it a detour from it? A faculty member noted, "I feel like I'm grading the AI, not the student." Conversely, a student argued, "I use ChatGPT to understand concepts better—it's like a tutor that doesn't judge me." These perspectives expose a shift in how knowledge and authorship are being redefined.

- Experiential frictions: Students encounter different practices across courses and instructors. Some promote AI-enhanced learning, others prohibit it. The resulting

inconsistency is perceived as a "learning lottery," undermining equity. Faculty also feel unsupported in making informed decisions about GenAI use, which fosters fragmentation.

- Institutional frictions: Universities appear torn between signaling innovation and preserving academic legitimacy. In doing so, they risk being perceived as passive or marginal in shaping the future educational landscape. Unless they actively engage in co-creating new learning paradigms, their institutional relevance could erode.

These frictions reflect a moment of free complexity—a transitional space where roles, norms, and value systems are unstable. Rather than being interpreted as dysfunctions, they can be seen as indicators of possible institutional metamorphosis.

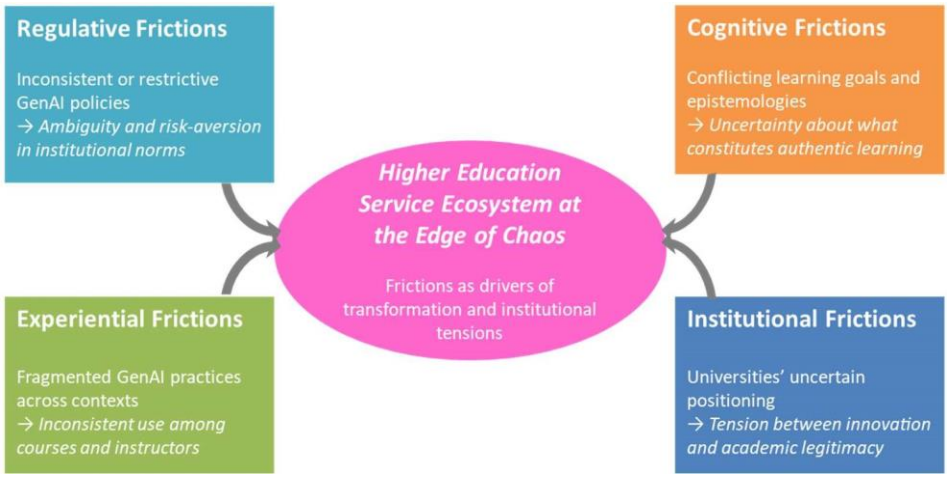



**Figure 1:** Higher Education Service Ecosystem at the Edge of Chaos.
Frictions as Drivers of Transformation and Institutional Tension

## 5. Conclusions and Implications

The adoption of GenAI in higher education is not only a technological event, but a systemic transformation with implications for identity, regulation, and value creation. Our findings highlight the usefulness of reading institutional responses as situated within a service ecosystem under pressure.

Theoretically, we suggest that these frictions are not failures, but signs that institutions are passing through a zone of interpretive struggle—where meaning, policy, and practice are negotiated daily, often informally and inconsistently.

From a managerial perspective, this means universities cannot simply regulate or prohibit the use of GenAI; instead, they must learn to inhabit and govern complexity. This involves cultivating internal capabilities for sensemaking, promoting AI literacy at all levels, and enabling participatory governance of new technologies. The aim shouldn't be to 'stabilize' the system, but to accept that uncertainty ("staying at the edge of chaos") is now part of the educational landscape—and to help educators and

students navigate it with clarity, ethics, and shared expectations.. In this respect, complexity is not a problem to be solved but a terrain to be navigated—one that can stimulate innovation or inhibit change depending on

how it is addressed. Universities that embrace this dual nature may reposition themselves not only as adaptive institutions, but as active shapers of the future educational ecosystem.

Methodologically, the use of policy documents, qualitative interviews, and AI-based reflection allowed us to triangulate interpretations and reveal blind spots, silences, and ambiguities. Future studies could extend the scope to different institutional contexts, cultural systems, and academic disciplines.

In conclusion, GenAI is reshaping the university's role in the educational ecosystem. The challenge is not only to manage GenAI but to rethink what a university is and whom it serves. As one interviewee put it, "We used to teach students how to think. Now we must teach them how to think with AI—and against it." At the edge of chaos, universities face a stark choice: adapt as co-creators of meaning or risk fading into irrelevance.

## References


Akaka, M. A., Vargo, S. L., & Lusch, R. F. (2013). The complexity of context: A service ecosystems approach for international marketing. Journal of International Marketing, 21(4), 1–20. https://doi.org/10.1509/jim.13.0032

Andriopoulos, C., & Lewis, M. W. (2009). Exploitation–exploration tensions and organizational ambidexterity. Organization Science, 20(4), 696–717. https://doi.org/10.1287/orsc.1080.0406

Anzivino, A., Sarno, D. and Sebastiani, R., 2025. Complexity, frictions, and evolution in service ecosystems. In: Complexity and emergence in market ecosystems. Cham: Springer Nature Switzerland, pp.55–73.

Chandler, J. D., & Vargo, S. L. (2011). Contextualization and value-in-context: How context frames exchange. Marketing Theory, 11(1), 35–49. https://doi.org/10.1177/1470593110393713

Creswell, J. W., & Poth, C. N. (2016). Qualitative Inquiry and Research Design: Choosing Among Five Approaches. SAGE.

Davis, B., & Sumara, D. (2014). Complexity and education: Inquiries into learning, teaching, and research. Routledge.

De Toni, A.F., Zollo, G., De Zan, A. (2023) 'Organizational paradoxes and metamorphosis in collective Action', Systems, 11(5), pp. 241

Edvardsson, B., Kleinaltenkamp, M., Tronvoll, B., McHugh, P., & Windahl, C. (2014). Institutional logics matter when coordinating resource integration. Marketing Theory, 14(3), 291–309. https://doi.org/10.1177/1470593114534340

Farjoun, M. (2010). Beyond dualism: Stability and change as a duality. Academy of Management Review, 35(2), 202–225. https://doi.org/10.5465/amr.35.2.zok202

Flick, U. (2004). Triangulation in qualitative research. In U. Flick, E. von Kardorff, & I. Steinke (Eds.), A companion to qualitative research. SAGE.

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. Organizational Research Methods, 16(1), 15–31. https://doi.org/10.1177/1094428112452151

Greenwood, R., Raynard, M., Kodeih, F., Micelotta, E. R., & Lounsbury, M. (2011). Institutional complexity and organizational responses. Academy of Management Annals, 5(1), 317–371. https://doi.org/10.5465/19416520.2011.590299

Gummesson, E., Mele, C., Polese, F. (2019) 'Complexity and viability in service ecosystems', Marketing Theory, 19 (1), pp. 3–7.

Hahn, T., Preuss, L., Pinkse, J., & Figge, F. (2015). Cognitive frames in corporate sustainability. Academy of Management Review, 40(4), 481–499. https://doi.org/10.5465/amr.2012.0341

Jarzabkowski, P., Lê, J. K., & Van de Ven, A. H. (2013). Responding to competing strategic demands. Strategic Organization, 11(3), 245–280. https://doi.org/10.1177/1476127013481016

Kauffman, S. A. (1993). The origins of order: Self-organization and selection in evolution. Oxford University Press.

Lusch, R. F., & Vargo, S. L. (2014). Service-Dominant Logic: Premises, Perspectives, Possibilities. Cambridge University Press.

Mason, M. (2008). Complexity theory and the philosophy of education. Educational Philosophy and Theory, 40(1), 4–18. https://doi.org/10.1111/j.1469-5812.2007.00413.x

Mollick, E. R., & Mollick, L. (2023). Using AI to implement effective teaching strategies in classrooms: Five strategies, including prompts. The Wharton School Research Paper.

Morrison, K. (2008). Educational philosophy and the challenge of complexity theory. Educational Philosophy and Theory, 40(1), 19–34. https://doi.org/10.1111/j.1469-5812.2007.00394.x

Polese, F., Payne, A., Frow, P., Sarno, D., Nenonen, S. (2021) 'Emergence and phase transitions in service Ecosystems', Journal of Business Research, 127, pp. 25–34.

Smith, W. K., & Lewis, M. W. (2011). Toward a theory of paradox. Academy of Management Review, 36(2), 381–403. https://doi.org/10.5465/amr.2009.0223

Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: Continuing the evolution. Journal of the Academy of Marketing Science, 36(1), 1–10. https://doi.org/10.1007/s11747007-0069-6

Vargo, S. L., Peters, L., Kjellberg, H., Koskela-Huotari, K., Nenonen, S., Polese, F., Sarno, D., & Vaughan, C. (2023). Emergence in marketing: an institutional and eco-system framework. Journal of the Academy of Marketing Science, 51(1), 2-22.

Vargo, S.L. & Lusch, R.F. (2016). Institutions and axioms: An extension and update of service dominant logic. Journal of the Academy of Marketing Science, 44(1), 5-23.

Vargo, S.L., Akaka, M.A., Wieland, H. (2020). Rethinking the process of diffusion in innovation: A service-ecosystems and institutional perspective, Journal of Business Research, 116, 526-534. https://doi.org/10.1016/j.jbusres.2020.01.038.

Visvizi, A., Troisi, O., & Grimaldi, M. (2023). Exploring the drivers for digital transformation in smart education: An ecosystems approach. In ITM Web of Conferences (Vol. 51, p. 01003). EDP Sciences.

Weick, K. E. (1995). Sensemaking in Organizations. SAGE.

Zietsma, C., & Lawrence, T. B. (2010). Institutional work in the transformation of an organizational field. Administrative Science Quarterly, 55(2), 189–221. https://doi.org/10.2189/asqu.2010.55.2.189

## Appendix A

Interview Guide

1. What is your general perception of the use of GenAI in university teaching and learning?
2. In which moments do you use it or see it being used?
3. Have you received clear guidance on what is allowed or not allowed?
4. Have you had ethical or practical doubts about its use?
5. Do you feel supported in the conscious and effective use of these tools?
6. How do you think GenAI is changing your way of teaching/learning?
7. In your opinion, how should the university regulate these tools?
8. What tensions, challenges, or conflicts have you observed in your experience?

# User Perception of Value Proposition Driven by Conversational Agents in the Public Service Context

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## Abstract

The use of conversational agents in public services has expanded rapidly, driven by increasing digitalisation and the need for greater efficiency. However, existing literature has mainly focused on the technicalities and the chase for efficiency, still neglecting user perception. By adopting a Public Service Logic perspective, this study explores how AI-Conversational Agents affect the value proposition of Public Service Organisations, focusing on user perception.

Using a netnographic approach, the research analyses spontaneous conversations between users on Facebook, a platform frequently used by Public Service Organisations and their audiences. The analysis is guided by the Technology Acceptance Model (TAM), whose two key dimensions—perceived usefulness and perceived ease of use—serve as interpretive lenses for categorising user attitudes. By mapping user comments onto these dimensions, four personas emerge: the Supporter (high usefulness, high ease of use), the Opponent (low usefulness, low ease of use), the Skeptic (low usefulness, high ease of use), and the Traditionalist (high usefulness, low ease of use).

This framework, grounded in TAM, provides a valuable interpretive tool for designing technology-driven value propositions that better align with user perceptions, thereby contributing to the development of user-centred digital public services.

*Keyword: Value Proposition, Public Services, User Perception, Conversational Agents, Public Service Logic, Chatbot*

## 1. Introduction

In recent years, conversational agents such as chatbots, voice assistants, and AI-based conversational interfaces have become widespread in many areas (Crolic et al., 2022). Their ability to automate interactions, provide immediate responses, and customise the user experience has established them as essential tools for providing assistance in service contexts (Ranieri et al., 2024).

According to a report by Verified Market Research (2023), the global virtual assistant market is expected to reach $25.36 billion by 2027, growing at a compound annual rate of 34.2% between 2020 and 2027. This growth is being driven by the increasing adoption of remote working, a trend

exacerbated by the Covid-19 pandemic. This has prompted many companies to opt for more agile, scalable workforce solutions to efficiently respond to evolving needs.

In public services, conversational agent use has grown significantly (Maragno et al., 2022), making these tools popular for facilitating access to information, streamlining bureaucratic processes, and expanding service availability outside of traditional hours (Lee et al., 2023). The adoption of these tools responds to the need to improve service efficiency and continuity by reducing the human workload and making interactions more immediate.

However, while research in the private sector has focused primarily on customer service experiences and outcomes (Zhou et al., 2025), studies in the public sector have emphasised technical performance and operational efficiency (Lin et al., 2023). The crucial role of public trust is often overlooked in these studies. According to Aoki (2020), if users do not perceive these technologies positively, the implementation of technology could fail. Therefore, it is crucial to understand how users perceive the introduction of new digital solutions in public services and to address any factors that could undermine trust.

Adopting the theoretical lens of Public Service Logic (PSL), Zyzak and Martinussen (2024) call for future studies investigating users' perceptions of public services, in order to obtain more information on the effectiveness of Public Service Organisations' AI-embedded value propositions. Similarly, Strokosch and Osborne (2020) emphasised the importance of considering user perceptions when defining a new value proposition in public services. Designing or improving value propositions in public services without considering how they are perceived by users can jeopardise value co-creation.

However, this aspect has so far been neglected in the case of value propositions related to new AI-based systems, particularly when integrated into public digital platforms (Trischler & Trischler, 2022). Therefore, understanding how users perceive conversational agents within public services is crucial for evaluating the effectiveness of implemented technologies and for designing value propositions that truly align with user perceptions.

This study aims to contribute to the literature on PSL by exploring how the introduction of artificial intelligence, particularly conversational agents, affects the value proposition of public services from users' perspectives. In line with PSL relational orientation, the analysis focuses on users' perceptions, which are considered fundamental to understanding how value is co-created in interactions between users and Public Service Organisations (PSOs).

To achieve this, the study adopts a netnographic approach, analysing the spontaneous conversations and narratives of users on Facebook. This social platform is widely used by PSOs (Wirtz et al., 2020), and discussions about the value propositions of these organisations take place there, including debates on experiences of using conversational agents integrated into public services. Netnography provides access to in-depth qualitative insights, capturing the emotional, symbolic, and practical dimensions through which users attribute meaning and value to these tools, with the advantage of being unobtrusive, thus achieving an understanding of a phenomenon in an objective way, since there is no influence in data collection.

The analysis process is informed by the Technology Acceptance (TAM) Model (Davis, 1989), which emphasises the influence of perceptions of usefulness and ease of use on the adoption of new technologies. Although the TAM was originally developed in private businesses contexts, it is a useful

starting point for interpreting acceptance dynamics related to conversational agents in public service contexts, particularly when these dynamics emerge from spontaneous, unsolicited narratives.

The analysis reveals different categories who perceive the implementation of a conversational agent differently, and a theoretical framework emerges that describes different user personas based on recurring perceptions according to the adoption of a chatbot. This provides a useful interpretative tool to guide more targeted and informed future implementations.

The remainder of the paper is structured as follows: The next section provides a literature review on the use of conversational agents in public service contexts, as well as the concept of value proposition in the context of PSL. This is followed by the methodology section, which describes the adopted approach, as well as the data collection and analysis processes. The main results are then presented, followed by a critical discussion. The paper concludes with the theoretical and practical implications of the study, its limitations and suggestions for future research.

## 2. Literature Review

### 2.1 Conversational Agents in Public Service Context

Conversational agents have now taken on an increasingly central role in public services in response to the growing demand for efficiency, accessibility, and digitalisation (Ahn & Chen, 2020; Misuraca et al., 2020). These systems, which are based on artificial intelligence, are designed to interact with users through natural language, providing information, support and services in an automated and continuous manner (Lee et al., 2023). They are being adopted in various areas of the public sector with the aim of streamlining bureaucratic processes, reducing operating costs, and improving the user experience (Maragno et al., 2022).

The literature emphasises the potential contribution of conversational agents to make public services more inclusive and accessible to those who struggle to access traditional channels. Numerous studies demonstrate how conversational agents can facilitate interaction between users and PSOs by breaking down barriers related to opening hours, location, and technical capabilities (Wirtz et al., 2018; Larsen and Følstad, 2024). Recently, scholars focused on how artificial intelligence can be embedded into chatbots in order to make them more effective (Larsen and Følstad, 2024); indeed, artificial intelligence can be used in predicting the user intent and in ensuring service quality. Anyway, such conversational agents have fallen short due to a low ease of use from both employees and users. As it regards the first, technology providers offered support when infusing artificial intelligence in the ongoing system, while the problem is still open when it comes to users.

Despite the widespread use of conversational agents - both based or not on artificial intelligence -, studies focusing on user perception in the public services literature are lacking (Zyzak & Martinussen, 2024), mostly due to their newness. Understanding how users perceive conversational agents in public services is thus essential to ensuring satisfaction. Consequently, it is becoming increasingly important to understand users' experiences with conversational agents in order to develop solutions that are technologically advanced, accepted and appreciated by users.

### 2.2 Value Proposition in Public Service Logic

Within the framework of PSL, the value proposition is defined as the set of benefits that a PSO intends to provide to users through its services (Røhnebæk et al., 2024). PSL is a theoretical perspective analysing value creation dynamics in the realm of public services; it was initiated by Osborne (2018)

providing a shift from performance as the key metric of public service organizations (PSOs) and adopting a processual view. It has further evolved towards being a logic on its own, besides starting from some concepts brought by service logic and service-dominant logic. In this strand of literature, Eriksson et al. (2020) stressed the role of collaboration in enabling the process of value creation; such collaboration is not seen as a B2B or B2C tie, but as the sum of the interactions taking place in the social system centred on public services provision. Such systems are the *locus* where value propositions are set, rooted in the mission of PSOs and enabling the joint value creation process between public and private actors. The value proposition is not a static element determined uniquely by the provider (PSO), but rather a commitment to co-creating value realised through interaction between PSOs and their users (Osborne, 2018; Trischler et al., 2023).

In this context, value does not simply transfer from the PSO to the user; rather, it emerges dynamically from the user's active involvement in the service delivery and use process (Osborne, 2018). Therefore, PSOs can only propose value through the design and structuring of services; it is the user who attributes meaning to this proposal and determines its actual value in the specific context of use (the concept of value-in-use).

In line with these assumptions, PSL literature increasingly emphasises the need to investigate how user perception shapes the value proposition in public services. Understanding how users perceive the value proposition is essential for designing interventions that truly align with their needs, contexts, and expectations. User perception is therefore not a marginal element, but an active and decisive component in the process of co-creating public value (Strokosch and Osborne, 2020). Finally, recent studies highlight the need to analyse value perception in the users' sphere - besides recognizing the relevance of collective value, too - and call for investigation of such perception (Cui & Aulton, 2023).

## 3. Methodology

This study adopted a qualitative methodological approach (Yin, 2013) to investigate how users perceive the integration of conversational agents into public service organisations' value propositions. This approach is widely recognised in the literature as being well-suited to analysing emerging phenomena, such as the adoption of artificial intelligence in the public sector.

The methodological approach involves collecting data through netnographic analysis. This is defined as a valid 'qualitative research method that adapts netnographic research techniques to study cultures and communities that emerge through computer-mediated communication' (Kozinets, 2002, p. 62). This approach uses available online information to understand user perceptions (Mkono and Markwell, 2014), favouring objectivity in data collection, since it does not force users in stating considerations that would be necessarily appreciated by the person collecting data. The focus is on a series of cases concerning the adoption and implementation of chatbots by public sector institutions in Italy.

In particular, this research used Facebook as the main platform to gather empirical data, as it represents a widely used social media space where users actively share opinions, feedback, and criticisms regarding public services (Wirtz et al., 2020).

Indeed, Facebook has emerged as a significant platform for public service communication and citizen engagement. Public service broadcasters using Facebook have demonstrated higher performance in terms of content diversity compared to their television counterparts (Steiner et al., 2019).

This allowed us to explore users' spontaneous perceptions and narratives about the implementation of chatbots in public service delivery. The focus is on a series of cases concerning the adoption and implementation of chatbots by public sector institutions in Italy.

The research process is based on the TAM, a robust theoretical framework developed by Davis (1989) to analyse the factors influencing users' acceptance of technology. This model is particularly useful in the context of PSOs (Wirtz & Piehler, 2016) as it enables a systematic investigation into how users perceive and adopt digital solutions within public services.

As Piehler et al. (2016) have highlighted, TAM is a particularly suitable approach for analysing the specific context of PSOs. Specifically, the model enables us to explore two complementary dimensions: (i) the feasibility of using a conversational agent to automate communication activities and (ii) users' perceptions of adopting a conversational agent in public service delivery processes.

This study adopts the approach proposed by Tubaishat (2018) that perceived usefulness and perceived ease of use are the main determinants of users' intention to accept and use a new technology. These two key TAM constructs allow us to measure acceptance levels and gain an in-depth understanding of users' perceptions of introducing a chatbot to the public service experience.

### 3.1 Data Collection

This study collects data by analysing the Facebook pages of 8 PSOs. Specifically, 91 posts published between 2020 and 2024 containing the terms 'chatbot' or 'virtual assistant' are identified. For these posts, 206 user comments related to implementing chatbots in PSOs are systematically downloaded and documented, providing a robust basis for analysis. Finally, saturation was reached when no new themes or categories were identified despite the addition of new data; indeed, according to Guest et al. (2020), saturation was achieved as follows: first, the categories used to describe the reaction of users emerged as either positive or negative; the first part of the analysis led to highlight some comments showing the unfriendliness of the technology, instead of being just either positive or negative; this led to the third category. Then, after analysing the 30th post - namely the run as per Guest et al. (2020), approx. one-third of the sample - a new category emerged, namely scepticism; previous posts were reviewed, showing no need to re-categorize any post. From that moment on, no new categories emerged; thus, twice the number of the previously analyzed posts - from 30th to 91st - made categories stable in the series, showing saturation was achieved. Table 1 summarises the data collected for the study.

| **Public Service Organisation** | **Number of Selected Posts on Conversational Agents** | **Total Interactions (Likes, Comments, Shares)** | **Number of Comments** |
|---|---|---|---|
| Istituto Nazionale Tumori IRCCS "Fondazione G. Pascale" | 67 | 4057 | 74 |
| Fondazione Policlinico Universitario Agostino Gemelli IRCCS | 6 | 1463 | 30 |

| | | | |
|---|---|---|---|
| Regione Toscana | 5 | 373 | 46 |
| Comune di Siena | 3 | 573 | 8 |
| Comune di Latina | 2 | 152 | 3 |
| Parco archeologico del Colosseo | 5 | 560 | 21 |
| Galleria dell'Accademia di Firenze | 2 | 71 | 4 |
| Università degli Studi di Salerno | 1 | 280 | 20 |
| **Total** | **91** | **7529** | **206** |

*Source: authors elaboration*

**Table 1:** Number of Posts, Interactions and Comments

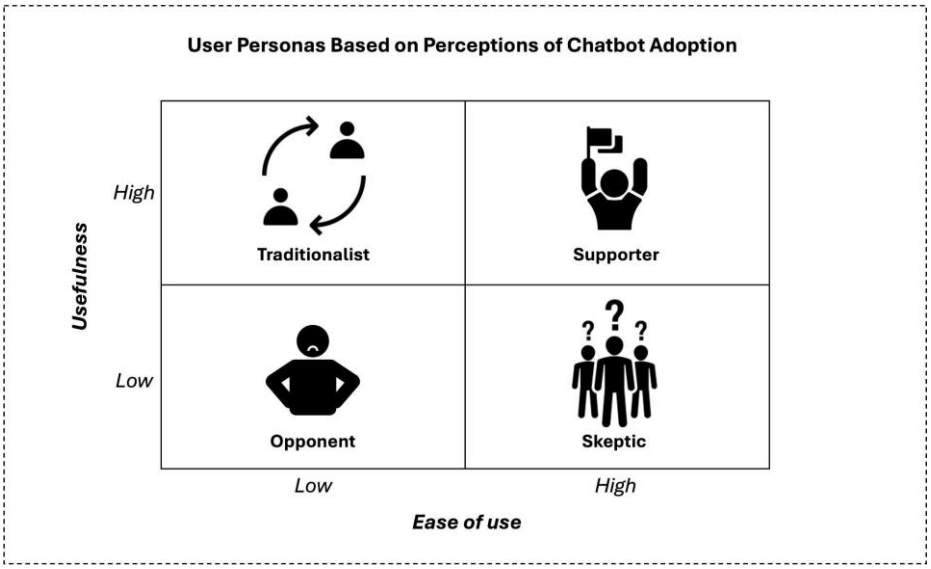
### 3.2 Data Analysis

The collected data was analysed using a two-tiered approach, with each tier operating at a distinct level. At the first level, user comments on technology adoption were categorised manually according to the two main dimensions of the TAM (Tubaishat, 2018): perceived ease of use and perceived usefulness. Two researchers coded the material independently, working separately in the initial phase to improve reliability and minimise bias. They then compared their individual results, addressing any differences through discussion until complete agreement was reached to ensure consistent final categorisation. This process determined whether each user perceived the technology as easy or difficult to use and useful or not. A total of 47 comments were excluded from the analysis as they were not relevant.

The second level of analysis involved an automated content review using Sketch Engine software. The "word list" function was used to identify the most frequent terms in the dataset. These key terms, which were considered to be the most informative for interpreting user perceptions, were then explored in more depth through concordance checks and n-gram analysis. Combining manual and automated techniques provided a more comprehensive and objective view of public attitudes towards chatbot integration in public service organisations.

## 4. Findings

A netnographic analysis of users' spontaneous conversations about the use of conversational agents in public services revealed an interpretative model based on four recurring user personas: *Supporter, Opponent, Traditionalist* and *Skeptic* (see Figure 1). These summarise the main perceptions expressed by users regarding ease of use and usefulness — two central dimensions in the subjective evaluation of technologies according to TAM (Tubaishat, 2018).




*Source: authors elaboration*

**Figure 1:** User Personas Framework

Personas are not rigid categories, but rather recurring configurations of attitudes, expectations and experiences that help us to understand how conversational agents are adopted, accepted or rejected in public service contexts.

The *Supporter* has a positive attitude towards conversational agents, considering them to be useful and user-friendly tools. They recognise the added value offered by chatbots, particularly in terms of the speed and availability of the service and emphasise their advantages over traditional channels. The Supporter readily adapts to digital interaction and actively contributes to legitimising innovation, demonstrating widespread trust in the institution that introduced the tool.

At the opposite end of the spectrum is the *Opponent*, who clearly rejects conversational agents, perceiving them as useless, ineffective or frustrating. They criticise the chatbot's lack of understanding, its inability to handle complex requests and the resulting isolation from human contact. From this perspective, not only does the agent fail to produce value, it also compromises the public service experience, generating disaffection and institutional mistrust.

*Traditionalists* have a low level of familiarity with and confidence in digital technologies, which often generates cautious or slightly distrustful attitudes toward conversational agents. While they don't openly oppose innovation, they tend to view chatbots as tools that differ from their communication habits. They prefer direct human interactions because they find them more reliable and reassuring. They only use conversational agents when there are no alternatives or for simple tasks, and they do not feel a sense of mastery over the tool. This reflects a technology-unfriendly profile in which digital adoption is slowed not by ideological rejection but by a sense of alienation, insecurity, and attachment to traditional relational models.

The *Skeptic* is in an ambiguous position. The users shaping this persona potentially recognize the ease of use of conversational agents but doubt their usefulness. Their assessments are often influenced by

negative past experiences, a lack of confidence in the public body's ability to properly implement the technology, and unrealistic expectations. Chatbots are perceived as incomplete innovations that are still far from guaranteeing a satisfactory experience. Table 2 provides examples of comments related to each persona.

| **Personas** | **PSOs** | **Description Comment Examples** |
|---|---|---|
| Supporter | Istituto Nazionale Tumori IRCCS "Fondazione G. Pascale" | *"Very interesting, I think the institute is getting ahead and can grow even more!"* |
| Supporter | Istituto Nazionale Tumori IRCCS "Fondazione G. Pascale" | *"So far it has always been perfect. I've been happy with it. I hope it always goes on like this."* |
| Supporter | Comune di Siena | *"I thought it was mediocre ... instead right now it's perfect!"* |
| Supporter | Galleria dell'Accademia di Firenze | *"What a brilliant idea! I love it!"* |
| Opponent | Regione Toscana | *"It's just a big waste of time; you have to go back to using the phone cup or the physical cup."* |
| Opponent | Regione Toscana | *"The guaranteed way to lose your mind"* |
| Opponent | Parco Archeologico del Colosseo | *"Please don't, grace us!"* |
| Traditionalist | Regione Toscana | *"When are free courses for the digitally unfamiliar? We make ourselves available."* |
| Traditionalist | Istituto Nazionale Tumori IRCCS "Fondazione G. Pascale" | *"How do you use it? On the Facebook page I can't find it ... thank you."* |
| Traditionalist | Istituto Nazionale Tumori IRCCS "Fondazione G. Pascale" | *"How do you talk to Pasqualino???"* |
| Traditionalist | Università degli Studi di Salerno | *How do you chat with Matthew?* |
| Skeptic | Istituto Nazionale Tumori IRCCS "Fondazione G. Pascale" | *"Interesting if it works."* |

| | | |
|---|---|---|
| Skeptic | Istituto Nazionale Tumori IRCCS "Fondazione G. Pascale" | *"Wasn't an information office better?"* |
| Skeptic | Istituto Nazionale Tumori IRCCS "Fondazione G. Pascale" | *"And let's hope it works in the facts."* |

*Source: authors elaboration*

**Table 2:** Description Comment Examples

Finally, the results of the analysis show that perceptions vary depending on the public sector. For instance, the analysis shows an overall positive perception of usefulness and ease of use in the healthcare sector. Users appreciate the introduction of this technology because they find it useful and efficient for healthcare services.

In contrast, comments from the public administration sector reflect a predominantly negative perception. Users believe that the technology does not improve the service and prefer personalized human interaction.

## 5. Discussion

This research offers a new perspective on how users perceive the adoption of conversational agents in public services. The results highlight the importance of subjective factors in determining the perceived value of these tools. The emergence of four user personas — *Supporter, Opponent, Traditionalist,* and *Skeptic* — shows that adopting a conversational agent in a public service context is not a neutral or solely technical process. Rather, it is an experience mediated by past experiences, expectations, and trust in the institution promoting the innovation.

These findings reinforce the PSL assumption that value in public services is co-created through interaction between users and PSOs (Osborne, 2018). Therefore, it is crucial to consider users' perceptions when defining value propositions, particularly when implementing public digital services (Osborne, 2018; Trischler & Trischler, 2022).

Users do not merely "receive" an automated service; they also interpret its meaning, evaluate its usefulness, and compare it with pre-existing models of legitimacy and quality. In this dynamic, the conversational agent is a tool and a symbolic touchpoint that reflects — and sometimes challenges — the relationship between users and PSOs.

The articulation of personas along the two dimensions of *usefulness* and *ease of use*—which are central to the TAM—suggests that acceptance of Artificial Intelligence technologies cannot be interpreted exclusively in functional terms. For example, some users, such as *Skeptics*, may perceive a tool as easy to use but not very useful, while others, such as *Traditionalists*, may recognise its potential but doubt its reliability or ease of use.

These differences highlight the fact that PSOs cannot adopt a one-size-fits-all strategy when designing AI-embedded solutions. Instead, they must develop value propositions that address the specific expectations, concerns, and needs of each user. This requires technical design work as well as targeted cultural support, institutional communication, and trust-building measures tailored to different user

profiles. Only through this users-centred approach can promote the inclusive, informed, and sustainable adoption of Artificial Intelligence technologies in public service context.

## 6. Conclusion

The infusion of artificial intelligence in addressing value proposition through conversational agents proved being a proper way to widen the chances to experience public services; indeed, the use of such agents supports the breaking down of barriers as previously theorised (e.g., Wirtz et al., 2018) and supports the understanding of what users might want, namely their intent (Larsen and Følstad, 2024). In addition to what extant studies proposed, this research shows the understanding of the need supported by artificial intelligence. Therefore, the embedding of artificial intelligence is beneficial in this way. Anyway, it has not to be thought of as a one-fits-all solution, due to the differences emerging among users. Indeed, the use of artificial intelligence-driven conversational agents might clash with the perception of a very limited ease of use. This proved the suitability of TAM in studies on innovative ways of service provision (Tubaishat, 2018), while stressing the need for further development of tools. This is due to different backgrounds, willingness to participate in service provision, and personal features hindering some users from fully enjoying what the offering is about and how to experience it. This consideration is fully new when it comes to the use of artificial intelligence in conversational agents, also due to the newness of such solutions.

From these considerations related to the conceptual side some more derive with reference to managerial suggestions; indeed, public managers planning to introduce artificial intelligence in conversational agents should properly address the novel value proposition, otherwise the digital divide and the digital illiteracy would further isolate some users. This is very relevant in an area where service provision is very often related to urgent and basic needs for users, thus PSOs should properly know and assess the plethora of potential users to understand what can hinder the full acceptance of novel conversational agents and how to contrast such issues. A multiplicity of solutions and training in the use of new technologies can represent the way to widen the chance of accepting such value propositions for multiple users. Being social networks the research context for data collection there is a chance to consider the interplay among different users - according to the personas - to favour a mutual learning effect, thus leveraging on peer-to-peer interactions instead of just having a PSOs setting video tutorial, online support, or any other form of training.

Further research is needed to explore the distinctive characteristics of the four user personas that emerged, as well as the response strategies that PSOs should adopt. It is particularly important to investigate how the most reluctant figures, such as the *Skeptic* and the *Opponent*, can be guided toward more favorable positions.

Additionally, in line with the considerations above, this research would benefit from a wider understanding of the reasons why the ease of use and the usefulness are perceived as limited. Therefore, next research might address such limitations via the use of qualitative methodologies to investigate single users and have a wider interpretation of the considerations emerged from online comments. Moreover, time is another feature to be considered, since over time there might be self-learning processes or community effects to increase the ease of use and favour a higher understanding of the usefulness. Similarly, the direct interaction with the companies providing technology services to PSOs as well as to PSOs themselves in order to analyse data and better frame users' behaviour in the interaction with conversational agents.

Finally, further research might compare the evidence of this study with new ones carried out in other geographical contexts, in order to understand whether digital divide and illiteracy is an issue mostly affecting some areas. This would lead to consider the managerial implications for further service offering, since a great relevance of user digital illiteracy might lead to a limited application of some solutions in multiple countries, hindering the scaling up of new ways to offer services.

## References


Ahn, M. J., & Chen, Y. C. (2020). Artificial intelligence in government: potentials, challenges, and the future. In Proceedings of the 21st annual international conference on digital government research (pp. 243-252).

Crolic, C., Thomaz, F., Hadi, R. and Stephen, A.T. (2022), "Blame the bot: anthropomorphism and anger in customer–chatbot interactions", Journal of Marketing, Vol. 86 No. 1, pp. 132-148, doi: 10.1177/00222429211045687

Cui, T., & Aulton, K. (2023). Conceptualizing the elements of value in public services: Insights from practitioners. Public Management Review, 1-23, doi: 10.1080/14719037.2023.2226676.

Davis, F. D. (1989). Technology acceptance model: TAM. Al-Suqri, MN, Al-Aufi, AS: Information Seeking Behavior and Technology Adoption, 205-219.

Eriksson, E., Andersson, T., Hellström, A., Gadolin, C., & Lifvergren, S. (2020). Collaborative public management: coordinated value propositions among public service organizations. Public Management Review, 22(6), 791-812, doi: 10.1080/14719037.2019.1604793.

Kozinets, R.V. (2002), "The field behind the screen: using netnography for marketing research in online communities", Journal of Marketing Research, Vol. 39 No. 1, pp. 61-72, doi: 10.1509/jmkr.39.1.61.18935.

Guest, G., Namey, E., & Chen, M. (2020). A simple method to assess and report thematic saturation in qualitative research. PloS one, 15(5), e0232076.

Larsen, A. G., & Følstad, A. (2024). The impact of chatbots on public service provision: A qualitative interview study with citizens and public service providers. Government Information Quarterly, 41(2), 101927.

Lin, C.C., Huang, A.Y. and Yang, S.J. (2023), "A review of ai-driven conversational chatbots implementation methodologies and challenges (1999-2022)", Sustainability, Vol. 15 No. 5, pp. 1-13, doi: 10.3390/su15054012

Lee, S. E., Ju, N., & Lee, K. H. (2023). Service chatbot: Co-citation and big data analysis toward a review and research agenda. Technological Forecasting and Social Change, 194, 122722.

Maragno, G., Tangi, L., Gastaldi, L., & Benedetti, M. (2022). AI as an organizational agent to nurture: effectively introducing chatbots in public entities. Public Management Review, 1-31.

Misuraca, G., van Noordt, C., & Boukli, A. (2020). The use of AI in public services: Results from a preliminary mapping across the EU. In Proceedings of the 13th international conference on theory and practice of electronic governance (pp. 90-99).

Mkono, M. and Markwell, K. (2014), "The application of netnography in tourism studies", Annals of Tourism Research, Vol. 48, pp. 289-291, doi: 10.1016/j.annals.2014.07.005.

Osborne, S. P. (2018). From public service-dominant logic to public service logic: are public service organizations capable of co-production and value co-creation?. Public management review, 20(2), 225-231. https://doi.org/10.1080/14719037.2017.1350461

Piehler, R., Wirtz, B. W., & Daiser, P. (2016). An analysis of continuity intentions of eGovernment portal users. Public Management Review, 18(2), 163-198.

Ranieri, A., Di Bernardo, I., & Mele, C. (2024). Serving customers through chatbots: positive and negative effects on customer experience. Journal of Service Theory and Practice, 34(2), 191-215.

Røhnebæk, M. T., François, V., Kiss, N., Peralta, A., Rubalcaba, L., Strokosch, K., & Zhu, E. Y. (2024). Public service logic and the creation of value propositions through framing. Public Management Review, 26(2), 399–420. https://doi.org/10.1080/14719037.2022.2095002

Steiner, M., Magin, M., & Stark, B. (2018). Uneasy Bedfellows: Comparing the diversity of German public service news on television and on Facebook. Digital Journalism, 7(1), 100–123. https://doi.org/10.1080/21670811.2017.14128

Strokosch, K., & Osborne, S. P. (2020). Co-experience, co-production and co-governance: an ecosystem approach to the analysis of value creation. Policy & Politics, 48(3), 425-442. https://doi.org/10.1332/030557320X15857337955214

Trischler, J., & Westman Trischler, J. (2022). Design for experience – a public service design approach in the age of digitalization. Public Management Review, 24(8), 1251–1270. https://doi.org/10.1080/14719037.2021.1899272

Trischler, J., Røhnebæk, M., Edvardsson, B., & Tronvoll, B. (2023). Advancing Public Service Logic: moving towards an ecosystemic framework for value creation in the public service context. Public Management Review, 1–29. https://doi.org/10.1080/14719037.2023.2229836

Tubaishat, A. (2018). Perceived usefulness and perceived ease of use of electronic health records among nurses: Application of Technology Acceptance Model. Informatics for Health and Social Care, 43(4), 379-389.

Verified Market Research. (2023).
https://www.verifiedmarketreports.com/it/product/human-virtual-assistant-services-market/

Wirtz, B. W., & Piehler, R. (2016). eGovernment Applications and public personnel acceptance: an empirical analysis of the public servant perspective. International Journal of Public Administration, 39(3), 238-247.

Wirtz, J., Patterson, P. G., Kunz, W. H., Gruber, T., Lu, V. N., Paluch, S., & Martins, A. (2018). Brave new world: service robots in the frontline. Journal of Service Management, 29(5), 907-931.

Wirtz, B. W., Langer, P. F., Göttel, V., & Thomas, M. J. (2020). Public Social Media Services: A Citizen's Perspective. Public Performance & Management Review, 43(6), 1342–1358. https://doi.org/10.1080/15309576.2020.1760112

Yin, R. K. (2013). Validity and generalization in future case study evaluations. Evaluation, 19(3), 321-332.

Zhou, M., Liu, L., & Feng, Y. (2025). Building citizen trust to enhance satisfaction in digital public services: the role of empathetic chatbot communication. Behaviour & Information Technology, 1-20.

Zyzak, B., & Martinussen, P. E. (2024). OK computer: applying the public service logic on digital health services. Public Management Review, 26(11), 3342–3364. https://doi.org/10.1080/14719037.2024.2337080

# Communicating Through Bias: How Financial Advisors Address Consumer Behavioral Barriers

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## Abstract

Understanding how financial advisors manage behavioral obstacles in client decision-making is critical for improving consumer outcomes in the financial services sector. While previous research has extensively exlored consumer biases and financial literacy gaps, little is known about how advisors themselves perceive and respond to these challenges in practice. This study investigates the communicative strategies used by financial advisors to address behavioral resistance and facilitate informed financial decisions. Through a thematic analysis of 15 in-depth interviews with professional advisors, four key themes emerged: (1) loss aversion as a psychological barrier to investment, (2) limited financial knowledge among clients, (3) empathy as a trust-building and diagnostic tool, and (4) the strategic use of examples and analogies to simplify complex information. The findings suggest that effective financial advising requires not only technical expertise but also adaptive communication, emotional intelligence, and narrative skills. The study contributes to the literature on behavioral finance and services marketing by highlighting the advisor's role as both educator and behavioral coach. Implications for advisor training and financial institutions are discussed, along with directions for future research on consumer-advisor dynamics.

*Keywords: Consumer behavior, Behavioral finance, Communication, Thematic analysis*

## 1. Introduction

In recent decades, financial decision-making has increasingly attracted the attention of scholars in the fields of marketing, behavioral economics, and consumer psychology (De Bondt & Thaler, 1995; Frydman & Camerer, 2016; Gärling et al., 2009; Greenberg & Hershfield, 2019; Martenson, 2008). Unlike low-involvement purchases, financial products are characterized by their complexity, long-term consequences, and inherent uncertainty, often requiring high levels of trust and cognitive effort from consumers (Lusardi & Mitchell, 2014). Despite the increasing availability of financial products and advisory services, many individuals continue to make suboptimal financial decisions: delaying investments, avoiding necessary risk-taking, or simply ignoring financial planning altogether (Douglas & Wildavsky, 1982; Kahneman & Tversky, 2013; Thaler & Sunstein, 2008). One of the key challenges in the financial services sector is that consumer behavior often deviates from the assumptions of rational choice (Faris et al., 2024). Cognitive biases such as loss aversion, status quo bias, and overconfidence systematically affect how individuals perceive financial information and make choices

(Barberis & Thaler, 2003; Benos, 1998; Chuah & Devlin, 2011). Among these, loss aversion, which is the tendency to prefer avoiding losses over acquiring equivalent gains, has been consistently identified as a primary obstacle to prudent financial behavior (Byrne, 2005). Financial advisors are frequently positioned at the intersection between complex product offerings and consumers with limited financial literacy and strong behavioral biases (Pearson, 2021). In this context, the advisor's role extends beyond technical expertise to include educational, emotional, and communicative functions (Gennaioli et al., 2015). Advisors translate abstract financial concepts into meaningful narratives and real-life examples, adapt their language to the client's level of understanding, and respond to emotional cues and behavioral resistance (Bhattacharjee et al., 2014; Mustafa et al., 2023). Yet, while the importance of financial literacy and behavioral finance is well documented, fewer studies have explored how advisors themselves perceive and manage the behavioral dynamics of their clients in everyday practice. Specifically, there is limited qualitative research investigating the communication strategies advisors adopt to mitigate biases and foster more informed financial decisions. Existing studies tend to focus either on consumer-side perspectives (e.g., investment behavior, trust, satisfaction) or on general principles of effective communication, rather than on the lived experiences and adaptive practices of financial consultants in the field (Lim et al., 2013; Van Rooij et al., 2011). This paper aims to address this gap by exploring how financial advisors interpret and respond to the behavioral challenges exhibited by clients during financial consultations. Through a thematic analysis (Braun & Clarke, 2006) of in-depth interviews with professional financial advisors, we identify the communication strategies they employ to manage behavioral resistance and enhance decision-making. It highlights the need to go beyond the "information deficit model", which assumes that poor decisions stem merely from a lack of knowledge, and to consider the relational and emotional dimensions of financial advising. As financial products become more customized and complex, advisors are increasingly required to act as interpreters of meaning, trust-builders, and behavioral coaches (Loewenstein et al., 2012). The paper is structured as follows: the next section reviews the literature on consumer behavior in financial services and the role of behavioral biases and communication. The third section outlines the research design, detailing the qualitative method and analytical approach adopted. The fourth section presents the preliminary findings of the thematic analysis, and the final section discusses their implications and suggests directions for future research.

## 2. Key Theoretical Background

Understanding consumer behavior in the financial services sector requires integrating insights from behavioral economics, marketing communication, and financial literacy research. Unlike traditional models of rational choice, behavioral finance emphasizes that individuals often rely on cognitive shortcuts and emotional heuristics when making financial decisions, leading to systematic biases such as loss aversion, mental accounting, and present bias (Gabhane et al., 2023). These biases are particularly influential in contexts involving uncertainty, delayed outcomes, and abstract information, as is typical of most financial products (Hofstede, 1994; Loewenstein et al., 2001). Simultaneously, numerous studies have documented widespread financial illiteracy among consumers, which exacerbates the effects of behavioral biases (Dervishaj, 2021) . Consumers frequently struggle to understand basic concepts such as compound interest, risk diversification, and inflation, impairing their ability to make informed choices (Van Rooij et al., 2011). In this context, financial advisors are not only product experts but also communicators and educators tasked with translating complex information into actionable knowledge (Wood, 2012). Communication theory in services marketing further highlights the relational dimension of advisor-client interactions (Bennett & Robson, 2005), indeed trust, empathy, and credibility have emerged as critical antecedents of effective financial advising and customer satisfaction (Gennaioli et al., 2015; Johnson & Grayson, 2005). Particularly in

high-stakes and emotionally loaded decisions, advisors must navigate not only informational asymmetries but also emotional states such as anxiety, regret, or fear of loss (Loewenstein et al., 2001). Despite these insights, the practical mechanisms through which advisors manage consumer biases and foster trust remain underexplored. Recent studies suggest that storytelling, metaphor, and analogical reasoning may serve as effective tools to make financial advice more relatable and cognitively accessible (Bhattacharjee et al., 2014). However, there is a lack of empirical work examining how these strategies are used in real-life advisory settings from the perspective of financial professionals themselves. The present study draws from this interdisciplinary theoretical background to explore how financial advisors experience and address consumer behavioral obstacles through everyday communicative practices.

## 3. Research Design

This study employed a qualitative research design based on thematic analysis (Braun & Clarke, 2006) to explore how financial advisors perceive and address the behavioral barriers encountered by clients in the context of financial product decision-making. The objective was to uncover patterns and interpretative themes that reflect the communicative strategies used by advisors to overcome cognitive and emotional obstacles such as loss aversion, low financial literacy, and client hesitation.

### 3.1 Data Collection

The data were collected through semi-structured interviews with a purposive sample of professional financial advisors operating in the Italian market. A total of 15 interviews were conducted, each lasting between 45 and 75 minutes. The interviews followed a flexible protocol designed to elicit reflections on clients' behaviors, communication challenges, and personal strategies used to facilitate decision-making. All interviews were conducted in person or via video conferencing, recorded with participant consent, and subsequently transcribed verbatim for analysis. The interview guide was iteratively refined as the fieldwork progressed, allowing for greater depth and exploration of emerging themes (Brinkmann & Kvale, 2018).

### 3.2 Data Analysis

The analysis followed a data-driven, inductive approach, allowing themes to be generated organically from the data rather than from predefined theoretical constructs (Braun & Clarke, 2006; Corbin & Strauss, 1990). The choice of thematic analysis was motivated by its flexibility and suitability for uncovering both explicit and implicit meaning in narrative data. This method enables researchers to generate rich, detailed, yet systematic accounts of lived experiences and to interpret how meaning is constructed and negotiated within specific contexts (Boyatzis, 1998; Braun & Clarke, 2013).

## 4. Preliminary Findings

The thematic analysis led to the identification of four core themes reflecting how financial advisors perceive and manage behavioral barriers in client decision-making. These themes, loss aversion, limited financial knowledge, empathy, and use of examples, highlight the complex interplay between cognition, emotion, and communication in financial advisory contexts.

*Loss Aversion as a Communication Barrier*

Advisors frequently referred to loss aversion as one of the most pervasive psychological tendencies encountered during consultations. Clients tended to overemphasize potential losses while undervaluing

possible long-term gains, leading to risk avoidance even when such risk was deemed necessary for achieving financial objectives. This was particularly evident in discussions about equity investments, insurance products, or pension funds. The findings suggest that rational explanations alone are often insufficient to shift client perspectives. Advisors must first acknowledge the emotional dimension of perceived loss before introducing alternatives that reframe risk in a more tolerable way.

*Limited Financial Knowledge and Cognitive Overload*

A recurring theme was the low financial literacy of many clients, regardless of their professional background. Advisors reported that clients often lacked a basic understanding of financial terminology, which created cognitive overload and reinforced passive or avoidant behavior. This lack of foundational knowledge often led advisors to simplify or re-sequence information, moving from tangible concepts (e.g., monthly expenses) to more abstract ones (e.g., interest rates, diversification). It also required careful calibration of language and pacing, avoiding jargon and adapting explanations to the client's level of familiarity.

*Empathy as a Trust-Building Device*

Empathy emerged as a central relational strategy, particularly in emotionally charged contexts such as inheritance planning, retirement decisions, or postcrisis repositioning. Advisors emphasized that establishing an emotional connection was not merely a soft skill but a strategic step toward effective communication. This finding aligns with existing literature on affective trust in service relationships (Johnson & Grayson, 2005). Empathy served both as a diagnostic tool to identify latent concerns and as a facilitator of decision confidence, helping clients overcome emotional paralysis.

*The Strategic Use of Examples and Analogies*

To bridge the cognitive and emotional gap, advisors frequently employed examples, stories, and analogies. These communicative devices were seen as essential in transforming abstract financial concepts into relatable narratives. For instance, advisors likened diversified portfolios to "baskets of fruit" or explained compound interest by referencing everyday savings habits. These analogies served two functions: they reduced complexity and activated intuitive reasoning, thus increasing message retention and engagement. Moreover, stories helped clients imagine future scenarios, encouraging longterm thinking and reducing the salience of short-term fears.

## 5. Discussion and Insights

This study explored how financial advisors perceive and manage behavioral obstacles in client decision-making. Thematic analysis revealed four key themes, loss aversion, limited financial knowledge, empathy, and the strategic use of examples, that shaped how advisors communicate and guide clients. The findings contribute to the literature on behavioral finance and services marketing, emphasizing the *communicative dimension* of behavioral bias management. While prior research has focused on the psychological mechanisms underlying consumer decisions (Barberis & Thaler, 2003; Kahneman & Tversky, 2013), this study highlights the advisor's active role in translating, reframing, and emotionally regulating information. This supports a more integrated view that connects behavioral economics with interpersonal communication and trust (Gennaioli et al., 2015; Johnson & Grayson, 2005). The use of storytelling and analogies emerged as a cognitive bridge between complex content and consumer understanding (Bhattacharjee et al., 2014), while empathy functioned as both a relational and strategic tool that promotes client openness and trust. Practically, these insights call for enhanced advisor training that integrates adaptive communication, metaphorical thinking, and active listening.

Institutions should also develop narrative-based toolkits to complement technical materials and better address emotional resistance. Moreover, given the persistent gap in financial literacy, advisors should be prepared to act as situational educators, tailoring explanations to each client's cognitive level. Some limitations must be acknowledged. The study focuses on Italian advisors and excludes client perspectives, which limits generalizability. Also, data were collected in a period of market stability, and results might differ during crises, when behavioral biases intensify. Future research should explore these dynamics further, using quantitative or experimental designs to test the impact of specific communication strategies. Studies could also investigate how robo-advisors manage behavioral resistance in the absence of empathy, or how advisor-client communication evolves to shape trust and financial behavior.

## References


Barberis, N., & Thaler, R. (2003). A survey of behavioral finance. *Handbook of the Economics of Finance*, *1*, 1053-1128.

Bennett, R. J., & Robson, P. J. (2005). The advisor-SMF client relationship: Impact, satisfaction and commitment. *Small Business Economics*, *25*, 255-271.

Benos, A. V. (1998). Aggressiveness and survival of overconfident traders. *Journal of Financial Markets*, *1*(3-4), 353-383.

Bhattacharjee, A., Berger, J., & Menon, G. (2014). When identity marketing backfires: Consumer agency in identity expression. *Journal of consumer research*, *41*(2), 294-309.

Boyatzis, R. (1998). *Transforming qualitative information: Thematic analysis and code development*. Sage.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, *3*(2), 77-101.

Braun, V., & Clarke, V. (2013). Successful Qualitative Research: A Practical Guide for Beginners.,(Sage: London, UK).

Brinkmann, S., & Kvale, S. (2018). Doing interviews.

Byrne, K. (2005). How do consumers evaluate risk in financial products? *Journal of Financial Services Marketing*, *10*(1), 21-36.

Chuah, S. H., & Devlin, J. (2011). Behavioural economics and financial services marketing: a review. *International Journal of Bank Marketing*, *29*(6), 456-469.

Corbin, J. M., & Strauss, A. (1990). Grounded theory research: Procedures, canons, and evaluative criteria. *Qualitative sociology*, *13*(1), 3-21.

De Bondt, W. F., & Thaler, R. H. (1995). Financial decision-making in markets and firms: A behavioral perspective. *Handbooks in operations research and management science*, *9*, 385-410.

Dervishaj, B. (2021). Psychological biases, main factors of financial behaviour-A literature review. *European Journal of Medicine and Natural Sciences*, *4*(1), 27-44.

Douglas, M., & Wildavsky, A. (1982). How can we know the risks we face? Why risk selection is a social process 1. In (Vol. 2, pp. 49-58): Wiley Online Library.

Faris, A. A., Jwan, H. K., & Al-Bidairi, K. H. A. (2024). From traditional finance to neurofinance: Literature review. *Periodicals of Engineering and Natural Sciences*, *12*(1), 191-204.

Frydman, C., & Camerer, C. F. (2016). The psychology and neuroscience of financial decision making. *Trends in cognitive sciences*, *20*(9), 661-675.

Gabhane, D., Sharma, A., & Mukherjee, R. (2023). Behavioral finance: exploring the influence of cognitive biases on investment decisions. *Boletin de Literatura Oral-The Literary Journal*, *10*(1), 3133-3141.

Gärling, T., Kirchler, E., Lewis, A., & Van Raaij, F. (2009). Psychology, financial decision making, and financial crises. *Psychological Science in the Public Interest*, *10*(1), 1-47.

Gennaioli, N., Shleifer, A., & Vishny, R. (2015). Money doctors. *The Journal of Finance*, *70*(1), 91-114.

Greenberg, A. E., & Hershfield, H. E. (2019). Financial decision making. *Consumer Psychology Review*, *2*(1), 17-29.

Hofstede, G. (1994). Management scientists are human. *Management science*, *40*(1), 4-13.

Johnson, D., & Grayson, K. (2005). Cognitive and affective trust in service relationships. *Journal of Business Research*, *58*(4), 500-507.

Kahneman, D., & Tversky, A. (2013). Prospect theory: An analysis of decision under risk. In *Handbook of the fundamentals of financial decision making: Part I* (pp. 99-127). World Scientific.

Lim, K. L., Soutar, G. N., & Lee, J. (2013). Factors affecting investment intentions: A consumer behaviour perspective. *J. Financ. Serv. Mark*, *18*(4), 201-223.

Loewenstein, G., Asch, D. A., Friedman, J. Y., Melichar, L. A., & Volpp, K. G. (2012). Can behavioural economics make us healthier? *Bmj*, *344*.

Loewenstein, G. F., Weber, E. U., Hsee, C. K., & Welch, N. (2001). Risk as feelings. *Psychological bulletin*, *127*(2), 267.

Lusardi, A., & Mitchell, O. S. (2014). The economic importance of financial literacy: Theory and evidence. *American Economic Journal: Journal of Economic Literature*, *52*(1), 5-44.

Martenson, R. (2008). How financial advisors affect behavioral loyalty. *International Journal of Bank Marketing*, *26*(2), 119-147.

Mustafa, W. M. W., Islam, M. A., Asyraf, M., Hassan, M. S., Royhan, P., & Rahman, S. (2023). The effects of financial attitudes, financial literacy and health literacy on sustainable financial retirement planning: The moderating role of the financial advisor. *Sustainability (Switzerland)*, *15*(3), 2677.

Pearson, B. (2021). The role of financial advisors in shaping investment beliefs. *Consumer Interests Annual*, *67*.

Thaler, R., & Sunstein, C. (2008). Nudge: Improving decisions about health, wealth and happiness. Amsterdam Law Forum; HeinOnline: Online,

Van Rooij, M., Lusardi, A., & Alessie, R. (2011). Financial literacy and stock market participation. *Journal of Financial economics*, *101*(2), 449-472.

Wood, W. H. (2012). Role of the Financial Advisor. *The Handbook of Municipal Bonds*, 43-50.

# Special Track UNESCO Chair
# Marketing in Entrepreneurial Ecosystems

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# Sustainable practices in the MENA entrepreneurial ecosystem: The impact of country culture

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## Abstract

To foster sustainable growth in the MENA region, many countries are promoting entrepreneurship. While start-up activity is high, environmental challenges like climate change and water scarcity persist. This study will explore how MENA start-ups implement and communicate sustainable practices to engage stakeholders, aligning with UN SDG 9 on sustainable industrialisation. Using Hofstede's cultural dimensions, it also will examine how country culture shapes these practices. A comparative case study of start-ups in MENA and Northern Europe will be carried on, and their websites and social media will be analysed to understand if their sustainable practices differ, to what extent they use different communication approaches and to explore the impact of cultural values on their choices. The research aims to deepen understanding the relationship between culture and sustainable communication strategy.

*Keywords: Sustainable Practices, Mena Countries, Country Culture, Hofstede, Communication.*

## 1. Introduction

The Middle East and North Africa countries (MENA) are a thriving region, rich in terms of natural resources, such as substantial petroleum and natural gas reserves, primary commodities in the region (Aminova et al., 2020). Nevertheless, the economic development of the area is tightly dependent on the oil prices fluctuations' (Arezki et al., 2018). To overcome these barriers, many MENA countries have turned to entrepreneurship as a strategic lever for reducing reliance on oil, diversifying their economies, and promoting sustainability. Indeed, according to the Global Entrepreneurship Monitor (2018/2019), most MENA economies report a higher prevalence of start-ups compared to established businesses, indicating a dynamic entrepreneurial landscape with growth potential. At the same time, the sustainability dimension adds further complexity to the region's development trajectory. Indeed, MENA countries are among the most vulnerable globally to the impacts of climate change, including rising temperatures, water scarcity, and natural resource depletion (Liu et al., 2022).

Despite its complexity and diversity, the area is still understudied (Xiong et al., 2024), especially considering the local entrepreneurial ecosystem. Moreover, the growth potential of the MENA countries could significantly and positively affect all the Mediterranean countries, with which several

trades and business exchanges could be implemented. Also, the economic improvement of the area would be beneficial since it could become an interesting market for European and Asian products (Ferretti et al., 2025).

The present research focuses on the entrepreneurial ecosystems in the MENA countries, analysing how these organisations implement and communicate sustainable good practices to attract local and international stakeholders. As we know from the Agenda 2030, sustainable practices are becoming not only a possible source for the competitive advantage but a mandatory approach. Particularly, we focus on the 9th objective of the Sustainable Development Goals (SDGs) outlined in the Agenda, which is dedicated to promoting inclusive and sustainable industrialisation.

To answer our research aim, we will analyse the impact of country culture on the emergence of sustainable good practices in these countries. First, country culture will be studied through Hofstede's model (Hofstede, 2011), which is widely acknowledged in the field of Cross-Cultural Management (Engelen et al., 2009). Secondly, we will adopt a qualitative approach, particularly a comparative case study (Yin, 2009; Gustafsson, 2017), to highlight differences in the approach of communicating sustainable practices in the North European countries and in the MENA countries. We will consider the sustainable communication strategy of MENA start-ups, analysing the start-ups' websites and social media channels. This is a working progress study; thus, we can formulate the expected results regarding the effect of cultural dimensions on the sustainable strategy adopted in those countries.

## 2. Theoretical Framework

The establishment of businesses through green entrepreneurship enables companies to generate profits while creating environmental and social value. New ventures implement eco-innovation strategies to solve environmental problems. Their success depends heavily on their presentation methods (Khan et al., 2025). Green branding demonstrates a company's dedication to environmental protection. Small firms, including start-ups, can establish market differentiation through transparent sustainability practice communication, according to multiple academic researchers. These firms use green labels together with authentic sustainability narratives to attract environmentally conscious consumers (Suki,2016). The start-up environment presents substantial obstacles to businesses operating within this framework. The limited availability of financial resources and human personnel restricts their operational capabilities. The scepticism of consumers combined with their concerns about greenwashing practices makes it difficult for them to establish trust (Bending et al., 2024; Bhatnagar et al., 2022). The worldwide focus on sustainability has gained momentum through the United Nations Sustainable Development Goals (SDG 9), yet most empirical research has concentrated on developed nations. The study of sustainability practices in entrepreneurial ecosystems of the MENA region faces limited research (El-Khalil et al., 2018). Start-ups have gained recognition as essential drivers for sustainable economic transformations. Their ability to adapt quickly, their innovative nature, and fast response to new social requirements make them important contributors to sustainable development (Schaltegger & Wagner, 2011). These ventures can include sustainability practices in their products, operations, and stakeholder communication strategies. Sustainability communication effectiveness helps them gain legitimacy while securing resources and differentiating their market position (Cahyadi et al., 2023). This form of communication is particularly relevant in regions characterised by weak institutions or regulatory voids, such as many MENA countries, which currently face rising environmental pressures and must diversify their economy beyond fossil fuel dependence (El-Katiri, 2014; World Bank, 2020). In response, governments are encouraging entrepreneurship as a means to promote sustainable growth, job creation, and industrial renewal. In this context, it is essential to examine how start-ups adopt and communicate sustainable practices.

Another important dimension that requires further investigation is the influence of country culture on sustainability. Hofstede et al. (2010) argue that culture shapes individuals' perceptions of responsibility, risk tolerance, and long-term orientation. For instance, countries with high levels of collectivism and uncertainty avoidance (as seen in many MENA nations) may support socially oriented sustainability approaches but be less inclined to engage in transparent and direct external communication. In contrast, individualistic cultures with low power distance, such as those in Northern Europe, tend to favour openness and proactive sustainability discourse (Hofstede, 2001; Kaasa, 2015). Hofstede's cultural dimensions are a useful tool to understand cultural differences. The cultural values can influence how start-ups perceive environmental issues, who they think is responsible, and whether they choose proactive or reactive communication (Merkin et al., 2014). The institutional support and infrastructure of mature markets are absent in entrepreneurial ecosystems of emerging economies, which impacts both sustainability communication channels and credibility (Autio et al., 2014 ). Digital tools such as websites and social media platforms become essential because of this situation. Start-ups can use these digital platforms to communicate their

sustainability initiatives while overcoming institutional barriers and establishing relationships with external partners (Olanrewaju et al., 2020). Laasch & Conaway (2015) explain that digital sustainability communication serves both informative and performative functions. Through digital sustainability communication, start-ups can establish their position as global actors who embrace innovation alongside resilience and responsibility. The analysis gains additional depth through the comparison of startups operating in Northern Europe. These countries integrate sustainability into their public policies as well as consumer values and investor expectations (Høgevold et al., 2014). Northern European cultures with low power distance and low masculinity, and strong long-term orientation tend to promote transparency and stakeholder engagement and clear environmental commitment communication (Hofstede, 2010). The analysis of these regions will help us understanding which factors mainly affect sustainability communication differences.

## 3. Methodology and Expected Results

We will adopt a qualitative approach based on a comparative case study (Yin, 2009; Gustafsson, 2017). We will consider Tunisia as a representative of MENA countries and Sweden as a representative of the Northern Europe cluster. Indeed, we will first analyse country culture through Hofstede's model. Secondly, we will collect data from start-up websites and social media from each country, and we will perform a content analysis to understand whether the communication strategy of sustainable practices changes and if country culture impacts these discrepancies. The sample will include start-ups from Tunisia and Sweden, selected using the snowball sampling technique. This approach enhances access to respondents who may be difficult to reach via conventional techniques (Ting et al., 2025).

According to Hofstede's model, Tunisia presents the following cultural dimensions: Power Distance 70, Individualism 27, Motivation towards Achievement and Success 40, Uncertainty Avoidance 75, Long-term Orientation 24 and Indulgence 0. Tunisia is strongly oriented toward collectivism, where power and status are considered relevant in daily relationships and in doing business. However, the economic performance is not the primary goal (based on the Motivation rate), which entails an expected good sustainable approach for start-ups. On the contrary, the region presents a short-term orientation and a higher rate of uncertainty avoidance, suggesting that Tunisian people do not feel comfortable facing the unknown. Both dimensions are not coherent with the adoption and the communication of sustainable practices.

Regarding Sweden, the country presents the following dimensions: Power Distance 31, Individualism 87, Motivation towards Achievement and Success 5, Uncertainty Avoidance 29, Long-term orientation 52, and Indulgence 78. The low rate of the motivation dimension, since it regards the value people place on equality and inclusion, suggests a stronger focus on communicating the sustainable practices. In the same vein, the uncertainty avoidance rate advises a relaxed and open attitude towards ambiguity, promoting an openness to highly direct and unfiltered communication of the adopted sustainable practices. However, some dimensions contrast with this assumption: for example, the higher individualism and the higher indulgence suggest that the Swedish people are very self-centred and focus on satisfying their personal needs, which apparently contrast with a sustainable strategy. Our expected results, indeed, should confirm the effect of country culture on the promotion of sustainable practices. Particularly, we expect to find significant differences in terms of communication strategy. We expect that Swedish start-ups are more oriented towards a clear and strong communication of their practices, while Tunisian start-ups could be more oriented towards communicating the importance of the collective well-being.

## 4. Conclusions And Implications

This analysis will shed some light on how country culture affects the way start-ups present their sustainable practices to their audience. The research will apply Hofstede's model to Sweden and Tunisia to demonstrate how cultural values affect the sustainability communication approaches of start-ups. The cultural values of Tunisia lead to a communication approach that is both cautious and community-focused. Tunisian start-ups tend to present sustainability through narratives that emphasise social responsibility and collective well-being, and moral duty instead of using performance data or innovative approaches. The short-term orientation indicates that Tunisian startups might choose to focus on social benefits in the present rather than environmental goals in the future. The communication style of Swedish start-ups reflects an open and direct approach. Swedish start-ups will use data-based messaging that showcases their sustainable actions through visible channels while upholding values of inclusivity and equality, and personal responsibility. The combination of high individualism and indulgence creates a potential conflict between personal enjoyment and enduring sustainability obligations. These preliminary findings may have relevant implications. For instance, sustainability communication depends on cultural context because narratives which succeed in one environment fail to connect in different settings. The discovered insight holds essential value for international organisations, together with investors and policymakers who aim to promote sustainable entrepreneurship across different countries. A standardised approach to sustainability communication fails to consider the cultural elements which determine how sustainability messages are received by different audiences. In conclusion, our study sheds light on how cultural context plays a crucial role in shaping sustainable behaviours and in influencing how these behaviours are communicated. Recognising these differences is essential for fostering authentic and impactful sustainability narratives across diverse entrepreneurial ecosystems.

## Reference

Aminova, M., Mareef, S., & Machado, C. (2020). Entrepreneurship Ecosystem in Arab World: the status quo, impediments and the ways forward. EuroMid Journal of Business and Tech-innovation (EJBTI), 1-13.

Arezki, R., Mottaghi, L., & Barone, A. (2018). Middle East and North Africa economic monitor, october 2018: a new economy in Middle East and North Africa. World Bank Publications.

Autio, E., Kenney, M., Mustar, P., Siegel, D., & Wright, M. (2014). Entrepreneurial innovation: The importance of context. *Research policy*, *43*(7), 1097-1108.

Bendig, D., Kleine-Stegemann, L., Schulz, C., & Eckardt, D. (2022). The effect of green startup investments on incumbents' green innovation output. Journal of Cleaner Production, 376, 134316 Bhatnagar, M., Taneja, S., & Özen, E. (2022). A wave of green start-ups in India—The study of green finance as a support system for sustainable entrepreneurship. Green Finance, 4(2), 253.

Bosma, N., & Kelley, D. (2019). Global Entrepreneurship Monitor Report: 2018/2019. Global entrepreneurship monitor.

Cahyadi, W., Candrasa, L., Cen, C. C., Cahyadi, L., & Pratama, I. (2023). Green supply chain, green communication and firm performance: empirical evidence from thailand. Systematic Reviews in Pharmacy, 11, 398-406. El-Katiri, L. (2014). A roadmap for renewable energy in the Middle East and North Africa. *Oxford Institute for Energy Studies*.

El-Khalil, R., & El-Kassar, A. N. (2018). Effects of corporate sustainability practices on performance: the case of the MENA region. *Benchmarking: An International Journal*, *25*(5), 1333-1349.

Engelen, A., Heinemann, F. and Brettel, M. (2009) 'Cross-cultural entrepreneurship research: current status and framework for future studies', Journal of International Entrepreneurship, Vol. 7, No. 3, pp.163–189.

Ferretti, M., Cannavale, C., Claudio, L., Zone, S., Franzese, G., Ernez Mrabet, M., & Rivieccio, G. (2025). Female entrepreneurship in Mediterranean ecosystems. A comparative analysis of Italy and Tunisia.

Gustafsson, J., 2017. Single case studies vs. multiple case studies: A comparative study.. Academy of Business, Engineering and Science Halmstad University, pp. 1-15.

Hofstede, G. (2011). Dimensionalizing cultures: The Hofstede model in context. Online readings in psychology and culture, 2(1), 8.

Hofstede, G. (2001). *Culture's Consequences: Comparing Values, Behaviors, Institutions and Organizations Across Nations*. Sage.

Høgevold, N. M., Svensson, G., Wagner, B., Petzer, D. J., Klopper, H. B., Varela, J. C. S., ... & Ferro, C.

(2014). Sustainable business models: Corporate reasons, economic effects, social boundaries, environmental actions and organizational challenges in sustainable business practices. *Baltic Journal of Management*, *9*(3), 357-380.

Kaasa, A. (2015). Culture, religion and social capital: evidence from European regions. *International Journal of Sociology and Social Policy*, *35*(11/12), 772-794.

Khan, M. H., Khan, S., & Iqbal, S. (2025). Green Entrepreneurship and Branding in Developing Economies: A Data-Driven Analysis. Review Journal of Social Psychology & Social Works, 3(1), 955-964.

Laasch, O., & Conaway, R. N. (2015). *Principles of responsible management:: glocal sustainability, responsibility, ethics*. Cengage.

Liu, H., Saleem, M. M., Al-Faryan, M. A. S., Khan, I., & Zafar, M. W. (2022). Impact of governance and globalization on natural resources volatility: The role of financial development in the Middle East North Africa countries. Resources Policy, 78, 102881.

Merkin, R., Taras, V., & Steel, P. (2014). State of the art themes in cross-cultural communication research: A systematic and meta-analytic review. *International Journal of Intercultural Relations*, *38*, 1-23.

Olanrewaju, A. S. T., Hossain, M. A., Whiteside, N., & Mercieca, P. (2020). Social media and entrepreneurship research: A literature review. *International journal of information management*, *50*, 90110.

Schaltegger, S., & Wagner, M. (2011). Sustainable entrepreneurship and sustainability innovation: categories and interactions. Business strategy and the environment, 20(4), 222-237.

Suki, N. M. (2016). Green product purchase intention: impact of green brands, attitude, and knowledge. *British Food Journal*, *118*(12), 2893-2910.

Ting, H., Memon, M. A., Thurasamy, R., & Cheah, J. H. (2025). Snowball sampling: A review and guidelines for survey research. Asian Journal of Business Research (AJBR), 15(1).

Xiong, D., Khaddage-Soboh, N., Umar, M., Safi, A., & Norena-Chavez, D. (2024). Redefining entrepreneurship in the digital age: exploring the impact of technology and collaboration on ventures. International Entrepreneurship and Management Journal, 20(4), 3255-3281.

Yin, R. K., 2009. Case study research: Design and methods. Vol. 5 ed.: Sage.

# Education as a Key Factor of Entrepreneurship Ecosystems: The Role of Lean Marketing

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## Abstract

This paper investigates the characteristics and evolutionary dynamics of entrepreneurship ecosystems (EEs), focusing on their role in local socio-economic development. It aims to contribute to the literature by detailing EE features, focusing on actor interactions and the enabling potential of some specific resources, such as collaboration, education, digital technologies, marketing communication, and regulatory frameworks.

Employing a qualitative, interpretive case study analysis, the research examines the EE in Campania, a prominent Southern Italian region, through semi-structured interviews with key informants.

Findings highlight the enhancing roles of entrepreneurship education and digital technologies in the ecosystem's evolutive dynamics. The study reveals that "institutional" actors strategically approach entrepreneurship education, emphasizing collaboration, omnichannel communication, and regulatory compliance. Collaboration within the EE is multifaceted, with actors engaging formally and informally to mobilize resources and create value. Entrepreneurship education is crucial for fostering entrepreneurial mindsets and innovation, with a growing shift towards digital and smart technologies for personalized learning experiences. Communication approaches vary, but institutional actors prioritize strategic, integrated digital channels. The regulatory framework, though complex, is vital for entrepreneurial activities, with support from local institutions and incubators helping navigate bureaucratic hurdles.

This research extends the understanding of EEs by detailing their internal dynamics, emphasizing the influence of entrepreneurship education and lean marketing on competitiveness. It offers implications for theory and practice, underscoring the need for strategic collaborations, digital infrastructure investment, and streamlined regulatory policies to foster thriving entrepreneurial environments.

*Keywords: Entrepreneurship ecosystem, digital technologies, entrepreneurship education, lean marketing.*

## 1. Introduction

Entrepreneurship is a complex phenomenon that goes beyond the mere business creation because it also affects economic growth, social development, innovation, and job creation (Acs et al., 2017). This

led scholars and practitioners to focus on the complex interplay of different actors and scopes that characterize entrepreneurial phenomena. This makes it possible to approach it according to a system perspective to holistically manage "the regulating effect of contextual factors on individual actions" (Lafuente et al., 2023, p.105). In doing so, the concept of the Entrepreneurship Ecosystem (EE) emerges as a suitable theoretical and practical construct to approach entrepreneurship.

EEs have been defined differently due to the multidirectional causality and the high-order interactions that interconnect the factors essential for boosting entrepreneurship (Spigel and Harrison, 2018). Drawing on Autio et al. (2014), EE are complex, self-organizing, self-sustaining, and self-regulating complex systems. More recently, Macías-Prada et al. (2024) defined EEs as "a set of factors andconditions that encourage the emergence and development of innovative businesses and entrepreneurs in a specific territory" (p.50). These ecosystems are complex socio-technical systems shaped by the multi-actor networked interactions intended to create and share the new knowledge essential for innovating (O'Sullivan and Dooley, 2008). At the core of such complex systems lie an interconnected group of different actors — ranging from customers, suppliers, and universities to research centers, governmental institutions, policymakers, established companies, and nascent startups — who interact within a self-organized, scalable, and sustainable environment. These interactions are designed to mobilize entrepreneurial attitudes, abilities, and aspirations, ultimately driving innovation and contributing to the socio-economic development of the local context in which the ecosystem is shaped (Muldoon et al., 2024).

Despite the increasing application of the EE approach, significant challenges remain in both its conceptualization and practical implementation. A primary challenge lies in clearly defining their fluid and often permeable boundaries. This is also due to the recent advancements in digital technologies, which are increasingly blurring traditional local and national borders, enabling real-time connections and facilitating the rapid sharing and transfer of new knowledge (both formal and informal) among geographically dispersed actors. Moreover, the complexity that characterizes these ecosystems and which is constantly influenced by various dynamic forces and feedback loops requires effective "rules" or institutional arrangements that govern interactions, define roles, and ensure the legitimacy and participation of all actors (Barile et al., 2022). This paper aims to contribute to addressing these challenges, highlighting the dynamic interplay of interacting actors and the most common resource they mobilize for stimulating innovation and socio-economic growth. In doing so, this study has been inspired by the general systems theory, which posits that socio-technical systems are intricate, dynamic, and influenced by various forces that can stabilize or destabilize them (Monat and Gannon, 2015).

To better understand the current transformative dynamics of EE, it is essential to focus on those mechanisms of knowledge creation that are at the core of innovation and development (Collins, 2015). These mechanisms can be operationalized through entrepreneurship education, which in an EE represents "a key link in the establishment of new enterprises, cultivation of innovative talents, scientific, and technological innovation" (Liu et al., 2021, p.2). Defining entrepreneurship education is not easy because it is more than "teaching someone to run a business" (Raposo & Do Paço, 2011, p.455). Thus, entrepreneurship education is an integrated set of resources, practices, and activities designed to equip individuals with various skills, including the ability to take risks, innovate, and assume responsibility for their actions (Laspita et al., 2023).

Entrepreneurship education has been recently reconceptualized as related to the acquisition and the implementation of transformative skills to start entrepreneurial processes, to the potential of digital technologies (Sitaridis and Kitsios, 2024). It follows that this study integrates the concept of digital transformation with entrepreneurship education, acknowledging its pervasive and disruptive potential

in reshaping education as well as the co-creative interaction at the core of EE evolution and growth. This transformation involves the combination of information sharing, connectivity technologies, and education programs. To support ecosystem actors in navigating these complex changes and in exploiting the potential of digital technologies, this study also incorporates the nascent research field of Lean Marketing and Communication (Dewell, 2007). Inspired by the broader lean thinking philosophy, this approach emphasizes customer-centricity, continuous improvement, and the systematic elimination of non-value-added activities.

Despite the growing body of literature on EEs, digital transformation, and entrepreneurship education, a significant research gap remains. There is a limited comprehensive understanding of how lean marketing principles can specifically support and accelerate, together with other factors, the potential of digital transformation and entrepreneurship education programs within EEs. More precisely, the existing research has not fully explored its potential in promoting an experiential approach to learning that significantly enhances participants' personalization, motivation, engagement in knowledge creation processes, and the adaptiveness of content and pedagogical approaches.

To bridge this gap, the study employed a qualitative analysis underpinned by an interpretative case study method that will contribute to addressing the research question that inspired the analysis: *What are the main drivers that complement entrepreneurship education and digital technologies in boosting the evolutionary dynamics of EE?*

This methodological choice allowed for an in-depth description and discussion of the main characteristics and evolutionary dynamics at the core of a specific entrepreneurship ecosystem. Data collection involved conducting semi-structured interviews with 30 carefully selected key informants from diverse ecosystem actors within the Campania region, a prominent Southern Italian region. The results of this interpretative data analysis demonstrate several key insights into the EE's evolutive dynamics.

The remainder of the paper has been organized as follows. The first section is dedicated to reviewing the literature on the topic under investigation. Follows a detailed description of the implemented methodology and the presentation and discussion of the achieved results. Closes, theoretical, managerial, and policy implications, complemented by future research paths.

## 2. Theoretical Background

### 2.1 Building an Entrepreneurship Ecosystem

Over the past decade, significant socio-economic changes have profoundly changed how individuals and organizations collaborate, utilize resources, and manage operations, leading to new standards and solutions. This has also implied a big change "in a competitive environment and reshaped traditional business strategies, models and processes" (Elia et al., 2020, p.2). The complexity and unpredictability of current socio-economic scenarios call for new and more holistic approaches to address global challenges related to economic growth and the sustainability of new ventures.

In this context, the ecosystem approach appears to be a more effective solution for problems that neoclassical economic theories may not adequately address (Belitski et al., 2019). This perspective offers a "systemic" view of entrepreneurial phenomena, emphasizing their evolutionary, interactive, and non-linear characteristics (Mason and Brown, 2014).

The ecosystem approach has been built upon a biotic metaphor coming from the natural sciences, which has been further advanced in social sciences by the system theory (Von Bertalanffy, 1972). According to this theory, socio-technical systems are intricate, dynamic, and constantly influenced by various forces and feedback loops that can stabilize, reinforce, or destabilize them. While the ecosystem perspective was applied to evolutionary economic theory by Nelson and Winter (1982) to explain differing outputs in complex systems, its application in entrepreneurship literature has varied. Thus, Cohen (2006) defines EEs as "an interconnected group of actors in a local geographic community committed to sustainable development through the support and facilitation of new sustainable ventures" (p.3). Similarly, Acs et al. (2017) considered them "a set of interdependent actors and factors coordinated in such a way that they enable productive entrepreneurship within a particular territory" (p.5). More broadly, EEs can be described as a collection of diverse actors, including customers, suppliers, universities, research centers, social and cultural operators, institutions, policymakers, companies, startups, entrepreneurs, experts, professionals, and investors, who are dedicated to entrepreneurial actions. These actors interact within a self-organized, scalable, sustainable, and interactive environment, mobilizing their entrepreneurial attitudes, abilities, and aspirations (Autio et al., 2018). Often, a central actor (from industry, institutions, or academia) can inspire and guide the ecosystem's activities, setting the foundational rules for its system dynamics (Elia et al., 2020), which engage the different entrepreneurial elements that guide resource allocation and the creation of new ventures (Acs et al., 2017). Despite these definitions, further research is needed to clearly define the boundaries of EEs and the nature of interactive multi-actor dynamics that characterize them (Cobben et al., 2022; Correia et al., 2024).

Recently, the advent of digital technologies has increasingly blurred ecosystem boundaries and has also added complexity to the internal and external multi-actor interactions. Therefore, further research effort is needed to better understand how these interactions are evolving, especially in terms of new knowledge (both formal and informal) sharing and transfer across different ecosystem layers (Miah et al., 2025). To contribute to bridging this gap Zhang et al. (2023) reported that in EE knowledge creation and sharing is boosted by "a supportive culture, high-quality institutions, supportive policies, accessible resources, and well-developed service industries" (, p.1079), engaging both internal and external stakeholders.

The evolving nature of ecosystems does not negate the presence of internal rules, which establish conditions that either enable or restrict socio-economic interactions within a specific setting (Baumol, 1996). These rules, or institutional arrangements, are crucial for defining the legitimacy of actors (Granovetter, 1985) and, consequently, their ability to participate in ecosystem processes (Kuratko et al., 2017). According to institutional theory, institutions and institutional arrangements represent "the rules of the game in a society" (North, 1990, p.3). The first ones are socially created schemas, norms, and regulations that drive the behavior of socio-economic actors, making it predictable and meaningful (DiMaggio and Powell, 1991). The second ones are sets of institutions nested in multiple ecosystem levels, which set framework conditions that enable or limit socio-economic interactions in a specific context (Scott, 2013; Badawi et al., 2021). This means that institutions and institutional arrangements help manage the inherent complexity of an ecosystem, which arises from the coexistence of various actors with different roles, and the "changing factors that interact to determine the entrepreneurial performance of a region or locality" (Spilling, 1996, p.91). They achieve this by "regulating" the interactions among ecosystem actors to generate value within a specific territory (Mason and Brown, 2014).

## 2.2 The Role of Entrepreneurship Education in Ecosystems: The Perspective of Lean Marketing

Higher education institutions (HEIs) are even more fundamental "for contemporary societies in the field of education and knowledge generation" (Kobylinska and Lavios, 2020, p.118). Their growing disposition to cooperate with external individuals and organizations, which can be recognized as EE's actors (e.g., business incubators, technology transfer centers, funding institutions, etc.) (Meyer et al., 2020), configures them as a fundamental ecosystem actor for promoting national and regional development (Etzkowitz and Leydesdorff, 2000).

Building upon some studies (Etzkowitz and Zhou, 2017), the generative dynamics at the core of socio-economic development emerge from the intertwined interactions of three main actors, which in the so-called Triple Helix Model have been conceptualized as different helices: university, industry, and government. More recently, Pita et al. (2021) advanced this conceptualization, underlining that HEIs actively contribute to EEs' development through entrepreneurial education programs, essential for stimulating the creation of new enterprises, such as start-ups and/or spin-offs. This is possible thanks to these institutions' ability to create and share knowledge through innovative programs and approaches to boost technology transfer processes and, consequently, innovative entrepreneurial initiatives (Correira et al., 2024). This ability has been operationalized in specific entrepreneurship education programs; thus, entrepreneurship education "is a key link in the establishment of new enterprises, cultivation of innovative talents, scientific, and technological innovation" (Liu et al., 2021, p.3).

Drawing on managerial studies, entrepreneurship education is generally defined as "a process of providing individuals with the ability to recognize commercial opportunities and the insights, self-esteem, knowledge, and skills to act on them" (Jones and English 2004, p. 416). In a similar vein, Fayolle et al. (2006) clearly defined it as "any pedagogical [program] or process of education for entrepreneurial attitudes and skills" (p. 702). Even though research on entrepreneurship education is still undergoing quick advancement, it is at the forefront of institutional policies and corporate strategies (Carpenter and Wilson, 2022). This is mainly due to its potential to transform the current society and strengthen business culture, innovation orientation, and competitiveness (Ratten and Jones, 2021). However, in the last decade, entrepreneurship education has undergone a critical but still ongoing change, caused by digital transformation and the disruptive innovative potential of the "combinations of information, computing system, communication, and connectivity technologies" (Prasetyaningtyas et al., 2022, p.4). Thus, HEIs are struggling to effectively proceed with digital transformation, reorganizing the learning and teaching processes (Duraes et al., 2024). Unfortunately, they are still far from achieving a good technological readiness and efficient digital infrastructures, essential to aligning entrepreneurship education with the requirements of the current socio-economic scenarios (Sitaridis and Kitsios, 2024). Therefore, HEIs need to recognize and manage the deep changes occurring in knowledge creation and sharing among the different ecosystem actors (e.g., universities, companies, institutions, learners, digital service providers, etc.), who can be formally and informally involved in educational processes.

Studies (Rippa et al., 2022; Mu and Zhao, 2024; Park et al., 2025) have focused on HEIs' necessity to complement digital competences and infrastructures with other multifaceted resources, such as a data-driven approach, practice-oriented methods, personalized and adaptive content, students' ethical commitment, interdisciplinary integration, and a global perspective. In dealing with such complexity, HEIs must overcome some barriers related not only to technology acceptance and readiness but also to the socio-cultural differences that influence venturing processes and, consequently,

entrepreneurship education (Sitaridis and Kitsios, 2024). It follows that these elements also impact the ability of HEIs to offer experiential, action-based, and personalized entrepreneurship education programs (Haneberg et al., 2022). This is also true when these programs are powered by the most recent digital technologies (e.g., Artificial Intelligence, cloud computing, IoT, data analytics, etc.).

Studies on the topic (Ezzaim et al., 2024; Pan et al., 2024; Tiberius and Weyland, 2024) highlight that a personalized and ubiquitous access to digital programs of entrepreneurship education must be inspired by innovative pedagogical and training approaches as well as by a multi-perspective and ethical approach to the different social, economic, and political nuances that characterize venturing in different ecosystems (Ratten and John, 2021). Therefore, this study builds on the adoption of the lean marketing and management approach to support HEIs in overcoming the barriers mentioned above and in digitally transforming entrepreneurship education programs.

Research on lean marketing is still nascent; consequently, a clear and well-established definition of the concept is still lacking, even though lean marketing supports business organizations in meeting the willingness of the appropriate customers to obtain their satisfaction (Dekier, 2012).

Lean marketing, inspired by the umbrella approach of lean thinking, can support HEIs in understanding and meeting customers' individual expectations, identifying and eliminating non-value-added activities (Zhou, 2019). The essential assumption at the core of this approach is that clients must be placed at the core of the entire system, inspiring the prioritization of "each product or service characteristic while setting development targets for the product or service" (Akao, 1994, p. 339).

Based on these insights, this study aims to underline the potential of lean marketing to further support the digital transformation of entrepreneurship education programs, complementing the potential of specific digital technologies, such as AI and Machine Learning, to translate students' needs "into engineering characteristics and appropriate statistical test methods" (Yamamoto et al., 2019, p.23) for a specific learning program, rationally allocating the available resources.

Complementing the use of digital technologies with a lean marketing perspective and tools can support HEIs in improving learning experiences, thanks to the possibility of using data for creating individually tailored and adaptive teaching and learning facilities (Ali et al., 2025).

## 3. Methodology

### 3.1 Research design

This study has been based on a qualitative analysis conducted by implementing an interpretative case study method, based on specific theoretical foundations used to interpret the case under investigation (Yin, 2013). The analysis has been conducted assuming the EE perspective (Acs et al., 2017; Stam and Van de Ven, 2021) to understand the transformative dynamics that education and digital technologies, together with other factors, can trigger for stimulating entrepreneurial phenomena. Therefore, the analysis will understand and describe the most common enabling drivers of EEs' growth. In doing so, an interpretative approach has been implemented to further analyze and describe the Campania EE.

To gather data essential to perform the case study analysis, a semi-structured interview was administered with some ecosystem actors to incorporate their perspectives in the study (Bray et al., 2014), and some archival information was also analyzed to support data triangulation and to ensure a certain results' generalizability (Eisenhardt, 1989). Respondents were selected following a multi-level approach, which made it possible to identify and select people to be involved in the case study analysis

"from different hierarchical levels, functional areas, groups [...] actors who view the focal phenomenon from diverse perspectives" (Eisenhardt and Graebner, 2007, p. 28).

### 3.2 Data collection and analysis

Data collection has been based on semi-structured interviews with key actors in a regional EE, specifically in the Campania region, a southern Italian region which represents a unique context in which entrepreneurial phenomena occur and evolve over time. The main factors that characterize this ecosystem are 1) growing investments in R&D, 2) the specialization in knowledge-intensive sectors, 3) the existence of innovative technological clusters and excellence, 4) the presence of several specialized research centers, 5) a female and youth entrepreneurship rates above the national average, and 6) the increase in capital companies.

The interviews were conducted between January and March 2025 and organized according to a specific protocol to ensure a general coverage of the research themes defined according to the review of the literature on EEs (Acs et al., 2017; Stam and Van de Ven, 2021). The interviewees were selected using the key informant approach (Kumar et al. 2020). Consequently, some representatives of local institutions, companies and start-ups, universities and research centers, students, professional associations, and NGOs (Non-Governmental Organizations) were selected considering their interactions with the focal actor (a local university), practices, and role in the ecosystem. Follows the respondents' selection criteria (Tab.1).

| **Key informants** | |
|---|---|
| Country | Italy |
| Region | Campania |
| Type of organizations | Local institutions, NGOs, companies, start-ups, incubators, research centers, students, professional associations, universities. |
| Partnership | At least one project/initiative with the focal actors |

Source: authors' elaboration.

**Table 1:** Key informants selection criteria

The same interviews were carried out with 30 ecosystem actors in Italian and then translated into English. If possible, more than one interview was conducted per type of actor to overcome the limitations due to the participation of individual key informants, who sometimes are unable to report on complex issues (Hughes and Preski, 1997). The total number of interviews (30) has been set following the theoretical saturation criterion typical of qualitative research, which according to Starks

and Trinidad (2007) occurs when "the complete range of constructs that make up the theory is fully represented by the data" (p. 1375). The total number of interviews set for this analysis is in line with the grounded theory methodology, which sets the minimum sample size required between 15 to 30 participants (Morse and Clark, 2019). This led to addressing the research questions at the core of this study, recognizing the differences between the conceptual categories or themes used for the study, and better describing the relationships between them. The main characteristics of the interview respondents are summarized in the following table.

The interview's themes were approached neutrally and free from personal beliefs. To this end, questions about sensitive information were avoided to reduce possible bias, and respondents were anonymously classified using symbols and progressive numbers (Tab.2) (Saunders et al., 2012). Two researchers independently approached the interviews to ensure data validity and reduce their personal influence. Interviews lasted an average of 30 min., were conducted both in presence and online, recorded and verbatim transcribed, and translated to be then analyzed and discussed through summary tables.

| **ID** | **Type of actor** | **Respondent occupation** |
|---|---|---|
| LI1, LI2 | Local Institution | Public Manager |
| R1, R2 | Research Center/University | Senior Researcher |
| I1, I2 | Incubator | CEO |
| N1, N2, N3, N4 | NGO | Representative |
| P1, P2, P3, P4 | Professional Association | Manager |
| C1, C2, C3, C4 | Company | Marketing Manager |
| SU1, SU2, SU3, SU4, SU5, SU6 | Startup | CEO |
| S1 S2, S3, S4, S5, S6 | Student | Student |

Source: authors' elaboration.

**Table 2:** Interview respondents' main characteristics

Interview responses were analyzed using a thematic analysis (Braun and Clarke, 2006), conducted bysystematically organizing, coding, and analyzing the interview's narratives using ATLAS.ti, which facilitated the management of transcripts and the iterative process of theme development and refinement.

After the first phase of familiarization with the data, conducted transcribing and organizing interviews, the coding phases were conducted meticulously by labeling the text that captures distinct ideas or concepts pertinent to the research aim and in line with the main macro themes derived from the review of the literature (Tab.3). Then, these themes were reviewed, and some specific characteristics were derived to better define and articulate what each theme represents and how it contributes to the understanding of the main EEs drivers and, in particular, of the contribution of to their present and future growth of two specific ones: 1) entrepreneurship education, and 2) marketing communication.

Finally, the achieved results were organized and presented in a report, weaving a compelling narrative that introduces each theme.

| Themes | Description |
|---|---|
| Actors | Who is involved with different but complementary roles in value creation processes and interacts to determine the entrepreneurial performance of a region or locality. They are actively engaged in routinized practices of resource allocation. |
| Collaboration | The networked and intertwining interactions between ecosystem actors, shape a collaborative network to pursue entrepreneurial opportunities. |
| Education | One of the multiple services that ecosystems offers to socio-economic actors, and which provide the skills and knowledge to seize business opportunities. |
| Marketing communication | The practices of analogic and digital information sharing that enable ecosystem actors to interact for creating new knowledge and jointly approach problem solving, avoiding value co-destruction. |
| Regulatory framework | Formal/informal rules or coordinating mechanisms that define roles, interactions, collaboration, and resource mobilization. It "regulates" actors' activities and ensures fair competition, private property rights, and societal instances protection. |

Source: authors' elaboration.

**Table 3:** Themes for shaping an entrepreneurship ecosystem.

Finally, interview responses were triangulated with additional data sources (e.g., reports, news, press releases, and other web sources) to increase internal validity (Yin, 2003).

## 4. Results presentation

The interviews' analysis led to a better definition of two of the essential drivers of EEs' education and technologies, recognizing the differences between the conceptual categories (Collaboration, Education, Marketing Communication, and Regulatory Framework) used for the study and better describing the relationships between them. The achieved results have been organized and synthesized in the following tables.

Table 4 details the main dimensions of "Collaboration," pointing out how ecosystem actors (Local Institutions, Research Centers/Universities, Incubators, NGOs, Professional Associations, Companies, Startups, and Students) engage in EE dynamic interactions. The interview quotes report and detail their collaboration approach.

| **Collaboration** | | |
|---|---|---|
| Actor | Coded text | Main characteristics (sub-themes) |
| Local Institutions | We collaborate with several socio-economic actor to support local entrepreneurs, facilitating their approach to legal and institutional framework. (SI) | - Formal collaboration |
| Research Centers/Universities | As university, we have established several formal and informal collaborations for learning/ training reasons and for national/international entrepreneurial project. (RU1) | - Formal collaboration<br>- Informal collaboration |
| Incubator | We collaborate with local institutions, universities, research centers and professional organizations to support the local entrepreneurship ecosystem. (I2) | - Formal collaboration<br>- Informal collaboration |
| NGO | We cooperate with institutions, universities and entrepreneurs in developing projects and activities dedicated to local development. (N3) | - Informal collaboration |
| Professional Association | My association has established important partnership with institutions, large companies and local universities to work on innovative ventures. (P3) | - Formal collaboration<br>- Informal collaboration |
| Companies | We have established some collaborations with other companies to apply to international funding programs. We did it also with some regional universities. (C5) | - Formal collaboration<br>- Informal collaboration |
| Startups | We collaborate with universities, an incubator, and a local professional association to access financial and knowledge resources. (SU3) | - Formal collaboration<br>- Informal collaboration |
| Students | I participated to an international competition dedicated to the development of innovative business ideas. We collaborate also with some innovative start-ups, whose representatives mentored us. (S1) | - Informal collaboration |

Source: authors' elaboration.

**Table 4:** Theme 1 presentation.

Table 5 outlines how various actors approach education initiatives, reporting some interviews' quotes, which illustrate their different approach to educational initiatives, such as the stimulation of the entrepreneurial mindset or the promotion of training programs, intended to boost different personal

dimensions (individual empowerment, entrepreneurship mindset, and innovation orientation) that foster entrepreneurial skills and attitudes.

| **Education** | | |
|---|---|---|
| Actor | Coded text | Main characteristics (sub-themes) |
| Local Institutions | Our institution firmly believes that supporting education is essential for the competitiveness of our region. In doing so, we also recognize the potential of digital technologies in advancing and making training even more effective. (SI) | - Personal empowerment<br>- Entrepreneurship mindset<br>- Innovation orientation |
| Research Centers/Universities | We have established specific courses and labs dedicated to stimulating an entrepreneurial and innovative mindset among our students. We did it exploiting the potential of I4.0 technologies, included AI (RU1) | - Entrepreneurship mindset<br>- Innovation orientation |
| Incubator | Our mission is working with local talents for supporting their growth, and for offering them the right entrepreneurial skills and tool to develop innovative solutions (I2) | - Personal empowerment<br>- Entrepreneurship mindset<br>- Innovation orientation |
| NGO | In recent years we have participated in specific national and regional program to stimulate the regional entrepreneurship vocation. (N3) | - Personal empowerment<br>- Entrepreneurship mindset<br>- Innovation orientation |
| Professional Association | The natural vocation of our association is promoting digital training and mentoring program for entrepreneurs and start-upper for supporting their ability to scout and grasp business opportunities. (P4) | - Entrepreneurship mindset |
| Companies | We are used to yearly organize education and training program. In doing this we are supported by the potential of the most recent digital and smart technologies. (C2) | - Personal empowerment<br>- Entrepreneurship mindset<br>- Innovation orientation |

| | | |
|---|---|---|
| Startups | We took part in a mentoring program, offered by a primary national incubator. We could do it, accessing and participating online. (SU4) | - Personal empowerment<br>- Innovation orientation |
| Students | I enrolled an entrepreneurship course because I'd like to gain more skills to better develop a business idea I was working together with some other students (S6) | - Personal empowerment<br>- Entrepreneurship mindset |

Source: authors' elaboration.

**Table 5:** Theme 2 presentation

Table 6 depicts how ecosystem actors approach marketing communication. The reported quotes highlight the different communicative approaches, which range from the more structured and strategically oriented ones to the more emergent ones. Thus, some actors are more skilled and confident with a strategic, omnichannel, and personalized approach to communication than others.

| **Marketing communication** | | |
|---|---|---|
| Actor | Coded text | Main characteristics (sub-themes) |
| Local Institutions | My institution uses different communication channels to promote entrepreneurship-oriented initiatives, especially when they are powered by new technologies. It approaches communication integrating the website and the institutional social media to directly interact with citizens (SI) | - Integration and Consistency<br>- Interactivity |
| Research Centers/Universities | The promotion of entrepreneurship education in person and digital initiatives responds my university strategic orientation. This implies the integrated use of digital and traditional communication channels, and messages personalized for each stakeholder (RU1) | - Strategic orientation<br>- Integration and Consistency<br>- Interactivity<br>- Adaptation and personalization |
| Incubator | We have created a strong digital community. We interact with it through several integrated digital channels. This allows us to directly and personally involve them in our initiatives. (I2) | - Integration and Consistency<br>- Interactivity<br>- Adaptation and personalization |

| | | |
|---|---|---|
| NGO | My organization uses different communication channels to promote entrepreneurship-oriented initiatives. It approaches communication in a coordinated, integrating the website and the institutional social media to directly interact with citizens (N2) | - Integration and Consistency<br>- Interactivity |
| Professional Association | Over time my association recognized the importance to establish a direct connection with our audience. This led us to interact with the associates via social media to share information and enage them into our initiatives. (P3) | - Interactivity<br>- Adaptation and personalization |
| Companies | My company is used to strategically approach communication. This led us to use different integrated digital channel to inform and to stay informed. This communication led us to participate to innovative digital education/training programs (C3) | - Strategic orientation<br>- Integration and Consistency<br>- Interactivity<br>- Adaptation and personalization |
| Startups | We use different communication channels to gather and provide information about our business activities. We mainly use social media to send and gather personalized information, and to find out insights for innovation (SU3) | - Integration and Consistency<br>- Adaptation and personalization |
| Students | I regularly use different social media to stay tuned and gather the opportunity for interacting with other entrepreneurs to be, sharing information, ideas, and experiences. (S3) | - Interactivity |

Source: authors' elaboration.

**Table 6:** Theme 3 presentation

Table 7 depicts how actors approach law and regulation. The interview quotes offer insights into the different regulatory areas that must be addressed, the related issues, and the possible ways to address them. This highlights the diverse regulatory aspects impacting entrepreneurial activities.

| **Regulatory framework** | | |
|---|---|---|
| Actor | Coded text | Main characteristics (sub-themes) |
| Local Institutions | We support local entrepreneurs and start-uppers in their venturing process, encouraging them to apply to specific support measures, and education/mentoring programs. We also promote a culture of legality and transparency through initiatives pointing to detect and fight business frauds. (I1) | - Regulation for establishing a new company<br>- Fiscal regulation |

| | | |
|---|---|---|
| | | - Funding regulation and procedures |
| Research Centers/Universities | We regularly organize mentorship initiatives to promote a better exploitation of business ideas and to successfully access market. (RU1) | - Regulation for establishing a new company |
| Incubators | My incubator supports start-ups not only with operative activities but also with the complex normative and bureaucratic ones. We support start-ups with regulation for access fundings, and for accomplish the normative requirements for starting a business. (I2) | - Regulation for establishing a new company<br>- Fiscal regulation<br>- Funding regulation and procedures |
| NGOs | My organization supports companies with local bureaucracy, guiding them towards all the steps needed to start a new venture and in meeting all legal requirements. (N2) | - Regulation for establishing a new company<br>- Fiscal regulation |
| Professional Associations | We help Italian companies and start-ups with business registration, local and national taxes, all the laws related to workplace security, and human resource management. (P3) | - Regulation for establishing a new company<br>- Fiscal regulation<br>- Human resource management |
| Companies | Over time we have learnt how to manage fiscal, security and operative issues to be compliant with national and local regulation. Currently, we are focused on funding regulation because we want to start an innovative project to be financed. (C4) | - Fiscal regulation<br>- Human resource management<br>- Funding regulation and procedures |
| Startups | In this country starting a new business is not so easy because apart from an entrepreneurship education or training we need to know a lot about bureaucratic requirements. To me it wasn't easy to approach the laws and regulation to establish my company and choose and access funding opportunities. (SU4) | - Regulation for establishing a new company<br>- Fiscal regulation<br>- Funding regulation and procedures |

| | | |
|---|---|---|
| Students | Following a program on entrepreneurship education, I approached for the first time the legislative and administrative requirements for starting a new venture. At first it seemed a bit complex but now I feel more confident with this. (S6) | - Regulation for establishing a new company<br>- Human resource management |

Source: authors' elaboration.

**Table 7:** Theme 4 presentation.

The achieved results demonstrated that "institutional" and "well-structured" actors (e.g., local institutions, research centers/universities, Incubators, and companies) are more likely to approach entrepreneurship education initiatives strategically and holistically. This is possible assuming a clear collaboration orientation, investing in corporate omnichannel communication by leveraging the potential of digital channels, and recognizing the importance of compliance with current regulations and laws.

## 5. Discussion

This study investigated the dynamics of the EE settled in the Campania region, focusing on the roles of entrepreneurship education and digital technologies as enabling drivers for its growth. In doing so, the role and influence of a lean marketing approach to stimulate ecosystem actors' engagement and collaboration have been investigated.

The achieved findings, derived from qualitative analysis of interviews with diverse ecosystem actors, provided several key insights that both corroborate and extend existing theoretical perspectives.

First, the results underscore the multifaceted nature of "collaboration" within the EE, as depicted by the general commitment and willingness to collaborate of all ecosystem actors (Table 4). Each actor demonstrated a different approach to cooperation; thus, some of them were focused just on formal or informal forms of collaboration, enacting different roles, providing different resources, and establishing different types of relationships. Collaboration in ecosystems can change over time, reshaping the nature or the scope of the initial relationship. According to Ketchen et al. (2007), this can be due to 1) role evolution, 2) interpersonal or inter-actor informal dynamics and ties, and 3) the blurred and evolving nature of the ecosystem. Actors can freely decide to formalize or not collaboration according to the goals they want to achieve and the resources they are willing to mobilize (e.g., knowledge, finance, technologies, etc.). The possibility to differently collaborate also highlight the adaptive and self-organizing characteristics of EEs, where actors dynamically engage to mobilize resources and create value according to their specific characteristics and goals (Isenberg, 2016; Autio et al., 2018). However, both formal and informal collaborations are intended to facilitate access to resources and foster the future development of innovative business ideas. This aligns with existing literature emphasizing the importance of networked interactions for pursuing entrepreneurial opportunities (Manimala, 2008; Elia et al., 2020).

Second, the analysis reveals that actors' disposition to effectively and actively participate in knowledge creation processes, by sharing and combining their personal material/immaterial resources, is essential to develop and promote entrepreneurship education. Thus, almost all ecosystem actors recognize their crucial role in stimulating entrepreneurial mindsets, fostering innovation orientation, and promoting

personal empowerment (Table 5). This corroborates the view that education is a key link in establishing new enterprises and cultivating innovative talents (Liu et al., 2021). The emphasis on practical skills and tools, as well as on mindset development, reflects a holistic approach to entrepreneurial capacity building. This also resonates with the notion of HEIs as fundamental actors in EE development through entrepreneurial education programs (Pita et al., 2021), also focusing on new paradigms and approaches. In particular, an experiential approach to learning processes, implies participants' ability to act in a hybrid environment in which educators and learners can go beyond the traditional approaches, offering the possibility to digitally experience specific and highly personalized activities, such as business idea development, opportunity exploitation, networking competencies development, and project-based learning (Motta and Galina, 2023).

Findings also demonstrated that education and, in particular, entrepreneurship education is going digital. Thus, several of the interviewed actors reported their disposition to use digital and smart technologies for organizing and/or participating in education/training programs. This is in line with the extant literature, which highlights that entrepreneurship education is undergoing a significant shift due to digital transformation and the disruptive potential of information, computing, communication, and connectivity technologies (Prasetyaningtyas et al., 2022). This move towards digital and smart technologies support to the creation of hybrid learning environments, allowing for digitally experienced activities like business idea development, opportunity exploitation, and networking, as noted by Motta and Galina (2023). Moreover, findings also demonstrated that actors' willingness to embrace these technologies is a practical manifestation of the ongoing efforts to align entrepreneurship and its education with the requirements of current socio-economic scenarios. However, some issues related to technological readiness and the availability of efficient digital infrastructures remain (Sitaridis and Kitsios, 2024). Thus, HEIs are still striving to reorganize learning and teaching processes in line with this transformation (Duraes et al., 2024)

Third, the findings demonstrated the different attention that ecosystem actors paid to communication. Thus, they implemented a spectrum of approaches, from highly strategic and omnichannel to more emergent and unstructured (Table 6). The "institutional" actors (e.g., institutions, research centers/universities, and companies) demonstrated a strategic orientation towards communication, integrating digital and traditional channels and personalizing messages. This strategic approach, leveraging digital channels for interactivity and consistency, is crucial for knowledge sharing and joint problem-solving within the ecosystem (Akaka et al., 2013). The observed variations suggest that while the importance of communication is recognized, the maturity of its implementation differs across actors. Findings also demonstrated that the way actors approach communication is highly influenced by the pervasiveness of digital and smart technologies and their digital maturity level. Thus, not all the interviewed actors approached communication according to an omnichannel logic (Mateus, 2021; Ponomareva and Ponomarev, 2022), which is one of the primary effects of digital transformation, allowing for seamless and integrated interactions across diverse digital and traditional touchpoints. This strategic orientation, which involves leveraging digital channels for enhanced interactivity and consistency, directly reflects the capabilities unlocked by digital advancements.

The observed differences in communication maturity across different ecosystem actors reflect their ongoing journey in adapting to and harnessing the full potential of digital strategies and tools for communication, knowledge sharing, and collaborative problem-solving (Han et al., 2022). Moreover, by leveraging digital technologies, the assumption of lean marketing perspective can help to translate education/training needs into specific learning programs, ensuring that educational resources are rationally allocated and that the learning experience is tailored and adaptive.

Finally, the "regulatory framework" emerged as a critical, albeit complex, dimension influencing entrepreneurial activities (Table 7). Actors highlighted various regulatory areas, including company establishment, fiscal regulations, and funding procedures. The challenges associated with navigating these bureaucratic requirements, particularly for startups, underscore the importance of institutional arrangements in defining the "rules of the game" (North, 1990) and ensuring the legitimacy and participation of actors (Kuratko et al., 2017). The support provided by local institutions and incubators in this regard is vital for fostering a conducive entrepreneurial environment. This finding is in line with the entrepreneurship extant literature, according to which for new ventures the complexity of regulation and laws causes so many issues that often demotivate and make them unable to start or expand their business (Kumar, 2020). It follows that a proper entrepreneurial education background can contribute to reducing the negative impact of bureaucratic burden and support actors to overcome the possible barriers associated with compliance.

## 6. Implications and final remarks

This study extends the understanding of EEs, offering granular insights into their internal evolutive dynamics and the interplay of key elements. This pointed out the influence that some factors (e.g., entrepreneurship education and a lean approach to marketing communication) have in promoting ecosystem competitiveness and viability. In doing so, the results offered some interesting implications for the theory and practice.

Firstly, the analysis led to better define and describe the inner networked dynamics that bond ecosystem actors in a collaborative network essential to make them mutually open to mobilize their personal (material and immaterial) resources to start knowledge-based co-creative processes essential to innovate and, in doing so, making the ecosystem competitive and viable over time (Autio et al., 2018). This nuanced view extends existing theories on networked interactions in entrepreneurial contexts, highlighting how actors dynamically engage to mobilize resources and create value based on their specific goals and characteristics (Sørensen and Sørenson, 2003; Isenberg, 2016). Moreover, these interactions are not static but evolve over time, influenced by roles' evolution, interpersonal ties, and the blurred boundaries of the ecosystem.

Secondly, the study deepens the theoretical understanding of entrepreneurship education's role within EEs. As stated, the analysis has been conducted assuming the perspective of the ecosystem focal actor, a local university. This led to a better understanding of the importance of education in nourishing knowledge-based value-creation processes intended to innovate and, in doing so, support the ecosystem's competitiveness and growth (Wurth et al., 2022).

The analyzed EE universities, going beyond their traditional role, facilitate regional knowledge spillovers and multi-actors' collaboration, essential for innovation. This is due to the university's ability to orchestrate other actors' activities, making them willing to mobilize personal resources to cooperate with other actors (Gieure et al., 2020; Macías-Prada et al., 2024). However, HEIs' responsiveness and proactivity, essential for the growth of the knowledge economy and innovation-driven development, come from its ability to promote personalized and digital education initiatives, which can support other actors in better approaching the collaboration processes in which the resources they mobilize are implemented, according to the "rules" set by the common regulatory framework.

Thirdly, this study also demonstrated that education, based on networked and collaborative interactions, helps actors in defining and enacting new value-creation processes, essential to promote ecosystem sustainability through innovation (Jensen, 2014; Cosimato et al., 2024). When this

synergistic approach is enacted, ecosystem actors can locally benefit from knowledge spillovers that boost the creation of new start-ups, spin-offs, and scale-ups (Belitski et al., 2019). To achieve this goal, decision-makers should facilitate and promote education programs to facilitate knowledge transfer from actor to actor (Stam and Van de Ven, 2021).

Finally, the analysis contributes to the nascent literature on lean marketing communication, highlighting its potential for the advancement of EEs. Thus, this approach to communication makes ecosystem actors not only more informed but also engaged in the interactive dynamics essential for starting knowledge creation and sharing processes, essential for scouting business opportunities, disseminating innovative ideas, and achieving traction for faster desired outcomes (Ponomareva and Ponomarev, 2022). In doing so, the contribution of digital technologies is essential for reaching out to people and identifying the right data for better designing the innovative solutions to address customer needs and market specifications (Ponomareva and Ponomarev, 2022). Thus, if entrepreneurship education is essential to create that entrepreneurial culture at the core of the so-called "social structure" of innovation, communication is essential to stimulate actors' engagement in the operationalization of such a culture, possible also thanks a conscious use of digital technologies or of the "technological infrastructure" that is essential to make new ventures able to adapt to the current socio-economic and competitive scenarios (Feldman, 1994).

This study also offers some interesting practical implications.

From a managerial perspective, the research highlights the necessity for ecosystem actors to strategically cultivate both formal and informal collaborations. Firstly, this means that decision-makers and managers must be open to moving beyond the traditional, rigid organizational boundaries to create dynamic and evolving relationships with other ecosystem actors **(**Etzkowitz and Leydesdorff, 2000; Rippa et al., 2022). Secondly, HEIs' managers to exploit the potential of entrepreneurship education for nourishing the ecosystem evolving dynamics cannot ignore the potential of digital technologies and of a lean approach to communication. This will support them in proceeding towards the digital transformation and personalization of the education program, possibly by informing them of a clear and aware data-driven approach (Han et al., 2022). To achieve this goal, managers in these institutions must invest in robust digital infrastructures and complement technical competencies with data-driven, practice-oriented, and personalized learning experiences. This will enable the creation of hybrid environments, crucial for developing practical entrepreneurial skills like business idea development and opportunity exploitation (Motta and Galina, 2023). Finally, the varied communication approaches observed necessitate that managers adopt more strategic, omnichannel communication strategies, leveraging digital channels for enhanced interactivity and consistency in knowledge sharing and problem-solving. Addressing the technological readiness gaps among different actors through targeted training and resource allocation is also a key managerial challenge.

For policymakers, the study underscores several critical areas.

Firstly, there's a clear need to invest in and incentivize the development of digital infrastructure across the region to support the ongoing digital transformation of entrepreneurship education and communication within the EE **(**Prasetyaningtyas et al., 2022).

Secondly, simplifying and streamlining the regulatory framework is paramount. Policies should focus on reducing bureaucratic hurdles associated with company establishment, fiscal regulations, and funding procedures, particularly for startups and new ventures that are often demotivated by such complexities. Policymakers can also facilitate access to resources and foster innovation by designing

programs that encourage both formal and informal collaborations among diverse ecosystem actors. Finally, recognizing the enhancing role of entrepreneurship education and digital technologies, policies should actively promote and fund programs that not only impart entrepreneurial skills but also integrate the use of emerging digital technologies, thereby preparing individuals to navigate the complexities of the modern entrepreneurial landscape.

This study comes with some limitations to be addressed in future research. Thus, it is somewhat limited by the implementation of a qualitative method and the analysis of a single case study, set in a specific local area (the Campania Region located in the South of Italy). Therefore, future research will be conducted comparing different EEs set in different countries and/or regions, and to grasp similarities and differences between them quantitative methods will be also implemented.

## References


Acs, Z.J., Stam, E., Audretsch, D.B., & O'Connor, A. (2017). The lineages of the entrepreneurial ecosystem approach. Small Business Economics, 49, 1-10.

Akaka, M. A., Vargo, S. L., & Lusch, R. F. (2013). The complexity of context: A service ecosystems approach for international marketing. *Journal of international marketing*, *21*(4), 1-20.

Autio, E., Nambisan, S., Thomas, L. D., & Wright, M. (2018). Digital affordances, spatial affordances, and the genesis of entrepreneurial ecosystems. *Strategic Entrepreneurship Journal*, *12*(1), 72-95.

Badawi, S., Carrubbo, L., Dragoicea, M. & Walletzký, L. (2021), "An analysis of the complex education service for resilience in a multi-contextual framework", *in INTED Conference Proceedings*.

Barile, S., Polese, F., Carrubbo, L. & Iandolo, F. (2022), "Understanding the contribution of the A4A Approach to Higher Education", in M., Diaz-Mendez, M.A.J., Saren, E., Gummesson (eds), *Improving the evaluation of scholarly work: the application of Service Theory*, Springer Ed., pp.45-64.

Baumol, W.J. (1996). Entrepreneurship: Productive, unproductive, and destructive. *Journal of business venturing*, *11*(1), 3-22.

Belitski, M., Aginskaja, A., & Marozau, R. (2019). Commercializing university research in transition economies: Technology transfer offices or direct industrial funding?. Research policy, 48(3), 601-615.

Bouncken, R.B., & Kraus, S. (2022). Entrepreneurial ecosystems in an interconnected world: emergence, governance and digitalization. *Review of Managerial Science*, *16*(1), 1-14.

Bray, M., Adamson, B., & Mason, M. (2014). *Comparative education research: Approaches and methods* (Vol. 19). Springer.

Brozović, D., & Tregua, M. (2022). The evolution of service systems to service ecosystems: A literature review. *International Journal of Management Reviews*, *24*(4), 459-479.

Carpenter, A., & Wilson, R. (2022). A systematic review looking at the effect of entrepreneurship education on higher education student. *The International Journal of Management Education*, *20*(2), 100541.

Cobben, D., Ooms, W., Roijakkers, N., & Radziwon, A. (2022). Ecosystem types: A systematic review on boundaries and goals. *Journal of Business Research*, *142*, 138-164.

Cohen, B. (2006). Sustainable valley entrepreneurial ecosystems. *Business strategy and the Environment*, *15*(1), 1-14.

Collins, P. K. (2015). Building a local design and entrepreneurship ecosystem. Procedia Technology, 20, 258-262.

Correia, M. P., Marques, C. S., Silva, R., & Ramadani, V. (2024). Academic entrepreneurship ecosystems: Systematic literature review and future research directions. Journal of the Knowledge Economy, 1-31.

Correia, M. P., Marques, C. S., Silva, R., & Ramadani, V. (2024). Academic entrepreneurship ecosystems: Systematic literature review and future research directions. Journal of the Knowledge Economy, 1-31.

Cosimato, S., Di Paola, N., & Vona, R. (2024). Digital social innovation: how healthcare ecosystems face Covid-19 challenges. *Technology Analysis & Strategic Management*, *36*(8), 1763-1778.

Dekier, Ł. (2012). The origins and evolution of Lean Management system. *Journal of International Studies*, *5*(1), 46-51.

Dewell, R. (2007). The dawn of Lean marketing. Journal of digital asset management, 3, 23-28.

DiMaggio, P.J. & Powell, W.W. (1991). *The new institutionalism in organizational analysis*. University of Chicago press.

Eisenhardt, K.M. (1989). Building theories from case study research. *Academy of management review*, *14*(4), 532-550.

Eisenhardt, K.M., & Graebner, M.E. (2007). Theory building from cases: Opportunities and challenges. *Academy of management journal*, *50*(1), 25-32.

Elia, G., Margherita, A., & Passiante, G. (2020). Digital entrepreneurship ecosystem: How digital technologies and collective intelligence are reshaping the entrepreneurial process. *Technological forecasting and social change*, *150*, 119791.

Etzkowitz, H., & Leydesdorff, L. (2000). The dynamics of innovation: from National Systems and "Mode 2" to a Triple Helix of university–industry–government relations. *Research policy*, *29*(2), 109-123.

Fayolle, A., Gailly, B., & Lassas-Clerc, N. (2006). Assessing the impact of entrepreneurship education programmes: a new methodology. *Journal of European industrial training*, *30*(9), 701-720.

Feldman, D.H. (1994). *Beyond universals in cognitive development*. Ablex Publishing.

Gieure, C., Benavides-Espinosa, M. D. M., & Roig-Dobón, S. (2019). Entrepreneurial intentions in an international university environment. *International journal of Entrepreneurial Behavior & research*, *25*(8), 1605-1620.

Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American journal of sociology*, *91*(3), 481-510.

Han, X., Zhang, M., Hu, Y., & Huang, Y. (2022). Study on the digital transformation capability of cost consultation enterprises based on maturity model. Sustainability, 14(16), 10038

Haneberg, D. H., Aaboen, L., & Middleton, K. W. (2022). Teaching and facilitating action-based entrepreneurship education: Addressing challenges towards a research agenda. The International Journal of Management Education, 20(3), 100711.

Hechavarria, D. M., & Ingram, A. E. (2016). The entrepreneurial gender divide: Hegemonic masculinity, emphasized femininity and organizational forms. *International Journal of Gender and Entrepreneurship*, *8*(3), 242-281.

Hughes, L.C., & Preski, S. (1997). Using key informant methods in organizational survey research: Assessing for informant bias. *Research in nursing & health*, *20*(1), 81-92.

Isenberg, D.J. (2016). Applying the ecosystem metaphor to entrepreneurship: Uses and abuses. *The Antitrust Bulletin*, *61*(4), 564-573.

Jones, C., & English, J. (2004). A contemporary approach to entrepreneurship education. *Education+ training*, *46*(8/9), 416-423.

Ketchen Jr D.J., Ireland, R.D., & Snow, C.C. (2007). Strategic entrepreneurship, collaborative innovation, and wealth creation. Strategic entrepreneurship journal, 1(3-4), 371-385

Kobylińska, U., & Lavios, J. J. (2020). Development of research on the university entrepreneurship ecosystem: trends and areas of interest of researchers based on a systematic review of literature. *Oeconomia Copernicana*, *11*(1), 117-133.

Kumar, M. (2020). Entrepreneurship ecosystem and development of entrepreneurship in Pakistan. Open Journal of Business and Management, 8(4), 1734-1770.

Kumar, S., Kumar, R.S., & PRABHU, M.G.N. (2020). Sampling framework for personal interviews in qualitative research. *PalArch's Journal of Archaeology of Egypt/Egyptology*, *17*(7), 7102-7114.

Kuratko, D.F., Fisher, G., Bloodgood, J.M., & Hornsby, J.S. (2017). The paradox of new venture legitimation within an entrepreneurial ecosystem. Small Business Economics, 49, 119-140.

Lafuente, E., Szerb, L., & Ács, Z. J. (2023). The Entrepreneurship Paradox: The Role of the Entrepreneurial Ecosystem on Economic Performance in Africa. In *The Entrepreneurial Ecosystem: A Global Perspective* (pp. 103-146). Cham: Springer Nature Switzerland.

Liu, H., Kulturel-Konak, S., & Konak, A. (2021). Key elements and their roles in entrepreneurship education ecosystem: comparative review and suggestions for sustainability. Sustainability, 13(19), 10648.

Macías-Prada, J.F., Silva, Y., & Zapata, Á.M. (2024). The role of universities in Latin American social entrepreneurship ecosystems: a gender perspective. *International Journal of Gender and Entrepreneurship*, *16*(1), 47-68.

Manimala, M.J. (2008). Entrepreneurship education in India: an assessment of SME training needs against current practices. International Journal of Entrepreneurship and Innovation Management, 8(6), 624-647.

Manna, R., Ciasullo, M. V., Cosimato, S., & Palumbo, R. (2018). Interplaying ecosystems: a mega-level analysis of education and labour ecosystems. *The TQM Journal*, *30*(5), 572-588.

Mason, C., & Brown, R. (2014). Entrepreneurial ecosystems and growth oriented entrepreneurship. Final report to OECD, Paris, 30(1), 77-102.

Mateus, A. F. (2021). Omnichannel marketing and consumer behavior. In Marketing and Smart Technologies: Proceedings of ICMarkTech 2020 (pp. 347-361). Springer Singapore.

Meyer, M. H., Lee, C., Kelley, D., & Collier, G. (2020). An assessment and planning methodology for university-based: entrepreneurship ecosystems. *The Journal of Entrepreneurship*, *29*(2), 259-292.

Miah, M. T., Aiupova, N., Erdei-Gally, S., & Fekete-Farkas, M. (2025). Digital entrepreneurship ecosystems: Then vs. now-a future perspectives. Digital Business, 5(1), 100110.

Monat, J.P., & Gannon, T.F. (2015). What is systems thinking? A review of selected literature plus recommendations. American Journal of Systems Science, 4(1), 11-26.

Morse, J.M., & Clark, L. (2019). The nuances of grounded theory sampling and the pivotal role of theoretical sampling. *The SAGE handbook of current developments in grounded theory*, 145-166.

Motta, V.F., & Galina, S.V.R. (2023). Experiential learning in entrepreneurship education: A systematic literature review. *Teaching and Teacher Education*, *121*, 103919.

Mu, Q., & Zhao, Y. (2024). Transforming entrepreneurship education in the age of artificial intelligence. Resources Data Journal, 3, 2-20.

Muldoon, J., Lee, Y., Liguori, E. W., Sahoo, S., & Kumar, S. (2024). Mapping the entrepreneurship ecosystem scholarship: Current state and future directions. International Entrepreneurship and Management Journal, 20(4), 3035-3080.

North, D.C. (1990). *Institutions, institutional change and economic performance*. Cambridge university press.

O'Sullivan, D., & Dooley, L. (2008). *Applying innovation*. Sage publications.

Park, J. H., Kim, S. J., & Lee, S. T. (2025). AI and Creativity in Entrepreneurship Education: A Systematic Review of LLM Applications. AI, 6(5), 100.

Ponomareva, A., & Ponomarev, M. (2022). Marketing of Loneliness in the Omnichannel Communication Space of the City. In Marketing and Smart Technologies: Proceedings of ICMarkTech 2021, Volume 2 (pp. 251-261). Singapore: Springer Nature Singapore.

Prasetyaningtyas, S. W., Ananda, A. S., Meliala, J. S., & Sanam, A. S. P. (2022, August). Digital transformation for entrepreneurship education in vocational high school: a case study. In 2022 International Conference on ICT for Smart Society (ICISS) (pp. 01-06). IEEE.

Raposo, M., & Do Paço, A. (2011). Entrepreneurship education: Relationship between education and entrepreneurial activity. Psicothema, 23(3), 453-457.

Ratten, V., & Jones, P. (2021). Entrepreneurship and management education: Exploring trends and gaps. *The International Journal of Management Education*, *19*(1), 100431.

Rippa, P., Landi, G., Cosimato, S., Turriziani, L., & Gheith, M. (2022). Embedding entrepreneurship in doctoral students: the impact of a T-shaped educational approach. *European Journal of Innovation Management*, *25*(1), 249-270.

Saunders, B., Kitzinger, J., & Kitzinger, C. (2015). Anonymising interview data: Challenges and compromise in practice. *Qualitative research*, *15*(5), 616-632.

Scott, W.R. (2013). *Institutions and organizations: Ideas, interests, and identities*. Sage publications.

Sitaridis, I., & Kitsios, F. (2024). Digital entrepreneurship and entrepreneurship education: a review of the literature. International Journal of Entrepreneurial Behavior & Research, 30(2/3), 277-304

Sørensen, J. B., & Sorenson, O. (2003). From conception to birth: Opportunity perception and resource mobilization in entrepreneurship. In Geography and strategy (Vol. 20, pp. 89-117). Emerald Group Publishing Limited.

Spigel, B., & Harrison, R. (2018). Toward a process theory of entrepreneurial ecosystems. *Strategic entrepreneurship journal*, *12*(1), 151-168

Spilling, O.R. (1996). The entrepreneurial system: On entrepreneurship in the context of a mega-event. *Journal of Business research*, *36*(1), 91-103.

Stam, E., & Van de Ven, A. (2021). Entrepreneurial ecosystem elements. *Small business economics*, *56*(2), 809-832.

Starks, H., & Trinidad, S. (2007). Choose your method: A comparison of phenomenology, discourse analysis, and grounded theory. *Qualitative health research*, *17*(10), 1372-1380.

Von Bertalanffy, L. (1972). The history and status of general systems theory. Academy of management journal, 15(4), 407-426.

Wurth, B., Stam, E., & Spigel, B. (2022). Toward an entrepreneurial ecosystem research program. *Entrepreneurship Theory and Practice*, *46*(3), 729-778.

Yamamoto, K., Milstead, M., & LIoyd, R. (2019). A review of the development of lean manufacturing and related lean practices: The case of Toyota Production System and managerial thinking. *International Management Review*, *15*(2), 21-90.

Zhang, J., van Gorp, D., & Kievit, H. (2023). Digital technology and national entrepreneurship: An ecosystem perspective. *The Journal of Technology Transfer*, *48*(3), 1077-1105.

Zhou, Y. (2019). Research on Lean Marketing Management of Mobile Games. Modern Economy, 10(1), 86-95.

# Self-Efficacy and Structural Change: Resilience in Italian Women Entrepreneurs During the Pandemic

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## Abstract

This study investigates the cognitive and strategic factors influencing the readiness and resilience of women entrepreneurs and their new ventures in Italy during the COVID-19 pandemic. Utilizing logistic regression on a sample of 201 Italian women entrepreneurs who launched businesses between 2020 and 2021, our empirical analysis reveals several compelling insights. We find strong evidence that prior managerial or entrepreneurial experience significantly enhances entrepreneurial self-efficacy and perceived readiness to navigate crisis conditions. Similarly, self-confidence in marketing and sales capabilities is robustly linked to a heightened sense of entrepreneurial preparedness. Contrary to expectations, ventures that implemented broader business model changes were significantly more likely to report negative pandemic impacts, suggesting that such strategic adaptations often reflected reactive responses to severe disruption rather than protective or pre-emptive measures. Interestingly, the direct relationships between prior experience and innovative marketing responses, as well as the perceived usefulness of personal networks and strategic adaptations, were not statistically significant in this crisis context, suggesting more complex dynamics at play. Furthermore, the isolated impacts of tactical marketing adaptations and technological adoption appeared less conclusive and, in some cases, potentially indicative of post-shock coping mechanisms rather than proactive innovation. These findings deepen our understanding of entrepreneurial resilience in gendered contexts, highlighting the critical role of internal resources and the nuanced, context-dependent nature of strategic responses for women entrepreneurs facing acute environmental shocks. We offer theoretical implications for entrepreneurship and marketing literature, alongside practical recommendations for entrepreneurs, policymakers, and support organizations aimed at fostering crisis-responsive ventures.

*Keywords: Female Entrepreneurship; Entrepreneurial resilience; COVID-19; Self-Efficacy; Business model adaptation; Marketing adaptation*

## 1. Introduction

The COVID-19 pandemic caused unprecedented global disruption, forcing businesses to rapidly adapt. For new ventures, this meant navigating extreme uncertainty while striving to build trust and secure resources (Kraus et al., 2020). Within this challenging environment, understanding how diverse entrepreneurial groups responded is crucial. Among these, a vital yet often underserved demographic, face persistent structural barriers in entrepreneurial ecosystems, including limited access to markets,

financing, and institutional support (Brush et al., 2019). Despite these challenges, evidence suggests women entrepreneurs often demonstrate remarkable creativity, customer orientation, and resilience (Cesaroni et al., 2017; Henry et al., 2015), uniquely positioning them to leverage innovation and marketing capabilities.

While innovation and adaptability are recognized as critical for survival during crises (Eggers, 2020a; Kraus et al., 2020), less is known about how entrepreneurs, especially women, mobilize resources to respond. Existing research highlights individual cognitive factors like entrepreneurial self-efficacy (Bandura, 1997; Chen et al., 1998) and prior experience (Ucbasaran et al., 2009). However, empirical studies rarely examine how these resources inform the specific types of adaptations implemented during systemic shocks like COVID-19, particularly in women-led ventures where cognitive and strategic capabilities may play a compensatory role (Brush et al., 2019; Henry et al., 2015).

Building on Bandura's Social Cognitive Theory, Social Capital Theory, entrepreneurial marketing, and gendered entrepreneurship literature, this study addresses this gap. We examine how prior managerial or entrepreneurial experience, marketing and sales self-confidence, and adaptive strategic actions influenced the resilience and performance of women-led ventures launched in Italy during the pandemic's peak.

Focusing on Italy, a country severely impacted by COVID-19 with a dynamic landscape of female entrepreneurship, we investigate the cognitive and strategic mechanisms that enabled women entrepreneurs to mitigate crisis impacts. Specifically, we explore:

1. How prior experience affects entrepreneurial self-efficacy.
2. The link between marketing and sales self-confidence and perceived entrepreneurial readiness.
3. Whether prior experience increases innovative marketing responses during a crisis.
4. How business model changes (including marketing strategy and technological adaptations) impacted venture performance.

Analyzing survey data from 201 Italian women entrepreneurs who started ventures between 2020 and 2021, this paper connects individual cognitive resources with marketing capabilities and strategic adaptations. Our findings significantly advance the understanding of how marketing and innovation co-evolve in entrepreneurial ecosystems under severe environmental constraints, offering theoretical insights into entrepreneurial resilience and practical implications for policymakers and support institutions.

## 2. Conceptual Background

### 2.1 Entrepreneurial resilience and adaptive innovation in times of crisis

Systemic disruptions like the COVID-19 pandemic have profoundly emphasized the importance of entrepreneurial resilience—the capacity of entrepreneurs and their ventures to absorb shocks, reconfigure resources, and maintain goal-oriented behavior under adverse conditions (Ghomi et al., 2023). The pandemic acutely highlighted this need, destabilizing global markets, consumer behaviors, and supply chains (Kuckertz et al., 2020) and forcing rapid adjustments due to unprecedented challenges like restricted mobility and demand declines (Kraus et al., 2020).

Entrepreneurial resilience is not just an innate trait; it's a dynamic process involving continuous learning, feedback, and strategic reconfiguration (Bernard & Barbosa, 2016). Resilient entrepreneurs swiftly mobilize resources, interpret changing environments, and implement decisive strategic changes (Corner et al., 2017; Teece, 2007). This encompasses individual cognitive factors like perseverance and optimism (Sutcliffe & Vogus, 2003), alongside strategic behaviors such as proactive planning, opportunity recognition, and continuous experimentation (Duchek, 2020). These often manifest as rapid business model adaptations, accelerated digital transformation, and responsive market repositioning, especially when traditional customer engagement becomes unviable (Kraus et al., 2020; Guttena et al. 2024). The crisis thus served as a powerful impetus for necessity-driven innovation.

For women entrepreneurs, the COVID-19 crisis often exacerbated existing structural constraints like limited access to capital (Coleman & Robb, 2012), disproportionate care burdens (Manolova et al., 2020), and underrepresentation in high-growth sectors (Brush et al., 2019). Many women-led ventures responded by strategically leveraging digital platforms, adopting new sales channels, or realigning product offerings (Gómez et al., 2024; RE-FEM Report, 2023). These adaptations, often implemented with fewer resources, underscore the intricate link between gendered entrepreneurial contexts and resilience-based innovation. Ultimately, under crisis conditions, innovation frequently arises not just from deliberate opportunity-seeking but significantly from necessity-driven adaptation, demonstrating how constraint can catalyze novelty for nascent women-led ventures.

### 2.2 Prior experience and Entrepreneurial Self-Efficacy

Entrepreneurial self-efficacy (ESE), defined as an individual's belief in their capability to successfully perform entrepreneurial tasks, is strongly shaped by accumulated professional and entrepreneurial experiences. Evidence shows that repeated exposure to managerial responsibilities—such as organizational problem-solving and decision-making—enhances confidence in handling new ventures (Chen et al., 1998; Baum et al., 2011). Similarly, previous entrepreneurial stints provide direct learning about market dynamics, resource mobilization, and venture creation, thereby reinforcing ESE.

For women entrepreneurs, these experiences are especially impactful. Role models, mentorship, and leadership positions help counterbalance structural and cultural barriers by strengthening perceived competence and providing alternative pathways to skill acquisition (Bosma et al., 2012; Shinnar et al., 2014). Studies from diverse contexts, including crisis situations, indicate that prior exposure—whether through family businesses or previous managerial roles—predicts greater self-efficacy, adaptability, and persistence in pursuing entrepreneurial initiatives (Botha, 2020; Sharma & Rautela, 2022; Korber & McNaughton, 2017). Therefore, we hypothesize:

*H1: Women entrepreneurs with prior managerial or entrepreneurial experience report higher levels of entrepreneurial self-efficacy when starting a business during the pandemic.*

### 2.3 Marketing self-confidence and entrepreneurial readiness

While ESE reflects a broad sense of competence, domain-specific forms of self-confidence play a critical role in shaping concrete entrepreneurial behaviors (Zhao et al., 2005; Baluku et al., 2020). Marketing self-confidence, in particular, is crucial because it directly influences an entrepreneur's ability to engage customers, access markets, and compete effectively (Eggers, 2020a; Hills & Hultman, 2013). Confidence in managing marketing tasks reduces perceived risks, increases the feasibility of opportunity exploitation, and supports proactive decision-making. Formal training, mentorship, and hands-on experience in sales and promotion are key sources of this confidence (Politis, 2005).

For women entrepreneurs, this domain-specific confidence has added significance. Gendered norms and institutional biases often limit access to networks, promotional channels, and sales opportunities (Henry et al., 2015; Ahl & Marlow, 2012). Such constraints can generate tension between expected gender roles and entrepreneurial demands (Eagly & Wood, 2012; Koenig et al., 2011). In these contexts, marketing self-confidence provides a critical psychological resource, enabling women to act decisively, pursue opportunities more assertively, and persist in the face of resistance (Revell-Love & Revell-Love, 2016; Wilson et al., 2007). By reinforcing readiness to launch and grow ventures under uncertainty, marketing self-confidence emerges as a central driver of entrepreneurial preparedness. Therefore, we hypothesize:

*H2: Higher self-confidence in marketing and sales capabilities is positively associated with perceived entrepreneurial readiness.*

### 2.4 Prior experience and innovative marketing responses

Prior managerial and entrepreneurial experience not only shapes general self-efficacy but also equips founders with practical skills, tacit knowledge, and a broader cognitive framework to navigate market turbulence (Unger et al., 2011; Politis, 2005). Experienced entrepreneurs tend to possess advanced sensing and seizing capabilities (Teece, 2007; Helfat & Peteraf, 2015), enabling them to quickly identify shifts in customer needs, competitive landscapes, or technological opportunities. This allows them to effectively adjust their marketing mix, explore digital channels, or reposition offerings in response to environmental shocks. Their accumulated knowledge base provides a repertoire of solutions and a greater ability to recognize patterns in complex situations, fostering a more agile and proactive approach to marketing.

For women entrepreneurs, drawing upon robust prior experience becomes an even more critical asset. This experiential capital can compensate for external limitations, providing the mental models and confidence needed to pivot rapidly. During the COVID-19 pandemic, evidence indicates that ventures led by more experienced entrepreneurs were quicker to adopt innovative marketing practices, such as online sales, digital advertising, novel distribution partnerships, and creative customer engagement strategies, to maintain customer relationships and revenue streams (Sahu & Panda, 2024; Zahara et al., 2023). Their prior exposure to varied business contexts provides them with a mental model for adapting to unforeseen challenges, reducing the cognitive load associated with radical changes. This readiness to innovate in marketing is crucial for maintaining market presence and customer loyalty during periods of disruption. Therefore, we hypothesize:

*H3: Women entrepreneurs with previous professional experience in entrepreneurial or managerial roles are more likely to adopt innovative marketing strategies in response to the pandemic.*

### 2.5. The role of personal networks in strategic adaptation

Entrepreneurial activity is fundamentally embedded in social contexts. Personal networks—comprising family, friends, peers, mentors, and professional contacts—offer a broad range of resources critical to decision-making under uncertainty, including informational, emotional, and instrumental support (Jack, 2005; Davidsson & Honig, 2003). Especially during crisis periods, when formal institutional support may be insufficient or slow to respond, networks can play a compensatory role by providing rapid, context-sensitive feedback and facilitating access to resources that aid in rethinking strategies (Klyver & Schenkel, 2013).

Drawing on Social Capital Theory (Nahapiet & Ghoshal, 1998), entrepreneurs embedded in richer personal networks are more likely to identify opportunities, recognize environmental shifts, and overcome resource constraints through trusted relationships. These connections reduce uncertainty and facilitate learning, which is particularly important in contexts marked by sudden discontinuities such as the COVID-19 pandemic (Diaz Gonzalez & Dentchev, 2021). The ability to exchange ideas, receive moral support, or gain insights from others simultaneously facing similar challenges strengthens the capacity for adaptation (Mzid et al., 2019).

Strategic adaptation often takes the form of business model adaptation, understood as deliberate changes in how a firm creates, delivers, and captures value (Teece, 2010; Foss & Saebi, 2015). This may involve adjusting marketing approaches, reshaping value propositions, or modifying communication strategies. Pivoting toward digital channels, incorporating technological tools, and expanding online service delivery have also been widely observed (Kraus et al., 2020; Eggers, 2020a, 2020b). Because such reconfigurations are inherently information-intensive, entrepreneurs benefit from shared learning, external perspectives, and trusted peer validation within their networks (Hoang & Antoncic, 2003). Indeed, empirical research highlights the importance of networked information flows in shaping small firm responses and fostering innovation (Battisti & Deakins, 2017).

Women entrepreneurs, in particular, often rely more heavily on informal and personal networks than on institutional sources of support (Edelman et al., 2017). Some studies underline that during the COVID-19 pandemic, close-knit social ties (bonding capital) provided emotional support and motivation through shared responsibilities, while broader business connections (bridging capital) helped in identifying opportunities (Tiwari & Shastri, 2023).

As such, understanding how perceived network utility influences adaptive behavior may be especially salient in the context of women-led ventures during the pandemic. We therefore hypothesize:

*H4. Women entrepreneurs who perceive their personal networks as more useful are more likely to undertake strategic business adaptations in response to the pandemic.*

### 2.6. Business model adaptation and perceived crisis impact

Periods of acute environmental turbulence compel entrepreneurial ventures to adjust swiftly. Business model adaptation becomes central in these circumstances, enabling firms to mitigate perceived negative impacts and ensure survival. These adaptations may range from changes in product offerings and distribution channels to adjustments in cost structures and financing.

Unlike narrow operational shifts, business model adaptations represent more comprehensive reconfigurations. Entrepreneurs might reshape their core value propositions, transition to digital platforms, or create new revenue streams to engage different customer segments (Doz & Kosonen, 2010; Liguori & Pittz, 2020). Such transformations are particularly vital when conventional practices become unviable due to health restrictions or evolving consumer behavior (Kraus et al., 2020).

Among various adaptation areas, marketing strategy revision and technological adoption stand out. Marketing changes may involve modifying how firms position, promote, and deliver their offerings, often through digital channels or revised promotional strategies (Doyle & Stern, 2006; Morrish & Jones, 2020). Simultaneously, investments in online platforms or CRM systems enable operational continuity and expand market reach during periods of limited mobility (Verhoef et al., 2021; Kraus et al., 2020).

These adjustments reflect an entrepreneur's strategic agility and capacity for systemic change (Corner et al., 2017; McKelvie & Davidsson, 2009). By reconfiguring elements of their business models, entrepreneurs not only withstand crisis conditions but may also perceive their consequences as less severe (Branicki et al., 2023).

This dynamic is especially relevant for women entrepreneurs, who, despite often facing greater constraints, demonstrate resilience and responsiveness in challenging contexts (Manolova et al., 2020; Cesaroni et al., 2017). Their ability to reorient business models through adaptive strategies can therefore play a key role in lessening the perceived negative impact of the pandemic. Based on this reasoning, we hypothesize:

*H5: Women entrepreneurs who implement business model changes due to the pandemic are less likely to report negative impacts from it.*

Building on this argument, it is also important to distinguish between the different dimensions of business model adaptation. Prior research suggests that marketing-related reconfigurations and technology adoption constitute two particularly salient domains (Morrish & Jones, 2020; Verhoef et al., 2021). Marketing adaptation strengthens customer relationships and sustains demand under volatile conditions, while technological adoption not only enables continuity but also provides access to new business opportunities. Since these mechanisms address distinct facets of resilience, we explore their independent effects through the following hypotheses:

*H5a: Women entrepreneurs who adapt their marketing strategies due to COVID-19 are less likely to report negative impacts from it.*

*H5b: Women entrepreneurs who adopt new technologies due to COVID-19 are less likely to report negative impacts from it.*

## 3. Methodology

This study employs a quantitative research approach to investigate the cognitive and strategic mechanisms that enabled women entrepreneurs in Italy to mitigate the impacts of the COVID-19 pandemic. Our empirical analysis is based on survey data, allowing for the examination of relationships between individual attributes, strategic adaptations, and perceived outcomes during a period of unprecedented disruption.

### 3.1 Data collection and sample

The data for this study were collected in February 2025 through a structured survey administered to a sample of 201 Italian women entrepreneurs who launched new ventures between 2020 and 2021, precisely during the critical phase of the COVID-19 pandemic. This specific focus on nascent ventures initiated during a global crisis provides a unique context to explore entrepreneurial resilience under extreme uncertainty. The survey was designed to capture entrepreneurs' self-perceived readiness, their responses to the crisis, and the influence of their prior experience and personal networks.

### 3.2 Measures

All key constructs were operationalized using either single-item or composite indicators, rigorously grounded in relevant entrepreneurship, marketing, and crisis management literature. The measures are detailed below:

- Entrepreneurial Self-Efficacy (ESE) / Perceived Readiness: This was operationalized as an ordinal variable capturing the entrepreneur's self-assessed preparedness to face challenges related to the COVID-19 crisis. This measure aligns with the foundational notion of entrepreneurial self-efficacy, a widely validated predictor of venture resilience and proactive behavior rooted in Bandura's Social Cognitive Theory (Bandura, 1997; Chen et al., 1998). Higher scores indicate greater perceived readiness.

- Self-Confidence in marketing and sales: This construct was measured on a four-point ordinal scale, ranging from "not at all confident" to "very confident." This item serves as a robust proxy for domain-specific self-efficacy (Zhao et al., 2005), reflecting the entrepreneur's perceived capability in managing critical market-facing functions such as customer acquisition, promotion, and sales. Such confidence is particularly crucial in times of market uncertainty and disruption (Wilson et al., 2007; Eggers, 2020a).

- Usefulness of social networks: an ordinal five-point variable measuring the perceived relevance and helpfulness of personal and professional networks in overcoming pandemic-related challenges. Social networks are theorized to provide critical resources, information, emotional support, and opportunities for effective crisis responses and resource mobilization (Stam & Spigel, 2016).

- Prior managerial or entrepreneurial experience: these were captured as two distinct binary indicators indicating whether the respondent held previous managerial positions or had prior experience in launching or managing another business. These two variables were combined into a new binary variable equal to 1 when either prior managerial or entrepreneurial experience was equal to 1 and 0 when both the original variables were equal to 0. These measures operationalize key human capital elements, which are theoretically expected to positively influence entrepreneurs' cognitive schemas, adaptive capacity, and innovativeness in new venture creation (Ucbasaran et al., 2009; Politis, 2005).

- Business adaptation strategies: a set of binary indicators were derived from the survey to capture whether entrepreneurs adjusted specific aspects of their business plan in response to the crisis. This multifaceted construct encompasses:

    - Marketing adaptations: a binary variable indicating whether the entrepreneur modified their marketing strategies (e.g., shifts in communication channels, promotional activities) (Eggers, 2020a, 2020b; Kraus et al., 2020).

    - Technological adoption: A binary variable reflecting the adoption of new technologies for business operations (e.g., e-commerce platforms, digital collaboration tools) (Seetharaman, 2020).

    - Broader business model changes: A binary variable capturing more fundamental reconfigurations of the business model (e.g., significant changes in market offerings, finance and revenue streams, distribution and promotion channels). These indicators collectively reflect the firm's strategic flexibility and adaptive capacity, consistent with literature highlighting adaptation as a core entrepreneurial response to environmental shocks (Williams & Shepherd, 2016; Doz & Kosonen, 2010).

- Perceived negative impact of COVID-19: This was coded as a binary outcome variable (1 = significant negative consequences reported, 0 = no significant negative consequences/positive impact). This measure aligns with prior crisis impact assessments in small and medium enterprise

(SME) research, providing a direct indicator of the perceived severity of the pandemic's effects on venture performance (Diaz Gonzalez & Dentchev; Kraus et al., 2020).

### 3.3 Statistical analysis

This study tested the proposed hypotheses using appropriate regression techniques tailored to the nature of the dependent variables.

All statistical analyses were conducted using Python's statsmodels and scikit-learn packages, ensuring rigorous adherence to robust estimation standards and promoting the replicability of our findings.

To test the first two hypotheses, H1 and H2, which examine the relationships between prior experience, marketing self-confidence, and perceived entrepreneurial readiness, ordinal logistic regression was employed. This method was selected because the dependent variable, Perceived Readiness (or ESE), is measured on an ordinal scale. This approach allowed us to estimate the likelihood of women entrepreneurs reporting higher categories of readiness based on their prior managerial or entrepreneurial experience (H1) and their self-confidence in marketing and sales capabilities (H2).

For H3, which investigates whether previous professional experience in entrepreneurial or managerial roles increases the likelihood of adopting innovative marketing responses, a binary logistic regression was utilized. This method is suitable for assessing the impact of prior experience on the dichotomous outcome of engaging in innovative marketing.

To test H4, which investigates the relationship between the perceived usefulness of personal networks and the likelihood of undertaking strategic business adaptations, binary logistic regression was also applied. This allowed us to assess how network utility influences the dichotomous outcome of implementing adaptations in response to the pandemic.

Regarding the impact of strategic adaptations, H5 posited that women entrepreneurs who implement broader business model changes are less likely to report negative impacts from COVID-19. This hypothesis was tested using binary logistic regression, with the dependent variable being the dichotomous outcome of reporting negative COVID-19 impacts. H5a and H5b were both likewise examined using binary logistic regression, allowing us to assess whether these adaptation types played differentiated roles in shaping resilience outcomes.

For all logistic regression models, Maximum Likelihood Estimation (MLE) was employed. In addition to this, we also employed a non-parametric bootstrapping procedure to enhance the robustness of coefficient estimation and hypothesis testing, particularly given the modest sample size and potential data imbalances. For each hypothesis, we performed 1,000 resampling iterations with replacement, re-estimating model parameters across these replicates. For ordinal models, the bootstrapping was applied using the OrderedModel implementation with logit link functions; for binary outcomes, standard logistic regression was used.

For each bootstrapped distribution of coefficients, we computed the mean coefficient, its exponentiated odds ratio, and an empirical two-tailed p-value, calculated as twice the proportion of resampled coefficients whose sign differed from the mean estimate.

Odds ratios are used to facilitate the interpretation of effect sizes, providing a clear understanding of the magnitude of association between the independent and dependent variables. This robust

methodological approach ensures the reliability and validity of our findings in addressing the research questions.

## 4. Findings

Our study analyzed a sample of 201 women entrepreneurs from diverse sectors across Italy, representing new ventures launched during the critical phase of the COVID-19 pandemic. Table 1 provides a detailed overview of the sample's descriptive statistics.

| Variable | Most Frequent Category | Frequency (%) |
|---|---|---|
| **Sector** | Wholesale/Retail Trade | 64 (31.8%) |
| **Firm Size** | 1 employee | 110 (54.7%) |
| **Legal Form** | Sole Proprietorship | 119 (59.2%) |
| **Age** | 45–54 years | 65 (32.3%) |
| **Marital Status** | Married | 87 (43.3%) |
| **Education** | High School Diploma | 121 (60.2%) |
| **Business Origin** | Start-up | 108 (53.7%) |

**Table 1:** Descriptive statistics of the sample (n = 201)

As shown, the sample is largely comprised of micro-enterprises, with 54.7% having only one employee. The most common industry is wholesale and retail trade (31.8%), followed by hospitality and food services (14.4%) and personal services (11.4%). Sole proprietorships dominate the legal structure (59.2%), reflecting individual ownership. The majority of entrepreneurs are between 45 and 54 years old (32.3%), with a significant portion under 35 (22.4%). Most hold a high school diploma (60.2%), and over half of the businesses (53.7%) were launched as new start-ups.

### 4.2 Hypotheses testing results

To test the proposed relationships, a series of logistic regressions were conducted. Table 2 presents the main results for the core hypotheses.

| Hypothesis | Coefficient | Odds Ratio | P-Value | Supported (p < .05) |
|---|---|---|---|---|
| **H1** | 0.8618 | 2.3675 | 0.004 | Yes |
| **H2** | 1.1654 | 3.2071 | <0.0001 | Yes |
| **H3** | 0.2696 | 1.3095 | 0.414 | No |
| **H4** | 0.0053 | 1.0053 | 0.934 | No |

| | | | | |
|---|---|---|---|---|
| **H5** | 1.6189 | 5.0478 | <0.0001 | Yes |
| **H5a (Exploratory)** | 4.0608 | 58.0199 | 0.3483 | No |
| **H5b (Exploratory)** | Highly Unstable | N/A | N/A | No |

**Table 2:** Logistic regression results for main hypotheses

The statistical analysis provides strong evidence supporting H1, indicating that women entrepreneurs with prior managerial or entrepreneurial experience report significantly higher levels of entrepreneurial self-efficacy when starting a business during the pandemic. This relationship was highly significant ($p<0.005$), with a large odds ratio (2.3675). This finding strongly underscores the importance of experiential learning in fostering the confidence necessary to navigate uncertain times, aligning with established theories on self-efficacy (Bandura, 1997; Zhao et al., 2005).

Similarly, H2 received robust empirical support. We found that higher self-confidence in marketing and sales capabilities is significantly associated with perceived entrepreneurial readiness ($p<0.001$). The substantial odds ratio (3.2071) reinforces the critical role of domain-specific confidence in shaping a founder's perception of her ability to effectively engage with the market and undertake strategic action (Wilson et al., 2007). This highlights that confidence in a key functional area like marketing is a potent cognitive resource for entrepreneurial action.

Conversely, our analysis did not support H3. The expectation that women entrepreneurs with previous professional experience in entrepreneurial or managerial roles would be more likely to adopt innovative marketing responses was not statistically significant ($p=0.414$). Despite prior research suggesting a correlation between experience and opportunity-driven innovation (Rae, 2006; Eggers, 2020a), our results indicate that a direct, statistically significant relationship was not observed in this specific crisis context. This might suggest a more complex mediation or moderation at play, or perhaps that necessity-driven innovation pathways differ from opportunity-driven ones during acute shocks.

Furthermore, H4 was also not confirmed. The perceived usefulness of personal networks did not significantly increase the probability of strategic business adaptations ($p=0.934$). While the literature consistently highlights the role of networks in enabling resilience and providing critical resources (Davidsson & Honig, 2003; Elfring & Hulsink, 2003), our findings suggest that, in the acute phase of the pandemic for this sample of women entrepreneurs, the perceived utility of these resources did not translate directly into a statistically significant likelihood of undertaking strategic business adaptations. This may indicate that generalized network support might not directly or immediately lead to demonstrable strategic adaptation outcomes during rapid, high-stakes disruptions.

Finally, H5 yielded a statistically significant and substantial positive association between reported business model changes and the likelihood of perceiving negative impacts from COVID-19 (coefficient = 1.6189, odds ratio = 5.0478, $p < 0.001$). Contrary to initial expectations, this suggests that women entrepreneurs who made broader strategic adaptations were more likely, not less, to report adverse consequences from the pandemic. Rather than indicating a protective effect, this result might reflect a reactive pattern of adaptation: entrepreneurs may have undertaken significant business model changes as a response to severe disruption, rather than as pre-emptive resilience strategies. This interpretation aligns with crisis research showing that adaptive responses during environmental shocks

are often triggered by necessity and distress, especially when undertaken late or under constrained conditions (Kraus et al., 2020).

In addition to the main test of H5, we conducted exploratory analysis to examine the independent effects of specific adaptation types. Hypothesis 5a, testing the effect of marketing strategy adaptation, showed a strong positive coefficient (4.0608) and a very high odds ratio (58.0199), but this relationship was not statistically significant ($p = 0.3483$), likely due to wide variability and limited sample size. For H5b, the adoption of new technologies was associated with an extremely large coefficient (26.4288) and odds ratio ($> 3 \times 10^{11}$), and the effect was statistically significant ($p < 0.001$). However, the magnitude of these estimates is caused by a near-complete separation in the data, which suggests that caution need to be adopted in interpreting these results. They likely reflect that all respondents who adopted new technologies also reported negative outcomes, making the predictor a near-perfect marker of crisis impact rather than a mitigating factor. However, we also stress that only 5 out of 201 respondents adopted technology changes. Together, these exploratory findings reinforce the notion that adaptation, while crucial, is not uniformly effective, and that its presence often reflects the intensity of the challenges faced rather than a guaranteed buffer against them.

## 5. Discussion

Our study embarked on an exploration of the cognitive and strategic factors influencing the readiness and resilience of women-led new ventures during the profound disruption of the COVID-19 pandemic in Italy.

A central theme emerging from our analysis is the paramount role of individual cognitive resources in fostering entrepreneurial readiness, especially for women founders in challenging environments. The strong empirical support for H1 confirms that prior managerial or entrepreneurial experience significantly bolsters women entrepreneurs' self-efficacy, making them feel more prepared to launch ventures amidst a crisis. This aligns directly with Bandura's (1997) Social Cognitive Theory: for women, who often face unique systemic barriers to external resources, this internal reservoir of experiential capital becomes even more vital, acting as a crucial cognitive buffer against adversity. Complementing this, H2's robust support for the positive association between marketing and sales self-confidence and perceived entrepreneurial readiness further underscores the importance of domain-specific conviction. This finding reinforces that confidence in critical functional areas, particularly those tied to market engagement and revenue generation, is a powerful predictor of an entrepreneur's perceived ability to navigate the complexities of a new venture (Wilson et al., 2007). In essence, our results highlight that an entrepreneur's belief in her capabilities, cultivated through past experiences and specific functional expertise, is an indispensable asset for proactive market engagement and strategic action, especially during periods of profound market turbulence.

Perhaps the most revealing insight from our study concerns the ambiguous role of strategic adaptation in times of crisis. Contrary to our initial expectations, H5 revealed a strong positive association between reported business model changes and the likelihood of perceiving negative impacts from COVID-19. Rather than suggesting a mitigating or protective effect, this finding implies that women entrepreneurs who undertook broader strategic adaptations were more likely to have experienced substantial disruptions. This result challenges conventional interpretations of adaptation as a proactive resilience mechanism, and instead points toward a reactive adaptation pattern, where significant changes in the business model were prompted by acute distress or environmental shock.

This interpretation aligns with recent crisis entrepreneurship research (Kraus et al., 2020), which suggests that adaptive responses during systemic disruptions are often driven by necessity, particularly when ventures face severe constraints or delayed responses. Business model change, in this context, may represent a signal of crisis severity rather than a buffer against it. The notion of adaptation as a *symptom* rather than a *solution* is particularly salient for resource-constrained, women-led ventures operating under high uncertainty.

Further nuance is offered by our exploratory analyses. While marketing adaptation (H5a) displayed a large but non-significant positive coefficient, the lack of statistical significance suggests considerable heterogeneity in how such adaptations were deployed and perceived. More strikingly, the effect of technological adoption (H5b), though statistically significant, was inflated by near-complete separation in the data: all women entrepreneurs who adopted new technologies also reported negative impacts. This extreme correlation likely reflects post-hoc coping mechanisms rather than pre-emptive digital transformation. Moreover, the very low number of adopters (only 5 out of 201) raises caution regarding generalizability.

Taken together, these findings suggest that strategic adaptation, while crucial, is not uniformly effective, nor is it necessarily indicative of resilience. In our sample, adaptation often appeared reactive rather than transformative, undertaken in response to disruption rather than in anticipation of it. For early-stage, women-led ventures—often operating with limited slack resources—piecemeal changes may be insufficient unless embedded within a broader, coherent strategic reconfiguration. Crisis-driven innovation, in this light, appears to favour depth and timing over breadth, highlighting the need to distinguish between adaptive effort and adaptive efficacy in assessing entrepreneurial resilience.

Our findings also offer intriguing discordances with certain aspects of existing literature, prompting deeper theoretical reflection. The non-support for H3, which posited a link between prior experience and the adoption of innovative marketing responses, challenges the straightforward assumption that experience directly translates into specific innovation outcomes, especially during acute crises. While experience clearly fosters overall readiness (H1), its role in triggering specific innovative marketing actions might be more complex. This could suggest that during a "necessity-driven" crisis, innovation might emerge from urgent problem-solving irrespective of prior formalized innovation experience, or that the nature of prior experience (e.g., routine versus highly adaptive roles) plays a nuanced part. Similarly, the non-confirmation of H4, concerning the perceived usefulness of personal networks and strategic business adaptations, presents an interesting divergence from the widely accepted view of networks as key resources for entrepreneurial resilience (Davidsson & Honig, 2003; Elfring & Hulsink, 2003). This could imply that while general network usefulness is beneficial, specific, actionable ties that directly facilitate strategic pivots might be more critical during rapid crises. Alternatively, in the context of women entrepreneurs, networks might predominantly serve as sources of emotional support or general information rather than direct conduits for strategic guidance, especially when facing widespread market collapse rather than localized challenges.

### 5.1 Theoretical implications

This study significantly enriches the literature on entrepreneurial resilience by offering empirical evidence that nuances the understanding of adaptive responses during systemic crises. Rather than confirming the expected protective role of business model innovation, our findings indicate that higher-order strategic adaptations often co-occur with greater perceived hardship, suggesting that such changes may be reactive responses to disruption rather than proactive resilience mechanisms. This underscores the need for a more granular theoretical framework of entrepreneurial resilience—one

that moves beyond general notions of "adaptability" to account for the timing, trigger, and depth of adaptation. Specifically, our results challenge a simplistic "hierarchy of adaptation" where transformative changes are inherently superior or more protective than incremental ones. While transformative changes (like a complete business model overhaul) might be necessary responses to existential threats, our data suggest they can also be indicators of significant distress. In contrast, incremental adaptations (e.g., minor adjustments to marketing tactics or gradual technological adoption) might reflect less severe pressure or a more proactive, measured approach. Particularly during crises like COVID-19, radical strategic pivots may not reflect strength but exposure to greater vulnerability, challenging assumptions that equate extensive transformation with an inherently positive form of resilience.

In the context of gendered entrepreneurship, our findings reinforce the critical importance of internal cognitive resources, such as prior managerial experience and entrepreneurial self-confidence, in navigating uncertainty. For women entrepreneurs these internal capacities may not only shape readiness and strategy but also influence the very decision to adapt. This shifts the theoretical lens from a deficit-based cataloguing of barriers toward a strength-based recognition of agency and adaptive cognition, emphasizing the role of internal capabilities in shaping entrepreneurial trajectories under conditions of constraint.

Furthermore, our results contribute to the marketing-innovation nexus by complicating the notion that innovation in crisis contexts is inherently protective or performance-enhancing. Rather than indicating effectiveness, the strong association between business model changes and negative crisis impacts suggests that radical innovation may emerge as a reactive necessity, not a strategic advantage. In such cases, business model reconfiguration reflects firms' attempts to cope with severe disruption—changing how value is marketed and delivered under duress, rather than as pre-planned innovation. This challenges conventional assumptions about the positive linearity between innovation and resilience, and instead calls for greater theoretical attention to the temporal and causal asymmetries of crisis-driven innovation.

The non-significant findings regarding direct links between prior experience or network utility and specific marketing innovations further suggest that adaptive marketing responses may not be easily predicted by static entrepreneur-level variables. This opens important avenues for future research into mediating and moderating mechanisms—such as emotional regulation, timing of response, or access to digital infrastructure—that might shape the translation of entrepreneurial capabilities into effective strategic change during crisis periods.

### 5.2 Managerial implications

The findings of this study offer important implications for women entrepreneurs, entrepreneurship support organizations, and policymakers seeking to strengthen venture resilience during systemic crises. For women entrepreneurs, the evidence emphasizes the centrality of cognitive preparedness. Accumulating diverse managerial and entrepreneurial experiences plays a critical role in strengthening self-efficacy, a key psychological resource for navigating uncertainty. Proactively seeking opportunities that foster this experiential capital can build not only general confidence, but specific readiness to confront crises. Moreover, cultivating domain-specific self-confidence in marketing and sales emerges as especially vital—this functional competence supports strategic decisiveness in revenue-critical areas, enhancing entrepreneurs' capacity to act swiftly and assertively in volatile markets.

However, our results caution against overestimating the protective role of strategic adaptations. The strong association between business model changes and reported negative impacts suggests that adaptation alone is not inherently beneficial. Rather, it may reflect late-stage coping strategies under duress. Thus, entrepreneurs should approach strategic change not merely as an emergency reaction, but as a deliberate and pre-emptive process embedded in ongoing business model learning. Developing the foresight and cognitive flexibility to engage in transformative change before disruption peaks may distinguish resilient ventures from those simply trying to survive.

For entrepreneurship support organizations and policymakers, this study points to the limits of narrowly addressing resource access or encouraging ad hoc innovation. Programs should focus on building strategic foresight, cognitive resilience, and readiness for deep structural transformation, not just incremental operational change. Training curricula must go beyond surface-level marketing tactics to include scenario planning, business model reconfiguration, and strategic innovation under uncertainty. Additionally, support structures should aim to cultivate marketing and sales confidence among women founders—an often under-recognized but powerful driver of strategic engagement.

Furthermore, while network support remains valuable, our findings suggest that not all networks offer equal utility during crisis. General personal networks may provide emotional reassurance, but they do not necessarily translate into strategic decision-making support. Policymakers should consider facilitating access to high-leverage, actionable networks, such as experienced mentors or peer groups with direct expertise in navigating business pivots. Programs that match women entrepreneurs with strategic advisors—especially those with experience in crisis management and business model transformation—could offer more targeted value.

Ultimately, these implications underscore that resilience is not simply about enduring shocks, but about possessing the cognitive, strategic, and relational assets to proactively reshape one's trajectory. For women entrepreneurs, this means going beyond grit or flexibility to develop the capacity for deep, anticipatory adaptation—an imperative that should shape both personal development strategies and the architecture of entrepreneurial support ecosystems.

## 6. Conclusion, limitations and further research

This study sheds light on the critical cognitive and strategic levers that enabled Italian women entrepreneurs to navigate the severe emergence of the COVID-19 pandemic. Our findings underscore the profound impact of prior managerial or entrepreneurial experience and marketing and sales self-confidence in building a robust sense of entrepreneurial readiness. These internal resources proved indispensable, acting as vital buffers against external shocks, particularly for women who often face systemic barriers to traditional external support.

Crucially, the research highlights that strategic adaptation—particularly business model change—does not always indicate resilience. Contrary to expectations, women entrepreneurs who implemented such changes were more likely to report negative impacts, suggesting these shifts were often reactive responses to acute environmental shocks rather than proactive strategies. In this context, adaptation may reflect the severity of external pressures rather than operate as a protective mechanism. This invites a more cautious interpretation of transformation efforts during periods of instability, especially for resource-constrained early-stage ventures.

Interestingly, our analysis also revealed that, in this turbulent environment, prior experience did not directly translate into innovative marketing responses, nor did general personal network utility directly

lead to strategic adaptations. This hints at a more complex, perhaps necessity-driven, innovation pathway and suggests that the nature or specificity of network support might be more critical during rapid, high-stakes disruptions.

These results suggest concretely that future research and policy should not treat strategic change as a uniformly positive indicator. Instead, scholars and practitioners should differentiate between reactive and proactive adaptation, potentially through longitudinal studies that trace not only the type of strategic responses adopted, but also their timing and perceived voluntariness. For example, future work could develop typologies of "forced" versus "deliberate" business model innovation and test their respective outcomes in different crisis contexts.

Moreover, programs supporting women entrepreneurs would benefit from integrating diagnostic tools that help identify early warning signals of reactive adaptation—such as cash flow volatility or client loss—so that interventions can be offered before full-scale restructuring becomes necessary. In parallel, comparative studies across countries or regions with differing institutional support could reveal how context conditions moderate the effectiveness and perception of strategic adaptation.

While this study offers valuable insights, it's important to acknowledge its limitations. The cross-sectional nature of our data means we can identify strong associations but cannot definitively establish causality. Future research using longitudinal designs would be invaluable to trace the dynamic evolution of these factors. Additionally, our sample predominantly comprises micro-enterprises in Italy, which may limit the direct generalizability of these findings to larger firms or different national contexts. Future comparative studies across diverse firm sizes and institutional environments could provide broader insights. Finally, our measures for specific adaptations, such as innovative marketing and technological adoption, were binary. More granular, multi-item scales in future studies could uncover nuanced effects and explain why their isolated impacts were not consistently significant in our analysis, potentially revealing the specific conditions under which they become powerful drivers of resilience. These avenues offer fertile ground for deeper exploration into how entrepreneurs, particularly women, can best fortify their ventures against future unforeseen challenges.

## References


Ahl, H., & Marlow, S. (2012). Exploring the dynamics of gender, feminism and entrepreneurship: advancing debate to escape a dead end?. *Organization*, *19*(5), 543-562.

Baluku, M. M., Matagi, L., & Otto, K. (2020). Exploring the link between mentoring and intangible outcomes of entrepreneurship: the mediating role of self-efficacy and moderating effects of gender. *Frontiers in Psychology*, *11*, 1556.

Bandura, A. (1997). Self-efficacy: The exercise of control. W. H. Freeman.

Battisti, M., & Deakins, D. (2017). The relationship between dynamic capabilities, the firm's resource base and performance in a post-disaster environment. *International Small Business Journal*, *35*(1), 78-98.

Baum, J. R., Locke, E. A., & Smith, K. G. (2011). A multidimensional model of venture growth. *Academy of Management Journal*, 39(3), 292-303.

Bernard, M. J., & Barbosa, S. D. (2016). Resilience and entrepreneurship: A dynamic and biographical approach to the entrepreneurial act. *M@ n@ gement*, *19*(2), 89-123.

Bosma, N., Hessels, J., Schutjens, V., Van Praag, M., & Verheul, I. (2012). *Entrepreneurship and role models*. Journal of Economic Psychology, 33(2), 410–424.

Botha, M. (2020). Prior entrepreneurial exposure and action of women entrepreneurs: exploring the moderation effects of entrepreneurial competencies in a developing country context. *Frontiers in psychology*, *11*, 922.

Branicki, L., Brammer, S., Linnenluecke, M., & Houghton, D. (2023). Accounting for resilience: the role of the accounting professions in promoting resilience. *Accounting and Business Research*, *53*(5), 508-536.

Brush, C. G., Edelman, L. F., & Manolova, T. S. (2019). Social capital and entrepreneurial growth: A gendered perspective. Entrepreneurship Theory and Practice, 43(4), 717-738.

Cesaroni, F. M., Consoli, D., & D'Angelo, S. (2017). Women entrepreneurs and venture creation: The role of entrepreneurial competence. Journal of Business Venturing Insights, 7, 1-7.

Chen, C. C., Greene, P. G., & Crick, A. (1998). Does entrepreneurial self-efficacy distinguish entrepreneurs from managers?. Journal of Business Venturing, 13(4), 295-316.

Coleman, S., & Robb, A. (2012). *A rising tide: Financing strategies for women-owned firms*. Stanford University Press.

Cope, J. (2011). Entrepreneurial learning from failure: An interpretative phenomenological analysis. Journal of Business Venturing, 26(5), 604-623.

Corner, P. D., Singh, R. P., & Pavlovich, K. (2017). Entrepreneurial resilience and venturing: An integrated conceptual model. Journal of Business Venturing Insights, 8, 26-33.

Davidsson, P., & Honig, B. (2003). The role of social and human capital among nascent entrepreneurs. Journal of Business Venturing, 18(3), 301-331.

Diaz Gonzalez, A., & Dentchev, N. A. (2021). Ecosystems in support of social entrepreneurs: A literature review. *Social Enterprise Journal*, *17*(3), 329-360.

Doz, Y. L., & Kosonen, M. (2010). Embedding strategic agility: A leadership agenda for accelerating business model renewal. *Long range planning*, *43*(2-3), 370-382.

Doyle, P., & Stern, P. (2006). *Marketing management and strategy*. Pearson Education.

Duchek, S. (2020). Organizational resilience: a capability-based conceptualization. *Business research*, *13*(1), 215-246.

Eagly, A. H., & Wood, W. (2012). Social role theory. In P. A. M. Van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook of theories of social psychology* (pp. 458-472). Sage Publications.

Edelman, L. F., Manolova, T. S., & Brush, C. G. (2017). US women entrepreneurs and their access to early-stage financing. In *The Routledge companion to global female entrepreneurship* (pp. 116-131). Routledge.

Eggers, F. (2020a). The impact of the COVID-19 pandemic on entrepreneurial ecosystems: Evidence from a German survey. *Journal of Business Research*, 121, 168-179.

Eggers, F. (2020b). Masters of disasters? Challenges and opportunities for SMEs in times of crisis. *Journal of business Research*, *116*, 199-208.

Elfring, T., & Hulsink, W. (2003). Networks in entrepreneurship: The case of high-technology firms. Small Business Economics, 21(4), 409-422.

Foss, N. J., & Saebi, T. (Eds.). (2015). *Business model innovation: The organizational dimension*. OUP Oxford.

Ghomi, Z. B., Branicki, L., Brammer, S., & Linnenluecke, M. K. (2023). Resilience in times of crisis: lessons learnt from COVID-19, and the future resilience of businesses and society. In *A Research Agenda for Sustainability and Business* (pp. 205-216). Edward Elgar Publishing.

Gómez, J., Krammer, S. M., Pérez-Aradros, B., & Salazar, I. (2024). Resilience to the pandemic: The role of female management, multi-unit structure, and business model innovation. *Journal of Business Research*, *172*, 114428.

Guttena, R. K., Atmaja, F. T., & Wu, C. H. J. (2024). COVID-19 crisis–coping up strategies of companies to sustain in markets. *Journal of Asia Business Studies*, 18(5), 1366-1387.

Helfat, C. E., & Peteraf, M. A. (2015). Managerial cognitive capabilities and the microfoundations of dynamic capabilities. Strategic Management Journal, 36(6), 843-855.

Henry, C., Foss, L., Fayolle, A., Walker, E., & Duffy, S. (2015). Entrepreneurial leadership and gender: Exploring theory and practice in global contexts. *Journal of Small Business Management*, *53*(3), 581-586.

Hills, G. E., & Hultman, C. (2013). Entrepreneurial marketing: Conceptual and empirical research opportunities. *Entrepreneurship Research Journal*, *3*(4), 437-448.

Hoang, H., & Antoncic, B. (2003). Network-based research in entrepreneurship: A critical review. Journal of Business Venturing, 18(2), 165-187.

Jack, S. L. (2005). The role, use and activation of strong and weak network ties: A qualitative analysis. *Journal of management studies*, *42*(6), 1233-1259.

Klyver, K., & Schenkel, M. T. (2013). From resource access to use: Exploring the impact of resource combinations on nascent entrepreneurship. *Journal of Small Business Management*, *51*(4), 539-556.

Koenig, A. M., Eagly, A. H., Mitchell, A. A., & Ristikari, T. (2011). Are leader stereotypes masculine? A meta-analysis of three research paradigms. *Psychological Bulletin, 137*(4), 616–642.

Korber, S., & McNaughton, R. B. (2017). Resilience and entrepreneurship: a systematic literature review. *International Journal of Entrepreneurial Behavior & Research*, *24*(7), 1129-1154.

Kraus, S., Clauss, T., Breier, M., Dalmarco, G., Ferraris, A., & Rungi, A. (2020). COVID-19 and the future of entrepreneurship research. Entrepreneurship Theory and Practice, 44(5), 1047-1052.

Kuckertz, A., Brändle, L., Gaudig, A., Hinderer, S., Reyes, C. A. M., Prochotta, A., ... & Berger, E. S. (2020). Startups in times of crisis–A rapid response to the COVID-19 pandemic. *Journal of Business Venturing Insights*, *13*, e00169.

Liguori, E. W., & Pittz, T. G. (2020). Strategies for small business: Surviving and thriving in the era of COVID-19. *Journal of the International Council for Small Business*, *1*(2), 106-110.

Manolova, T. S., Brush, C. G., Edelman, L. F., & Elam, A. (2020). Pivoting to stay the course: How women entrepreneurs take advantage of opportunities created by the COVID-19 pandemic. *International Small Business Journal*, *38*(6), 481-491.

McKelvie, A., & Davidsson, P. (2009). From resource base to dynamic capabilities: an investigation of new firms. *British Journal of Management*, *20*, S63-S80.

Morrish, S. C., & Jones, R. (2020). Post-disaster business recovery: An entrepreneurial marketing perspective. *Journal of Business Research*, *113*, 83-92.

Mzid, I., Khachlouf, N., & Soparnot, R. (2019). How does family capital influence the resilience of family firms?. *Journal of International Entrepreneurship*, *17*(2), 249-277.

Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23(2), 242-266.

Politis, D. (2005). The process of entrepreneurial learning: A conceptual framework. Entrepreneurship Theory and Practice, 29(4), 399-424.

Rae, D. (2006). Entrepreneurial learning: A narrative-based conceptual model. Journal of Small Business and Enterprise Development, 13(2), 195-211.

RE-FEM (2023). *Women Entrepreneurs in Turbulent Times*. RE-FEM Research Report, available at https://refem.eu/wp-content/uploads/2023/12/17_Reserach-Report_RE-FEM_Final_EN.pdf?

Revell-Love, C., & Revell-Love, T. (2016). Competencies of women entrepreneurs utilizing information marketing businesses. *Journal of Small Business and Enterprise Development*, *23*(3), 831-853.

Sahu, C. K., & Panda, R. K. (2024). Evaluating the relationship between entrepreneurial ecosystem, resilience and SME performance in post-pandemic period. *Journal of Entrepreneurship and Public Policy*, 13(3), 491-506.

Seetharaman, P. (2020). Business models shifts: Impact of Covid-19. *International Journal of Information Management*, *54*, 102173.

Sharma, S., & Rautela, S. (2022). Entrepreneurial resilience and self-efficacy during global crisis: study of small businesses in a developing economy. *Journal of Entrepreneurship in Emerging Economies*, *14*(6), 1369-1386.

Shinnar, R. S., Hsu, D. K., & Powell, B. C. (2014). Self-efficacy, entrepreneurial intentions, and gender: Assessing the impact of entrepreneurship education longitudinally. *The International Journal of Management Education*, *12*(3), 561-570.

Stam, E., & Spigel, B. (2016). *Entrepreneurial ecosystems* (Vol. 16, No. 13, pp. 1-15). USE Discussion paper series.

Sutcliffe, K. M., & Vogus, T. J. (2003). Organizing for resilience. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), Positive organizational scholarship (pp. 94-110). Berrett-Koehler Publishers.

Teece, D. J. (2007). Explicating dynamic capabilities: The nature and microfoundations of (sustainable) enterprise performance. Strategic Management Journal, 28(13), 1319-1350.

Teece, D. J. (2010). Business models, business strategy and innovation. Long Range Planning, 43(2-3), 172-194.

Tsai, K. H., Chang, H. C., & Peng, C. Y. (2016). Extending the link between entrepreneurial self-efficacy and intention: a moderated mediation model. *International Entrepreneurship and Management Journal*, *12*, 445-463.

Ucbasaran, D., Westhead, P., & Wright, M. (2009). The extent and nature of opportunity identification by experienced entrepreneurs. *Journal of Business Venturing*, 24(2), 99-115.

Unger, J. M., Rauch, A., Frese, M., & Rosenbusch, N. (2011). Human capital and entrepreneurial success: A meta-analytical review. *Journal of Business Venturing*, 26(3), 341-358.

Verhoef, P. C., Broekhuizen, T., Bart, Y., Bhattacharya, A., Grewal, D., & Roggeveen, A. L. (2021). Digital transformation: A multidisciplinary reflection and research agenda. Journal of Business Research, 122, 198-208.

Williams, T. A., & Shepherd, D. A. (2016). Building resilience or providing sustenance: Different paths of emergent ventures in the aftermath of the Haiti earthquake. *Academy of Management Journal*, *59*(6), 2069-2102.

Wilson, F., Kickul, J., & Marlino, D. (2007). Gender, entrepreneurial self–efficacy, and entrepreneurial career intentions: Implications for entrepreneurship education. *Entrepreneurship Theory and Practice*, 31(3), 387-407.

Zahara, Z., Ikhsan, Santi, I. N., & Farid. (2023). Entrepreneurial marketing and marketing performance through digital marketing capabilities of SMEs in post-pandemic recovery. *Cogent Business & Management*, 10(2), 2204592.

Zhao, H., Seibert, S. E., & Hills, G. E. (2005). The mediating role of self-efficacy in the development of entrepreneurial intentions. *Journal of Applied Psychology*, 90(6), 1265-1272.

# Leveraging Growth Hacking and Digital Marketing: Evidence from Tunisian Startups

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## Abstract

This study explores how Tunisian entrepreneurs adopt digital marketing and growth hacking to support the development of their startups. The aim is to gain a better understanding of the marketing strategies of startups from emerging markets, in a context characterized by resource constraints. By adopting a qualitative, multi-case study approach to explore in depth how Tunisian entrepreneurs perceive and use digital marketing and growth hacking strategies. For this purpose, 15 semi-structured interviews were conducted with 10 founders of startups operating in various sectors, and five experts in marketing or entrepreneurial coaching. Findings highlight how entrepreneurs in Tunisia leverage digital marketing and growth hacking to compete in the business environment and seize market opportunities, while facing challenges within a fragmented entrepreneurial ecosystem.

*Keywords. Digital marketing; Growth Hacking; Startups; Tunisia.*

## 1. Introduction

Entrepreneurship is seen as an important solution to Africa's socio-economic challenges, offering ways to create employment, innovation, and economic diversification. Many African countries have exploded in start-up activity over the past decade, mainly due to younger populations, increased digital connectivity, and heightened interest from global investors (Liouane, 2024). However, this increase in power is not without obstacles. Most start-ups on the continent work in a very restrictive environment, characterized by limited access to capital, underdeveloped infrastructure, regulatory uncertainty, and low consumer purchasing power (Lay and Tafese, 2025). Tunisia represents a particularly interesting case study in the African startup landscape.

As a small North African country with a relatively solid educational infrastructure and high youth unemployment, Tunisia has made entrepreneurship a policy lever for socio-economic transformation. Initiatives such as the Startup Act have created a dedicated legal and fiscal framework to support early-stage businesses, offering benefits such as tax exemptions, seed funding, and streamlined administrative processes. These developments have earned Tunisia growing visibility as a booming technology hub in the MENA region, with reports showing a 205% increase in ecosystem value in 2023 alone (Siddiqui, 2024). Nevertheless, Tunisian startups are constantly faced with enduring challenges typical of many African ecosystems, which often prevent startups from developing effectively, despite viable products and strong local demand. In this context, marketing innovation is an essential tool for survival and growth, especially when developed at low cost.

In recent years, two strategies have become popular with the world's start-ups: growth and digital marketing. Growth laces are an experimental approach that focuses on data that can often be used to rapidly acquire users and optimize key performance indicators, through unconventional or low-cost techniques (Bargoni et al., 2023; Bohnsack and Liesner, 2019). Digital marketing, on the other hand, refers to the strategic use of online tools, such as search engine optimization (SEO), social media, content marketing and e-mail optimization, the development of customer brand awareness and long-term engagement (Tiago and Veríssimo, 2014; Olivieri and Testa, 2024). Although these approaches are often discussed separately in the literature, their combined applications are particularly relevant for startups operating in nexus environments such as Tunisia. Growth actions offer agility and speed, while digital marketing brings depth and sustainability. When effectively integrated, they can form a strong hybrid strategy that offsets short-term benefits through the creation of long-term value (Troisi et al., 2020; Sanasi, 2024).

However, empirical research on this integration, particularly in the context of emerging markets, is limited. Existing research on growth hacking and digital marketing generally focuses on startups in developed countries with robust digital infrastructures, mature consumer markets and access to abundant venture capital (Macca et al., 2024; Cavallo et al., 2023). These studies provide valuable references to the effectiveness of specific tactics or strategic models, but rarely consider the contextual realities of African startups. In Tunisia, for example, most startups are run by single or small teams and executed on a minimal budget, and strategy must be adapted to fragmented and highly competitive digital environments.

In addition, although some studies analyze the challenges of digital transformation in African companies, they often focus on large firms or standard digital tools, leaving aside marketing strategies that foster the initial development of startups (Chakraborti et al., 2022). There is also a lack of information on how Tunisian entrepreneurs perceive and implement growth, especially regarding the resources they have, the level of maturity of the ecosystem, as well as cultural or regulatory constraints.

This empirical study aims to address this gap by conducting qualitative research involving ten startups and five ecosystem experts in Tunisia. The main objective is to examine how Tunisian startups are adopting and integrating growth hacking techniques and digital marketing into their business.

## 2. Theoretical background

Over the past few years, growth hacking has become essential for new businesses that want to expand rapidly with few resources. Despite its growing adoption (Macca et al., 2025), this method is still poorly understood in the academic literature. Growth hacking is based on a culture of rapid, data-driven experimentation, enabling startups to test ideas, learn and adjust continuously. It encourages innovation, flexibility, and data-driven choices. However, its practical implementation faces various obstacles: lack of in-house skills, budget limitations, and fear of failure. These factors underscore the importance of better understanding the adoption of this method among entrepreneurs in general, but also more specifically in the Tunisian context.

Growth hacking is a mindset and approach developed to foster rapid growth in start-ups, using creative, data-driven, low-cost experiments (Bohnsack and Liesner, 2019; Sanasi, 2024). This method focuses on rapidly acquiring new users, testing hypotheses, and adapting based on immediate feedback. Techniques such as referral marketing, A/B testing, viral loops, and product-market fit optimization are essential to this method (Troisi et al., 2019).

One of the key strengths of growth hacking is its flexibility. This method enables start-ups to avoid traditional, budget-intensive marketing campaigns, relying instead on statistics, automation, and virality (Bargoni et al., 2023).

Digital marketing takes an organized and thoughtful approach, focusing on the use of digital tools to manipulate brand positioning, attract new customers and forge lasting bonds with them (Ritz et al., 2019). Key tools include search engine optimization (SEO), social networks, email campaigns, marketing content, and paid online advertising (Tiago and Veríssimo, 2014 ; Patel and Chugan, 2018).

Although growth hacking focuses primarily on short-term acquisition and testing, digital marketing aims to foster long-term customer engagement and develop brand image (Olivieri and Testa, 2024). Nevertheless, researchers are increasingly showing that these two methods can complement each other and that the right combination can allow startups to achieve solid, sustainable growth (Troisi et al., 2019 ; Bargoni et al., 2024). This combination is particularly important for young companies in the launch phase, which often need to rapidly acquire a customer base while gradually building a solid, sustainable brand image. Research suggests a growing need for studies that examine how these companies evolve from a phase of initial "hacks" to more elaborate marketing methods (Bargoni et al., 2023; Sanasi, 2024).

Implementing these approaches is not easy for startups as they encounter significant barriers such as budget constraints, lack of time, or even a lack of internal skills within the team to experiment with these new approaches. On the other hand, many start-ups are not in a position to experiment with new things or test new ideas for fear of failure, and the habit of using data in decision-making is not yet developed among entrepreneurs; these limitations reduce the possibilities of using growth hacking successfully (Macca et al.,2025). To minimize this phenomenon, it is necessary to provide support tailored to the needs of entrepreneurs, to help them understand these approaches and succeed in using them.

Most academic research on growth hacking and digital marketing is based on case studies from developed or Western countries (Macca et al., 2024; Cavallo et al., 2023). Ecosystems such as those in Silicon Valley, Berlin, or London offer startups significant access to funding, advanced technological infrastructure, qualified mentors and favorable regulations.

Generalized growth models derived from these ecosystems often fail consider the informality, resource limitations and market fragmentation typical of African startups (Liouane, 2024). They overlook the fact that many African startups cater to non-digital users or use channels that mix digital and offline, making their customer acquisition and engagement strategies more complex (Enpact, 2019). Thus, African entrepreneurs can choose to apply growth hacking and digital marketing strategies differently than developed countries. Global approaches can be merged with local tactics or focus on building community trust and informal networks rather than automation and virality. For instance, in Tunisia, creators often must rely on informal learning, their own intuition, or the help of their peers (Chakraborti et al., 2022). This gap between theory and reality raises crucial questions about how entrepreneurs in resource-constrained contexts like Tunisia perceive and use digital marketing and growth strategies.

Therefore, this study tries to address the following research question:

*RQ. How do Tunisian entrepreneurs adapt digital marketing and growth hacking strategies to support their startup's growth?*

## 3. Methodology

### 3.1 Research Setting

This research aims to analyze in depth how Tunisian entrepreneurs perceive and use digital marketing and growth hacking strategies. As the objective of the study is exploratory, the appropriate methodology to use is qualitative (Yin, 1994). Following previous studies on startups' digital marketing strategies and growth hacking (Foggetti et al., 2025; Macca et al., 2025), a case study approach is adopted. In particular, this research adopts a multiple-case study approach (Eisenhardt and Graebner, 2007) as it is more generalizable than the single case study.

### 3.2 Data collection

Data collection was carried out between November 2024 and May 2025 using the online platform Teams. The interviews lasted around 40 minutes. With the exception of two interviews conducted in English, the rest was conducted in French, as Tunisia is a French-speaking country and the interviewees were most comfortable with French. With the consent of the interviews, the interviews were fully recorded and the transcripts were then translated verbatim. Interviews were conducted according to a pre-established interview guide, while allowing some flexibility to enable participants to freely express their point of view and explore certain themes in more detail. In detail, 15 semi-structured interviews were conducted with:

- 10 founders of startups operating in various sectors (Agritech, Edutech, Tourism, Culture, technology and services) (Table 1); and
- Five marketing experts and professionals from incubators, organizations that support entrepreneurship active in the entrepreneurial ecosystem in Tunisia (Table 2).

| # | Role | Name | Industry | Year of Foundation |
|---|---|---|---|---|
| S # 01 | COO (Chief Operating Officer) | Startup 1 | Technology | 2022 |
| S # 02 | CEO (Chief Executive Officer) & CMO (Chief Marketing Officer) | Startup 2 | Edu tech | 2023 |
| S # 03 | CEO (Chief Executive Officer) | Startup 3 | Culture and travel tech | 2022 |
| S # 04 | CEO (Chief Executive Officer) | Startup 4 | Biotech | 2022 |
| S # 05 | CEO (Chief Executive Officer) | Startup 5 | Agri tech | 2022 |
| S # 06 | CEO (Chief Executive Officer) & CMO (Chief Marketing Officer) | Startup 6 | Data analytics | 2022 |
| S # 07 | CEO (Chief Executive Officer) | Startup 7 | Technology | 2022 |
| S # 08 | CEO (Chief Executive Officer) | Startup 8 | Technology & Tourism | |
| S # 09 | CEO (Chief Executive Officer) & CMO (Chief Marketing Officer) | Startup 9 | Urban Mobility | 2023 |
| S # 10 | CEO (Chief Executive Officer) & CMO (Chief Marketing Officer) | Startup 10 | Edu tech | 2022 |

**Table 1:** Startups involved in the study (Source: Our elaboration)

| | Role | Area of expertise |
|---|---|---|
| E # 01 | Director, Employability & Entrepreneurship Hub/Honoris united universities | Strategic business consulting |
| E # 02 | Professor, Marketing consultant, Entrepreneurship coach | Marketing expert who helps compagnies grow their business and marketing strategies |
| E # 03 | Alternative Investment Specialist Co Founder 1kub Incubator | Experienced in setting up an ecosystem, shared valuable insights into startup strategies and growth. |
| E # 04 | Business Coach, Trainer ,Speaker& Marketing Expert | Marketing expert who helps compagnies grow their business and marketing strategies |
| E # 05 | Expert and Trainer in Eco-entrepreneurship \| Business support | Strategic business consulting |

**Table 2:** Experts involved in the study (Source: Our elaboration)

## 3.2 Data analysis

The data analysis adopted Gioia's methodology (Gioia et al., 2013) and was supported by the use of NVivo 14 software to code the data, to identify first order concepts directly from the quotes cited by the interviewees. First-order concepts were then grouped into second-order themes to develop broader schemas on the data to identify three aggregate dimensions, which will be explained in detail in the next section.

## 4. Findings

The findings of this study highlight how entrepreneurs in Tunisia perceive, exploit, and evolve digital marketing and growth hacking approaches. The findings are structured around three aggregate dimensions that illustrate actual practices, the importance of the entrepreneurial ecosystem in Tunisia, and the marketing strategies implemented. Each aggregate dimension Entrepreneur's market orientation, Strategic role of the entrepreneurial ecosystem, Digital-Driven Marketing Strategy, and Capability are supported by two second-order themes.

### 4.1 Entrepreneur's Market Orientation

This study revealed that a large proportion of different business owners and specialists

recognized insufficient market knowledge as the main obstacle facing new businesses, hindering their growth. A weak grasp of consumer needs and the attributes of rival firms typically results in ineffective marketing plans, with entrepreneurs making choices without detailed investigations grounded in thoroughly evaluated information.

The professionals consulted mentioned how challenging it is for business owners to correctly determine their target market. Many business owners tend to focus more on their products than on understanding the requirements of their customers or the customers themselves.

Other entrepreneurs rely on personal experiences or impressions, spontaneous and unstructured interactions. Sometimes startup founders do not know how to proceed with adequate market research that fits their offer or service. What many entrepreneurs have in common is that they have no entrepreneurial experience, lack the necessary business knowledge, and rely solely on their technical skills.

If they had entrepreneurial skills, they would perhaps have a much better chance of knowing their market. They are unaware of the logic involved. On the other hand,

lack of financial and human resources prevents entrepreneurs from conducting in-depth market research.

This mismatch between supply and consumers' real needs represents a major obstacle to the performance of entrepreneurs' marketing strategies. To succeed in this strategic phase, the support of support structures is essential. Despite these initial difficulties, many entrepreneurs are trying to adapt their marketing actions to what is available on the market. We observed the emergence of a harmonization process based on customer feedback, experimentation, and the desire to increase brand awareness.

Entrepreneurs are increasingly orientated towards experimentation and the creation of prototypes to gain validation from small-scale potential customers. However, on the other hand, founders of startups are trying to exploit the strengths of digital content and enhance their digital visibility to gain notoriety and credibility with the target audience, thus building a good reputation. These are some of the simple ways that most entrepreneurs adopt in order to better reach a specific target.

Entrepreneurial mindset and learning ability play a major role in the implementation of an effective marketing strategy. Entrepreneurs who have the ability to adjust to change and who are receptive to criticism and questioning are the ones who succeed in laying the foundations for a robust strategy.

### 4.2 The Strategic Role of the Entrepreneurial Ecosystem

This study reveals a significant need to deepen and strengthen the entrepreneurial skills of Tunisian entrepreneurs. These needs go beyond the technical or functional aspects, but also touch on the ability to elaborate a solid marketing strategy, to acquire customers, build a relationship with them, and measure the effects of the actions carried out.

Although the Tunisian entrepreneurial ecosystem has seen the birth of many support structures over the past decade, many of the founders interviewed admitted to having acquired their knowledge in the field, without specific support from these structures. In addition, experts confirmed that the marketing aspect is not well explored within coaching programmes, which weakens entrepreneurs' strategic choice of marketing actions.

This reality creates a gap between the desire to expand and the actual ability to implement organized strategies. Many business leaders report a lack of means, processes, and indicators to effectively manage their communications or select their means of dissemination. They also note a challenge in setting priorities and making marketing decisions.

Incubators are still essential support organizations. They offer training in various fields related to entrepreneurship, and they also provide a meeting place for entrepreneurs and experts in any specialty, even marketing, except that the majority of entrepreneurs and experts have also declared that this support is standardized, poorly adapted to the situation of each startup and sometimes out of sync with their real needs.

The entrepreneurial landscape is seen as unbalanced: some areas of Tunisia receive a great deal of support, while others remain on the sidelines; support structures are located in the country's capital, which minimizes the chances of entrepreneurs in the regions taking advantage of these programmes.

However, the interviewed entrepreneurs also see promising avenues: a growing acceptance of entrepreneurship, the creation of support networks, and a younger generation more receptive to digital technologies. The real challenge lies in the ecosystem's ability to organize its services, improve connections between the various players and adjust support systems to the concrete needs of startups. Against this backdrop, many institutions have begun to turn to specialized work that will, in one way or another, help startups.

### 4.3 Digital-Driven Marketing Strategy and Capability

Data reveal that startup entrepreneurs in Tunisia make extensive use of digital marketing tools, particularly social networks, to increase their visibility and reach their customer base. However, their use often remains basic, intuitive, and haphazard. Most interviewed entrepreneurs say they share content, sponsor publications, or use WhatsApp to exchange, but without integrating these actions into an overall marketing strategy.

The principle of growth hacking is still partially understood or unclear for many of the current leaders.

entrepreneurs interviewed. Although some use similar approaches, they don't recognize them as such, nor do they use them in a vision of rapid growth or idea validation. The term 'growth hacking' sometimes generates confusion, and many people simply see it as an important use of social media or as a short-term visibility strategy.

However, there is a natural adoption of growth hacking strategies. Examples include sponsorship (inviting one customer to bring in another), the launch of 'limited offer' promotions, or the use of digital word-of-mouth. These initiatives demonstrate the ability to activate viral mechanisms, test offers, and rapidly obtain user feedback at low cost.

## 5. Discussion

### 5.1 Theoretical contribution

This research contributes to different areas of the literature on entrepreneurship and digital marketing with a focus on growth hacking. First, it highlights the importance of market orientation for start-ups, an idea already put forward by Narver and Slater (1990), while revealing a striking contrast in resource-constrained environments such as Tunisia. Entrepreneurs have limited knowledge of their target market, reinforcing the observations of Chakraborti et al. (2022) regarding the use of intuition to compensate for the absence of formal market research.

In addition, our results enrich research on the development of entrepreneurial skills. The analysis conducted by Kaffka and Krueger (2024) indicates that participation in structured returns through mentoring or coaching facilitates the acquisition of practical and strategic skills. This is in line with our findings that entrepreneurs in contact with experts or well-organized incubators are more successful in adapting their marketing methods to transform them into learning approaches.

Furthermore, this research calls into question the universal scope of the dominant models in digital marketing. Unlike studies carried out in advanced technological contexts (Cavallo et al., 2023), our findings show that the use of digital tools is often superficial, lacking a specific strategy. This indicates that Western-derived models cannot be applied as they are in emerging ecosystems and need to be adjusted.

Last but not least, our main contribution concerns growth hacking, an approach that is still poorly understood but is being implemented informally. The results corroborate the findings of Macca et al. (2025), who highlight the vagueness surrounding the application of growth hacking and the need for context-specific approaches. While the literature presents it as a flexible, data-driven strategy designed for resource-constrained environments (Bargoni et al., 2024), our results indicate that Tunisian entrepreneurs require the creation of hybrid models integrating learning, support, and simplified tools.

Finally, this research also enriches our knowledge of entrepreneurial ecosystems. Unlike most studies focusing on advanced economies (Kansheba and Wald, 2020), our results highlight that limitations related to infrastructure, financing and the culture of experimentation are key elements in entrepreneurs' strategic decisions, necessitating a reassessment of analytical frameworks.

### 5.2 Managerial implications

The research also presents important practical recommendations for entrepreneurs, incubators, and policy-makers. Firstly, the findings show a pressing need for tailored training programmes that focus not only on the use of digital tools, but also on the creation of a solid marketing strategy, focused on clear growth, conversion, and retention objectives. Secondly, support organizations need to re-evaluate the way they help startups during their creation. Incubators need to move away from a one-size-fits-all approach to individualized support, taking into account the field of activity, the stage of development of the project, and the skills of the team. This means including a strategic module on market positioning, customer acquisition decisions, and marketing performance evaluation. Third, it is

advisable to gradually apply the principles of growth hacking to support systems. Practical sessions focusing on experimentation, A/B testing, performance evaluation and rapid iteration cycles would offer founders the opportunity to learn how to develop agile actions adaptable to their specific situations. Finally, public officials and funders can act as catalysts by funding strategic marketing training, establishing regional skills clusters to reduce territorial inequalities, and fostering collaborations between startups and digital marketers. These initiatives would help strengthen the resilience of startups in Tunisia and promote their sustainable development. Beyond Tunisia, these suggestions could also serve as inspiration for other African ecosystems facing similar difficulties. The gradual introduction of support systems combining strategic marketing and experimental approaches could boost entrepreneurship across the continent.

## 6. Limitations and future research directions

This study is not exempt from limitations, which are first related to the generalizability of results as we conducted our analysis on a limited sample of startups based in one single country, Tunisia. Future research should enlarge the focus of the analysis to startups from other countries, e.g. African startups that share a similar business environment with Tunisian startups.

Furthermore, the focus of this research is on the company side and did not consider the

perspective of customers. Future research should investigate the consequences of startups' digital marketing and growth hacking strategies by also integrating the point of view of customers and investors.

Finally, quantitative methods could be applied to study this phenomenon to measure the key effects of the digital marketing and growth hacking strategies of startups.

## References


Bargoni, A., Smrčka, L., Santoro, G., & Ferraris, A. (2024). Highway to hell or paradise city? Exploring the role of growth hacking in learning from innovation failure. *Technovation*, *131*, 102945.

Bohnsack, R. and Liesner, M.M. (2019). What the hack? A growth hacking taxonomy and practical applications for firms. *Business Horizons*, *62*(6), pp.799–818.

Cavallo, A., Cosenz, F., & Noto, G. (2024). Business model scaling and growth hacking in digital entrepreneurship. *Journal of Small Business Management*, *62*(4), 2058-2085.

Chakraborti, J., Dutta, A., & Jana, B. (2022). An empirical investigation into why startups resist use of digital marketing. *Journal of Content, Community & Communication*, *15*(8), 69-83.

Eisenhardt, K. M., & Graebner, M. E. (2007). Theory building from cases: Opportunities and challenges. *Academy of Management Journal*, *50*(1), 25-32.

Enpact (2019). *Empowering Entrepreneurship. Startup Ecosystem Report: Tunisia*. Available at: https://enpact.org/publication/tunisia-country-report/ (Accessed 24 May 2025).

Foggetti, C., Natalicchio, A., Ardito, L., & Albino, V. (2025). Opening the black box of Growth Hacking: Insights into the microfoundations of Lean Startup Capabilities. *Journal of Business Research*, *191*, 115272.

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational Research Methods*, *16*(1), 15-31.

Kaffka, G., & Krueger, N. (2024). How entrepreneurs engage with feedback during value creation–a taxonomy. *Journal of Intellectual Capital*, *25*(7), 109-128.

Kansheba, J.M.P. and Wald, A.E. (2020). Entrepreneurial ecosystems: a Systematic Literature Review and Research Agenda. *Journal of Small Business and Enterprise Development*, 27(6), pp.943–964.

Liouane, K. (2024). Follow The Money: Exploring the Key Factors Influencing Investment in African Startups. *arXiv preprint arXiv:2401.05760*.

Lay, J., & Tafese, T. (2025). Africa's Emergent Tech Sector: Characteristics and Development Implications. *Africa Spectrum*, 00020397241306454.

Macca, L. S., Santoro, G., Jabeen, F., & Gavurova, B. (2025). Fuelling growth: a qualitative study on the benefits and challenges of growth hacking for micro, small and medium enterprises. *International Journal of Entrepreneurial Behavior & Research*, (ahead-of-print).

Olivieri, M., & Testa, G. (2024). Social media platforms use in startups' international marketing strategies: a multiple case study. *International Marketing Review*, *41*(5), 1074-1101.

Patel, C. P., & Chugan, P. K. (2018). Digital inbound marketing to drive the success of startups. *International Journal of Family Business and Management*, *2*(1), 1-6.

Ritz, W., Wolf, M. and McQuitty, S. (2019). Digital Marketing Adoption and Success for Small Businesses. *Journal of Research in Interactive Marketing*, 13(2), pp.179–203.

Sanasi, S., Ghezzi, A., & Cavallo, A. (2023). What happens after market validation? Experimentation for scaling in technology-based startups. *Technological Forecasting and Social Change*, *196*, 122839.

Siddiqui, S. (2024). Tunisia's Tech Ecosystem By the Numbers. *Startup Genome*, 30 August. Available at: https://startupgenome.com/articles/tunisias-tech-ecosystem-by-the-numbers (Accessed: August 30, 2024).

Tiago, M. T. P. M. B., & Veríssimo, J. M. C. (2014). Digital marketing and social media: Why bother?. *Business horizons*, *57*(6), 703-708.

Troisi, O., Maione, G., Grimaldi, M., & Loia, F. (2020). Growth hacking: Insights on data-driven decision-making from three firms. *Industrial Marketing Management*, *90*, 538-557.

Yin, R. K. (1994). Discovering the future of the case study. Method in evaluation research. *Evaluation Practice*, *15*(3), 283-290.

# XXII SIM Conference 2025

## The Marketing-Innovation Nexus:

## Past Insights for Future Challenges

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# Track 2 - Consumer Behavior

## Loss or win? How charity gifts are valued and appreciated by gift recipients

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### Abstract

In an era where consumers increasingly demand authenticity from brands, the emergence of Generative Artificial Intelligence (GAI) in activist communication poses new challenges. This study explores cross-cultural perceptions of GAI-generated brand activist messages through a qualitative thematic analysis involving 38 participants from Italy, Sweden, and the United States. It examines how different national contexts shape expectations of authenticity, emotional resonance, transparency, and responsibility in AI-generated communication. Findings reveal five key themes: authenticity and consistency, the role of human agency, transparency and accountability, limited empathy, and context-specific appropriateness. While AI was broadly accepted as a supportive tool, participants emphasized that credible activism still requires human presence: a deliberate, value-driven commitment rooted in authentic beliefs, along with the ability to feel, express, and respond to complex emotions, which AI tools are evidently unable to replicate. GAI was seen as more appropriate for environmental causes, perceived as data-driven, than for social justice issues demanding personal understanding and a human voice. Cultural differences shaped these views: Italians focused on sincerity and alignment with brand values, Swedes adopted a practical approach, assessing functional relevance and transparency, and US respondents evaluated whether activism matched the brand's business and offerings. Despite these differences, shared skepticism emerged toward fully AI-authored activism lacking human oversight and emotional credibility. This study contributes to branding and communication research by highlighting the sociocultural filters through which GAIgenerated activism is interpreted. It calls for hybrid, culturally sensitive strategies that preserve human authenticity while leveraging technological innovation in cause-related messaging.

*Keywords: Brand Activism, Generative Artificial Intelligence (GAI), Brand Communications, AI-generated content (AICG), Thematic analysis, Cross-cultural study*

# Sustainability on the Menu: How Framing and Ingredient Type Influence Upcycled Food Acceptance

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## Abstract

Food waste represents one of the most pressing global challenges, with restaurants playing a central role due to their high use of fresh ingredients and frequent disposal of unused parts. Upcycling—the practice of transforming surplus or byproducts into new dishes—offers a sustainable solution, yet its adoption in hospitality settings faces strong consumer resistance. This study addresses this gap by examining the psychological barriers that hinder acceptance of upcycled food in restaurants.

Across multiple studies, the research identifies perceived contamination as the primary barrier. Consumers often associate upcycled food with being unsafe or unclean, though this reaction depends on the ingredient source. Preparation scraps and surplus stock are more positively received than buffet leftovers, which are strongly linked to contamination concerns. Restaurant type also plays a decisive role: in luxury settings, consumers perceive upcycling as innovative and sustainable, especially when framed as the outcome of chef craftsmanship. By contrast, in budget restaurants, the same practices may be interpreted as cost-cutting, reinforcing negative perceptions. Finally, communication proves critical—abstract, sustainability-oriented framing (e.g., "Artisan Alchemy") is more effective than literal descriptions in enhancing acceptance.

The findings advance understanding of consumer psychology in sustainable food innovation by clarifying how contamination inferences and construal level theory interact to shape acceptance of upcycled food. They highlight that ingredient type and consumption context jointly influence willingness to try, offering a more nuanced perspective on barriers to circular economy practices in hospitality.

For practitioners, the results suggest that upcycling can be successfully implemented in luxury restaurants if communicated through abstract narratives of sustainability and creativity. Managers should avoid emphasizing waste origins and instead highlight craftsmanship, innovation, and environmental value. Menu design, staff communication, and storytelling represent key levers to normalize upcycled dishes while maintaining the premium dining experience.

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# Unveiling the World of Riders: How Power and Discourse Shape Platform Inequalities

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## Abstract

**Introduction.** Platform-mediated delivery services such as Uber Eats, DoorDash, Deliveroo, and Glovo have become pervasive in urban environments, reshaping not only consumer practices but also the structure of labor. These platforms mediate interactions between consumers and workers, organizing labor through algorithms, ratings, and app-based notifications (Huang, 2023). Delivery workers, framed as "independent contractors," operate under precarious conditions, subjected to continuous consumer evaluations and algorithmic oversight (Cant, 2019). Structural conditions such as stress, surveillance, and precarity exacerbate conflict; one in five food delivery workers in the U.S. have been physically assaulted while on the job (New York Post, 2024). This study asks how cultural representations of real conflicts on delivery platforms, as expressed in virtual spaces, reflect and reinforce intersectional inequalities, and what role social actors play in sustaining symbolic and structural violence against riders (Recuero, 2024). **Brief Literature Review.** Studies have examined algorithmic management (Woodcock & Graham, 2020), opacity of digital infrastructures, and shifts within digital capitalism (Couldry & Mejias, 2019). Platforms embed surveillance, algorithmic oversight, and affective modulation into everyday transactions. Comment threads and rating systems act as moral scripts reinforcing symbolic hierarchies (Cheng et al., 2014). Consumers are delegated co-governors who maintain platform operations through micro-interactions that blur the distinction between consumption and managerial oversight (Törnberg, 2023; Jhaver et al., 2021). **Methodology.** A qualitative and immersive netnographic framework (Kozinets, 2019) guided data collection. Digital media archives were analyzed to identify conflict cases, and transversal keywords were used to systematize searches across Twitter/X, TikTok, and Reddit. The dataset includes 45 news articles and 194 immersive journals with screenshots, comments, threads, and visual fragments. An immersive journal (Kozinets, 2023) supported reflexive interpretation. Inductive coding, informed by intersectionality (Collins & Bilge, 2020), traced co-occurring patterns of identity, affective, and symbolic elements. **Results.** Racism and xenophobia emerged as central axes: riders were mocked for names, accents, and origins, and immigrant communities reproduced dominant stereotypes to distance themselves from marginalized groups. Humor and memes normalize suffering and convert labor into entertainment. Gender based violence targeted women riders, who adopted gender-neutral profiles to avoid harassment and whose viral cases were often met with digital shaming. Nationalist narratives politicized immigrant riders, framing them as cultural threats and fueling restrictive immigration discourses. Spatial exclusion added further risk, with riders avoiding certain neighborhoods and facing intensified stress in affluent zones.

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**Discussion and Conclusion.** Delivery work becomes a site where systemic inequalities are amplified through digital mediation. Consumer practices reinforce symbolic violence, aestheticize labor, and normalize stigma (Cortés, 2021). While some acts of solidarity challenge these narratives, they remain overshadowed by algorithmically amplified hostility. Findings highlight the need for comparative studies of platform design and mechanisms for abuse reporting, consumer accountability, and worker protection, as well as research into how riders mobilize digital spaces for resistance and alternative narratives.

*Keywords: Consumer Power, Gig Economy, Platform-mediated Labor, Intersectionality, Netnography*

**References**

Cant, C. (2019). Riding for Deliveroo: Resistance in the new economy. John Wiley & Sons. Cheng, J., Danescu-Niculescu-Mizil, C., & Leskovec, J. (2014, May). How community feedback shapes user behavior. In Proceedings of the International AAAI Conference on Web and Social Media (Vol. 8, No. 1, pp. 41-50).

Collins, P. H., & Bilge, S. (2020). Intersectionality. John Wiley & Sons.

Couldry, N., & Mejias, U. A. (2019). The costs of connection: How data is colonizing human life and appropriating it for capitalism. In The costs of connection. Stanford University Press. Huang, H. (2023). Algorithmic management in food-delivery platform economy in China. New Technology, Work and Employment, 38(2), 185-205.

Jhaver, S., Frey, S., & Zhang, A. X. (2021). Decentralizing platform power: A design space of multi-level governance in online social platforms. Proceedings of the ACM on Human-Computer Interaction, 5(CSCW1), 1–29.

Kozinets, R. (2019). Netnography: The essential guide to qualitative social media research. Kozinets, R. V. (2023). Immersive netnography: a novel method for service experience research in virtual reality, augmented reality and metaverse contexts. Journal of Service Management, 34(1), 100-125.

New York Post. (2024, May 11). One in five food app delivery workers assaulted on the job: study. Retrieved from https://nypost.com/2024/05/11/us-news/one-in-five-food-app-delivery workers-assaulted-on-the-job-study/

Recuero, R. (2024). The platformization of violence: Toward a concept of discursive toxicity on social media. Social Media + Society, 10(1).

Woodcock, J., & Graham, M. (2020). The gig economy. Polity.
Törnberg, P. (2023). How platforms govern: Social regulation in digital capitalism. Big Data & Society, 10(1), 20539517231153808.

# Track 3 - Marketing Communication & Branding

## Brand Identification and Supportive Behaviors: a comparison between students and employees

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### Abstract

In a context of intensifying competition in higher education, universities are increasingly leveraging branding strategies to engage stakeholders and attract funds to support their institutional initiatives. While branding literature has extensively explored brand identification and advocacy in business settings, there has been only limited research on how these mechanisms operate within universities, particularly in relation to financial support behaviours among different stakeholder groups. The present study addresses this gap by investigating how brand pride and brand knowledge influence brand identification, and how this, in turn, affects advocacy behaviours and funding intentions, specifically through crowdfunding, among students and employees. Both of these stakeholder groups are immersed in the university brand environment on a daily basis, but, unlike most prior studies that focus on either alumni or students alone, this research offers a comparative perspective, highlighting significant differences in the relational dynamics of brand identification and advocacy across these groups. Using data collected from an Italian university's pioneering initiatives on research crowdfunding, this study applies a multi-group structural equation model to test the proposed relationships. The findings show that brand pride is a consistent driver of brand identification for both students and employees, which is driven, in turn, by brand knowledge, but only for employees Furthermore, the study also highlights the mediating role of advocacy behaviours in the relationship between brand identification and funding intentions, and demonstrates that only employees convert one of these behaviours into tangible financial support intentions. The findings contribute to the stream of higher education branding literature by clarifying brand identification mechanisms and offering managerial insights for tailoring stakeholder-specific communication and engagement strategies.

*Keywords: brand identification; brand advocacy; higher education marketing; brand management; crowdfunding*

# A Deep Dive into Consumer-Influencer Parasocial Relationships: An Analysis of Dynamic Trajectories

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## Abstract

This article presents a study designed to investigate and map dynamic trajectories of consumer-influencer relationships. Consumers described experiences related to the initiation and evolution of their relationships with their most loved influencers and most hated influencers. Participants, pertaining to different generations, were asked to graphically trace the course of their feelings toward their currently most loved influencers and to recall the events that influenced those feelings. Similarly, participants were asked to do the same for the most hated influencers. The path towards love followed five distinct trajectories. The path towards influencer hate followed three distinct paths. The formative experiences shaping these trajectories often include personal individual experiences that cannot be controlled by marketers.

*Keywords: Consumer-influencer relationships; parasocial relationships; consumer-influencer trajectories; Formative experiences; In-depth interviews*

With the growth of social media in the marketing landscape, influencer marketing has achieved a prominent role in social media strategies (Ye et al. 2021). The global influencer marketing industry is expected to achieve the value of $ 480 billion by 2027 (Rossum, 2024). As companies' interest in influencers has grown over the years, academic research on the topic has expanded significantly since 2017. So far, this research has focused on several broad themes: influencer characteristics (e.g., demographics, expertise, and personal branding); content characteristics (e.g., authenticity, narrative styles, and presentation); audience characteristics (e.g., audience size, engagement levels, and stakeholder perspectives); product characteristics (e.g., influencers' expertise and involvement with specific products); and regulatory characteristics (e.g., ethical concerns and disclosure requirements) (Spörl-Wang et al., 2025). More recent studies have noted that younger generations are increasingly aware of the commercial nature of influencer-brand relationships. They often perceive influencers as "mannequins" or lifeless figures whose sole purpose is to entertain and grab attention, without real human qualities or credibility as advertising messengers (Vizcaíno-Verdú et al., 2025). Besides, most studies examine how influencers nurture parasocial relationships for commercial gain. However, they typically adopt a cross-sectional perspective, overlooking how these relationships evolve over time. In other words, prior research lacks a dynamic view of consumer-influencer relationships (Tyrväinen & Karjaluoto, 2025), which is essential for identifying signals that enhance influencer marketing effectiveness or for recognizing those that lead to disengagement or influencer avoidance. Adopting a dynamic perspective on the development of these relationships can reveal critical factors that influence their strength, either positively or negatively, over time. This study covers this gap by tracing the dynamics in the trajectories of consumer-influencer

relationships and identifying formative experiences that shape those trajectories. This analysis of the parasocial dynamics in consumer–influencer relationships is crucial for both brands and influencers, as it helps identify signals that may weaken these relationships with consumers and followers (Ekinci et al., 2025). Additionally, the in-depth dynamic analysis of relationship trajectories offers insights into salient moments that warrant further attention and interpretation within the context of parasocial relationships (Tyrväinen & Karjaluoto, 2025). The study adopts a qualitative approach through in-depth interviews following a method employed in brand research to analyze the trajectories of brand love and brand hate (Lagner et al., 2016; Zarantonello et al., 2018). Theoretically, this study responds to recent calls for longitudinal studies on the consumer-influencer relationships by adopting a dynamic perspective on consumer-influencer parasocial relationships (Tyrväinen & Karjaluoto, 2025). It also contributes to the growing body of research on the dark side of influencers (Ekinci et al., 2025), exploring those experiences that lead to extreme negative or favorable feelings towards influencers that may lead to consumers' deceptive behaviors or adverse effects on consumer well-being or self-esteem. From a managerial perspective, this research provides influencers and brands with practical guidance on identifying the signals that strengthen or weaken their relationships with followers.

## References


Ekinci, Y., Dam, S., & Buckle, G. (2025). The Dark Side of Social Media Influencers: A Research Agenda for Analysing Deceptive Practices and Regulatory Challenges. Psychology & Marketing.

Langner, T., Bruns, D., Fischer, A., & Rossiter, J. R. (2016). Falling in love with brands: a dynamic analysis of the trajectories of brand love. Marketing letters, 27, 15-26.

Rossum, van Daan. (2024). Who Wants A Slice Of The $480 Billion Creator Economy Pie? https://www.flexos.work/learn/who-wants-a-slice-of-the-480-billion-creator-economy-pie.

Spörl-Wang, K., Krause, F., & Henkel, S. (2025). Predictors of social media influencer marketing effectiveness: A comprehensive literature review and meta-analysis. Journal of Business Research, 186, 114991.

Tyrväinen, O., & Karjaluoto, H. (2025). Unrequited love? A mixed-methods study of parasocial engagement with social media influencers. International Journal of Information Management, 80, 102845.

Vizcaíno-Verdú, A., Feijoo, B., & Sádaba, C. (2025). 'Influencers are just mannequins': Decoding teenagers' perception about advertising content creators. European Journal of Communication, 40(1), 3-22.

Ye, G., Hudders, L., De Jans, S., & De Veirman, M. (2021). The value of influencer marketing for business: A bibliometric analysis and managerial implications. Journal of advertising, 50(2), 160-178.

Zarantonello, L., Romani, S., Grappi, S., & Fetscherin, M. (2018). Trajectories of brand hate. Journal of Brand Management, 25, 549-560.

# From Awareness to Action: Strategic Communication for Customer Engagement in Prevention

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## Abstract

This work-in-progress study explores the role of prevention within the health customer journey, with a particular focus on the effectiveness of engagement strategies in promoting preventive health behaviors. Specifically, it investigates how health communication strategies and associated factors positively or negatively influence individuals' willingness and ability to adopt preventive practices. Employing a mixed-method approach—combining qualitative focus group analysis with experimental designs—the study aims to generate actionable insights for healthcare professionals, policymakers, and communication strategists. The ultimate goal is to provide evidence-based recommendations to enhance patient engagement in prevention and to inform the development of personalized, effective, and culturally sensitive health communication interventions.

*Key words: health marketing; customer journey in healthcare; health communication strategies; preventive health behaviors.*

### 1.Introduction

Providing individuals with health-related information and support can foster behavior change, sustain healthy practices, and enhance both psychological and physiological outcomes. This, in turn, contributes to the prevention and reduction of chronic diseases, mortality, and overall disease burden. In this context, health communication plays a crucial role. However, limited evidence exists on the specific characteristics of effective health messages targeting preventive behaviors, and on the factors that shape public responses to such communication.

Despite increased investments in preventive care—including health promotion and communication, which rose from 2.9% in 2019 to 5.5% in 2022 in Europe (Eurostat, 2025)—data continue to show insufficient public engagement in preventive behaviors (ONS, 2023).

This study explores the role of prevention within the patient journey, focusing on the effectiveness of engagement strategies in fostering preventive actions. Acknowledging the multidimensional nature of patient engagement, the research seeks to understand why some strategies succeed while others fall short in encouraging active participation. By adopting a multimethod approach (focus groups and experimental studies), it investigates the health communication approaches most conducive to engagement and examines how individual-level factors—such as social identity, motivation, and risk perception—affect individuals' capacity and willingness to engage in preventive behaviors.

The study is guided by the following research questions:

RQ1. Which health communication strategies are most effective in promoting patient engagement in prevention?

RQ2. How do individual and social factors influence participation in preventive behaviors?

RQ3. What barriers hinder patient engagement, and how can communication strategies overcome them?

## 2. Theoretical framework

### 2.1 Customer journey in healthcare

In the digital age, the customer journey has evolved into a complex, multi-channel process characterized by non-linear interactions across various touchpoints (Grewal & Roggeveen, 2020). Conceptualized as a dynamic and iterative experience, the customer journey spans the entire purchasing cycle, incorporating behavioral responses, emotional engagement, co-creation, and technological influence (Lemon & Verhoef, 2016; Tueanrat, Papagiannidis & Alamanos, 2020). From a service design perspective, it integrates both procedural and experiential dimensions, offering valuable insights into service delivery and user experience (Følstad & Kvale, 2017).

Within healthcare, this concept is adapted as the patient journey, which encompasses the continuum of care and emphasizes patients' emotional, physical, and functional experiences during service encounters, particularly across transitions in care (Ponsignon, Smart & Phillips, 2018; Beleffi et al., 2021; McCarthy et al., 2016). A dynamic understanding of this journey allows for a more comprehensive assessment of the patient experience (Saragosa et al., 2023). Patient experience is a critical component of both preventive and therapeutic healthcare, directly influencing health outcomes (Ryan et al., 2014). Central to this is patient involvement in decision-making, which enhances satisfaction and care quality, reflecting principles of patient-centered care and empowerment (Birkeland et al., 2022; Castro et al., 2016). Empowerment involves fostering patients' understanding, knowledge, and participation within culturally responsive contexts (WHO, 2009), forming the foundation for meaningful engagement (Tambuyzer & Van Audenhove, 2013; Hickmann et al., 2022).

Effective engagement requires personalization, accessibility, commitment, and collaborative relationships between patients and providers (Higgins et al., 2017; Carman et al., 2013). In preventive contexts, engagement is influenced by individual characteristics, health conditions, and professional competencies (WHO, 2016). Communication plays a pivotal role, particularly for patients with varying levels of health literacy (Krist et al., 2017; Mazor et al., 2016). Promoting health literacy through education and supportive environments enhances patient autonomy and aligns with patient-centered care principles (Barello et al., 2020). Ultimately, fostering a culture of proactive, two-way communication is essential for advancing health promotion and prevention strategies (Luecking et al., 2020).

### 2.2 Health communication

Health communication plays a vital role in public health, as the rapid dissemination of information is essential for reaching broad audiences (Ceretti et al., 2022). Traditional one-size-fits-all strategies have proven limited, prompting a shift toward audience and message tailoring to improve outcomes. Younger populations' preference for digital tools—such as patient portals, mobile apps, and email—supports the effectiveness of online interventions for education and prevention (Clarke et al., 2020; Lana et al., 2014).

To enhance these strategies, behavioral theories offer key insights. Self-Determination Theory (SDT) emphasizes autonomy, competence, and relatedness as drivers of motivation (Ryan & Deci, 2000), while Social Cognitive Theory (SCT) focuses on observational learning and self-efficacy (Bandura, 1986, 2004). SDT-based interventions have improved patient motivation (Ntoumanis et al., 2021), and SCT highlights self-efficacy as critical to behavior change (Dishman et al., 2014).

Message framing, risk perception, and social norms further influence preventive behaviors. Gain-framed messages are particularly effective (Gallagher & Updegraff, 2012; Rothman et al., 2006), as are communications that address personal risk perceptions (de Bruin & Bennett, 2020) and include personalized assessments (Edwards et al., 2000). Social norms—both descriptive (what others do) and injunctive (what others approve)—shape behaviors across contexts such as adolescent health, social distancing, and mental health stigma (Martínez et al., 2021; Dixon et al., 2015; Silk et al., 2017; Malher et al., 2008).

Effective campaigns require understanding decision-making processes, identifying barriers, and tailoring messages accordingly (Snyder, 2007). Health literacy remains essential, especially in primary prevention (Berkman et al., 2010), and family communication plays a key role in hereditary conditions like melanoma (Wu et al., 2023; Gaber et al., 2013). Engaging individuals in message creation enhances relevance and impact. Involving young people fosters creativity, peer influence, and trust—key to effective and authentic communication (Schillinger et al., 2017; Zhu et al., 2018). This participatory approach supports a culture of shared responsibility in health prevention.

## 3. Methodology

This study adopts a mixed-method design (Davis et al., 2011), beginning with a focus group (Study 1) to inform two subsequent experimental studies (Studies 2 and 3). The aim of Study 1 is to explore effective health communication strategies for fostering patient engagement in preventive behaviors. Due to limited prior research, a qualitative approach was employed using the focus group method (Calder, 1977; Stewart & Shamdasani, 1990; Fern & Fern, 2001), which allows for rich, interactive data collection (Belzile & Öberg, 2012) and yields more nuanced insights than one-on-one interviews (Krueger, 2014).

The focus group, conducted in Italy in May 2025, involved twelve participants (10 women, 2 men; Mage = 24) and followed Fern and Fern's (2001) guidelines, including moderation by an experienced facilitator and a structured discussion protocol (Bell, Bryman & Harley, 2018). The 2-hour session began with general attitudes toward preventive behaviors and moved to communicative factors that support or hinder engagement. Participants received a clear explanation of the session's goals and procedures in advance. The discussion was audio-recorded, transcribed (Bazeley & Jackson, 2013), and independently coded by two researchers to ensure validity (Weber, 1990). Interrater reliability, assessed with Cohen's kappa (.83), confirmed strong agreement (Cohen, 1960). Thematic analysis followed Brocato, Voorhees, and Baker's (2012) categorization process. Open coding led to the development and refinement of a coding framework, allowing for increasing abstraction and consensus in interpretation.

Findings from Study 1 will inform the design of Studies 2 and 3, which will experimentally test the effectiveness of selected communication strategies, considering boundary conditions (e.g., health literacy, motivation, risk perception) and underlying mechanisms (e.g., perceived inefficacy of preventive measures).

## 4. Preliminary results

The qualitative findings reveal that preventive health behaviors are perceived as a sensitive and multifaceted issue, influenced by both facilitating and inhibiting factors.

Participants generally associated prevention with everyday choices—such as healthy eating, regular physical activity, and avoiding risky habits. However, several participants described prevention as a reactive rather than a proactive behavior, activated primarily in response to emerging symptoms or specific concerns. As one participant noted: "I don't actively research every type of prevention, but if I start having doubts about a potential illness or problem, then I look into that specific issue. I don't seek out information about everything on a daily basis."

The findings also identified a number of motivational and inhibitory factors shaping engagement in preventive behaviors. Key drivers included family upbringing, personal experiences, and health-related anxiety. Social influences—particularly from family members and peers—emerged as significant in encouraging or discouraging preventive actions. Several participants reported: "Partly because of the way I was raised—my parents always passed on the message of prevention and being careful—and partly because of my own will and anxiety, the fear of having something."; "In my family there's a lot of attention on this aspect. Since I'm also a blood donor, I have the results sent directly to my doctor; so I check my values quite regularly."; "Other important figures have been long-time friends, who have engaged in conversations about medical topics. They also care a lot about it, and since we've known each other for so long, they encourage me to do prevention and to pay attention. I have to say, they're a good influence."

Conversely, key barriers to engagement included systemic constraints—such as limited access to general practitioners and long waiting times—as well as economic burdens related to private screenings. Psychological resistance, particularly fear of discovering an illness, was another major inhibitor. Additionally, participants referenced gendered cultural norms, especially among men, that discouraged open discussion of health concerns or engagement in preventive behaviors, particularly in areas such as sexual health.

Many participants highlighted a lack of trust in healthcare providers, especially general practitioners, as a barrier to proactive health management: "Unfortunately, in Italy, the quality of general practitioners—who should be the first point of reference to guide you toward more in-depth exams—is lacking. So either you take care of things on your own, or you have to wait a long time to be seen, or you just leave it up to chance."

Fear was also frequently cited as a deterrent to engaging in preventive behaviors: "I didn't have anxiety about getting tests done, but rather a fear of discovering something, and that fear was stronger than the other side—it kept me from wanting to get checked. It was a fear I didn't even admit to myself, and I went through it very badly."

Finally, participants offered insights into the features of effective prevention campaigns. Several emphasized the importance of using real-life stories from relatable peers to foster identification: "I would focus on leveraging young people for communication efforts, because we feel closer to them." "If I see a young person getting checked, it motivates me more because I feel like we might have similar needs."

## 5. Conclusions and limitations

The originality of this study lies in its contribution to the ongoing debate regarding the effectiveness of health communication strategies in promoting preventive health behaviors. By examining the communication factors that influence the success or failure of various approaches—alongside individual-level variables such as perceived fear, motivation, and risk perception—this research offers nuanced insights into how patient engagement in preventive efforts can be maximized.

From a managerial perspective, the study aims to provide healthcare professionals, policymakers, and communication strategists with evidence-based recommendations for optimizing communication strategies to foster greater patient involvement in preventive care. By generating actionable insights, this research supports the development of more effective, personalized, and culturally sensitive health interventions. Ultimately, it seeks to empower individuals, promote proactive health management, and improve public health outcomes.

As a work-in-progress, this study is subject to several limitations. The exploratory nature of the research constrains the generalizability of the findings. In particular, the validity and reliability of the qualitative data may be affected by the sample size and demographic characteristics of the focus group participants. Furthermore, the potential for social desirability bias cannot be excluded, as participants may have

expressed views perceived as socially acceptable rather than their genuine opinions. To address these limitations and enhance the robustness of the findings, at least one additional focus group will be conducted. This step will serve to validate and enrich the preliminary insights, thereby strengthening the empirical foundation for subsequent experimental phases of the research.

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**References available upon request.**

# Track 4 - Business-to-Business Marketing

## AI-Driven Value Creation in B2B Service Firms: An Exploratory Cross-Sectoral Study

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### Abstract

In recent years, artificial intelligence (AI) has emerged as a technological enabler and strategic asset capable of transforming internal and external processes and redefining how service organizations interact with their stakeholders and in their networks. This study investigates how AI contributes to the value creation process in business-to-business (B2B) service. Through a cross-sectoral exploratory study, until now 8 semi-structured interviews have been conducted with key informants operating in B2B service firms. The preliminary findings of this ongoing study suggest that AI plays a key role in three major areas of value creation, i.e., (1) effectively positioning the brand of service firms, by enabling advanced analyses of the competitive environment and supporting the development of targeted branding strategies; (2) optimizing resource mobilization, by improving the allocation and utilization of both financial and human capital through predictive analytics; and (3) strengthening business relationships with key stakeholders, by facilitating more personalized and responsive interactions which enhance trust, loyalty, and long-term engagement. The results of this study contribute to the academic debate on the role of AI in value creation process of B2B service firms and present several managerial implications for professionals and policy makers operating in the service ecosystem.

*Keywords: Artificial intelligence, value creation, B2B service firms, business relationships.*

# La donazione di sangue e le motivazioni alla base del dono e dell'attività di volontariato

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## Abstract

Questo articolo considera l'importanza assoluta che la donazione di sangue ha per il Servizio Sanitario Nazionale e come risulta essenziale raggiungere e mantenere l'autosufficienza del sistema trasfusionale italiano, intesa come la capacit‡ di garantire a tutti i pazienti che ne hanno bisogno quantit‡ di sangue e plasma della massima qualit‡ e sicurezza.

La nostra ricerca prende in esame il tema del dono e delle sue caratteristiche (completamente gratuito, anonimo, senza aspettativa di scambio e con il solo scopo di raggiungere il bene altrui). Abbiamo considerato lavori classici e lavori pi˘ recenti, ma ci siamo soffermati soprattutto sui contributi di Titmuss e Mauss, che fanno riferimento al tema della donazione di sangue, Titmuss, e al dono in generale, Mauss. Per entrambi gli autori, il dono comprende l'atto di donare e di ricevere, ma differiscono per l'atto di ricambiare, presente nell'analisi di Mass ma assente nel lavoro di Titmuss.

Malgrado l'autosufficienza, i centri trasfusionali attribuiscono sempre maggiore importanza alle azioni legate al marketing sociale, dal momento che in Italia abbiamo una bassa percentuale di donatori rispetto alle persone potenzialmente in grado di donare sangue. Di questi donatori, occorre conoscere le motivazioni, che ci portano a distinguere i volontari che durano nel tempo da quelli che invece dopo poco abbandonano l'attività di donazione.

Nel 2024, in Italia abbiamo avuto 1,67 milioni di donatori, di cui 1,4 milioni sono stati donatori periodici, donatori cioË su cui il sistema trasfusionale italiano puÚ fare un certo affidamento; 267mila sono stati donatori alla prima donazione e di questi 267mila, 75mila hanno avuto un'età compresa fra i 18 e i 25 anni; le donazioni sono state superiori ai 3 milioni, con un incremento dell'1,1% rispetto al 2023. Nella raccolta di plasma, la parte liquida del sangue che serve soprattutto per produrre medicinali plasmaderivati, come ad esempio l'albumina e le immunoglobuline, l'Italia non raggiunge l'autosufficienza e quindi dipende dall'estero.

In Italia il numero di donatori Ë pari al 6% della popolazione che per legge puÚ donare (le persone che per legge possono donare sangue sono quelle che vanno dai 18 ai 65 anni per la prima donazione, mentre i donatori periodici possono continuare a donare sangue fino a 70 anni). Fra una donazione e l'altra di sangue intero (450 ml), devono passare 90 giorni per gli uomini e per le donne in menopausa (categorie che quindi possono arrivare ad un massimo di 4 donazioni l'anno) e 180 giorni per le donne in et‡ fertile (che invece possono arrivare ad un massimo di 2 donazioni l'anno). Le associazioni di volontariato raccolgono tutte le informazioni sui potenziali donatori e procedono alla chiamata alla donazione, importante soprattutto per coinvolgere il donatore e per cercare di fidelizzarlo.

I non donatori sono rappresentati dai pigri, categoria nella quale rientrano anche le persone che manifestano fobie nei confronti del prelievo di sangue, dagli scettici, coloro che cioË manifestano un sentimento di pericolo e quindi di rifiuto verso la donazione, e dagli anticonformisti o minoritari, che

vedono come una discriminazione l'esclusione di alcune categorie a rischio. Nei confronti di queste categorie di non donatori si attuano strategie di convincimento, che consistono nel cercare di dare maggiore importanza alla valenza pubblica della donazione, per i pigri, nel cercare di migliorare la parte estetica del prelievo, per gli scettici, e nel modificare i questionari in modo da apparire neutrali soprattutto nei confronti di alcuni orientamenti sessuali, per gli anticonformisti o minoritari.

L'originalità della nostra ricerca sta nell'aver parlato di un tema, la donazione di sangue, poco dibattutto ma fondamentale per il funzionamento di un qualsiasi sistema sanitario. Alla donazione di sangue non viene data la rilevanza che merita, almeno fino a quando anche noi non siamo anche noi costretti a dover beneficiare della raccolta effettuata.

*Parole chiave: donazione di sangue, autosufficienza, dono, motivazioni, donatori, volontariato, non donatori.*

# Track 5 - Retailing, Sales, & Trade Marketing

# Does selling orientation shape customer satisfaction in B2C door-to-door food retailing? The mediating role of customer commitment

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## Abstract

In B2C door-to-door (D2D) selling, personal interaction between sales representatives and customers crucially shapes the overall experience. This study examines how two prominent selling behaviors (consultative vs relational) impact customer satisfaction, considering the mediating role of customer commitment to the salesperson. Building on Construal-Level Theory (CLT), it explores how customer-seller psychological distance affects satisfaction. Findings indicate that consultative selling, emphasizing value and expertise, has a positive direct effect on customer satisfaction. Conversely, relational selling, based on trust and rapport, positively impacts satisfaction only when this relationship is mediated by customer commitment. Results underscore the crucial role of customer commitment when considering different selling orientations in seller-customer relationships within D2D frozen food retail contexts.

*Keywords: personal selling orientations; customer satisfaction; customer commitment; door-to-door selling; Construal-Level Theory*

## 1.Motivation and background

Despite growing online shopping trends, direct selling maintains significant relevance in Europe, with a market size exceeding 40 billion euros in 2024 and the D2D frozen food retail market accounting for 2 billion euros, particularly appreciated by elderly populations and families prioritizing reliable service and quality delivery. In D2D selling, sales forces play a pivotal role in customer satisfaction due to the centrality of personal interactions between representatives and customers. The type of selling orientation exhibited by salespeople—whether consultative or relational—can profoundly impact customer perceptions, satisfaction, and future purchase decisions. Academic literature on selling orientation shows inconsistencies, with studies demonstrating negative, positive, or no significant effects on sales performance. This inconsistency motivates our research question: "How do personal selling orientations impact customer satisfaction in D2D sales?"

Drawing from the social dimension of Construal Level Theory (Trope & Liberman, 2010), this study explores consultative selling behavior —based on higher construal level— versus relational selling —based on lower construal level— in shaping customer satisfaction. The study considers customer commitment with the salesperson as a mediator, offering empirical insights from B2C door-to-door sales contexts.

## 2. Key methods or approach

The research context is a leading German company specializing in D2D sales and home delivery of premium frozen foods through van-based direct selling. Independent sales representatives personally visit customers every two weeks, directly managing customer relationships. A structured survey was used to collect the data offline (April-July 2023) and online (November 2023-February 2024). The final sample consists of 205 respondents (69.3% women), surveyed across different demographics including age cohorts (56.1% over 65), education levels (46.3% high school diploma), and income levels (67.4% <28k€/year). Existing scales from marketing and sales literature were adopted to assess sales representative consultative and relational selling behavior (IVs), customer satisfaction (DV), and customer commitment to the salesperson (mediator). Data analysis employed PROCESS model 4 (Hayes, 2017) on SPSS to test hypothesized relationships between selling behaviors and customer satisfaction, examining the mediating effect of customer commitment.

## 3. Main results

Two distinct models revealed different patterns of relationships. Model 1 (IV=consultative selling) demonstrated that consultative selling behavior positively influences customer satisfaction ($R^2$ = .55, F(112,58) = .53, p = .000), supporting our primary hypothesis. Furthermore, the indirect effect through customer commitment was also significant (= 0.18, BootSE = 0.05, 95% bootstrap CI [0.09, 0.30]) thus indicating a positive partial mediation effect. Model 2 revealed that relational selling behavior positively influenced customer commitment ($R^2$ = .14, F(28,53) = .022, p = .000), and customer commitment positively influenced satisfaction ($R^2$ = .46, F(72,83) = .053, p = .000). but no significant direct effect of the predictor was found on customer satisfaction. Hence, customer commitment fully mediated the relationship between relational selling behavior and customer satisfaction. These findings indicate that consultative selling provides direct satisfaction benefits while relational selling requires customer commitment as a necessary pathway to satisfaction, demonstrating distinct mechanisms through which different selling orientations operate in D2D contexts.

## 4. Brief discussion or implications

Our findings contribute to research on selling orientation effects on customer satisfaction, offering specific insights from D2D food retailing. Following CLT, when customer-salesperson relationships are driven by institutional rules (consultative selling; high-level construal), consumers tend toward higher satisfaction with weaker customer commitment mediation. Conversely, when relationships are driven by social rules (relational selling; low-level construal), customer commitment becomes crucial, fully mediating satisfaction effects. From managerial perspectives, results suggest training and incentivizing salespeople toward consultative selling may yield greater customer satisfaction returns compared to relational selling alone. Adopting relational techniques might be risky, particularly in such contexts with high salesperson turnover and low customer commitment levels, as these may not suffice to drive satisfaction. We recommend B2C firms adopting direct selling models invest in training and incentivizing salesforces toward consultative approaches. Similarly, we advise salespeople, especially early in careers, to invest in consultative orientations rather than focusing solely on relational aspects. These findings differentiate pathways through which selling behaviors affect customer satisfaction via customer commitment, contributing to personal selling and relationship marketing literature in B2C contexts.

**References are available upon request**

# From Play to Purchase: Extending the Retail Mix into Free-to-Play Gaming Ecosystems

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## Abstract

As gaming environments evolve into immersive, participatory ecosystems, Free-to Play (F2P) platforms have emerged as hybrid commercial spaces where entertainment, identity construction, and retail dynamics converge (Statista, 2024; Welden et al., 2025). This study investigates how the traditional retail mix can be extended into F2P ecosystems through the introduction of the Virtual Retail Mix model. Drawing on semi structured interviews with expert gamers and immersive netnography (Kozinets, 2022), the research explores how the six levers of the retail mix (Levy & Grewal, 2023; Blut et al., 2018) - product, price, place, promotion, people, and presentation - are reinterpreted in virtual game environments. Findings show that symbolic product assortments and scarcity tactics, gamified pricing models, experiential and diegetic distribution, community-driven promotion, and synesthetic presentation design shape value creation and consumer engagement within F2P contexts. The Virtual Retail Mix highlights how transactional and experiential logics are blended, redefining the consumer role from buyer to player and co-creator. This model contributes to retail theory by framing immersive consumption as a strategic interface between commerce and play, while offering practical guidance for developers and brands in designing sustainable monetization strategies. Limitations include the exclusive focus on consumer perspectives, suggesting future research should integrate managerial insights. Overall, the study advances understanding of digital-native retail strategies and the convergence of retail and gaming.

*Keywords: Free-to-Play (F2P) Games; In-Game Retailing; Virtual Retail Mix; Gamification; Digital Commerce, Freemium*

# Track 6 - Tourism, Culture & Arts Marketing

# Memorable for the wrong reasons: a text mining analysis of negative memorable guest experiences in the hospitality sector

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## Abstract

While the Memorable Tourism Experience paradigm has traditionally emphasized positive episodes, this study introduces the concept of Negative Memorable Guest Experience (NMGE) to address a critical gap in tourism literature. Through text mining analysis of 1.2 million Booking.com reviews from Mediterranean destinations using LIWC-22 and Leximancer, we compare NMGE with ordinary negative reviews to identify distinctive characteristics. NMGE reviews are substantially longer (119 vs. 38 words) and demonstrate significantly higher analytical thinking, authenticity, and authoritative tone. They show lower ratings and garner more helpful votes, confirming greater influence on booking decisions. Emotional analysis reveals predominant sadness, suggesting deeper emotional wounds manifesting as reflective disappointment. Thematic analysis identifies room conditions and hotel operations as dominant concerns, followed by staff rudeness and cleanliness failures as primary memorability drivers. These service failures violate core hospitality expectations, triggering intense cognitive-emotional processing consistent with negativity bias theory. The study extends the MTE paradigm beyond its positive focus, demonstrating that memorable negative experiences undergo distinctive narrative processing characterized by analytical depth and emotional complexity. For practitioners, findings underscore that preventing memorable negative experiences requires prioritizing fundamental service quality over luxury amenities.

*Keywords: memorable tourism experience, negative memorable guest experience, text mining, hospitality management, Mediterranean tourism*

## 1.Motivation and Theoretical Background

The Memorable Tourism Experience paradigm has become central to tourism research, emphasizing how emotions shape memory formation and tourist behaviors (Tung & Ritchie, 2011). However, this framework exhibits systematic bias toward positive experiences, with measurement scales focused exclusively on pleasurable dimensions (Kim et al., 2012). This orientation overlooks the powerful role of negative experiences, despite cognitive psychology evidence that negative events achieve greater memorability through emotional intensity, a phenomenon known as negativity bias (Baumeister et al., 2001; Kensinger, 2007). Industry data reveals 94% of consumers avoid businesses after reading negative reviews, underscoring the disproportionate impact of negative experiences. While recent work explores

negative experiences in peer-to-peer hospitality (Sthapit & Björk, 2022), mechanisms through which negative experiences achieve memorability in traditional hospitality remain underexplored. This study introduces Negative Memorable Guest Experience (NMGE), examining how service failures transform into lasting memories shared through digital platforms.

## 2. Methodological Approach

We analyzed 1.2 million English-language Booking.com reviews across Barcelona, Venice, Verona, and Salerno, addressing the geographical bias in MTE research dominated by Asian and North American contexts (Hosseini et al., 2023). Following established protocols (Han & Anderson, 2021), negative experiences were operationalized through reviews rating ≤5 on a ten-point scale. The NMGE subset was identified using keywords from MTE literature (Hosany et al., 2022; Sthapit, 2018), yielding 142 NMGE reviews matched with a same size subset of ordinary negative reviews. Analysis employed LIWC-22 (Boyd et al., 2022) examining analytical thinking, clout, authenticity, and emotional tone, plus specific emotion categories. Leximancer facilitated thematic analysis through co-occurrence mapping. ANOVA procedures tested for significant differences between review types.

## 3. Main Results

NMGE reviews demonstrated significantly higher analytical thinking, clout, and authenticity scores (all $p<.001$), indicating structured, confident narratives. Most strikingly, they result three times longer (119 vs. 38 words) than ordinary ones. While overall negative language showed no difference, sadness-related language appeared more prominently in NMGE reviews (0.40 vs. 0.17; $p=.025$), suggesting reflective disappointment rather than anger or anxiety. NMGE reviews received lower ratings (3.04 vs. 3.70; $p<.001$) but more helpful votes (0.75 vs. 0.27; $p=.003$), indicating greater perceived value by platform members. Thematic analysis identified seven themes: room conditions (254 occurrences) and hotel operations (253) dominated, followed by staff rudeness (65), explicit memory references, location issues, cleanliness failures, and monetary disputes. Theme interconnection suggests memorable negative experiences involve multiple cascading failures rather than isolated incidents.

## 4. Discussion and Implications

These findings extend negativity bias theory (Baumeister et al., 2001) to digital tourism, demonstrating that memorable negative experiences undergo distinctive narrative processing. The prevalence of sadness over anger and anxiety reveals nuanced emotional landscapes consistent with emotional memory research (Kensinger & Schacter, 2006). Theoretically, the study advances MTE beyond its positive bias, revealing negative experiences achieve memorability through distinct psychological pathways. The dominance of tangible service failures and staff behavior confirm these breakdowns violate hospitality expectations profoundly, triggering intense cognitive-emotional processing (Davidow, 2003). Practically, NMGE reviews' greater length, analytical depth, their authentic and authoritative style and perceived helpfulness indicate a strong influence on booking decisions. Identification of specific failure points enables targeted prevention strategies. Investments in fundamental service quality, clean rooms, professional staff, may yield greater returns than luxury amenities in preventing damaging word-of-mouth.

As hospitality operates increasingly within digital ecosystems where experiences become public narratives, understanding and preventing NMGE formation becomes essential for maintaining competitiveness in contemporary tourism markets.

**References available upon request**

# 'Don't Take That Photo Yet': How Instagram Reels Turn Urban Spots into Tourist Stages

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*Keywords: Instagram Reels, Tourism, Symbolic Appropriation, Digital Micromobilities*

**Introduction.** Social media have changed how people choose and experience tourism. Instagram, particularly through Reels, rapidly circulates visual content that turns ordinary places into sought-after destinations (Sharma & Arora, 2024). This popularization alters dynamics, generating tensions between residents and tourists and raising debates on belonging and the limits of public use (Cohen & Cohen, 2019). Despite studies on tourism and social media (Gretzel et al., 2015; Xiang & Gretzel, 2010), there is still a gap in understanding how viral short videos transform urban territories. This study asks: how do Reels, by promoting ordinary locations as "hidden," trigger symbolic and practical transformations in perception and appropriation of these spaces? **Brief Literature Review.** Social media reshape the tourism industry, influencing selection, planning, and experience (Xiang & Gretzel, 2010). Urban space is a social product shaped through cultural practices and power relations (Gottdiener et al., 2019). Urry's tourist gaze (2002) helps explain how images mediate experience, now amplified by influencers and virality (Nixon, 2022). Influencer-generated content builds idealized images that create expectation–experience gaps and lead to discomfort (Huang et al., 2025; Pan et al., 2014; Arefieva et al., 2021; Egger et al., 2022). Soares (2025) identified this contrast across different Reel categories. **Methodology.** Netnography (Kozinets, 2020) was used to analyze Reels describing hidden spots around the Colosseum. The sample included 169 videos from accounts with more than 10,000 followers and high engagement (Campbell & Farrell, 2020) and over 5,000 comments. Data collection took place in July 2024 and was complemented by in loco observation in January 2025 at the two most featured locations. An immersive journal with 89 entries and photographs supported interpretation of digital representation versus spatial reality. **Results.** Secret narratives frame ordinary space as exclusive and desirable, but comments reveal resistance and contestation, showing the fragility of symbolic capital in the digital age. Reels transform space into a stage for tourist performance, visible in the offer of professional photography services and accounts of its use as a recurring photo set. Viralization generates overcrowding, obstructions, and tension between tourists and residents, fragmenting urban territory into micro microterritories. Comments also reveal insecurity, theft, environmental degradation, and inappropriate behavior, exposing social complexity. Photographers and tour guides act as agents of symbolic commodification, professionalizing the experience. Emotional ambivalence emerges, with users oscillating between gratitude and fear of overexposure, attempting to control virality by asking to delete videos. **Conclusion.** Instagram Reels act as cultural agents transforming spaces into performative microterritories and exposing tensions between discovery and saturation. Viralization reconfigures the visual and emotional geography of space, pressuring everyday uses (Urry, 2002; Gottdiener et al., 2019; Gretzel et al., 2015). Netnography revealed hidden social layers such as insecurity, damage, and conflict. The study highlights ethical challenges for content creators and urban managers and calls for future research on emotional governance, influencer roles, and strategies to mitigate viral tourism impacts.

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Società Italiana Marketing. ISBN 978-88-947829-3-6

## References


Arefieva, V., Egger, R., & Yu, J. (2021). A machine learning approach to cluster destination image on Instagram. Tourism Management, 85, 104318.

Campbell, C., & Farrell, J. R. (2020). More than meets the eye: The functional components underlying influencer marketing. Business horizons, 63(4), 469–479. Cohen, S. A., & Cohen, E. (2019). New directions in the sociology of tourism. Current Issues in Tourism, 22(2), 153-172.

Egger, R., Gumus, O., Kaiumova, E., Mükisch, R., & Surkic, V. (2022). Destination image of DMO and UGC on Instagram: A machine-learning approach. In Information and Communication Technologies in Tourism 2022: Proceedings of the ENTER 2022 eTourism Conference, January 11–14, 2022 (pp. 343-355). Springer International Publishing.

Gottdiener, M., Hohle, R., & King, C. (2019). The new urban sociology. Routledge. Gretzel, U., Sigala, M., Xiang, Z., & Koo, C. (2015). Smart tourism: foundations and developments. Electronic markets, 25, 179-188.

Huang, Y., Qian, L., & Tu, H. (2025). When social media exposure backfires on travel: The role of social media–induced travel anxiety. Tourism Management, 110, 105163. Kozinets, R. (2020). Netnography—The Essential Guide to Qualitative Social Media Research. 3rd edn. Sage, London.

Nixon, L. (2022). Do DMOs promote the right aspects of the destination? A study of Insta gram photography with a visual classifier. In Information and Communication Technologies in Tourism 2022: Proceedings of the ENTER 2022 eTourism Conference, January 11–14, 2022 (pp. 174–186). Springer International Publishing

Pan, S., Lee, J., & Tsai, H. (2014). Travel photos: Motivations, image dimensions, and affective qualities of places. Tourism Management, 40, 59–69. https://doi.org/10.1016/j.tourman.2013.05.007

Sharma, N., & Arora, N. (2024). Do Instagram reels influence travelers' behavioral and e-WOM intentions for the selection of ecotourism destination?. Journal of Hospitality and Tourism Insights, 7(5), 2603-2623.

Soares, A. L. V. (2025). Reels Versus Reality: Comparing Influencer Content with Real-World Travel Experiences. In ENTER e-Tourism Conference (pp. 349-359). Springer, Cham. Urry, J. (2002), The Tourist Gaze (2nd), Sage, London

Xiang, Z., & Gretzel, U. (2010). Role of social media in online travel information search. Tourism Management, 31(2), 179–188. https://doi.org/10.1016/j.tourman.2009.02.01

# Beyond luxury: A dual perspective on exclusive tourism experiences

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## Abstract

While "luxury tourism" has traditionally been associated with opulence, premium quality, and high price, recent studies indicate that its meaning is evolving (Iloranta, 2022; Japutra et al., 2022). As upscale amenities and services become more widely accessible, exclusivity is emerging as a key differentiator in the high-end travel sector (Lopes et al., 2023). Rather than being defined solely by lavish material comforts, luxury is increasingly conceptualized as the ability to access experiences that are difficult to replicate, meaningful, authentic (Hanks et al., 2024), and personally memorable (Kim et al., 2024). In the luxury services literature, exclusivity has been identified as a multifaceted construct—including monetary, social, and hedonic dimensions—that fundamentally shapes consumers' perceptions of luxury. In tourism, exclusivity often manifests through limited-access destinations, personalized itineraries, and one-of-a-kind activities unavailable to the "ordinary" traveler. Understanding how such exclusive experiences are designed and perceived is important for both theory and practice, as it reflects travelers' evolving expectations and offers insight into the future of luxury travel marketing

This paper focuses on the co-creation of exclusive tourism experiences within cultural destinations and specifically aims: 1) to identify the strategies and the enablers that tourism providers design in order to create exclusive experiences, and 2) to uncover the dimensions that tourists perceive as the most important in shaping exclusive experiences.

The study employs a qualitative research design. To address the first aim, in-depth face-to-face interviews were conducted with high-end tourism providers in a major Italian tourism destination (Verona). For the second aim, micro-narratives with international tourists were collected through an online panel (Ho et al., 2023). The data were analyzed through reflexive thematic analysis (Braun and Clarke, 2019).

The findings show that tourism providers adopt a variety of strategies to foster exclusivity, including tailoring experiences to tourists' needs, emphasizing uniqueness and authenticity, and creating opportunities for rich emotional engagement.

In addition, based on tourists' micro-narratives, some dimensions emerge as central to the exclusive tourism experience, including a sense of privilege, personal meaning, authentic connection, and emotional engagement.

The findings support the idea that exclusivity in tourism is achieved not simply by opulence or price, but by crafting moments that cannot be easily replicated. In addition, co-creation emerges as a key aspect of exclusive tourism experiences for both suppliers and tourists. The study contributes to tourism research by providing a dual perspective on exclusive experiences, offering a deeper understanding of exclusivity as a multifaceted construct that is co-created. These insights extend the luxury tourism literature and provide practical guidance for designing and managing exclusive experiences.

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The fact that the research was conducted in a single destination and with a specific sample profile may limit the generalizability of the findings. Future studies could expand the research context to other cultural destinations and adopt quantitative designs to test the relationships between perceived exclusivity of the experience and tourist satisfaction and loyalty to the provider or the destination.

*Key words: luxury tourism, exclusive experiences, co-creation, service providers, tourists, cultural destination*

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## References

Braun V, Clarke V (2019) Reflecting on reflexive thematic analysis. Qualitative Research in Sport, Exercise and Health, 11(4): 589–597.

Iloranta, R. (2022). Luxury tourism – a review of the literature. European Journal of Tourism Research, 30, 3007.

Hanks, L., Mody, M., & Dogru, T. (2024). Is authenticity the new luxury? Examining the components and dynamics of the luxury accommodation experience. Journal of Hospitality & Tourism Research, 48(8), 1335-1349.

Japutra, A., Loureiro, S. M. C., Li, T., Bilro, R. G., & Han, H. (2022). Luxury tourism: where we go from now?. Asia Pacific Journal of Tourism Research, 27(8), 871-890.

Kim, J. H., Badu-Baiden, F., Kim, S., Koseoglu, M. A., & Baah, N. G. (2024). Evolution of the memorable tourism experience and future research prospects. Journal of Travel Research, 63(6), 1315-1334.

Leban, M., Errmann, A., Seo, Y., & Voyer, B. G. (2024). Mindful luxury: A case of the Faroe Islands. Tourism Management, 104, 104929.

Lopes, J. M., Gomes, S., Durão, M., & Pacheco, R. (2023). The holy grail of luxury tourism: a holistic bibliometric overview. Journal of Quality Assurance in Hospitality & Tourism, 24(6), 885-908.

# Track 7 - Technology and Innovation Marketing

## Smart Devices and the Amateur Cycling Experience: An Assemblage Theory Perspective

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## Abstract

This study examines how smart devices are transforming amateur cycling by integrating physical and digital experiences. Using assemblage theory and object-oriented ontology, it conceptualizes cycling as a socio-technical assemblage. Through secondary data analysis, it explores how smart objects influence agency, practices, and subjectivities in contemporary cycling.

*Keywords: Amateur cycling, smart objects, assemblage theory, object-oriented ontology, self-tracking, digital sport*

### 1.Introduction

Amateur cycling has entered a "smart" era, where affordable devices and apps enable everyday cyclists to train and track performance like professionals (Crul, 2019). Cyclists now commonly use GPS bike computers, heart-rate sensors, and social fitness platforms like Strava and Zwift. This shift raises questions about how human and technological elements interact. While traditional sports science focuses on performance gains, there is a need to explore how technologies shape cycling practices, identities, motivations, and communities. This study applies assemblage theory and object-oriented ontology (OOO) to view amateur cycling as a socio-technical network. Our goal is to understand how cyclists and smart devices interact and how digital technologies impact amateur sport.

### 2. Theoretical Background

This research builds on assemblage theory and object-oriented ontology (OOO). Assemblage theory (Novak & Hofmann, 2019; DeLanda, 2016) posits that social phenomena arise from the interaction of diverse elements. Amateur cycling is viewed as an assemblage composed of human riders, bicycles, smart devices, roads, data platforms, and cultural norms. Each component retains autonomy, but their interactions shape cycling practices. For instance, a rider with a power meter and a training app forms an assemblage where body, machine, and data continuously influence performance (Barrie, Waitt, & Brennan-Horley, 2019). Key concepts include machinic assemblages (material components like bikes and sensors) and collective assemblages (expressive elements like sharing ride data). Assemblage theory also explores territorialization (stabilizing routines) and deterritorialization (disrupting routines). Smart

devices can shift a rider's focus from subjective feelings to objective metrics, creating new routines like the norm "if it's not on Strava, it didn't happen."

Object-oriented ontology (OOO) complements this by emphasizing the agency of objects. OOO argues that objects, such as bikes or apps, have their own existence and affect outcomes independently of human intentions (Harman, 2018). This view acknowledges that smart devices are active participants in cycling, shaping the experience. For instance, a GPS device can alter a rider's route or rankings, while training algorithms guide decisions. OOO reveals how non-human actors like sensors and algorithms influence cycling practices, contributing to a more-than-human understanding of amateur sports.

## 3. Methodology

This qualitative study uses secondary data, including academic literature, industry reports, forum discussions, and social media content. We aim to understand the socio-technical configurations of amateur cycling by analyzing how elements like devices, services, behaviors, and environments interact. The analysis follows three steps: identifying components of the assemblage, examining interactions, and interpreting the dynamics of how configurations emerge or shift.

## 4. Expected Results

We expect smart devices to alter the cycling experience by expanding the temporal and relational dimensions of the practice. These devices enable ongoing engagement through planning, data review, and gamification, transforming cycling into a digital activity. They also shape identities and hierarchies, as data-driven self-representations become central to how cyclists perceive themselves.

## 5. Conclusions

This study frames amateur cycling as a socio-technical assemblage, emphasizing that smart devices are active elements in shaping practices and relationships. The findings suggest further research is needed on how cyclists navigate the presence and authority of smart objects, which can inform both academic discussions and the design of future technologies.

## References

Barrie, L., Waitt, G., & Brennan-Horley, C. (2021). Cycling assemblages, self-tracking digital technologies and negotiating gendered subjectivities of road cyclists on-the-move. In H. Thorpe & R. Toffoletti (Eds.), Transforming sport and physical cultures through feminist knowledges (pp. 108–126). Routledge.

DeLanda, M. (2016). Assemblage theory. Edinburgh University Press.

Franco, P., Canniford, R., & Phipps, M. (2022). Object-oriented marketing theory. Marketing Theory, 22(3), 401–420.

Harman, G. (2018). Object-oriented ontology: A new theory of everything. Penguin.

Hoffman, D. L., & Novak, T. P. (2018). Consumer and object experience in the internet of things: An assemblage theory approach. Journal of Consumer Research, 44(6), 1178–1204.

Novak, T. P., & Hoffman, D. L. (2019). Relationship journeys in the internet of things: A new framework for understanding interactions between consumers and smart objects. Journal of the Academy of Marketing Science, 47, 216–237.

# Track 8 - Digital Marketing

## The Impact of Privacy Communication Formats on Data Disclosure and AI App Adoption

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### Abstract

Gamification is increasingly embedded in digital retail strategies, yet its effects on actual customer behavior and firm performance remain ambiguous. Existing research has focused primarily on engagement and attitudinal responses, leaving limited evidence on behavioral and financial outcomes. This study investigates how distinct gamified actions, such as subscribing to newsletters, adding products to wish lists, writing product reviews, and engaging with social media, shape consumer purchasing patterns and revenue. Using a two-year dataset from a major European e-tailer and addressing selection bias with robust matching techniques, the analysis reveals that gamification is not uniformly beneficial. Some actions, such as newsletters and reviews, accelerate the pace of repurchase without substantially increasing spending. Wish list additions, counterintuitively, are linked to lower purchase frequency and spending. In contrast, socially oriented actions like liking and sharing content are associated with both more frequent purchases and higher revenues. These findings highlight the need for retailers to design gamification strategies with strategic precision. Theoretically, the study contributes by moving beyond attitudinal outcomes to show how gamified actions differentially affect behavior and revenues, and by differentiating between personal and social forms of gamification. For practice, it provides guidance on how to prioritize gamification features that foster transactional momentum and social connection while avoiding mechanisms that encourage purchase deferral. Overall, this research bridges the gap between gamification theory and retail practice, offering a nuanced understanding of when and how gamification creates value for both customers and firms.

*Keywords: Gamification, Digital Retail, Customer Behavior, Revenue, Social Engagement, E-tailing*

The paper examines whether and how gamification in digital retail affects consumer behavior and revenues. It aims to clarify the heterogeneous impact of different gamified actions, addressing a key gap in literature that has often overlooked financial outcomes.

**Methodology.** We analyze a two-year dataset from a large European e-tailer that implemented a comprehensive gamification program. Actions include newsletter subscriptions, wish list additions, product reviews, and social media engagement. Propensity score matching is used to control for self-selection, ensuring robust comparisons between participants and non-participants in gamification.

**Findings.** Results demonstrate that gamification effects are action-specific rather than universal. Actions tied to personal engagement (e.g., newsletter subscriptions, product reviews) shorten repurchase cycles

but have limited effect on spending. Actions tied to deferred consumption (e.g., wish lists) reduce both purchase frequency and expenditure. Socially oriented actions (e.g., liking, sharing) drive both more frequent purchases and greater revenues, underlining the value of social connection in gamified retail environments.

**Research Limitations and Implications.** The study focuses on a single European retailer, which may limit generalizability. Future research should examine other industries, cultural contexts, and longitudinal effects of gamification. Conceptually, the findings suggest that distinguishing between personal and social gamification is critical for advancing theory.

**Practical Implications.** For managers, the study highlights that not all gamified actions are equal in value creation. Socially engaging activities should be prioritized to boost revenues, while wish list mechanics may require redesigning to avoid discouraging purchases. Gamification should be applied with strategic precision, emphasizing mechanisms that reinforce purchase momentum and community engagement.

**Originality and Value.** This paper provides rare field evidence on the financial impact of gamification in digital retail. By linking gamified actions to behavioral and revenue outcomes, it advances academic understanding and offers actionable insights for practitioners, thereby bridging the gap between theory and practice.

**References are available upon request.**

# The Impact of Privacy Communication Formats on Data Disclosure and AI App Adoption

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## Abstract

This study investigates how the format of privacy communications (text, infographic, audio) affects users' willingness to provide personal information (WPPI) and intention to use an AI-based app (ITU). Drawing on Construal Level Theory, we propose that communication formats shape psychological distance and construal levels, thereby influencing data disclosure and adoption behaviour. A 3 (privacy communication format: text vs. infographic vs. audio) × 1 between subjects experiment was conducted with 396 participants and a hypothetical AI powered sport app as a scenario.

Findings show that audio messages significantly reduced WPPI compared to text, whereas infographics had no effect. The effect of communication format on ITU is mediated by willingness to share personal data. Further, subjective privacy literacy (SPL) moderated the relationship between the format and the WPPI: individuals with higher SPL were less negatively affected by audio compared to text, indicating that privacy literacy buffers against defensive reactions to certain formats. In contrast, privacy concerns did not moderate the relationship between format and WPPI.

These results demonstrate that message design shapes disclosure behaviour and indirectly affects app adoption. Rather than assuming formats are interchangeable, firms should recognize that audio messages may heighten perceived risks, particularly among less privacy-literate users, thereby reducing willingness to share data and, indirectly, adoption of AI apps.

*Keywords: Privacy Communication, Construal Level Theory, Subjective Privacy Literacy, Privacy Concerns, AI-powered Apps, Data Sharing Behavior*

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# How GenAI-Enhanced Content Shapes Engagement on Social Media

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## Abstract

Recent advancements in Generative Artificial Intelligence tools have not just transformed but revolutionized content creation and consumption patterns. Marketers are increasingly integrating AI technology due to its potential to create effective marketing content at a fraction of the cost and significantly increase efficiency in marketing campaigns (Ashbridge, 2024; Gibson, 2024). According to a recently published report, 55% of marketers use AI for text-based content creation, but only 7% of them do not edit AI outputs (HubSpot, 2025). People still work on AI outputs to make them better. Therefore, it is important to note that AI tools do not replace humans; instead, they enhance them through collaboration (Raisch & Krakowski, 2021). We define content created through human–AI collaboration in the content creation process, which is the primary focus of this study, as "GenAI-enhanced Content" (GEC).

While previous studies have generally compared content generated entirely by GenAI or by humans (Castelo et al., 2019; Hartmann et al., 2025), there is limited understanding of how consumers respond to content generated by human–AI collaboration, which is GenAI-enhanced content. Answering this question is important because faster content generation with GenAI may lead to the perception that content creators are spending less effort. Previous research has shown that the amount of effort spent is related to perceptions of morality (Amos et al., 2019; Bigman & Tamir, 2016). Therefore, the perception that content enhanced by GenAI requires less effort may lead to influencers being viewed as less moral, particularly in areas such as influencer marketing, where success is tied to the creator's reputation (Cocker et al., 2021), and this can negatively impact important marketing outcomes such as social media engagement.

In this context, research examines the effect of GEC on social media engagement (eWOM and follow intention) through four experimental studies. Specifically, we propose that the perception that GEC requires less effort leads to a more negative moral evaluation of the influencer, which in turn reduces social media engagement. Additionally, we investigate how consumers' individual differences influence the positive relationship between an influencer being perceived as more moral and their posts achieving higher engagement rates. In this context, we test whether individuals' "capacity for trust"—the tendency to forgive others and see the good in people (Soto et al., 2022)—functions as a moderator.

Study 1 (n = 200) revealed that participants in the GEC condition reported less eWOM (M = 2.02, SD = 1.28) than those in the human-generated condition (M = 2.64, SD = 1.54) and less follow intention (M = 1.69, SD = 1.11) than those in the human-generated condition (M = 2.29, SD = 1.52). Study 2 (n = 210) revealed that participants in the GEC condition reported less perceived morality (b = –1.39, SE = 0.19, t = –7.22, p < .001), with perceived morality increasing eWOM (b = 0.79, SE = 0.05, t = 13.41, p < .001) and follow intentions (b = 0.68, SE = 0.06, t = 10.60, p < .001). Study 3 (n = 200) revealed

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that the negative effect of GEC is sequentially driven by perceived effort and morality on both eWOM (b = –0.78, 95% CI [–1.08, –0.52]) and follow intentions (b = –0.56, 95% CI [–0.81, –0.33]). Study 4 (n = 280) revealed a significant moderated mediation on both eWOM (b = 0.22, SE = 0.06, t = 3.61, p < 0.001) and follow intentions (b = 0.35, SE = 0.06, t = 5.10, p < 0.001). We also found a significant interaction effect between perceived morality and capacity for trust on eWOM (b = 0.22, SE = 0.06, t = 3.61, p < 0.001) and follow intentions (b = 0.35, SE = 0.06, t = 5.10, p < 0.001).

The results show that consumers interpret the effort spent in content creation as a moral signal and that the use of GenAI weakens this perception.**References**

## References


Amos, C., Zhang, L., & Read, D. (2019). Hardworking as a heuristic for moral character: Why we attribute moral values to those who work hard and its implications. Journal of Business Ethics, 158(4), 1047–1062. https://doi.org/10.1007/s10551-017-3725-x

Ashbridge, Z. (2024, September). 10 Challenges Marketers Face When Implementing AI in 2024 [New Data + Tips]. In HubSpot. https://blog.hubspot.com/marketing/ai challenges

Bigman, Y. E., & Tamir, M. (2016). The road to heaven is paved with effort: Perceived effort amplifies moral judgment. Journal of Experimental Psychology: General, 145(12), 1654–1669. https://doi.org/10.1037/xge0000230

Castelo, N., Bos, M. W., & Lehmann, D. R. (2019). Task-dependent algorithm aversion. Journal of Marketing Research, 56(5), 809–825. https://doi.org/10.1177/0022243719851788

Cocker, H., Mardon, R., & Daunt, K. L. (2021). Social media influencers and transgressive celebrity endorsement in consumption community contexts. European Journal of Marketing, 55(7), 1841–1872. https://doi.org/10.1108/EJM-07-2019- 0567

Gison, C. (2024, April). AI and the Future of Influencer Marketing Content. In Medium. https://medium.com/@chasegison/ai-and-the-future-of-influencer-marketing content-4d5fc41c9afa

Hartmann, J., Exner, Y., & Domdey, S. (2025). The power of generative marketing: Can generative AI create superhuman visual marketing content? International Journal of Research in Marketing, 42(1), 13–31. https://doi.org/10.1016/j.ijresmar.2024.09.002

Raisch, S., & Krakowski, S. (2021). Artificial intelligence and management: The automation–augmentation paradox. Academy of Management Review, 46(1), 192– 210. https://doi.org/10.5465/amr.2018.0072

# How time-related information affect customer satisfaction in chat-based interactions

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## Abstract

Consumers have the possibility to multitask in chat-based service interactions, therefore, providing time-related information may be crucial for improving their experience. Study 1 analyzes over 100.000 chat messages exchanged between agents and customers of a telecom provider, showing that frontline agents using direct time adverbs (e.g., next, soon) achieve higher customer satisfaction. Exploratory evidence suggests this effect may be driven by perceived caring. This work contributes to service research by studying the overlooked dimension of time communication and shows how subtle variations in speech parts can positively influence customer satisfaction. Practically, it suggests that embedding time cues in frontline communication can boost customer satisfaction by potentially enhancing perceptions of caring.

*Keywords: time adverbs, customer satisfaction, digital interactions, customer service, perceived caring.*

Live chat has become one of the preferred customer service channels, with many consumers favoring it over traditional ones (Leggett, 2016; Leshchenko, 2018). Yet, a high number of customers is not confident to get the best online service resolution in a reasonable amount of time (Baun, 2023); this may be partly due to the widespread use of canned responses (Digital Minds BPO, 2025). However, waiting in a live chat context is not inherently negative and may matter less than the quality of the response itself (Patterson, 2022). Indeed, consumers usually multitask while using live chat (Freshworks, 2024). Thus, they seek reassurance regarding both timing and resolution, aiming to optimize their experience and make the most of their time (Thompson, 2022).

Prior literature has explored the role of time in offline and online service settings, above all in terms of waiting times, that are typically associated with lower satisfaction (e.g., Tom and Lucey, 1997; Masuch et al., 2024). However, the temporal dynamics of online chat remain underexplored, despite its distinct nature as a text-based channel. Although speed has been shown to matter in service failure recovery (e.g., Tang et al., 2018; Harun et al., 2018), little attention has been paid to how time communication shapes customer experience and evaluation in online interactions. Language plays a central role in shaping customer perceptions and behaviors in digital settings (Villarroel et al., 2014; Packard et al., 2018). Notably, existing literature in this domain has neglected the role of adverbs. They represent a particularly powerful part of speech, as they modify verbs, adjectives, or other adverbs, answering various questions such as "when?" (Kronrod, 2022; Purnell, 2022). Unlike other time-related words, time adverbs do not refer to objects or entities but instead modify the action itself, offering additional information about it (Vlach, 1993; Betti, 2022). Within this category, direct time adverbs – those answering to the question "when?" – provide crucial timing information (Richards, 1982). This makes them potentially relevant in online service interactions, considering that live chat users often multitask (Caruelle et al., 2023) and look for cues to manage their time efficiently to fully leverage this capability (Thompson, 2022). Therefore, signaling an awareness of the customer's time investment – through small

but intentional cues – may be a way to positively influence the customer experience. Based on this, we hypothesize that:

H1: Greater use of direct time adverbs by frontlines in chat-based interactions increases customer satisfaction.

Communicating time enhances clarity and transparency, showing respect and care (Roet-Green, 2023). This aligns with research suggesting that care can be communicated through body language or effective communication (Kumah, 2019). Building on this, providing time-related information may activate the mechanism of perceived caring, which reflects an individual's perception of being seen and heard (Roos et al., 2023). This is very relevant, since previous studies in healthcare have revealed that nurse caring behaviors are associated with higher patient satisfaction scores and service quality evaluations (King et al., 2019; Labrague et al., 2020). Considering this, we suggest that:

H2: The positive effect of using direct time adverbs on customer satisfaction is mediated by frontline's perceived caring.

To test these hypotheses, we analyzed 100.438 individual messages exchanged between customers and agents from a North-European telecommunication company. Satisfaction was estimated using the Net Promotor Score. Direct time adverbs were measured through a self-made dictionary resulting in a list of 40 words (e.g., "later", "now"). We also included a set of control variables in our regression model, to account for unobserved heterogeneity. As predicted, we find a significant and positive effect of direct time adverbs on NPS ($\beta = .235$, $SE = .045$, $t = 5.25$, $p < .001$), even after accounting for control variables and various robustness checks. Given H2, we tried to preliminarily explore this mediation through moderation in our dataset. The idea is that if the positive effect of time adverbs on NPS is driven by a sense of being cared for, then when caring is explicitly conveyed through another means – such as caring language – the main effect of time adverbs should be mitigated. To gauge the degree of caring signaled by frontlines' messages, we developed a dictionary of 50 caring words (e.g., "care", "help"). Consistent with our prediction, the direct time adverbs*caring interaction is significant and negative ($\beta = -.184$, $SE = .038$, $t = -4.91$, $p < .001$), even after accounting for control variables and after robustness checks.

This research demonstrates that frontline messages containing direct time adverbs are associated with higher customer satisfaction, as measured by NPS in our dataset. Ancillary analyses provide preliminary support for the proposed underlying mechanism of perceived caring. In future studies, we plan to establish the causal effect of direct time adverbs through controlled experiments and to formally test the mediating role of perceived caring. These findings highlight how subtle linguistic cues in frontline communication can meaningfully influence customer perceptions and behaviors.

References are available upon request

# Track 10 - Services Marketing

## Lights, Camera, Backlash? The Double-Edged Sword of Service Provider Media Exposure

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### Abstract

Mass media plays an increasingly influential role in shaping consumer perceptions of service providers. This research investigates how televised portrayals, specifically those from popular Italian competition shows 4 Ristoranti and 4 Hotel, affect consumer sentiment toward service providers. While these shows aim to celebrate local identity and culinary authenticity, the resulting exposure can have unintended consequences. Drawing on the Dunning-Kruger effect, we propose that such shows may inadvertently inflate viewers' confidence in their own ability to judge service quality. Using a Difference-in Differences (DiD) design and over one million Tripadvisor reviews, we estimate the causal impact of appearing on these shows on consumer sentiment. Results show that media exposure often leads to a decline in sentiment, suggesting a backlash driven by overconfidence and heightened expectations. These findings offer a more nuanced perspective on media visibility, emphasizing that while it brings attention, it also invites intensified scrutiny. For small and family-run service providers, this can result in a reputational paradox: celebrated on screen yet criticized in practice. The study contributes to research on consumer behavior, media effects, and hospitality marketing, while shedding light on the psychological mechanisms that shape consumer evaluations following media exposure.

*Keywords: Media Exposure, Restaurants, Hotels, Difference-in-Differences*

# Strategic Customer Experience Management in B2B Service Contexts: A Multi-Perspective Analysis of Value Co-Creation Across Market Segments

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## Abstract

Customer experience (CX) has emerged as a critical source of competitive advantage in contemporary service markets (Gahler et al., 2023). While extensively examined in B2C contexts, it remains underexplored in B2B settings, where CX management is more complex due to the involvement of multiple actors, extended decision-making processes, and relational as well as organizational dynamics (De Keyser et al., 2025). The unique characteristics of business-to-business (B2B) service environments demand distinct theoretical and managerial approaches (Zolkiewski et al., 2017; Witell et al., 2020). Despite growing practitioner interest, academic understanding of how B2B service firms can strategically leverage CX remains fragmented and underdeveloped.

This study aims to explore how B2B service firms can strategically manage CX to create value across heterogeneous market segments. Drawing on service-dominant logic (Vargo and Lusch, 2016) and adopting Wirtz et al.'s (2025) CX management archetypes framework, we conduct an in-depth case study of Your Kitchen Group (YKG), a B2B food service provider operating across luxury hospitality and industrial catering segments.

We adopt an interpretive case study methodology to examine CXM in YKG (Stake, 1995). We examine the provider's and customers' viewpoints through in-depth interviews, and we anticipate the findings will reveal critical gaps between intended and perceived CX value propositions, suggesting that strategic effectiveness depends on CX management maturity and contextual alignment with segment-specific customer goals.

We expect our findings to contribute to service management theory by: (1) empirically validating the contingent nature of CX management strategies in B2B contexts, (2) revealing the co-created nature of CX value through provider-customer alignment analysis, and (3) demonstrating how service firms must orchestrate different CX management approaches within their portfolio to achieve competitive advantage. These insights advance understanding of strategic service management in complex B2B environments.

While this study's single-case design enables deep analysis, it inherently limits the generalizability of the findings. Future research needs to explore how the findings from the specific context of food service in Namibia can be transferable to other B2B service contexts. Additionally, quantitative testing of the alignment-performance relationship could provide generalizable insights about the financial impact of strategic CX management.

*Keywords: customer experience management, B2B services, value co-creation, service strategy, market segmentation*

## References

De Keyser, A., Antonetti, P., Rouziou, M., Béal, M., Wang, Z. H., Grégoire, Y., & Lussier, B. (2025). Understanding the B2B customer experience and journey: A convergence-based lens. Journal of Business Research, 198, 115481.

Gahler, M., Klein, J. F., & Paul, M. (2023). Customer experience: Conceptualization, measurement, and application in omnichannel environments. Journal of Service Research, 26(2), 191-211.

Stake, R. E. (1995). The art of case study research. Sage Publications.

Vargo, S. L., & Lusch, R. F. (2016). Institutions and axioms: An extension and update of service dominant logic. Journal of the Academy of Marketing Science, 44(1), 5–23. https://doi.org/10.1007/s11747-015-0456-3

Wirtz, J., Kowalkowski, C., Jaakkola, E., Holmlund, M., Ulaga, W., & Ahmed, T. (2025). Strategic customer experience management in B2B markets: A typology of archetypal approaches. Journal of Service Research, forthcoming. https://doi.org/10.1016/j.jbusres.2024.115165

Witell, L., Kowalkowski, C., Perks, H., Raddats, C., Schwabe, M., Benedettini, O., & Burton, J. (2020). Characterizing customer experience management in business markets. Journal of Business Research, 116, 420–430. https://doi.org/10.1016/j.jbusres.2019.08.045

Zolkiewski, J., Story, V., Burton, J., Chan, P., Gomes, A., Hunter Jones, P., O'Malley, L., Peters, L. D., Raddats, C., & Robinson, W. (2017). Strategic B2B customer experience management: The importance of outcomes based measures. Journal of Services Marketing, 31(2), 172–184. https://doi.org/10.1108/JSM.10.2016.0350

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# Papers

# Track 2 - Consumer Behavior

## From Lab to Market: How Scalable Tools Can Bring Consumer Neuroscience Closer to Practice

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### Abstract

Consumer neuroscience has attracted growing interest in recent years. Nevertheless, its integration into marketing practice remains limited, primarily due to the low scalability of neuroimaging techniques. A recent shift in the literature moves attention from the brain to the body, highlighting the potential of scalable tools, such as webcam-based eye-trackers and wearable physiological sensors, as cost-effective, non-invasive, and ecologically valid alternatives for collecting consumer data in real-world settings. Their increasing adoption in everyday life further enhances consumer engagement and enables real-time behavioral and physiological data collection.
This paper provides an overview of the most promising tools, evaluating their suitability and ease of integration into marketing research and practice. Drawing on concrete examples, we illustrate how these tools can inform marketing decisions through an adaptation of the 4Ps framework (product, promotion, place, and price). We also discuss key barriers to adoption and propose actionable solutions for their integration into existing workflows. Finally, we identify high-potential application domains, particularly in healthcare and public services.

*Keywords: Consumer Neuroscience; Scalable Neuromarketing Tools; Wearable Technologies; Consumer Behaviour*

### 1.Introduction

Consumer neuroscience is a recent field in consumer behaviour research (Smidts et al. 2014). It has the objective of identifying the neural and physiological correlates of consumers' decision-making, and eventually predict their purchase behaviour ("neuroforcasting"): e.g., purchase intentions, willingness to pay, memory recall, emotional engagement, etc. (Hubert and Kenning 2008; Genevsky, Yoon, and

Knutson 2017). The novelty of consumer neuroscience in the marketing field consists in the ability to gather information otherwise undetectable with traditional marketing tools, e.g., subconscious processes underpinning consumers' decision-making (Bazzani et al. 2020). Consumer neuroscience experiments are usually carried out applying sophisticated neuroscientific techniques exploring brain activity, such as electroencephalography (EEG) and functional magnetic resonance imaging (fMRI) (Plassman, Ramsøy, and Milosavljevic 2012).
Despite the promising potential real-world applications of consumer neuroscience, the introduction of this methodology into marketing practice is still scarce.

We have traced three main barriers to the adoption of consumer neuroscience in marketing activities:

(i) The expensiveness and invasiveness of some of the techniques used (e.g., fMRI) (Kenning and Linzmajer 2011).

(ii) The long times required to conduct experiments of this kind (e.g., Alvino et al. 2020), hardly compatible with companies' roadmaps.

(iii) The lack of standardized experimental protocols, which makes the setup of experiments challenging for newcomers. Moreover, consumer neuroscience experiments typically take place in a laboratory setting, so that the corresponding findings are not always generalizable to real-word business scenarios (Kasai et al. 2015; Pozharliev, Verbeke, and Bagozzi 2017).

In the present paper, we review the literature to identify the tools that can be more feasibly integrated into marketing practice. To this end, we examine technologies derived both from neuroimaging and human physiology research, following a growing trend that shifts the focus from the brain to the body as a valuable source of data for understanding consumer behavior. For example, Chlitero et al. (2024) highlight the potential of using wearable technologies to track consumer's physiological signals – such as heart rate, skin conductance, and facial affective responses – to obtain dynamic insights into consumer experiences across both physical and digital environments.
We use the term neurophysiological tools broadly referring to instruments that measure either central nervous system activity (e.g., EEG) or autonomic physiological signals (e.g., heart rate variability, electrodermal activity) that reflect emotional and cognitive states. When referring specifically to peripheral signals we use the term physiological tools.
We discuss the most promising tools in terms of their suitability and scalability, which can help overcome current barriers to adoption, including costs, complexity of experimental protocols, and limited ecological validity.
We identify as scalable those tools that are (i) cost-effective, (ii) non-invasive, (iii) easily deployable across users and environments, and (iv) compatible with data collection in ecological (real-world) settings.
Our aim is to outline a series of methodological approaches that offer greater applicability for marketing professionals while maintaining scientific rigor. We adopt the perspective that a broader adoption of consumer neuroscience tools in business contexts may, in turn, enable marketing researchers to expand their theoretical and empirical research agendas.

## 2. Literature Review

### 2.1 Promising Neurophysiological Tools for Marketing Research

Recent technological advancements in neurophysiology, a branch of neuroscience, have made it easier to use scalable techniques for collecting physiological parameters. For example, wearable eye-trackers (Ye et al. 2012), wrist actigraphs (Martin and Hakim 2011), and smart sensors (Kim et al. 2019) are now more accessible. Given their versatility, these devices offer a promising solution for collecting consumer physiological data on a large scale.

Among the many scalable technologies available for acquiring neurophysiological and physiological data, eye-tracking and wearable sensors stand out due to their ease of use (Oyama et al. 2019), low costs (Alvino et al. 2020), and wide range of applications (dos Santos et al. 2015). While eye-tracking is already well-known in marketing (Wedel and Pieters 2008), wearable devices are also seeing increased use (e.g., Ragot et al. 2017).

Eye-tracking – Eye-tracking is a technique that measures eye movements and gaze locations over time in response to various stimuli or tasks (Carter and Luke 2020). Eye-trackers vary in shape and sampling frequency, making them suitable for diverse applications, from neuropsychiatry to social psychology and marketing (Papagiannopoulou et al. 2014; Rahal and Fiedler 2019). The use of eye-tracking in marketing dates back to the early 2000s (Schall and Bergstrom 2014). Eye-tracking can provide insights into consumers' gaze behavior, the number of blinks, and, under controlled conditions, even pupillary behavior (dos Santos et al. 2015; Popa et al. 2015; Lemarcier et al. 2014).

Researchers typically identify two main "gaze events": fixations and saccades. A fixation is defined as maintaining gaze on a single point, while a saccade is the eye's movement from one gaze point to another (Salvucci and Goldberg 2000).

Several gaze metrics can be calculated based on fixations, including: the number of fixations; (ii) the duration of fixation; (iii) the time to the first fixation; (iv) the path (distance) scanned by the eye (Manippa et al. 2017; Bradley, Moulder, and Lang 2005; Casado-Aranda and Sanchez-Fernandez 2022).

These metrics can be computed for the entire visual stimulus or for a specific Area of Interest (AOI) defined by the experimenter. When using portable eye-tracking devices like glasses, visual targets can change, especially in field experiments (e.g., in a supermarket). In such cases, visual targets might include actual products on a shelf or printed advertisements (Rayner et al. 2001; Bialkova, Grunert, and van Trijp 2020). five main topics, including decision-making, well-being, and consumer attitudes towards wearables. Data collected through wearable technologies can serve as a valuable source of information for marketers (Kalantari 2017).

While few experimental studies in marketing research have specifically assessed consumer reactions to marketing stimuli based on physiological data from wearables, there are notable examples. For instance, Kakaria et al. (2022) provide an overview of heart rate variability in marketing research. Similarly, sleep deprivation and circadian rhythms have been studied in relation to purchase behavior (Venkatraman et al. 2007; Li et al. 2020). Therefore, sleep parameters obtainable with wearable devices, such as wrist actigraphs (Marino et al. 2013; De Zambotti et al. 2019), could be of significant interest to marketers.

Combining Techniques – Consumer neuroscience researchers often recommend combining different techniques to obtain richer data on consumer behavior (e.g., Lin, Cross, and Jones, 2018). A particularly effective combination is eye-tracking with EEG, which has been increasingly adopted to capture both visual attention and neural correlates of preference and decision-making (Khushaba et al., 2013; Bazzani et al., 2020; Alvino, Herrando, and Constantinides, 2024). Portable versions of eye-trackers and EEG headsets make these techniques particularly suitable for out-of-lab studies and increasing their applicability in real-world marketing contexts (Meißner et al., 2019; Roberts et al., 2018).

### 2.2 What Makes Neuromarketing Tools Suitable for Marketing Practice?

Data derived from scalable neurophysiological tools can significantly aid in customer segmentation, product customization, personalization of communication messages, and maximization of consumer experience.

Customer segmentation – Consumers differ in demographic traits, purchase needs, and personality (e.g., Tynan and Drayton 1987; Dibb and Simkin 1991; Aaker 1997; Wedel and Kamakura 2002; Goldsmith 2016). Several studies have already highlighted the promising contribution of neurobehavioral models to segmenting consumers (Hubert and Kenning 2008; Venkatraman et al. 2012; Smidts et al. 2014; Van Der Laan and Smeets 2015; Plassmann and Weber 2015). Venkatraman et al. (2012) proposed a conceptual framework explaining neuroscience's role in understanding individual variability.

Scalable neurophysiological tools can provide insights into individual differences based on physiological characteristics, leading to more accurate and systematic segmentation. Supporting this, a previous work (Trieste et al., 2021) showed a significant negative association between food literacy and individual preference for circadian activity (a neurophysiological parameter called chronotype; Adan et al. 2012). In that sample, evening chronotypes tended to have lower food literacy scores, and high food literacy levels were associated with greater attention to the nutritional content of everyday products.

Customization of Offerings and Communication Messages – Customer profiling forms the foundation for personalizing offerings and promotions (Vesanen and Raulas 2006; Chandra et al. 2022). The market increasingly demands customized goods, whether in terms of pricing (e.g., Tomczyk et al. 2022) or aesthetic features (taste, colors, packaging type) and functionalities (e.g., Homburg, Schwemmle, and Kuehnl 2015; Pallant, Sands, and Karpen 2020). Simultaneously, customizing services can increase customer satisfaction and loyalty (Coelho and Henseler 2012), also echoing corporate communications (Ball, Coelho, and Vilares 2006).

Consumer neuroscience can help explore cognitive and emotional differences in consumers to tailor messages accordingly (e.g., Chua et al. 2009; Falk et al. 2015). By detecting individual differences based on (neuro)physiological parameters, consumer neuroscience studies can be valuable far beyond simply testing commercial ad effectiveness.

Maximization of Consumer Experience – For consumers entering a store with a smartwatch, the stream of physiological data (e.g., heart rate) can provide objective correlates of their experienced pleasantness for environmental features like thermal comfort, background music, or ambient scent (e.g., Berčík et al 2021; Mansi et al. 2021; Kakaria et al. 2022; Jiang et al. 2022). Furthermore, EEG systems can expand real-life applications of consumer neuroscience, particularly in multisensory and immersive experiences (e.g., Kumar et al. 2016; Hofmann et al. 2022).

Ecological validity – Using scalable tools, consumer reactions can be captured in ecological settings (Harris, Ciorciari, and Gountas 2018). Experiments with webcam-based eye-tracking or wearable devices can be conducted in real stores (Huddleston et al. 2015; Meißner et al. 2019; Bialkova, Grunert, and van Trijp 2020), home settings, or urban environments (Salamone, Masullo, and Sibilio 2021).

Moreover, user-friendly interfaces (e.g., digital platforms, mobile apps) can visually represent collected data with graphs or indexes that stakeholders – consumers, marketers, scholars, and even policymakers – can use to immediately grasp the meaning of parameters monitored minute-per-minute over time (Wang et al. 2015; Classen et al. 2018; Alvino et al. 2020). This ease of data use can also engage stakeholders, starting with consumers' curiosity, which in turn fosters the wider diffusion of such tools.

### 2.3 What Makes Neuromarketing Tools Feasible for Marketing Practice?

Reducing Expensiveness – Scalable technologies offer two main advantages over neuroimaging instruments such as fMRI: lower costs and simpler experimental protocols (Harris, Ciorciari, and Gountas 2018). While fMRI scanners can cost up to $1 million per Tesla (Sarracanie et al. 2015), eye-trackers range from $30 to $30,000 (Alvino et al. 2020; Mantiuk et al. 2012). Wearable devices have a similar price range, from $150 to $1,690 (Ueafuea et al. 2020). EEG systems also have comparable prices, from $750 (for research editions) to $50,000 (medical-grade devices) (Sawangjai et al. 2019).

Furthermore, EEG and eye-tracking systems are evolving towards being less invasive. For instance, eye-tracking glasses now resemble common market glasses, and many studies show a trend toward using EEG systems with fewer electrodes (e.g., Bazzani et al., 2020).

Standardization of Protocols – In terms of experimental protocols, the time required to set up an experiment with wearable technology or a webcam-based eye-tracking system is relatively short. Many systems offer a plug-and-play setup and easy-to-understand software interfaces, making it simpler to use multiple devices in parallel given their relatively low costs (e.g., Bánki et al 2022). Ensuring accurate time synchronization across multimodal signals from different devices remains a persistent challenge (e.g., Xiao et al. 2022).

Facilitating the use of these tools can also promote the reproducibility of consumer neuroscience experiments on large samples, thus making corresponding findings more robust.

Another critical point is experimental design and the interpretation of collected data. The degree of expertise required to interpret neurophysiological and physiological data limits the widespread dissemination of consumer neuroscience for real-world applications (Plassmann et al. 2015). The multidisciplinary nature of this field implies a variety of skills that are difficult to find in the marketing or R&D departments of an average company. Therefore, close collaboration with consumer neuroscience experts is an advisable approach for marketers (Bazzani et al. 2020).
The introduction of scalable tools could help resolve this tricky trade-off by reducing the time and economic costs of experiments.

## 3. Operational Contributions of Scalable Neurophysiological Tools

To map out the practical contribution of scalable tools to marketing actions, we adopt the classical 4Ps framework (McCarthy, 1960): product, promotion, place, and price. This model provides a structured lens for analyzing how neurophysiological data can inform core marketing decisions (Bazzani et al., 2020). For each "P," we reference a seminal study to guide scholars and practitioners in designing consumer neuroscience experiments, emphasizing how scalable tools can enhance the applicability of such methods in real-world contexts (see Figure 1).
To enrich this operational mapping, we draw on an adapted framework from Festa et al. (2016), originally proposed in the wine sector. Below each "P," we have therefore indicated a corresponding experiential dimension ("E"): Experience, Emotion, Environment, and Expectation.
We argue that this combined framework is particularly well-suited to multisensory product categories, which are especially conducive to consumer neuroscience approaches.

| | Product | Promotion | Price | Place |
|---|---|---|---|---|
| | *Expertise* | *Education* | *Evaluation* | *Experience* |
| **Traditional consumer neuroscience** | Khushaba et al. 2013 | Falk et al. 2015 | Plassmann et al. 2008 | Horská and Berčík 2014 |
| **Scalable Neurophysiological Tools** | Bialkova, Grunert, and van Trijp 2020 | Ramsøy, Michael, and Michael 2019 | Roberts et al. 2018 | Meißner et al. 2019 |

Figure 1 - Contributions of Scalable Neurophysiological Tools to the 4Ps of Operational Marketing.

## 4. New Scenarios Opened by Scalable Tools: The Case of the Healthcare Sector

In this final section, we focus on the application of scalable tools in the healthcare sector. There are two main reasons behind this choice. First, many of these tools have already been adopted in the health and well-being domain, both for self-monitoring and clinical applications, such as wearable devices for stress

tracking Hickey et al. 2021) and telemedicine platforms for outpatient settings (Perednia & Allen, 1995). Wearable sensors and eye-trackers are already used in medical diagnostics: telemedicine systems monitor patients' physiological signals remotely (Ekeland, Bowes, & Flottorp, 2010; Kuan et al., 2022), and eye-tracking is applied in psychiatry (Levy et al., 1994) and neurodevelopmental disorders (Papagiannopoulou et al., 2014). However, most of these applications have primarily focused on the clinical interpretation of the collected data. We argue that such physiological information could also be leveraged to analyze patients' behavior as service users. For instance, tracking implicit reactions during the use of hospital interfaces, digital platforms, or rehabilitation devices could provide actionable insights to improve service design, user satisfaction, and compliance. Second, the healthcare sector is characterized by continuous technological innovation aimed at improving patient outcomes and quality of life. In this dynamic context, consumer neuroscience techniques can offer valuable insights by capturing in-field, implicit, and non-verbal reactions from healthcare professionals, patients, and caregivers. For example, within the Fit4Medical Robotics (Fit4MedRob, https://www.fit4medrob.it) Initiative, scalable consumer neuroscience techniques are being explored to assess the acceptance of new robotic rehabilitation systems during real-world use, in comparison to standard care. From a public health perspective, the relatively low cost and minimal infrastructure requirements of scalable tools mean they can be deployed in any setting with basic IT capacity. This opens a way for democratizing access to healthcare, particularly for underserved or remote populations (Appuswamy & Desimone, 2020; Xu et al., 2021). Furthermore, they can help identify vulnerable segments of the population (Johnson & Picard, 2020), enabling more targeted and effective health promotion campaigns (Kreps & Neuhauser, 2015). Indeed, these tools hold promise in the domain of social marketing. Eye-tracking and physiological monitoring can be used to evaluate the effectiveness of public service announcements (Falk et al., 2016; Harris, Ciorciari, & Gountas, 2018). Finally, insurance companies have begun incorporating wearable technologies into their service models, using data to compute risk-based health scores and offering personalized plans or incentives for healthy behaviors (Dinh-Le et al., 2019; McCrea & Farrell, 2018; Neumann, Tiberius, & Biendarra, 2022). This signals a broader shift toward data-driven preventive care and individualized service provision, an area where scalable tools are poised to play a growing role.

## 5. Research and Managerial implications

We propose three main impactful directions opened by scalable tools both for scholars and practitioners:
1) They allow for longitudinal data collection, enabling the study of customers' decision-making over their journey, and the assessment of long-term marketing outcomes.
2) Their low costs and invasiveness make these tools optimal candidates for using consumer neuroscience in ecological settings and on larger samples. Also, it opens their accessibility also to small and medium-sized enterprises (SMEs).
3) They are easier to use and combine, opening their applications to the study of interactions between consumers (social consumer neuroscience).

From a managerial perspective, they hence offer practical solutions for assessing consumer behavior, and specifically for customers' segmentation, product customization, and targeted communication.
Public institutions could also benefit from the use of scalable tools to design public health campaigns, improve educational strategies, and reach underserved communities.

## 6. Limitations and Agenda for future research

Covering all unconventional applications of neurophysiological and physiological tools in marketing is beyond the scope of this paper.
Additionally, the generalizability of the methodological approach proposed is limited by the heterogeneity of existing studies and the lack of longitudinal validation in many cases.

Nevertheless, scalable tools represent a promising innovation, particularly due to their ease of use and affordability, which reduce barriers to adoption for companies.

Two key challenges remain to be addressed:

1. Data quality in real-world contexts – Experiments conducted in naturalistic settings often generate noisy or low-quality data. Addressing this challenge will require the development of robust algorithms and advancements in hardware to ensure accurate signal processing and valid interpretation.

2. Data governance – The use of physiological data raises important privacy, ethical, and legal concerns (Segura Anaya, 2018). Although a full discussion of this topic lies beyond the scope of this paper, it is crucial for building public trust and promoting responsible data management. A related issue is consumer reluctance to share physiological information, particularly in sensitive domains such as health. This highlights the need for transparent communication and robust ethical safeguards that ensure individuals maintain control over their personal information.

## 7. Concluding remarks

In this paper, we reviewed the emerging literature on the application of neurophysiological and physiological tools in marketing research, focusing on their scalability and practical feasibility. We introduced the term scalable tools to describe a class of technologies that enhance the ecological validity of consumer neuroscience while lowering financial and operational barriers. We discussed how these tools can contribute to more accurate segmentation, personalized offerings, and enhanced consumer experiences, with particular attention to applications in healthcare. We emphasized their potential for democratizing access to consumer neuroscience, enabling also SMEs and public institutions to integrate these tools into their workflows.

Finally, we outlined some key limitations and identified areas for future research, including data quality and data governance. We call for interdisciplinary collaborations to develop theoretical and applied frameworks that ensure the responsible and effective use of scalable tools in both commercial and societal contexts.

## References

Aaker, J. L. (1997). Dimensions of brand personality. Journal of marketing research, 34(3), 347-356.

Adan, A., Archer, S. N., Hidalgo, M. P., Di Milia, L., Natale, V., & Randler, C. (2012). Circadian typology: a comprehensive review. Chronobiology international, 29(9), 1153-1175.

Alvino, L., Pavone, L., Abhishta, A., & Robben, H. (2020). Picking your brains: Where and how neuroscience tools can enhance marketing research. Frontiers in Neuroscience, 14, 577666.

Alvino, L., Herrando, C., & Constantinides, E. (2024). Discovering the art of advertising using neuromarketing: a literature review on physiological and neurophysiological measures of ads. International Journal of Internet Marketing and Advertising, 21(3-4), 297-330.

Ancoli-Israel, S., Cole, R., Alessi, C., Chambers, M., Moorcroft, W., & Pollak, C. P. (2003). The role of actigraphy in the study of sleep and circadian rhythms. Sleep, 26(3), 342-392.

Appuswamy, A. V., & Desimone, M. E. (2020). Managing diabetes in hard to reach populations: a review of telehealth interventions. Current Diabetes Reports, 20(7), 1-10.

Ball, D., Coelho, P. S., & Vilares, M. J. (2006). Service personalization and loyalty. Journal of services marketing.

Bánki, A., de Eccher, M., Falschlehner, L., Hoehl, S., & Markova, G. (2022). Comparing online webcam- and laboratory-based eye-tracking for the assessment of infants' audio-visual synchrony perception. Frontiers in Psychology, 6162.

Bazzani, A., Ravaioli, S., Trieste, L., Faraguna, U., & Turchetti, G. (2020). Is EEG suitable for marketing research? A systematic review. Frontiers in Neuroscience, 14, 594566.

Bazzani, A., Amato, A., Faraguna, U., & Turchetti, G. (2021). Food literacy and food choice–a survey-based psychometric profiling of consumer behaviour. British Food Journal.

Benedetti, D., Olcese, U., Frumento, P., Bazzani, A., Bruno, S., d'Ascanio, P., ... & Faraguna, U. (2021). Heart rate detection by Fitbit ChargeHR™: A validation study versus portable polysomnography. Journal of Sleep Research, 30(6), e13346.

Berčík, J., Gálová, J., Vietoris, V., & Paluchová, J. (2021). The application of consumer neuroscience in evaluating the effect of aroma marketing on consumer preferences in the food market. Journal of International Food & Agribusiness Marketing, 1-22.

Bialkova, S., Grunert, K. G., & van Trijp, H. (2020). From desktop to supermarket shelf: Eye-tracking exploration on consumer attention and choice. Food Quality and Preference, 81, 103839.

Bradley, M.M., Moulder, B. and Lang, P.J. (2005), "When good things go bad: the reflex physiology of defense", Psychological Science, Vol. 16 No. 6, pp. 468-473.

Brasel, S. A., & Gips, J. (2008). Breaking through fast-forwarding: Brand information and visual attention. Journal of Marketing, 72(6), 31–48.

Carter, B. T., & Luke, S. G. (2020). Best practices in eye tracking research. International Journal of Psychophysiology, 155, 49-62.

Casado-Aranda, L. A., & Sanchez-Fernandez, J. (2022). Advances in neuroscience and marketing: analyzing tool possibilities and research opportunities. Spanish Journal of Marketing-ESIC.

Chandra, S., Verma, S., Lim, W. M., Kumar, S., & Donthu, N. (2022). Personalization in personalized marketing: Trends and ways forward. Psychology and Marketing, 39(8), 1529–1562. https://doi.org/10.1002/MAR.21670

Chua, H. F., Liberzon, I., Welsh, R. C., & Strecher, V. J. (2009). Neural correlates of message tailoring and self-relatedness in smoking cessation programming. Biological psychiatry, 65(2), 165-168.

Classen, J., Wegemer, D., Patras, P., Spink, T., & Hollick, M. (2018). Anatomy of a vulnerable fitness tracking system: Dissecting the fitbit cloud, app, and firmware. Proceedings of the ACM on interactive, mobile, wearable and ubiquitous technologies, 2(1), 1-24.

Coelho, P. S., & Henseler, J. (2012). Creating customer loyalty through service customization. European Journal of Marketing.

de Arriba-Pérez, F., Caeiro-Rodríguez, M., & Santos-Gago, J. M. (2016). Collection and processing of data from wrist wearable devices in heterogeneous and multiple-user scenarios. Sensors, 16(9), 1538.

De Zambotti, M., Cellini, N., Goldstone, A., Colrain, I. M., & Baker, F. C. (2019). Wearable sleep technology in clinical and research settings. Medicine and science in sports and exercise, 51(7), 1538.

Dias, D., & Paulo Silva Cunha, J. (2018). Wearable health devices—vital sign monitoring, systems and technologies. Sensors, 18(8), 2414.

Dibb, S., & Simkin, L. (1991). Targeting, segments and positioning. International Journal of Retail & Distribution Management.

Dinh-Le, C., Chuang, R., Chokshi, S., & Mann, D. (2019). Wearable health technology and electronic health record integration: scoping review and future directions. JMIR mHealth and uHealth, 7(9), e12861.

dos Santos, R. D. O. J., de Oliveira, J. H. C., Rocha, J. B., & Giraldi, J. D. M. E. (2015). Eye tracking in neuromarketing: a research agenda for marketing studies. International journal of psychological studies, 7(1), 32.

Duchowski, A. T., & Duchowski, A. T. (2017). Eye tracking methodology: Theory and practice. Springer.

Ekeland, A. G., Bowes, A., & Flottorp, S. (2010). Effectiveness of telemedicine: a systematic review of reviews. International journal of medical informatics, 79(11), 736-771.

Falk, E. B., O'Donnell, M. B., Cascio, C. N., Tinney, F., Kang, Y., Lieberman, M. D., ... & Strecher, V. J. (2015). Self-affirmation alters the brain's response to health messages and subsequent behavior change. Proceedings of the National Academy of Sciences, 112(7), 1977-1982.

Falk, E. B., O'Donnell, M. B., Tompson, S., Gonzalez, R., Dal Cin, S. D., Strecher, V., Cummings, K. M., & An, L. (2016). Functional brain imaging predicts public health campaign success. Social Cognitive and Affective Neuroscience, 11(2), 204–214. https://doi.org/10.1093/SCAN/NSV108

Ferreira, J. J., Fernandes, C. I., Rammal, H. G., & Veiga, P. M. (2021). Wearable technology and consumer interaction: A systematic review and research agenda. Computers in human behavior, 118, 106710.

Festa, G., Cuomo, M. T., Metallo, G., & Festa, A. (2016). The (r) evolution of wine marketing mix: From the 4Ps to the 4Es. Journal of Business Research, 69(5), 1550-1555.

Genevsky, A., Yoon, C., & Knutson, B. (2017). When brain beats behavior: Neuroforecasting crowdfunding outcomes. Journal of Neuroscience, 37(36), 8625-8634.

Goldsmith, R. (2016). The Big Five, happiness, and shopping. Journal of Retailing and Consumer Services, 31, 52-61.

Hickey, B. A., Chalmers, T., Newton, P., Lin, C. T., Sibbritt, D., McLachlan, C. S., ... & Lal, S. (2021). Smart devices and wearable technologies to detect and monitor mental health conditions and stress: A systematic review. Sensors, 21(10), 3461.

Hofmann, S. M., Klotzsche, F., Mariola, A., Nikulin, V., Villringer, A., & Gaebler, M. (2021). Decoding subjective emotional arousal from EEG during an immersive Virtual Reality experience. Elife, 10, e64812.

Holmqvist, K., Nyström, M., Andersson, R., Dewhurst, R., Jarodzka, H., & Van de Weijer, J. (2011). Eye tracking: A comprehensive guide to methods and measures. OUP Oxford.

Homburg, C., Schwemmle, M., & Kuehnl, C. (2015). New product design: Concept, measurement, and consequences. Journal of marketing, 79(3), 41-56.

Horská, E., & Berčík, J. (2014). The influence of light on consumer behavior at the food market. Journal of Food Products Marketing, 20(4), 429-440.

Huddleston, P., Behe, B. K., Minahan, S., & Fernandez, R. T. (2015). Seeking attention: an eye tracking study of in-store merchandise displays. International Journal of Retail & Distribution Management.

Hubert, M., & Kenning, P. (2008). A current overview of consumer neuroscience. Journal of Consumer Behaviour: An International Research Review, 7(4-5), 272-292.

Husić-Mehmedović, M., Omeragić, I., Batagelj, Z., & Kolar, T. (2017). Seeing is not necessarily liking: Advancing research on package design with eye-tracking. Journal of Business Research, 80, 145-154.

Iqbal, S., Mahgoub, I., Du, E., Leavitt, M. A., & Asghar, W. (2021). Advances in healthcare wearable devices. NPJ Flexible Electronics, 5(1), 1-14.

Jiang, A., Yao, X., Westland, S., Hemingray, C., Foing, B., & Lin, J. (2022). The Effect of Correlated Colour Temperature on Physiological, Emotional and Subjective Satisfaction in the Hygiene Area of a Space Station. International Journal of Environmental Research and Public Health, 19(15), 9090.

Johnson, K. T., & Picard, R. W. (2020). Advancing neuroscience through wearable devices. Neuron, 108(1), 8-12.

Kakaria, S., Bigné, E., Catrambone, V., & Valenza, G. (2022). Heart rate variability in marketing research: A systematic review and methodological perspectives. Psychology & Marketing.

Kalantari, M. (2017). Consumers' adoption of wearable technologies: literature review, synthesis, and future research agenda. International Journal of Technology Marketing, 12(3), 274-307.

Kasai, Kiyoto, Masato Fukuda, Noriaki Yahata, Kentaro Morita, and Naotaka Fujii (2015), "The Future of Real-World Neuroscience: Imaging Techniques to Assess Active Brains in Social Environments," Neuroscience Research, 90, 65–71.

Kenning, P., & Linzmajer, M. (2011). Consumer neuroscience: an overview of an emerging discipline with implications for consumer policy. Journal für Verbraucherschutz und Lebensmittelsicherheit, 6(1), 111-125.

Khushaba, R. N., Wise, C., Kodagoda, S., Louviere, J., Kahn, B. E., & Townsend, C. (2013). Consumer neuroscience: Assessing the brain response to marketing stimuli using electroencephalogram (EEG) and eye tracking. Expert systems with applications, 40(9), 3803-3812.

Kim, J., Campbell, A. S., de Ávila, B. E. F., & Wang, J. (2019). Wearable biosensors for healthcare monitoring. Nature biotechnology, 37(4), 389-406.

Krafka, K., Khosla, A., Kellnhofer, P., Kannan, H., Bhandarkar, S., Matusik, W., & Torralba, A. (2016). Eye tracking for everyone. In Proceedings of the IEEE conference on computer vision and pattern recognition (pp. 2176-2184).

Kreps, G. L., & Neuhauser, L. (2015, January). Designing health information programs to promote the health and well-being of vulnerable populations: The benefits of evidence-based strategic health communication. In Meeting health information needs outside of healthcare (pp. 3-17). Chandos Publishing.

Kuan, P. X., Chan, W. K., Ying, D. K. F., Rahman, M. A. A., Peariasamy, K. M., Lai, N. M., ... & Anand, A. (2022). Efficacy of telemedicine for the management of cardiovascular disease: a systematic review and meta-analysis. The Lancet Digital Health, 4(9), e676-e691.

Kumar, G. V., Halder, T., Jaiswal, A. K., Mukherjee, A., Roy, D., & Banerjee, A. (2016). Large scale functional brain networks underlying temporal integration of audio-visual speech perception: An EEG study. Frontiers in psychology, 7, 1558.

Lemercier, A., Guillot, G., Courcoux, P., Garrel, C., Baccino, T., & Schlich, P. (2014). Pupillometry of taste: Methodological guide–from acquisition to data processing-and toolbox for MATLAB. Quantitative Methods for Psychology, 10(2), 179-195.

Levy, D. L., Holzman, P. S., Matthysse, S., & Mendell, N. R. (1994). Eye tracking and schizophrenia: a selective review. Schizophrenia bulletin, 20(1), 47-62.

Li, M., Mai, Z., Yang, J., Zhang, B., & Ma, N. (2020). Ideal Time of Day for Risky Decision Making: Evidence from the Balloon Analogue Risk Task. https://doi.org/10.2147/NSS.S260321

Magno, M., Salvatore, G. A., Jokic, P., & Benini, L. (2019). Self-sustainable smart ring for long-term monitoring of blood oxygenation. IEEE access, 7, 115400-115408.

Manippa, V., Padulo, C., van der Laan, L.N. and Brancucci, A. (2017), "Gender differences in food choice: effects of superior temporal sulcus stimulation", Frontiers in Human Neuroscience, Vol. 11, p. 597.

Mansi, S. A., Barone, G., Forzano, C., Pigliautile, I., Ferrara, M., Pisello, A. L., & Arnesano, M. (2021). Measuring human physiological indices for thermal comfort assessment through wearable devices: A review. Measurement, 183, 109872.

Mantiuk, R., Kowalik, M., Nowosielski, A., & Bazyluk, B. (2012, January). Do-it-yourself eye tracker: Low-cost pupil-based eye tracker for computer graphics applications. In International Conference on Multimedia Modeling (pp. 115-125). Springer, Berlin, Heidelberg.

Marino, M., Li, Y., Rueschman, M. N., Winkelman, J. W., Ellenbogen, J. M., Solet, J. M., ... & Buxton, O. M. (2013). Measuring sleep: accuracy, sensitivity, and specificity of wrist actigraphy compared to polysomnography. Sleep, 36(11), 1747-1755.

Martin, J. L., & Hakim, A. D. (2011). Wrist actigraphy. Chest, 139(6), 1514-1527.

McCarthy, E.J. (1960) Basic Marketing: A Managerial Approach. McGraw-Hill Inc., US.

McCrea, M., & Farrell, M. (2018). A conceptual model for pricing health and life insurance using wearable technology. Risk Management and Insurance Review, 21(3), 389-411.

Meißner, M., Pfeiffer, J., Pfeiffer, T., & Oppewal, H. (2019). Combining virtual reality and mobile eye tracking to provide a naturalistic experimental environment for shopper research. Journal of Business Research, 100, 445-458.

Neumann, D., Tiberius, V., & Biendarra, F. (2022). Adopting wearables to customize health insurance contributions: a ranking-type Delphi. BMC Medical Informatics and Decision Making, 22(1), 1-7.

Oyama, A., Takeda, S., Ito, Y., Nakajima, T., Takami, Y., Takeya, Y., ... & Morishita, R. (2019). Novel method for rapid assessment of cognitive impairment using high-performance eye-tracking technology. Scientific reports, 9(1), 1-9.

Papagiannopoulou, E. A., Chitty, K. M., Hermens, D. F., Hickie, I. B., & Lagopoulos, J. (2014). A systematic review and meta-analysis of eye-tracking studies in children with autism spectrum disorders. Social neuroscience, 9(6), 610-632.

Perednia, D. A., & Allen, A. (1995). Telemedicine technology and clinical applications. Jama, 273(6), 483-488.

Pieters, R., Wedel, M., & Zhang, J. (2007). Optimal feature advertising design under competitive clutter. Management Science, 53(11), 1815–1828.

Plassmann, H., O'doherty, J., Shiv, B., & Rangel, A. (2008). Marketing actions can modulate neural representations of experienced pleasantness. Proceedings of the national academy of sciences, 105(3), 1050-1054.

Plassmann, H., Ramsøy, T. Z., & Milosavljevic, M. (2012). Branding the brain: A critical review and outlook. Journal of consumer psychology, 22(1), 18-36.

Plassmann, H., Venkatraman, V., Huettel, S., & Yoon, C. (2015). Consumer neuroscience: applications, challenges, and possible solutions. Journal of marketing research, 52(4), 427-435.

Plassmann, H., & Weber, B. (2015). Individual differences in marketing placebo effects: Evidence from brain imaging and behavioral experiments. Journal of Marketing Research, 52(4), 493–510. https://doi.org/10.1509/jmr.13.0613

Popa, L., Selejan, O., Scott, A., Mureşanu, D. F., Balea, M., & Rafila, A. (2015). Reading beyond the glance: eye tracking in neurosciences. Neurological Sciences, 36(5), 683-688.

Pozharliev, R., Verbeke, W. J., & Bagozzi, R. P. (2017). Social consumer neuroscience: Neurophysiological measures of advertising effectiveness in a social context. Journal of Advertising, 46(3), 351-362.

Ragot, M., Martin, N., Em, S., Pallamin, N., & Diverrez, J. M. (2017, July). Emotion recognition using physiological signals: laboratory vs. wearable sensors. In International Conference on Applied Human Factors and Ergonomics (pp. 15-22). Springer, Cham.

Rahal, R. M., & Fiedler, S. (2019). Understanding cognitive and affective mechanisms in social psychology through eye-tracking. Journal of Experimental Social Psychology, 85, 103842.

Ramsøy Zoëga, T., Michael, N., & Michael, I. (2019). A consumer neuroscience study of conscious and subconscious destination preference. Scientific Reports, 9(1), 1-8.

Rayner, K., Rotello, C. M., Stewart, A. J., Keir, J., & Duffy, S. A. (2001). Integrating text and pictorial information: eye movements when looking at print advertisements. Journal of experimental psychology: Applied, 7(3), 219.

Roberts, H., Soto, V., Tyson-Carr, J., Kokmotou, K., Cook, S., Fallon, N., ... & Stancak, A. (2018). Tracking economic value of products in natural settings: a wireless EEG study. Frontiers in Neuroscience, 12, 910.

Salamone, F., Masullo, M., & Sibilio, S. (2021). Wearable devices for environmental monitoring in the built environment: a systematic review. Sensors, 21(14), 4727.

Salvucci, D. D., & Goldberg, J. H. (2000, November). Identifying fixations and saccades in eye-tracking protocols. In Proceedings of the 2000 symposium on Eye tracking research & applications (pp. 71-78).

Sarracanie, M., LaPierre, C. D., Salameh, N., Waddington, D. E., Witzel, T., & Rosen, M. S. (2015). Low-cost high-performance MRI. Scientific reports, 5(1), 1-9.

Sawangjai, P., Hompoonsup, S., Leelaarporn, P., Kongwudhikunakorn, S., & Wilaiprasitporn, T. (2019). Consumer grade EEG measuring sensors as research tools: A review. IEEE Sensors Journal, 20(8), 3996-4024.

Segura Anaya, L. H., Alsadoon, A., Costadopoulos, N., & Prasad, P. W. C. (2018). Ethical implications of user perceptions of wearable devices. Science and engineering ethics, 24(1), 1-28.

Smidts, A., Hsu, M., Sanfey, A. G., Boksem, M. A., Ebstein, R. B., Huettel, S. A., Yoon, C., et al. (2014). Advancing consumer neuroscience. Marketing Letters, 25(3), 257–267.

Teixeira, T. S., Wedel, M., & Pieters, R. (2010). Moment-to-moment optimal branding in TV commercials: Preventing avoidance by pulsing. Marketing Science, 29(5), 783–804.

Tomczyk, A. T., Buhalis, D., Fan, D. X., & Williams, N. L. (2022). Price-personalization: Customer typology based on hospitality business. Journal of Business Research, 147, 462-476.

Tynan, A. C., & Drayton, J. (1987). Market segmentation. Journal of marketing management, 2(3), 301-335.

Ueafuea, K., Boonnag, C., Sudhawiyangkul, T., Leelaarporn, P., Gulistan, A., Chen, W., ... & Piyayotai, S. (2020). Potential applications of mobile and wearable devices for psychological support during the COVID-19 pandemic: a review. IEEE Sensors Journal, 21(6), 7162-7178.

Valliappan, N., Dai, N., Steinberg, E., He, J., Rogers, K., Ramachandran, V., ... & Navalpakkam, V. (2020). Accelerating eye movement research via accurate and affordable smartphone eye tracking. Nature communications, 11(1), 1-12.

Van Der Laan, L. N., & Smeets, P. A. (2015). You are what you eat: a neuroscience perspective on consumers' personality characteristics as determinants of eating behavior. Current Opinion in Food Science, 3, 11-18.

Venkatraman, V., Chuah, Y. L., Huettel, S. A., & Chee, M. W. (2007). Sleep deprivation elevates expectation of gains and attenuates response to losses following risky decisions. Sleep, 30(5), 603-609.

Venkatraman, V., Clithero, J. A., Fitzsimons, G. J., & Huettel, S. A. (2012). New scanner data for brand marketers: How neuroscience can help better understand differences in brand preferences. Journal of consumer psychology, 22(1), 143-153.

Vesanen, J., & Raulas, M. (2006). Building bridges for personalization: a process model for marketing. Journal of Interactive marketing, 20(1), 5-20.

Wang, J. B., Cadmus-Bertram, L. A., Natarajan, L., White, M. M., Madanat, H., Nichols, J. F., ... & Pierce, J. P. (2015). Wearable sensor/device (Fitbit One) and SMS text-messaging prompts to increase physical activity in overweight and obese adults: a randomized controlled trial. Telemedicine and e-Health, 21(10), 782-792.

Wedel, M. (2013). Attention research in marketing: A review of eye tracking studies. Robert H. Smith School Research Paper No. RHS, 2460289.

Wedel, M., & Pieters, R. (2008). A review of eye-tracking research in marketing. Review of Marketing Research, 4(2008), 123–147.

Wedel, M., & Kamakura, W. A. (2002). Introduction to the special issue on market segmentation. Intern. J. of Research in Marketing, 19, 181-183.

Xu, S., Rwei, A. Y., Vwalika, B., Chisembele, M. P., Stringer, J. S., Ginsburg, A. S., & Rogers, J. A. (2021). Wireless skin sensors for physiological monitoring of infants in low-income and middle-income countries. The Lancet Digital Health, 3(4), e266-e273.

Ye, Z., Li, Y., Fathi, A., Han, Y., Rozga, A., Abowd, G. D., & Rehg, J. M. (2012, September). Detecting eye contact using wearable eye-tracking glasses. In Proceedings of the 2012 ACM conference on ubiquitous computing (pp. 699-704).

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# How Far is Too Far? The impact of the Perimeter-of-Origin on the Willingness to Pay

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## Abstract

The origin of products is a key factor in consumers' decision-making process (Bilkey & Nes, 1982). With the growing attention to product traceability, companies increasingly see the use of labels indicating national or local sourcing of products throughout the supply chain as a strategic asset.
The Country-of-Origin (COO) literature has highlighted that consumers perceive "Made in Italy" products as high-quality, especially in the fashion, food and beverage, accessories, mechanical, and technology sectors (Cappelli et al., 2019).
Studies on consumer ethnocentrism (CE) suggest that people often show a bias in favor of local products and brands compared to foreign ones (Shimp & Sharma, 1987).
Furthermore, buy-local literature highlights that the preference for local products extends beyond the national perimeter and also applies to smaller geographic areas (Fernández-Ferrín & Bande-Vilela, 2013). However, most of these studies are limited to the food industry.
A gap in the literature remains to be addressed: although COO and CE have been well documented, the impact on consumers of varying perimeters of origin (considering also sub-national dimensions) has been scarcely explored in the non-food industry.
Perimeter-of-Origin (PO) is defined by the author as the perceived geographical scope of a product supply chain, ranging from local (within 100 km of the purchase point), to national, continental and global.
This work aims to analyze the impact of different levels of the Perimeter-of-Origin (PO) on consumers' willingness to pay (WTP), while controlling the role of quality and assessing the moderating role of CE, through a Discrete Choice Experiment (DCE).

### 1.Introduction

In many sectors, labels such as "Made in Italy", "100% Italian" or "Local Product" are becoming a key element of differentiation and market positioning. Although the geographical origin of products is gaining relevance, its impact on the willingness to pay varies significantly across studies and contexts (Thøgersen, 2023; Yeh & Hirsch, 2023).
According to Social Identity Theory (Tajfel, 1970, 1974; Tajfel & Turner, 1986), individuals show a preference for their own group (in-group bias) resulting in more favorable evaluations and attitudes. This bias not only influences interpersonal evaluations but also consumption preferences, leading consumers to favor local products over imported ones (Shankarmahesh, 2006). To measure individual differences in national products preference, called consumer ethnocentrism, Shimp & Sharma (1987) developed a 17-item scale, the CETSCALE.
Beyond ethnocentrism, the effect of product origin on purchasing preferences has been extensively documented by more than 1,000 studies on the Country-of-Origin (COO) effect (Samiee & Chabowski,

2021). These studies have demonstrated the existence of a halo effect of the COO on the products that can be broken down into four different dimensions: the general country image, the general product country image, the specific product country image and the partitioned country image (Oduro et al., 2024). Over 80% of the studies on consumer ethnocentrism have used surveys in order to investigate the phenomenon (Baber et al., 2024). One of the main limits of using selfreport measures is that results can be affected by social desirability and other biases. This creates a problem of generalization, as argued by Yildiz et al. (2018), ethnocentrism was in fact not a strong predictor of real local product purchase.
The DCE methodology involves the use of implicit measurement that is expected to bypass the aforementioned biases, providing evidence of the Perimeter-of-Origin effect on consumer behavior and the moderating role of ethnocentrism.

The research questions that are going to be addressed are:

i. To what extent is the willingness to pay of consumers based on the PO of the product?

ii. To what extent does ethnocentrism moderate the effect of the PO on the WTP?

## 2. Literature Review and Hypoteses

### 2.1 Country-of-Origin

The Country-of-Origin (COO) effect has been extensively studied since the 1980s (Al-Sulaiti & Baker, 1998; Bilkey & Nes, 1982), showing that the COO image has a positive though moderate effect on consumers' evaluation of products (Peterson & Jolibert, 1995).
Furthermore, the COO is not a unidimensional construct, but can be measured by using four different dimensions: general country image; general product country image, namely the general image of the products of a Country; specific product country image, namely the specific competence attributed to a Country in the realization of a specific class of goods or services; and partitioned country image, namely the impact of the Country of design (COD), parts (COP), assembly (COA), brand (COB) and manufacture (COM) (Chowdhury & Ahmed, 2009). The main impact on brand image is due to the general product country image, followed respectively by partitioned country image, general country image, and specific product country image (Oduro et al., 2024).
Within COO literature, consumer ethnocentrism is another deeply studied phenomenon. The consumers in fact show a domestic country bias (Balabanis & Diamantopoulos, 2004), that manifests in a higher buying intention and a better perception of the product.
The importance of the "Made in Italy" label has increased over the years according to KPMG (2010), and brands are stressing the Italianness of their products in order to gain competitive advantage, especially in fashion (Piancazzo et al., 2024).
Fashion, together with food and beverage, accessories, mechanical and technology, are, in fact, sectors where the "Made in Italy" label is associated with an increased willingness to pay of consumers (Cappelli et al., 2019).
Accordingly with aforementioned literature, it is possible to forecast that WTP will result negatively correlated with the scope of the PO, and consequently, a higher WTP for national products compared to foreign ones is expected.

### 2.2 Buy local

Local products are defined by Meyerding et al. ( 2019) as "less the 100 km from home", while a report of JRC states that "'Local Food Systems' as those where the production, processing, trade and consumption of food occur in a defined reduced geographical area (depending on the sources and reflections, of about 20 to 100 km radius)" (2013).

Buy local literature is primarily focused on food sector, but it offers interesting insights into consumers' decision-making drivers. Feldmann & Hamm (2015) found that motives for the purchase of local products can be divided into two categories: egoistic and altruistic. The former includes perceived higher quality, while the latter relates to sustainability and to the support to the territory.
Therefore, WTP is expected to be found higher for local products compared to national and foreign ones.
Most of the literature on the topic adopts a binary perspective, differentiating between local and non-local, without considering the nuances that can occur both within and between the categories. The concept of PO allows a multilevel analysis that makes it possible to capture these nuances. Defined by the author as the perceived geographical scope of a product supply chain, ranging from local (within 100 km of the purchase point), to national, continental and global, the integration of the PO concept allows a more detailed analysis on the effects of different gradations of proximity on the WTP.
This leads to the following hypothesis:
H1: consumers' willingness to pay decreases progressively from local to national, continental, and global origins of products.

### 2.3 Consumer ethnocentrism

Ethnocentrism is born as a sociological construct denoting the favoritism towards people sharing the same cultural background, and aversion towards people with a different one (Sumner, 1907). It was later used in the studies on consumer behavior to indicate the preference for local products compared to foreign ones (Shimp & Sharma, 1987), regardless of their quality and price (Shankarmahesh, 2006). Starting from the 1980s the interest for the construct has
always increased over the years (Baber et al., 2024).
The most widely used theoretical framework explaining the phenomenon is Social Identity Theory (SIT) (Tajfel, 1970, 1974; Tajfel & Turner, 1986). According to SIT, people tend to favor the members of their group (in-group bias), being more indulgent towards them, and attributing them better characteristics. The propensity to buy local products compared to foreign ones is therefore linked to the same bias.
Baber et al. (2024) have highlighted how antecedents of ethnocentrism can be divided in socio-cultural factors (patriotism, conservatism, country image), political factors (concern for political pressure, COO), and demographic factors (cultural identity, social class).
Willingness to pay, repeated purchase, brand preferences, and product judgment can be identified as consequences of ethnocentrism.
Many mediators and moderators have been found to be relevant: cosmopolitanism, materialism, perceived brand prestige among the ones in the former category and perceived quality, perceived necessity and imported product judgment among the latter.
H2: CE moderates the relation between WTP and PO, increasing WTP among consumers with high levels of CE.

## 3. Methodology

To examine the effect of the Perimeter-of-Origin on consumers' decision-making processes, a Discrete Choice Experiment has been designed. Specifically, the experiment examines how the Perimeter-of-Origin and the quality of the product affect the willingness to pay of a non-food product, a 100% cotton t-shirt.
Since, as suggested by literature, the origin of the product is at least partially correlated with the perception of quality, a variable distinguishing between "standard", "high" and "excellent" quality has been used, in order to isolate the specific effect of the PO.
The levels assigned to the variable PO are: "Imported", "Made in EU", "100% made in Italy" and "Local product". Since the last two levels could overlap, it will be explicitly specified that "Local Product" should be interpreted as a product that has a local (within 100 km from the purchase point) supply chain (design, manufacturing, assembly and components).

For the price level, starting from the average price of a 100% cotton t-shirt, 7 price levels have been obtained through a consecutive 10% price increase.
This 7x4x3 design generates a total of 84 scenarios.
To construct a D-efficient design and ensure comprehensibility, a pre-test consisting of 16 random paired choice scenarios will be conducted on a pilot sample. The pre-test is necessary to ensure respondent comprehension of the questionnaire and to derive the coefficients necessary to structure a D-efficient design. According to literature, the pre-test sample will be of 30-50 subjects.
After the experimental phase, the subjects will complete a questionnaire, containing demographic questions, and the CETSCALE to assess CE.
The sample will be of 150-200 subjects, recruited by online platforms (Prolific). The study will be administered via Qualtrics, and will consist of an introduction, the experiment and finally the questionnaire.
The results of the DCE will be analyzed through a Multinomial Logit Model (MNL), and a Mixed Logit, to assess the impact of the PO and quality on the WTP, also
incorporating the heterogeneity of the subjects.
The results of the CETSCALE will be used to evaluate the moderating role of the CE through a regression.

## 4. Expected results

According to the hypothesis, expected findings include: (i) a significant and negative correlation between the WTP and the scope of the PO; (ii) a significant and positive correlation between WTP and perceived quality; (iii) higher WTP for local and national products for subjects with higher levels of CE.

## 5. Conclusions

This paper analyzes the impact of the Perimeter-of-Origin on the Willingness to Pay of consumers, considering the roles of quality and ethnocentrism. Through a Discrete Choice Experiment, consumers' preferences for imported, European, Italian and local products will be measured.
A key theoretical contribution lies in the expansion of the Country-of-Origin literature, going beyond the duality of national/foreign products, by analyzing different levels of the Perimeter-of-Origin and testing the moderating role of ethnocentrism. Furthermore, the experimental method allows the understanding of consumer preferences from a behavioral perspective.
The results of this study could support companies in defining pricing and positioning strategies. Companies could benefit from a specific labeling indicating the PO of their supply chain, and influence consumers' WTP. Furthermore, the moderating effect of CE can be used to segment their audience, targeting ethnocentric consumers with tailored communications highlighting territorial identity. Finally, the findings may encourage local investments, as well as higher transparency in the supply chain.

**References available upon request.**

# Track 6 - Tourism, Culture & Arts Marketing

# Towards the Use of Lean Six Sigma and the Integration of Blockchain to Enable Supplier Procurement in Tourism: A Model Proposal

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## Abstract

The tourism industry faces increasing pressure to transform amid rising demand for personalized, transparent services and a fragmented supplier landscape. This study examines how Lean Six Sigma (LSS) principles, known for reducing variability and enhancing quality through continuous improvement, can be further enhanced by integrating blockchain technology as a digital enabler. While LSS frameworks offer structured tools for process optimization, their effectiveness in tourism is hindered by poor data standardization and low inter-organizational trust. Blockchain, with features such as immutability, transparency, and smart contracts, can address these shortcomings by providing a secure, decentralized infrastructure that aligns well with the data-driven requirements of the DMAIC cycle. We propose a blockchain-enabled LSS procurement model. The model facilitates real-time transparency, automated compliance, and stakeholder accountability, turning a static supply-centered approach into a dynamic, customer-driven procurement ecosystem. Moreover, it encourages co-creation between customers and suppliers by supporting the design of shared services, decentralized feedback mechanisms, and reputation systems. This framework aims to operationalize the flexible, feedback-rich ideals of LSS within the variable and fragmented context of tourism. While theoretical, the model provides a blueprint for scalable and resilient procurement strategies, inviting future empirical testing and refinement. It contributes to emerging literature on digitally enabled service ecosystems and highlights the synergistic potential of combining LSS methodologies with blockchain infrastructure for enhanced tourism procurement.

*Keywords: Lean Six Sigma, Blockchain application, Tourism sector, Supplier Procurement Process, Co-Creation, Digital Transformation*

## 1. Framing of the research

### 1.1 Lean Six Sigma Approach

Faced with a dynamic shift towards the demand for personalized services, a conscious push for transparent and socially responsible services is shaping the transformation within the tourism industry. A change is needed from the rigid traditional linear service delivery towards a dynamic ecosystem of suppliers. This transformation could be supported by a methodology historically rooted in manufacturing and developed from a combined approach of Lean and Six Sigma principles, integrating with each other to create Lean Six Sigma (LSS) (Ramphal,2017).

Lean Six Sigma (LSS) is a hybrid management methodology that combines lean waste-reduction principles with Six Sigma's data-driven quality improvement approach through variability elimination (Pyzdek & Keller, 2014). Lean is derived from the Toyota production system, which was developed to eliminate non-value-adding activities within manufacturing through waste reduction. This was achieved by tools such as Just-In-Time (JIT). The philosophy behind the tool was that the factory would only produce when requested, based on consumer demand. This aimed to minimize excess stock and eliminate waste within the process. It also allowed for greater customer input as the product could be made to specifications requested by consumers (Womack & Jones, 2003).

The data-driven Six Sigma methodology is a rigid system that operates as a data-driven decision-making tool that aims to reduce defects and process variation. One of the tools that helps make data-driven decisions is the DMAIC framework (Define, Measure, Analyse, Improve, Control). The tool acts as a cornerstone. Using the framework helps organisations to analyze and optimize process flows by identifying root causes and measuring KPIs (Antony, 2006). Through data, the process flows can be controlled and continuously improved. The integration of lean and Six Sigma into LSS provides a comprehensive toolkit for organizations to enhance value creation by simultaneously reducing waste and improving product quality (Snee,2010; Chakraborty & Tan, 2013).

The potential implementation of these LSS tools shows significant promise. However, the implementation of these tools in tourism is not as standardized as in manufacturing (Abliwi et al., 2015). With the high variability of personalized demand, on top of being an intangible service that is highly influenced by customer interaction, standardization and defect measurement become inherently more complex (Kokkranikal et al.,2013). The fragmentation of suppliers further enhances these challenges. Tourism procurement environments often consist of small, independent suppliers and numerous stakeholders who create information silos and hinder coordinated quality controls due to high variability of unique experiences (Jovanovic et al., 2023). Though these challenges persist throughout the entire industry, you must face one obstacle when implementing LSS. With the successful implementation of it hinging on the organizational culture, an unavoidable barrier is that the data infrastructure and mindset need to be aligned to allow continuous improvement (Kumar et al., 2009). LSS needs reliable, real-time data, as it is crucial to the performance of the DMAIC process (Ramphal & Nicolaides, 2018). Tourism faces problems in collecting such data. With issues of inconsistent data sources or a lack of quality data on top of low inter-organizational trust, there is limited data to build a foundation of quality data. Due to the challenges procurement faces in tourism, emerging digital enablers could provide potential efficient solutions, such as blockchain, offering the tools to build the foundation to operationalize LSS by improving transparency, traceability, and stakeholder coordination (Baydeniz, 2024).

### 1.2 The Blockchain concept and framework

Blockchain has become a buzzword when discussing digital transformation trends. As various industry models show, customer expectations for transparency and customization have increased, making the need for change more prevalent. This digital transformation is accelerating the shift toward on-demand, experience-based travel (Rashideh, 2020; IBM, 2022). Blockchain has emerged as a possible foundational enabler of a secure, automated, and data-rich service ecosystem that aims to improve service transparency, verify supplier authenticity, and automate contractual relationships. It supports the key challenges that the dynamic tourism procurement environment faces (Zhang et al, 2022; Lansiti & Lakhani).

Blockchain is a digital peer-to-peer ledger that records transactions immutably and transparently across multiple nodes. A network of sorts. Each transaction is grouped into a "block", time-sampled, cryptographically hashed, and attached to a chain of prior transactions (Tripathi et al., 2019). Traditional centralized databases are prone to failure and do not ensure data validity, as there remains the possibility of manipulation. Unlike these conventional databases, blockchain systems offer no single point of control or failure and operate on consensus mechanisms to ensure data validity. Enterprise settings, such as tourism and our focus point of procurement, require a slightly different approach. Permissioned

blockchains are chains where only verified participants can view or add information to. These are preferred within these settings to ensure privacy and compliance concerns (IBM,2022).
Several key foundational characteristics are especially relevant to procurement within tourism. These key building blocks in the blockchain consist of immutability, transparency, smart contracts, traceability, and decentralization (Rashideh, 2020). The data once entered within the blockchain cannot be altered without consensus from the network. ensuring traceability of the phases in procurement, such as booking confirmations, delivery logs, and compliance audits. Within a Permissioned blockchain, authorized stakeholders have shared access to the same source of truth. A feature that helps to enhance collaboration as service providers across platforms, and customers can collaborate on an equal playing field reducing disputes and building trust (Lansiti & Lakhani, 2020). Self-executing digital agreements, better known as smart contracts, automatically act upon programmed transaction triggers based on predefined conditions. These can automatically enforce the rules set on the predefined conditions helping automate payments, applying penalties for service-level breaches, and enforcing refund policies. Removing a lot of the hassle associated with it (Chatterjee et al., 2021). The traceability of the data gives end-to-end visibility across the supply chain. This data can help control the origin and quality of the services. Verifying these experiences or products can help to ensure standardization within the tourism industry (Baralla et al.,2020; Zhang et al., 2022). These features can enable collaborative service design and flexible bundling of offerings, fostering an environment of co-creation across the tourism value chain. Decentralizing authority over the data across nodes reduces the reliance on intermediaries to manage the network and update it with data, giving authority to the suppliers and customers, fostering a more agile and customer-driven procurement environment (Rashideh, 2020).

### 1.3 Merging the Lean Six Sigma approach and the blockchain framework

Blockchain features can make it not just a mere transactional technology, but will help it thrive as a systemic trust mechanism. This is especially suitable for environments that require inter-organizational coordination and verification, such as within an LSS-based procurement model, where it can be the infrastructural backbone for a more transparent, adaptive and efficient supplier network in tourism. Where key features like blockchain's immutability support key features of LSS, such as the Measure and Control phases in DMAIC, smart contracts can facilitate process standardization and automation during their improvement and control phases. The merging of the two approaches has the potential to create that backbone that will propel the tourism industry into an adaptive and customer-driven industry.
There is a potential path for integrating blockchain into a Lean Six Sigma-based procurement model. It presents a compelling synergy through reinforcing tools. Therefore, intersecting these two methodologies can potentially address operational and structural limitations observed in tourism procurement (Kumar & Sharma, 2023; Zhang et al., 2022). The current LSS framework operates to reduce variability and enhance process efficiency through continuous data-driven improvement (Pyzdek & Keller, 2014). The model struggles to adapt in operationalizing such a fragmented and highly personalized service sector. A lack of reliable, standardized data and low inter-organizational trust have limited its operational efficiency (Ramphal & Nicolaides, 2018; Erol et al., 2022). Blockchain can operate as the technological infrastructure to bridge the gap. The digital ledger inherently characterizes itself as a tool that enhances transparency, immutability, and decentralized governance, providing a technical edge that can help mitigate the existing barrier (Baralla et al.,2020; Lasiti & Lakhani, 2020). The DMAIC framework requires quality data to operate efficiently. The digital ledger infrastructure can provide such data in a tamper-resistant, real-time manner in a secure environment (Zhang et al., 2022; Abeywardena et al., 2023). Once embedded within this architecture, smart contracts can facilitate automated process enforcement and adaptive contract execution (Wei, 2022), potentially, operationalizing the control aspects of LSS in dynamic supplier networks (Kumar & Sharma, 2023). The auditable nature and immutable, transparent manner of operating create trustworthy data. This data can be used for quality control, supplier accountability, and customer engagement (Rashideh, 2020; Fragniere et al., 2022). These concepts resonate with the voice of the customer with the data helping to facilitate continuous feedback loops

(Chatterjee et al., 2021; Melkic & Cavlek, 2020). The infrastructure that the ledger provides shows the potential for operationalizing LSS and its inherent synergy (Li et al., 2023; Erol et al., 2022).
Blockchain would not operate as an add-on technology to enhance value creation but as an infrastructural enabler for a more adaptive, scalable, and customer-centric LSS procurement model (Zhang et al., 2022; Tripathi et al., 2019). This is explored within subsequent sections through potential use cases. This paper seeks to illustrate how blockchain may be embedded within the infrastructure of a procurement framework to enhance supplier verification, streamline contract execution, and promote transparency and data-driven quality assurance (Baralla et al., 2020; IBM, 2022).

## 2. Methodology

This research employed a qualitative approach, including data collection, desk analysis and interpretation from the blockchain use in tourism literature and internal observation and inspection of the operational processes of the Golden Moments Worldwide business case study. The research methodology offered the possibility to further develop the new customer-oriented integrated service procurement management model suggested and structured by Tardio and Straetemans (Tardio & Straetemans 2025) introducing and including the blockchain framework within the existent theoretical model in order to develop a more efficient record of information, impacting the customised product build up and the supplier procurement and performance evaluation process. The frame was designed using a case study of a tourism business operating online with a digital platform, namely Golden Moments. Golden Moments Worldwide Ltd is an experience provider website that counts 14 European digital platforms. The Italian Market is currently the most active of the overall businesses operating as a booking tourist service agency. Golden Moments was founded by the Cheatle twin brothers in 1999, and it is based in Southsea in the United Kingdom. Since its foundation, the agency has always pushed to be innovative and to grow its online presence as a digital company operating in Europe with a tourist main vocation. The goal of this analysis has consisted of picturing new business operations when LSS tools have been introduced and implemented, also supported by the theoretical adoption of a blockchain framework within the service procurement process.

## 3. Results

The Golden Moments procurement model is in transition towards a customer-driven approach. The model currently used as a sample, is based on the LSS methodology and operationalized for tourism. The LSS model emphasizes waste reduction and efficiency through Just-in-Time (JIT), a methodology derived from TPS that aimed to align production closely with real-time demand (Womack & Jones, 2003). While these principles work well in theory, application in the tourism sector has proven difficult due to a fragmented supplier network, high service variability, and low inter-organizational trust due to a lack of standardization (Kokkranikal et al., 2013; Ramphal & Nicolaides, 2018). The Golden Moments original supplier-driven model operated on a fixed-contract basis, resulting in low flexibility and supplier inactivity when consumer demand fluctuated. The shift toward a customer-driven procurement model helped reposition the customer as a prosumer, actively co-creating their experiences with suppliers through transparent and traceable interactions facilitated by digital blockchain infrastructure, with the model centered on LSS methodologies. The model helped to reposition the customer as a service cocreator making the consumer the one who generates and codesigns their experience (Niezgoda, 2013).
A capable infrastructure must be in place to realize this flexible pull-based model. This is where the paper proposes the integration of blockchain into the framework, building upon the existing model of Tardio & Straetemans (2025) by giving it the foundational infrastructure required. The technological infrastructure aims to provide the capacity to improve transparency, decentralize trust, automate processes, and create an interactive supplier network (Zhang et al., 2022; Rashideh, 2020). The model consists of an interconnected blockchain system that facilitates the supplier blockchain, customer blockchain, and hybrid customer-supplier blockchain, which is facilitated within the procurement blockchain. These layers help to facilitate process optimization and control within the DMAIC cycle and are aimed at resolving inefficiencies within the tourism procurement model (Tripathi et al., 2019; Chatterjee et al., 2021; IBM, 2022).

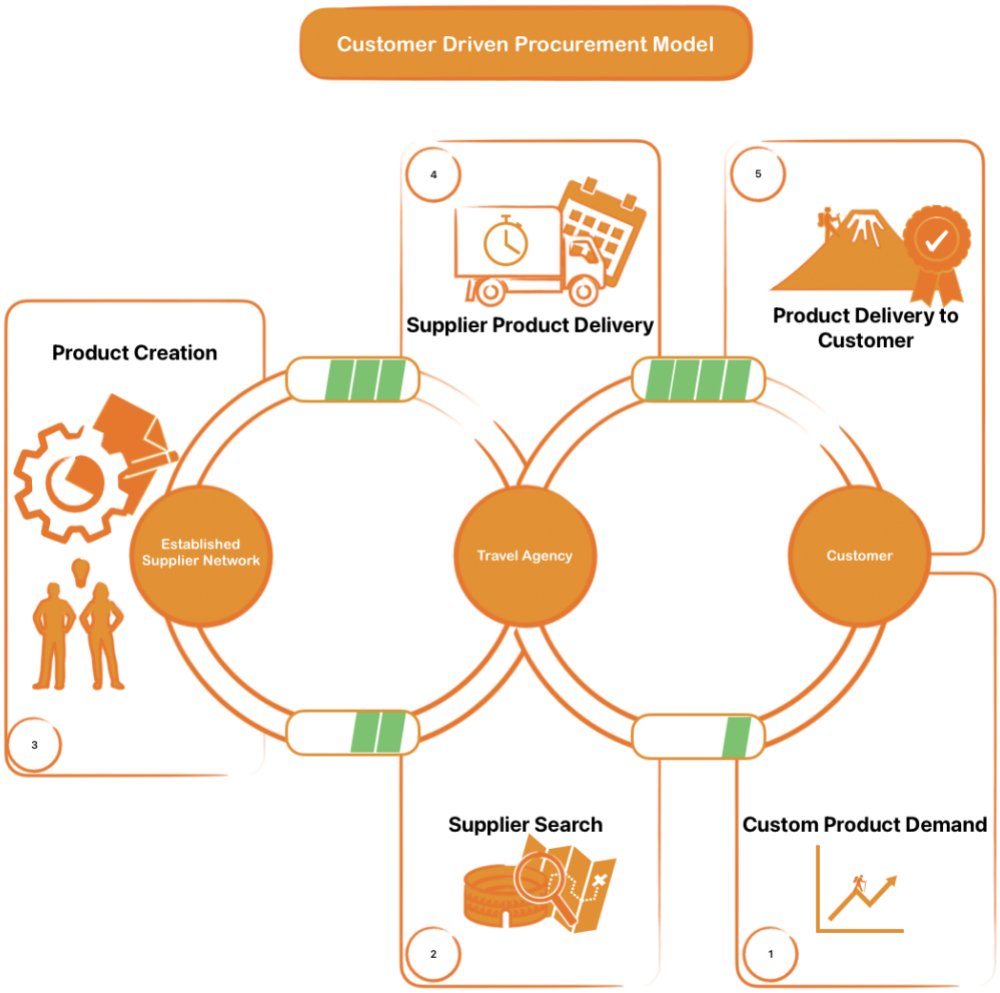



Figure 1. Lean Six Sigma Procurement Model (Tardio & Straetemans, 2025)

Integrating blockchain into the procurement model aims to realize the full potential of the flexible pull-based model on which the booking agency operates. The system requires the necessary digital infrastructure to deliver on real-time transparency, adaptive supplier matching, and trusted performance verification. This layer will help automate and improve operational processes. These capabilities will foster the foundation beyond just a data record, smart contract enforcement, validating decentralized reputation systems, and synchronizing feedback loops across stakeholders (Tripathi et al., 2019; Chatterjee et al., 2021). The immutable nature of the technology supports a JIT approach by ensuring that only verified suppliers are engaged when demand arises. Reinforced by smart contracts, the fulfillment of these experiences is empowered by reduced lag and error in the process and penalization when specific criteria aren't met (IBM, 2022; Iansiti & Lakhani, 2020). The decentralisation of data can be useful to consumers and suppliers, empowering them with actionable insights and creating the trust and traceability needed to coordinate agile experiences at scale. The infrastructure enables the evolution of LSS from a dynamic supplier network in theory, but a static supply-centered system in practice, into a dynamic data-driven procurement ecosystem envisioned in the original design, with the capability of responding to the demands of modern tourism with precision and resilience (Zhang et al., 2022; Rashideh, 2020).

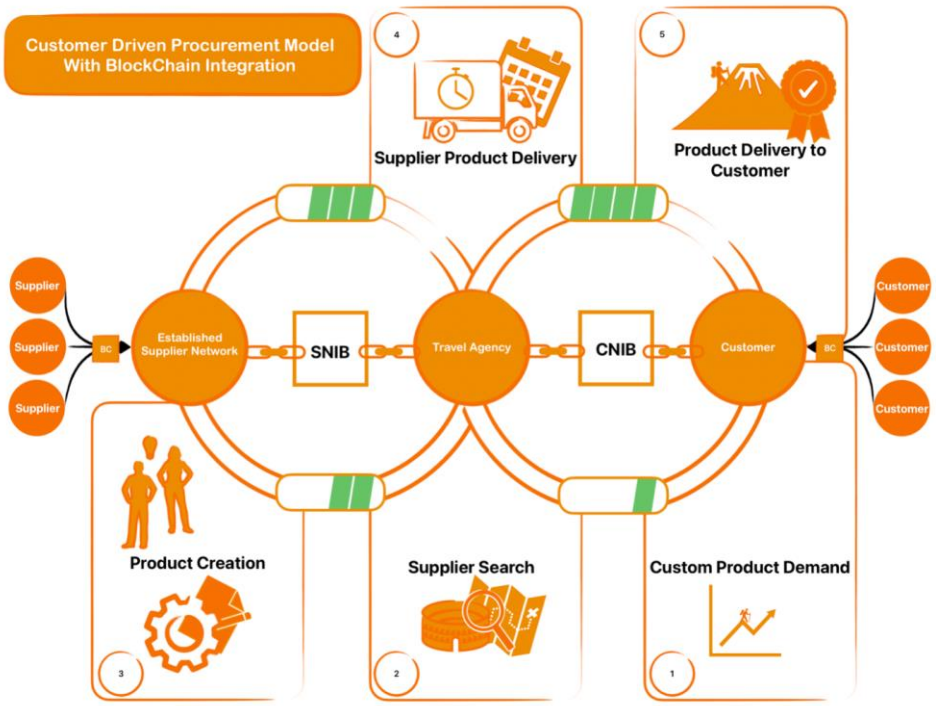



Figure 2. Blockchain integration procurement model

Tourism procurement often suffers from a lack of consistent supplier quality, traceability, and process accountability (Jovanovic et al., 2023). Creating immutable supplier profiles helps generate and validate the network. Hashes comprising metadata, certifications, delivery history, and customer ratings would form the profile (Abeywardena et al., 2023). These profiles help to establish a transparent network to improve trust, providing a reliable dataset for the Measure and Control phases of DMAIC (Zhang et al). The data can be used in various ways, with a key regulator being smart contracts able to automate supplier compliance through the contracts' pre-defined service level agreements that must be adhered to. Penalization is a significant consequence for not following the regulations by automatically triggering penalties or payments based on performance metrics (Chatterjee et al., 2021). The automation of vetting minimizes manual work, eliminates errors, and reinforces the control phase digitally.

Additionally, the transparency of performance and supplier profile creates a peer-monitored environment. A self-regulating supplier network where standards are enforced not by centralized procurement but through transparent competition in the network (Baralla et al., 2020). Aligning well with the principles of kaizen and continuous improvement, and supporting the improvement phase of DMAIC (Erol et al., 2022). This network would foster continuous service refinement. The transparency and access to shared service data allow suppliers to co-create experiences by bundling offerings or coordinating availability. Facilitating a unique proposition to be in the network. This layer would reduce redundancy and encourage collaboration, increasing the overall value stream in the LSS framework (Snee, 2010).

In tourism, the production journey is the deliverable itself. The customer side would benefit from the traceability of co-creation of that journey, on top of the accountability of suppliers, by integrating blockchain. The customer blockchain would store immutable records of each customer's preferences, reviews, and transaction history (Li et al., 2023). A user profile can be used to curate the network. This historical data can be accessed via cryptographic hashes, forming the foundation of personalized experiences. Customer reviews and journey logs influence future supplier selection by operating as decentralized feedback loops. Once a review is submitted, the chain cannot be altered, enhancing the

credibility and enabling data-driven adjustments in procurement (Melkić & Čavlek, 2020) empowering customers through the voice of the customer, which is central to LSS (Chatterjee et al., 2021).
The data-rich environment of the user profiles is facilitated on the chain, which can inform agents and customers about suppliers' past performance and set expectations. This helps the agent to curate the customer experience and gives them the tools to adjust if unsatisfied. The resulting procurement environment enables the use of data not just to validate but also to improve personalization and satisfaction helping in the Define and Analyze phases of DMAIC by outlining the requirements of consumers and pinpointing deviations (Pyzdek & Keller, 2014).
The hybrid layer operates as an intersection of customer data and supplier metrics, potentially enabling real-time co-creation between high-performing suppliers and consumers through dynamic preference matching and decentralized trust mechanisms. Acting as a trust broker, it enables real-time matching between verified, high-performing suppliers and customers whose preferences are transparently hashed (Fragnière et al., 2022; Wei, 2022) enabling continuous improvement through the aforementioned feedback loops where the consumer impact can be directly felt as a supplier, it impacts interactions with them. Either negative or positive, they can adapt to consumer feedback within their specialty, not just their own. These loops align with the improve and control phases of LSS, where the network maintains a dynamic performance evaluation system (Erol et al., 2022).
Empowered Choice is a key feature. Consumers become effective service cocreators and collaborate with agents to tailor their journey. The data-driven environment helps meet their needs and preferences. Facilitated through the reputational indicators in the network. The immutable infrastructure ensures that the preferences and reviews are honoured for future interactions of the same consumer or impacting another's journey. The participatory governance structure supports decentralized yet coordinated procurement and reduces information asymmetry (Zhang et al., 2022).

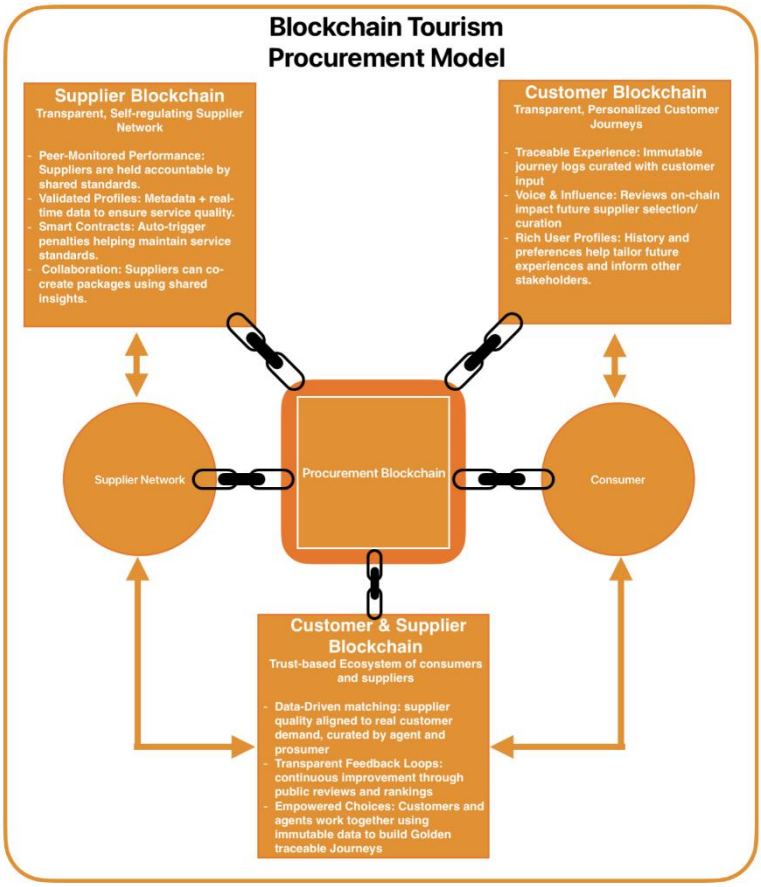



Figure 3. Blockchain Use Model in Tourism Sector

The procurement blockchain serves as the operational command center at the model's center. This layer houses various facilitators and acts as the infrastructural backbone such as smart contracts that define the rules of service engagement, payment release, dispute resolution, and performance validation (IBM, 2022; Tripathiet al., 2019). It transforms the procurement lifecycle from a manually managed process to an automated, rule-based digital environment contributing to waste reduction by eliminating redundant work and ensuring faster, trigger-based actions. Embedded in the control phase, they can ensure service quality and timelines are enforced without manual intervention (Iansiti & Lakhani, 2020).
The integrated data from the supplier and customers into a single ecosystem allows real-time procurement decisions, efficient resource allocation, and the development of traceable service journeys, giving the tools to the agent to align with either the supplier or the consumer when procuring an experience. The shared data facilitates the quality needed to improve the analysis and the improvement phases of LSS (Pyzdek & Keller, 2014). The reputation-based access requirements helps to maintain the network by pushing visibility and trust ranking of suppliers that meet KPIs and customer expectations, while underperforming suppliers can be filtered out (Rashideh, 2020; Abeywardena et al., 2023). The digital implementation of this control strategy enhances accountability and drives continuous improvement through transparency. The model proposes a data-rich, transparent, and adaptive system that addresses challenges faced in the LSS framework in dynamic and highly variable environments such as tourism helping to operationalize the DMAIC cycle by acting as an infrastructural enabler. Embedding Lean Six Sigma principles into the procurement model, allows a data-driven trust and performance-based network that facilitates the co-creation of quality experiences.

## 4. Research Limitations

The paper aims to locate itself within the quite recent literature concerning the strategic use of blockchain technology and framework within the tourism sector. As many other papers belonging to the same research category, this work and the application of the proposed model, presents a list of limitations. First of all, the practical application of blockchain in tourism still needs to be implemented and tested (Rashideh, 2020) and the potential low level of adaptability of tourism professionals in accepting and starting to use the new technology might represent a main barrier for its implementation (E. Fragnière et al. 2022). Also, this paper remains linked to a theory based approach since, at the moment, there are not yet direct and concrete applications of the blockchain technology in the tourism market sector (S.Melkic et N.Cavlek 2020). Moreover, in tourism, as in other business sectors, the fast recording and storage of personal data might cause a security and privacy issue by applying the blockchain technology (I. Tyan et al, 2021). Besides, as it has been revealed and discussed in other studies concerning the theme, the application of the innovative blockchain technology could be subject to face regulatory fences on the market and, in the wide range of business sectors,the regulatory adaptation needs could be different over multiple states and territories (G. Baralla et al. 2020), Finally, it needs to be underlined that the validation of the suggested model will require a long term testing phase across multiple markets and suppliers.

## 5. Originality of The Paper

The paper presents a unique approach that aims to combine the LSS method and the use of innovative blockchain technology to improve and enable faster and more efficient relationships between a wide range of stakeholders within the tourism business sector. This paper explores a niche and relatively recent research area in blockchain that aims to link potential new technologies and managerial practices in the tourism sector. The blockchain framework reinforces a potentially unconventional data-driven approach. The paper, which is theory-based due to the novelty of the explored tools in the field of practice, proposes a new service procurement model that aims to facilitate an innovative methodology to collect data concerning customer needs and supplier performance evaluation. The suggested new model wants to identify a path to reconfigure the managerial approach, addressing an innovative methodology to build and establish a solid and, at the same time, dynamic and flexible supply chain structure for travel agencies and tourism businesses focused on reinforcing service assembly packages, through digital enablers that support customer-supplier co-creation and performance-based collaboration, with them operating as

stakeholders' intermediaries in multiple areas of the tourism sector. Moreover, through this work and the presented combination of LSS methodology and blockchain technology, there is the intention to inspire new avenues of research practice for implementing and applying innovative operational strategies within tourism firms. Finally, whether the suggested customer-oriented procurement model has been built focusing on the tourism business sector, the application of the proposed flow paradigm could be adapted and applied in other service fields.

## Bibliography


Abeywardena, I. S., Devadhasan, S., Balasubramanian, K., & Chandrakar, R. (2023). The effect of blockchain technology on supply chain collaboration: A case study of Lenovo. Systems, 11(6), 299.

Abliwi, S. A., Antony, J., Arshed, N., & Gijo, E. V. (2015). Critical literature review on Lean Six Sigma for higher education institutions (HEIs). International Journal of Productivity and Performance Management, 64(5), 573–592.

Antony, J. (2006). Six sigma for service processes. Business Process Management Journal, 12(2), 234–248. https://doi.org/10.1108/14637150610657558

Baralla, G., Pinna, A., & Corrias, G. (2020). Ensuring transparency and traceability of food local products: A blockchain application to a smart tourism region. Concurrency and Computation.

Baydeniz, M. B. (2024). Improving sustainability in the tourism industry through blockchain technology: Challenges and opportunities. Tourism Management, 94, 104699.

Chakraborty, A., & Tan, K. C. (2013). A survey of quality tools in the context of Lean and Six Sigma. Total Quality Management & Business Excellence, 24(5-6), 498–515.

Chatterjee, S., Rana, N. P., Tamilmani, K., & Sharma, A. (2021). Blockchain technology in tourism management: A review and research agenda. International Journal of Information Management, 60, 102456.

Erol, Y., Gunay, M., & Ar, I. M. (2022). Improving sustainability in the tourism industry through blockchain technology: Challenges and opportunities. Tourism Management, 94, 104699.

Fragnière, E., De Keyser, V., & Bähler, R. (2022). Blockchain technology in the tourism industry: New perspectives in Switzerland. Journal of Innovation Economics & Management, 11(1), 111–132.

IBM (2022). What is blockchain for business? IBM Think.

Iansiti, M., & Lakhani, K. R. (2020). Building a transparent supply chain. Harvard Business Review, 98(3), 96–105.

Jovanovic, T., Pranicevic, D. G., & Pavicic, J. (2023). The impact of blockchain technology on tourism intermediation. Tourism and Hospitality Management, 29(1), 27–42.

Kokkranikal, J., Antony, J., & Garvare, R. (2013). Lean Six Sigma in tourism and hospitality: A review of applications and challenges. Tourism and Hospitality Research, 13(4), 245–263.

Kumar, M., Antony, J., Singh, R. K., Tiwari, M. K., & Perry, D. (2009). Implementing the Lean Sigma framework in an Indian SME: A case study. Production Planning & Control, 17(4), 407–423.

Kumar, S., & Sharma, R. (2023). Applications of blockchain technology in business: Challenges and opportunities. International Journal of Information Management, 63, 102481.

Li, L., Ma, L., & Zhang, R. (2023). Blockchain propels tourism industry—An attempt to explore topics and information in smart tourism management through text mining and machine learning. Information, 10(1), 9.

Melkić, D., & Čavlek, N. (2020). The impact of blockchain technology on tourism intermediation. Tourism and Hospitality Management, 26(1), 27–42.

Niezgoda, A. (2013). Prosumers in tourism market. In Tourism Research (pp. 183–196). Springer.

Otamendi, J. F. A. G. (2011). New business opportunities along the air tourism supply chain: The combination of identification technologies and just-in-time. African Journal of Business Management, 5(11), 4007–4022.

Pyzdek, T., & Keller, P. A. (2014). The Six Sigma handbook: A complete guide for Green Belts, Black Belts, and managers at all levels (3rd ed.). McGraw-Hill Education.

Ramphal, R. R. (2017). Lean Six Sigma in service: Applications and case studies. Routledge.

Ramphal, R., & Nicolaides, A. (2018). Lean Six Sigma and quality management in higher education: A review of relevant literature. Educational Research and Reviews, 13(17), 644–656.

Rashideh, W. Y. (2020). Blockchain technology framework: Current and future perspectives for the tourism industry. Tourism Management Perspectives, 33, 100528.

Snee, R. D. (2010). Lean Six Sigma – Getting better all the time. International Journal of Lean Six Sigma, 1(1), 9–29.

Tardio, R., & Straetemans, A., (2025). Lean Six Sigma for a Sustainable Customer-Driven Model in Tourism: A Case Study Analysis. SinergieSima2025.

Tripathi, R., Zeng, J., & Li, Y. (2019). Blockchain-based digital platforms: Constructing a framework for smart contract-enabled digital ecosystem. International Journal of Information Management, 49, 168–184.

Wei, W. (2022). Gemiverse: The blockchain-based professional certification and tourism platform with its own ecosystem in the metaverse. Journal of Network and Computer Applications, 200, 103332.

Womack, J. P., & Jones, D. T. (2003). Lean thinking: Banish waste and create wealth in your corporation. Free Press.

# Track 7 - Technology and Innovation Marketing

## Ethical AI Literacy for Future Managers: Insights from a Systematic Literature Review

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## Abstract

As artificial intelligence (AI) becomes increasingly embedded in organizational decision-making, business education must equip future managers not only with technical awareness but also with the ethical literacy needed to govern AI responsibly. While recent literature acknowledges the ethical implications of AI in education, there is a notable lack of pedagogical frameworks tailored to the managerial context. This paper addresses that gap by conducting a systematic bibliometric and content analysis of 581 publications at the intersection of AI, ethics, and higher education. The findings reveal a fast-growing field, driven by the rise of generative AI and regulatory developments, yet characterized by limited attention to practice-oriented educational models for management students.

In response, the paper introduces the Ethical AI Literacy Framework for Management Education, a four-layered model grounded in the literature and designed for integration into university-level business programs. The framework includes: (1) Conceptual Foundations to build AI fluency; (2) Ethical Reasoning and Reflection to develop normative judgment; (3) Applied Managerial Contexts to situate learning within business functions; and (4) Instructional Strategies and Assessment to support effective pedagogy. Anchored in principles of interdisciplinarity, contextualization, and active engagement, the framework offers a practical roadmap for embedding AI ethics into management curricula.

By reinterpreting AI literacy as a core strategic and ethical competence, this study contributes both theoretically and practically to the design of future-facing business education. It concludes by outlining directions for empirical research on implementation, evaluation, and long-term impact of shaping responsible AI leadership.

*Keywords: Artificial intelligence; AI literacy; AI education; AI ethics; Responsible AI; Management education*

### 1. Introduction

Artificial intelligence (AI), together with big data, machine learning, and related digital technologies, is reshaping the socioeconomic and organizational landscape in profound and irreversible ways. While these tools enable unprecedented advancements in efficiency and innovation, they simultaneously give rise to critical ethical dilemmas around algorithmic discrimination, privacy invasion, opacity, accountability, and disruptive social consequences (Patel et al., 2021; Binns, 2018). Despite business leaders are central to deploying and governing these technologies, current management education often falls short in integrating ethical considerations into AI literacy training (Mittelstadt, 2019; Stahl et al., 2021). This oversight risks creating technically skilled but ethically unprepared professionals.

Scholars increasingly advocate for ethics as a core component of AI literacy, not just an afterthought. Mittelstadt (2019) specifically criticizes AI literacy programs that prioritize technical knowledge, advocating for curricula that emphasize ethical aspects like bias, fairness, and accountability. Stahl et al. (2021) echo this, asserting that critical moral capacities are essential for responsible AI professionals. Neglecting ethics in AI education could lead to a technocratic mindset detached from AI's societal and moral implications (Floridi et al., 2018). This imperative has become even more compelling in light of the EU Artificial Intelligence Act, which embeds ethical principles throughout its provisions, particularly emphasizing human oversight, transparency, non-discrimination, and respect for fundamental rights for high-risk AI systems (Article 4(1)(e), Recital 35). Crucially, Article 3(56) defines "AI literacy" to include awareness of AI's ethical and societal implications, signaling that ethical understanding is now a regulatory expectation.

Historically, ethical AI instruction has been concentrated in philosophy, humanities, computing, and engineering programs (Erduran, 2023; Umbrello & van de Poel, 2021). However, these initiatives have rarely extended into business education, where ethics is often treated as a separate or elective topic, rather than as an integral component of AI governance and strategic leadership (Johnson & Mohamed, 2025).

This paper focuses on educational offerings within higher education curricula aimed at professional formation—that is, university-level programs such as undergraduate and graduate degrees in management, business administration, and related fields, situated between secondary education and workplace entry. Existing research highlights a persistent gap in these programs, where the integration of AI ethics remains marginal, fragmented, or superficial (Zawacki-Richter et al., 2019; Floridi & Cowls, 2022). In response to this misalignment between regulatory expectations and pedagogical practice, the paper proposes a framework that identifies the essential components for developing ethically grounded AI literacy among future managers.

## 2. Theoretical Background

### 2.1 Defining AI literacy: A multidimensional construct

AI literacy is a central concept within Artificial Intelligence in Education (AIED), focusing on what individuals need to know and do to engage effectively and ethically with AI (Baker et al., 2019; Holmes et al., 2019). Unlike the broader field of AI education, which encompasses teaching processes, AI literacy represents the outcome: a combination of skills, knowledge, and attitudes for informed and responsible AI engagement (Miao et al., 2020; Zhao et al., 2022).

Scholars offer various definitions, reflecting different disciplines and technological advancements. Long and Magerko (2020) define AI literacy as the ability to recognize AI, understand its function, and critically reflect on its ethical and social implications, emphasizing critical thinking over purely technical skills. Ng et al. (2021) reinforce this perspective, stressing that AI literacy involves technical knowledge, critical awareness, and ethical sensitivity, linking AI's functionality to its impact on people and institutions.

More recent contributions expand this construct. Kong et al. (2022) include cognitive, affective, and sociocultural dimensions, aligning AI literacy with broader digital literacies. Wilton et al. (2022) and Wang et al. (2023) propose multidimensional models that cover awareness, usage, evaluation, and ethics. These models suggest AI literacy isn't just about using AI tools, but also assessing their suitability, identifying potential harms, and reflecting on automation and algorithmic decision-making.

AI literacy is increasingly seen as intersecting with data literacy, information literacy, and digital literacy, forming a broader set of competencies for data-driven societies (Carolus et al., 2023; Schüller, 2022; Stolpe & Hallström, 2024). Some scholars believe AI literacy will soon be as fundamental as reading and writing (Aoun, 2017), requiring integration across all educational stages, from early childhood (Burgsteiner et al., 2016; Su & Yang, 2022) to professional settings (Cetindamar et al., 2022).

Despite these advancements, much of the academic literature still largely confines AI literacy to STEM (Science, Technology, Engineering and Mathematics) fields, especially computer science and engineering (Touretzky et al., 2019). Even when AI ethics is included (e.g., in Responsible AI), it's typically for developers and technical experts (Umbrello & van de Poel, 2021), overlooking leadership and decision-

making roles. This narrow focus prioritizes system operation over critical evaluation, neglecting the broader ethical and strategic responsibilities of future managers (Luckin et al., 2022).
Consequently, AI literacy remains underdeveloped in business and management education, often reduced to operational tool fluency or innovation management rather than a core ethical and strategic competence. Addressing this gap requires fundamentally rethinking AI literacy as an indispensable interdisciplinary and values-informed capability for navigating AI's profound organizational and societal impact.

### 2. 2 The ethical challenges of Artificial Intelligence: why AI literacy must include ethics

The ethical risks of AI systems—such as algorithmic opacity, bias, accountability gaps, and privacy erosion—have been widely examined (Zarsky, 2016; Selbst & Barocas, 2018). While traditionally approached as technical challenges, a growing literature argues that ethical oversight cannot rest solely with developers. Instead, it must extend to those who commission, deploy, or govern AI systems—roles typically held by managers and organizational leaders (Binns, 2018; Morley et al., 2021). These actors shape how AI is implemented in practice, often in ways that carry significant moral and social consequences, even when intentions are benign (Dignum, 2019).
Mittelstadt et al. (2016) stress that algorithmic systems generate moral consequences irrespective of the designer's intent, especially when used in organizational decision-making. Bryson (2018) similarly highlights that delegating decision-making to machines requires moral competence from those who choose to automate. Within this view, AI literacy in managerial contexts must go beyond technical fluency to include the ability to recognize ethical dilemmas, weigh normative trade-offs, and evaluate downstream impacts.
This expanded notion of AI ethics is particularly relevant in business contexts, where reputational damage, regulatory liability, and public trust are at stake (Floridi et al., 2018; Alkire et al., 2024). As Morley et al. (2020) and Stahl et al. (2021) argue, ethical instruction in AI is often fragmented or relegated to CSR modules, failing to prepare future managers for the real-world ethical complexity of AI deployment (Jobin et al., 2019; Dwivedi et al., 2021).

### 2. 3 Educational gaps in preparing managers for the ethical governance of AI

Despite growing recognition of AI's transformative impact, business and management education continues to lag in preparing students for the ethical governance of these technologies. Studies consistently point to a lack of integrated, interdisciplinary approaches that connect technical understanding with normative reflection (Stahl et al., 2021; Holmes et al., 2019). A comparative OECD (2023) report confirms that while AI ethics is gaining ground in computing and engineering curricula, it remains rare in business management education—especially at undergraduate and MBA levels. This curricular gap is especially concerning in light of recent policy developments. The EU AI Act frames AI literacy—including ethical awareness—as a professional requirement, yet university-level business management programs still tend to approach AI as a purely strategic asset (Johnson & Mohamed, 2025; Guzman, 2018). As a result, graduates often lack the tools to critically assess AI's societal implications, focusing instead on efficiency and innovation.
In the Italian context, the issue is even more pronounced. A recent national survey found that only 23% of university students had received any AI-related training, despite high usage of AI tools in academic and professional settings (Rome Business School, 2025). Gottardello and del Mar Pàmies (2019), through interviews with Italian business faculty, reveal that ethics and sustainability are often perceived as marginal to core management instruction. Industry-level analyses corroborate this disconnect: firms report a lack of ethical training despite increased AI adoption (OECD/BCG/INSEAD, 2025; Cisco, 2024).
These findings point to a structural tendency to treat ethics as an optional or peripheral concern in management education. Without embedding ethical competencies into the core training of future leaders, business schools risk producing professionals ill-prepared for the socio-technical challenges of AI integration.

## 3. Methodology

This study adopts a Systematic Literature Review (SLR) design to explore how ethical training related to artificial intelligence (AI) is addressed in management and business education. The aim is to critically examine the current academic landscape at the intersection of AI ethics, higher education, and managerial preparation, and to lay the groundwork for developing a pedagogical framework aimed at fostering ethically grounded AI literacy among future decision-makers.
The review process adheres to the PRISMA 2020 guidelines (Page et al., 2021), which provide a structured and transparent protocol for the identification, selection, and analysis of literature.

### 3.1 Data sources and search strategy

The literature search was conducted using two major academic databases—Scopus and Web of Science (WoS)—both renowned for their comprehensive indexing and multidisciplinary coverage in fields such as education, management studies, digital technologies, and ethics. Their integration ensures a more inclusive and balanced retrieval of relevant publications, reducing the risk of omitting significant studies due to database-specific coverage limitations (Falagas et al., 2008).
The search query was formulated to capture the intersection of artificial intelligence, ethics, and pedagogy in the context of management education. The final string used was:
("artificial intelligence" OR "AI" OR "digital technologies") AND ("ethics" OR "ethical principles" OR "responsible AI" OR "algorithmic ethics") AND ("higher education" OR "university curriculum" OR "business schools" OR "management education" OR "teaching" OR "pedagogy").
The search was restricted to peer-reviewed articles in English published between 2015 and 2025, to reflect recent and emergent academic contributions. In Web of Science, the query was limited to categories related to education and management; in Scopus, the scope was narrowed to the Social Sciences and Business, Management and Accounting classifications.
This search yielded 432 records from Web of Science and 377 from Scopus, for a total of 809 initial articles. After removing 228 duplicates through automated and manual procedures, the final dataset for analysis included 581 unique publications.

### 3.2 Bibliometric Analysis

The full dataset of 581 articles was subjected to bibliometric analysis using the open-source Bibliometrix R package (Aria & Cuccurullo, 2017). This analysis aimed to provide a macro-level mapping of the scholarly landscape, focusing on:

- Trends in publication volume over time;
- Distribution of documents across journals;
- Frequency and co-occurrence of keywords;
- Thematic evolution and trend topics.

The bibliometric analysis allowed for a longitudinal understanding of how the academic discourse on AI ethics in higher education has evolved over the past decade.

### 3.3. Content analysis: screening and eligibility criteria

The screening process involved a multi-phase evaluation of the retrieved records. During the identification and screening phases, all 581 articles were imported into a reference management system and independently reviewed by three researchers. Titles, authors' keywords, and abstracts were analyzed to determine alignment with the scope of the study.

To be retained for further consideration, articles needed to address at least one of the following three intersecting dimensions:

- Ethical dimension: Explicit reference to ethical principles, dilemmas, or frameworks related to AI or digital technologies.

- Corporate or managerial relevance: A clear focus on organizational settings, leadership, or business decision-making in relation to AI use.

- Educational and pedagogical dimension: Discussion of curricular design, teaching practices, or conceptual models for AI literacy or ethics education.

This preliminary qualitative screening was designed to identify studies relevant to the goal of understanding how AI ethics is (or is not) integrated into the training of future managers. Based on these criteria, 109 articles were selected for an in-depth full-text content analysis using NVivo software. A hybrid coding approach, combining deductive and inductive methods, was employed to systematically extract relevant information (Fereday & Muir-Cochrane, 2006; Braun & Clarke, 2006):

- The deductive coding scheme was informed by established ethical constructs, such as transparency, accountability, fairness, and privacy, as articulated in major academic and policy frameworks (e.g., Mittelstadt, 2019; Morley et al., 2021; European Commission, 2024). This approach allowed us to identify predefined ethical principles and their application within the context of AI in business and management education. The focus was on extracting specific content, principles, and approaches related to ethical considerations that could serve as foundational inputs for the construction of our framework.

- The inductive coding allowed for the emergence of novel themes directly from the data (Thomas, 2006), including barriers to curriculum integration, conceptual definitions of AI literacy, and cross-disciplinary challenges in business school contexts. Through this bottom-up approach, we sought to uncover unanticipated insights, teaching methods, and pedagogical strategies that could also inform the development of the framework, beyond the pre-established ethical constructs. This included identifying specific teaching methods, curricular structures, and practical examples of ethical AI integration.

This phase of the analysis was designed to generate deeper insights into the pedagogical approaches, theoretical underpinnings, and institutional dynamics that shape the integration of ethical AI training into management education. Following this comprehensive content analysis of the 109 full-text articles, 22 articles were deemed particularly relevant and useful for the research. These 22 articles were then further analyzed in detail, without the intermediation of software, to extract nuanced insights. A synthesis of the findings from these 22 key articles is presented in the subsequent findings section.

## 4. Findings

The bibliometric analysis highlights a rapidly expanding field at the intersection of artificial intelligence, ethics, and higher education, with increasing relevance to business and management studies. The literature has grown significantly over the past decade, with 581 publications across 381 sources, and an impressive annual growth rate of 54.2%. The average document age of just 1.52 years confirms the field's dynamism and early-stage maturity.

This growth has not been linear. From 2015 to 2019, scholarly output remained limited, with fewer than ten articles per year. A modest increase began in 2020, likely in response to the ethical uncertainties that accompanied the sudden digital acceleration triggered by the COVID-19 pandemic. A more pronounced surge occurred between 2021 and 2022, followed by an explosion of publications in 2023 and 2024—coinciding with the mainstreaming of generative AI tools and heightened debates on academic integrity, fairness, and responsible technology use. Preliminary data from 2025 suggest this momentum is continuing.

Terminological patterns in the literature further illuminate the field's contours. Terms such as "artificial intelligence," "AI ethics," and "higher education" dominate, reflecting the core focus of scholarly attention. More recent entries—like "OpenAI," "generative AI," and "large language models"—signal growing interest in specific technologies and their implications for educational practice. Meanwhile, the

emergence of terms such as “AI literacy,” “academic integrity,” and “assessment” points to an ongoing shift from abstract ethical concerns to more practical, curriculum-level challenges.
The literature is notably interdisciplinary, drawing on contributions from educational technology, ethics, psychology, and sustainability. Journals such as Computers and Education: Artificial Intelligence, Education and Information Technologies, and the International Journal of Artificial Intelligence in Education have emerged as key publishing venues, reinforcing the field’s cross-sectoral character.
Taken together, these findings suggest that the ethical dimensions of AI in education are no longer peripheral, but central to current scholarly discourse—especially as universities grapple with the pedagogical implications of emerging AI technologies. This evolving landscape calls for educational models capable of addressing not only the technical capabilities of AI but also the ethical and strategic questions that accompany its use in professional training contexts.

### 4. 1 Thematic Map Analysis

This section discusses the findings from the thematic analysis, drawing insights from both the thematic map generated by Bibliometrix and the thematic network visualization.

The thematic map, segmented into four quadrants based on "Relevance degree (Centrality)" and "Development degree (Density)," provides a clear overview of the intellectual structure of the research domain.

- Motor Themes (High Centrality, High Density): This quadrant, indicative of well-developed and highly relevant topics, prominently features "covid-19" and "datafication." Their high centrality suggests they are foundational to the field, while high density implies a substantial body of literature and ongoing research. The emergence of "covid-19" as a motor theme underscores its significant and pervasive impact across various research areas, likely driving new inquiries and applications.

- Basic Themes (High Centrality, Low Density): This quadrant highlights themes that are central to the field but may not be as extensively developed or are perhaps foundational concepts. "Artificial intelligence," "education," and "AI ethics" are clustered here, notably marked by a red circle in the provided image, indicating their significant centrality. Other themes in this quadrant include "assessment," "ethical implications," "ethical principles," "information literacy," "professional ethics," "medical education," "critical thinking," and "medicine." The strong presence of ethical considerations ("ethical implications," "ethical principles," "AI ethics," "professional ethics") alongside "artificial intelligence" and "education" strongly indicates that the intersection of AI, ethics, and educational contexts is a critical and widely acknowledged area within the field.

- Niche Themes (Low Centrality, High Density): These themes represent specialized or emerging areas of research that are well-developed internally but may not yet have broad connections across the entire field. "Autonomy," "applied ethics," "digital health," "digital competencies," "data justice," "scale development," and "authentic assessment" fall into this category. "Digital illiteracy," "curriculum design," and "disruptive technologies" also appear here. These themes suggest focused research clusters with significant depth, potentially indicating new directions or highly specialized sub-fields. For instance, "data justice" and "authentic assessment" could represent burgeoning areas of specific inquiry.

- Emerging or Declining Themes (Low Centrality, Low Density): This quadrant typically contains themes that are either nascent and not yet widely integrated, or those that are losing prominence. "Machine ethics" appears here, suggesting it might be an emerging concept still seeking broader integration or a topic with less sustained attention compared to the other themes. "Innovation," "sustainability," and "equity" are also present, which, despite their general importance, may not yet be deeply embedded as central research themes within this specific domain's current discourse, or their connection to other topics is still developing.

The thematic network analysis further supports the central role of artificial intelligence, education, and ethics within this research domain. These terms consistently emerged as the most prominent and interconnected keywords, confirming their foundational importance.
The analysis clearly showed that ethical considerations are not isolated; terms like "ethical implications," "ethical principles," and "AI ethics" are strongly linked to core concepts such as "artificial intelligence," "education," "assessment," and "digital technology." This illustrates that ethics is deeply interwoven with both the practical and theoretical aspects of AI in education, rather than being a peripheral concern.
While some areas like "digital health" and "digital competencies" might appear as niche themes, the network provides a more granular view of their specific connections within the literature, detailing how they relate to broader concepts.
Collectively, the analysis reinforces the overwhelming focus of this research domain: the strong connections between "artificial intelligence," "education," and various "ethics" terms explicitly demonstrate that the responsible and pedagogical integration of AI is a paramount concern in the current scholarly landscape.

### 4. 2 Content analysis results

Following a detailed content analysis of 109 full-text articles and a subsequent in-depth review of 22 highly relevant studies, this section synthesizes the key insights that directly inform the development of an ethically-informed AI literacy framework, particularly for business and management education. These findings reveal emerging themes, prevalent ethical considerations, diverse pedagogical approaches, and identified gaps in current educational practices.
The 22 studies, sourced from various journals and conferences, collectively highlight a growing recognition of the need to integrate ethical considerations into AI education. While some studies address the general challenges of AI implementation or the importance of "ethical by design" principles (Molina-Espinosa, n.d.; Vanhée, n.d.), a significant portion delves into the specifics of embedding ethics within educational curricula across different domains. The summary of the 22 analyzed articles, in table 1, highlights their relevant contributions to understanding AI ethics and its integration into managerial training.

| Author(s) (Year) | Relevant contribution to ethical AI literacy of managers |
|---|---|
| Molina-Espinosa & Ramírez-Montoya (2025) | Highlights general AI implementation challenges in education, including implicit ethical concerns in using generative tools like ChatGPT. This is crucial for managers navigating AI risks in business. |
| Vanhée & Borit (2022) | Emphasizes the importance of integrating ethics into the AI design phase ("ethical by design"). This is a critical concept for managers who commission and oversee AI system development. |
| Weidener & Fischer (2024) | Proposes a structured method for teaching AI ethics that can be adapted to managerial contexts. This helps train future leaders in applying ethical principles when dealing with AI. |
| Masters (2023) | Outlines principles for the ethical use of AI in a professional context. This offers a model for applying AI ethics to managerial decisions across various sectors. |
| Cornejo-Plaza & Cippitani (2023) | Analyzes the legal and ethical aspects of AI in education, underscoring the need for managers to understand the regulatory framework and legal implications of AI use. |
| Vilaza & Bækgaard (2022) | Provides practical insights into teaching ethics in system design. This is relevant for managers who need to evaluate the usability and ethical implications of user interaction with AI. |

| | |
|---|---|
| Alonso-Rodriguez (2024) | Contributes to the discussion on structuring ethics in AI education, providing elements for a managerial framework to guide AI-related decisions. |
| Ronaghi (2024) | Introduces innovative methodologies for business ethics education, suggesting how AI (e.g., VR) can be used to simulate complex ethical dilemmas for future managers. |
| Pierce (2024) | While more general on business ethics, it highlights the increasing relevance of ethical considerations in the global business context, which is directly applicable to AI integration. |
| Dash & Bharathi (2025) | Proposes a pedagogical approach to familiarize future managers with fundamental AI concepts through the Turing Test, stimulating reflection on AI's capabilities and limitations. |
| Lu & Lin (2025) | Defines what AI literacy entails for non-technical users, providing a basis for understanding what managers, as "non-experts," need to know about AI beyond technical skills, particularly regarding its societal implications. |
| Majidi (2024) | Discusses the broader implications of AI for human intelligence and consciousness, implicitly highlighting the need for management education to prepare leaders to navigate these profound changes and their ethical considerations. |
| Luckin (2025) | Emphasizes the need to redefine education to foster human intelligence in an AI-driven world, suggesting that management education must adapt to prepare leaders for new ethical and strategic responsibilities. |
| Yue et al. (2025) | Offers a pedagogical framework for AI literacy, even at early ages, which can inform foundational principles for AI ethics education across all levels, including management, by emphasizing design and responsible creation. |
| Ndungu (2024) | Proposes a framework for integrating basic AI literacy into broader information literacy, relevant for managers to understand how to critically evaluate AI-generated information and its ethical implications. |
| Atenas et al. (2025) | Advocates for critical and creative pedagogies in AI and data literacy, stressing "data justice." This highlights the need for managers to address issues of fairness, equity, and ethical data governance in AI systems. |
| Domínguez Figaredo & Stoyanovich (2023) | Explicitly advocates for a stakeholder-first approach to responsible AI literacy, which is crucial for managers to consider the diverse impacts of AI on all affected parties and ensure accountability. |
| O'Dea et al. (2024) | Focuses on generative AI literacy, directly addressing the ethical considerations and necessary competencies for students (and future managers) to effectively and responsibly use advanced AI tools. |
| Zhang et al. (2023) | Explores the integration of ethics and career implications with technical AI learning. This model suggests that early and holistic ethical integration is vital for building a foundation for future managers. |
| Ng et al. (2021) | Provides a broad overview of AI literacy, including its definition, pedagogical approaches, evaluation methods, and ethical dimensions. This offers comprehensive input for designing AI literacy programs for managers. |

| | |
|---|---|
| Yang et al. (2024) | Focuses on developing AI literacy through project-based learning in STEM. While for middle school, its emphasis on practical application and goal-oriented learning provides transferable insights for managerial training. |
| Yim & Su (2025) | Reviews AI literacy education in primary schools, indicating the foundational nature of AI concepts and ethics. This indirectly supports the idea that ethical considerations should be introduced early and built upon throughout educational pathways, including managerial ones. |

Table 1. Summary of key studies on AI ethics for managerial training

### 4.2.1 Key themes and insights

The in-depth analysis of these 22 articles revealed several recurring themes and provided critical input for our proposed framework:

- the inseparability of AI ethics and managerial decision-making: several articles underscore that ethical considerations are not merely technical add-ons but are intrinsically linked to strategic and operational decisions made by managers. Studies by Masters (2023) and Weidener and Fischer (2024) demonstrate how ethical frameworks are vital for professionals making decisions about AI implementation, even in non-technical fields. This extends to business, where Ronaghi (2024) highlights a shift towards practical, context-specific ethical training.

- multidimensionality of Ai literacy beyond technical skills: consistent with our earlier discussion on AI literacy as a multidimensional construct, several studies emphasize the need to move beyond purely technical proficiency. Research by Lu & Lin (2025) and insights from Ng et al. (2021) directly explore the various facets of AI literacy, including critical evaluation and ethical understanding. This supports the notion that managers need to comprehend the societal implications of AI, as explored by Cornejo-Plaza and Cippitani (2023).

- diverse pedagogical approaches for ethical Ai education: the analyzed articles present a variety of methods for integrating ethical AI into education. Vilaza and Bækgaard (2022) discuss insights into practical ethics instruction. Yue et al. (2025) propose a pedagogical framework for AI literacy, suggesting early intervention. For management education, Dash and Bharathi (2025) indicate creative approaches to conceptualizing AI. These diverse methods provide valuable guidance on how ethical AI literacy can be effectively taught across different educational levels and disciplinary contexts.

- focus on stakeholder impact and responsible AI: a strong emphasis emerged on understanding the impact of AI on various stakeholders and promoting responsible AI development and deployment. Domínguez Figaredo & Stoyanovich (2023) explicitly advocate for considering all affected parties. This resonates with broader ethical discussions in papers like Alonso-Rodriguez (2024). This highlights that ethical AI literacy for managers must encompass an understanding of accountability and the broader societal implications of their AI-driven decisions.

- addressing the generative AI landscape: the advent of generative AI tools, particularly large language models, has introduced new ethical considerations. Reviews by Molina-Espinosa & Ramírez-Montoya (2025) and O'Dea et al. (2024) specifically address the ethical implications and literacy needs related to this rapidly evolving technology. These findings underscore the dynamic nature of AI ethics and the continuous need to update educational content to reflect new technological advancements and their associated ethical challenges.

- the interdisciplinary nature and current gaps in management education: While the need for ethical AI understanding is evident, several papers, including Majidi (2024) and Luckin (2025), implicitly or

explicitly point to the current deficit in management education concerning comprehensive AI ethics. Atenas et al. (2025) emphasize the need for interdisciplinary approaches, which are often lacking in traditional business curricula.

These collective findings provide a rich empirical basis for developing a framework that not only defines the essential components of AI literacy for future managers but also integrates a robust ethical dimension, moving beyond abstract principles to actionable insights for responsible AI leadership.

## 5. Discussion

The results of this study reveal a rapidly expanding research field at the intersection of AI, ethics, and education, catalyzed by the diffusion of generative AI and accelerated by the COVID-19 pandemic. Thematic mapping shows that ethical considerations—such as fairness, academic integrity, and AI literacy—are central but still underdeveloped, highlighting a lack of actionable pedagogical guidance.
While the discourse around AI ethics in education is growing, most contributions remain situated within STEM or general education contexts, with limited translation into management education. Ethical AI literacy is rarely addressed as a core managerial competence, and when it is, it often lacks operational depth and contextual specificity. Existing models seldom reflect the real-world complexity of AI deployment in business functions such as HR, finance, or marketing, and few offer concrete teaching strategies or assessments suitable for business programs.
This disciplinary and pedagogical disconnect underlines the urgent need for structured educational frameworks that bridge ethical principles with managerial relevance. The content analysis emphasizes the importance of moving from abstract ethical awareness to applied, domain-specific competence.
These findings directly inform the development of the Ethical AI Literacy Framework for Management Education, which aims to address these gaps through a layered, actionable, and pedagogically grounded model, presented in Scheme 1. This framework is a synthesis of key insights and pedagogical approaches emerging from the most relevant reviewed literature, structured into four interconnected layers designed to be implemented within university-level programs in management, business administration, and related fields.
At its core, the framework rests on the premise that AI literacy for managers must go beyond basic familiarity with technological concepts. It must enable students to critically interrogate the ethical dimensions of AI in the contexts where they will be expected to make decisions. This means building a foundation of conceptual understanding, fostering ethical reasoning, connecting learning to applied business domains, and supporting implementation through appropriate instructional strategies.
The framework is anchored by three core pedagogical principles: interdisciplinarity, recognizing that AI ethics cannot be effectively taught in disciplinary silos; contextualization, emphasizing the relevance to real-world decision environments; and active engagement, prioritizing student-centered, experiential learning. Designed to be modular and flexible, the model allows for either standalone implementation or seamless integration into existing courses, providing a concrete roadmap for embedding AI ethics into business education.

| Layer | Key Elements & Description |
|---|---|
| **Conceptual Foundations** | **Goal:** Interpret and contextualize AI systems.<br>**Description:** This layer introduces students to fundamental AI concepts, including:<br>- **AI types** (e.g., narrow vs. general AI)<br>- **Core functions** (e.g., prediction, classification, generation, optimization)<br>- **Capabilities and inherent limitations** of these systems.<br>The intention is not to train students as developers, but to provide sufficient technical fluency to interpret how AI systems work, assess their relevance and trustworthiness in business settings, and anticipate where their application may raise ethical or strategic concerns. This foundational knowledge is crucial for critical evaluation. |

| Layer | Key Elements & Description |
|---|---|
| | **Relevant concepts:** Algorithms, automation, machine learning, large language models (LLMs), deep learning, data sets, etc. |
| **Ethical Reasoning & Reflection** | **Goal:** Equip students with the capacity to evaluate AI systems through normative frameworks.<br>**Description:** This layer focuses on engaging students with ethical principles and teaching them to identify, analyze, and resolve ethical dilemmas arising from AI deployment. The aim is to cultivate genuine ethical awareness beyond mere compliance.<br>**Key principles:** Fairness, accountability, transparency, privacy, justice, human oversight, non-discrimination, beneficence, non-maleficence, etc.<br>**Methods/Activities:** Structured debates, case study analyses (real-world and hypothetical), moral reasoning exercises, reflective writing, ethical frameworks application (e.g., utilitarianism, deontology, virtue ethics). |
| **Applied Managerial Contexts** | **Goal:** Situate ethical reflection within concrete areas of business practice.<br>**Description:** This layer connects ethical theory to the real-world challenges managers encounter when integrating AI tools into various organizational functions. Students learn to identify and navigate ethical trade-offs in specific managerial contexts.<br>**Business domains:** Human Resources (e.g., automated hiring, performance reviews), Finance (e.g., credit scoring, fraud detection, algorithmic trading), Marketing (e.g., customer profiling, personalized advertising), Logistics & Operations (e.g., inventory optimization, supply chain management), Cybersecurity, Product Development, Strategy, etc.<br>**Activities:** Simulations, ethical audits of AI systems, stakeholder role-plays, business case analyses, project-based learning with ethical constraints. |
| **Educational Strategies & Assessment** | **Goal:** Ensure pedagogical viability and scalability of the framework.<br>**Description:** This layer addresses the practical methods for embedding AI ethics content into existing management curricula. It encourages diverse teaching methods and robust assessment approaches to measure ethical judgment and competency.<br>**Approaches:** Active learning methods (e.g., flipped classrooms, problem-based learning, project-based learning), interdisciplinary co-teaching across faculties (e.g., business, ethics, computer science), modular design for flexible integration into existing courses, blended learning formats.<br>**Tools/Assessments:** Portfolios demonstrating ethical reflections and AI project analyses, dilemma-based evaluations, ethical audits of hypothetical or real-world AI systems, peer reviews of ethical analyses, simulations with ethical decision points, reflective journals, presentations on ethical AI cases. |

Scheme 1. Ethical AI Literacy Framework for Management Education

The Ethical AI Literacy Framework for Management Education is built on three developmental layers focused on student learning—conceptual understanding of AI systems and their limitations; ethical reasoning and reflection; and applied engagement with managerial functions such as HR, marketing, and operations—complemented by a cross-cutting layer dedicated to educational strategies and assessment, designed to progressively cultivate comprehensive ethical AI literacy in future managers. It moves beyond mere technical understanding to emphasize critical ethical engagement.

The framework begins with Conceptual Foundations, which ensure students grasp core AI concepts and limitations, not to make them developers, but to empower them to critically interpret and assess AI systems in business. This understanding is vital for evaluating AI's claims and anticipating ethical challenges. This foundational knowledge is supported by studies from Ndungu (2024), Ng et al. (2021), Zhang et al. (2023), O'Dea et al. (2024), and Yue et al. (2025).

Next, the Ethical Reasoning and Reflection layer focuses on developing students' capacity to analyze AI through normative frameworks, engaging with principles like fairness and transparency. This layer aims to foster genuine ethical awareness, moving beyond compliance through activities such as debates and case studies that promote critical thinking and moral reasoning. This approach is informed by contributions from Domínguez Figaredo and Stoyanovich (2023), Weidener and Fischer (2024), Cornejo-Plaza and Cippitani (2023), Alonso-Rodriguez (2024), and Lu and Lin (2025), who emphasize ethics as a dynamic, practiced competence.

Applied Managerial Contexts then grounds this ethical reflection in real-world business challenges. It addresses how managers integrate AI tools across various functions, from HR to finance, using experiential methods like simulations and ethical audits to help students navigate the practical tensions and trade-offs of AI deployment. The importance of grounding ethical literacy in authentic managerial scenarios is underscored by authors such as Domínguez Figaredo and Stoyanovich (2023), Atenas et al. (2025), Zhang et al. (2023), Weidener and Fischer (2024), and Yang et al. (2024).

Finally, Educational Strategies and Assessment layer ensures the framework's pedagogical viability. This layer details how AI ethics can be integrated into existing management curricula via modular and interdisciplinary approaches, promoting active learning and diverse assessment tools to measure students' applied ethical judgment in an ever-evolving AI landscape. This draws on practical and integrative recommendations from Ndungu (2024), Atenas et al. (2025), Vanhée and Borit (2022), Yang et al. (2024), and Ng et al. (2021).

This framework provides a structured yet adaptable roadmap for embedding ethical AI literacy into management education, equipping students to become not just competent users of AI, but responsible and reflective decision-makers in an increasingly automated world.

## 6. Theoretical and Practical Implications

The proposed Ethical AI Literacy Framework contributes to both the theoretical discourse on AI education and the practical design of pedagogical strategies within management programs. Theoretically, the framework advances the field by shifting the focus of AI literacy from STEM-dominated narratives toward a multidimensional, interdisciplinary understanding that is specifically tailored to the ethical and strategic demands of business leadership. It underscores the need to interpret AI literacy not only as a set of technical skills or general awareness, but as a layered construct encompassing ethical reasoning, contextual judgment, and reflective capacity—dimensions that are underrepresented in existing literature on management education.

Practically, the framework offers a blueprint for educators and curriculum designers seeking to integrate AI ethics meaningfully into business school programs. Each layer of the model translates high-level concepts into pedagogically actionable content, providing guidance on what to teach, how to teach it, and how to assess learning outcomes. For example, the focus of Layer 3 on applied managerial contexts ensures that ethics is not taught in isolation but embedded within the decision-making domains future managers will encounter. Similarly, the emphasis Layer 4 on educational strategies and assessment supports the realistic integration of AI ethics into modular and interdisciplinary course designs.

The framework is also relevant for institutional actors aiming to align business education with emerging regulatory expectations, such as those outlined in the EU AI Act and other global governance initiatives. By promoting a version of AI literacy that includes ethical, legal, and organizational dimensions, the model equips future professionals not just to use AI tools, but to question and guide their deployment in ways that are socially responsible and strategically sound.

In short, the framework operationalizes ethical AI literacy as a managerial competence. It can be adopted in the design of new courses, serve as a foundation for executive education, or be used to revise existing curricula in strategic management, HR, marketing, or operations to reflect the new realities of AI-infused business practice.

## 7. Conclusion and future research

This paper responds to a growing recognition that future managers must be prepared not only to work with AI, but to govern its use responsibly within complex organizational environments. Despite the rapid expansion of research at the intersection of AI, ethics, and education, there remains a clear gap in pedagogical strategies that translate these concerns into meaningful instruction for business students. Most current models of AI literacy fail to capture the domain-specific ethical and strategic challenges that managers face when adopting AI technologies.

To address this gap, we have developed a layered pedagogical framework grounded in a systematic analysis of the literature. The Ethical AI Literacy Framework for Management Education proposes a structured yet adaptable approach to cultivating ethically competent business leaders. It emphasizes conceptual understanding, ethical reflection, contextual application, and effective instructional design, all anchored in pedagogical principles of interdisciplinarity, contextualization, and active engagement.

The framework aims not merely to increase AI awareness among students, but to embed ethical reasoning into their professional identity as future decision-makers. In doing so, it contributes a concrete, implementable model for aligning business education with the ethical imperatives of the AI era.

Future research should explore the practical implementation of this framework in diverse institutional contexts, assessing its impact on students' ethical reasoning, managerial judgment, and readiness to handle AI-related dilemmas. Empirical studies are also needed to evaluate the effectiveness of specific teaching strategies—such as simulations, ethical audits, or dilemma-based assessments—in developing these competencies. Additionally, longitudinal research could examine how graduates trained under such frameworks apply ethical AI literacy in their professional trajectories, thereby closing the loop between educational design and responsible leadership practice.

By reframing AI ethics as a central pillar of managerial education, this work lays the foundation for a new generation of business professionals capable of leading with both technological fluency and ethical integrity.

## References


Alkire, L., Bilgihan, A., Bui, M., Buoye, A. J., Dogan, S., & Kim, S. (2024). RAISE: leveraging responsible AI for service excellence.Journal of Service Management,35(4), 490-511.

Alonso-Rodríguez, A. M. (2024). Towards an Ethical Framework of Artificial Intelligence in Education. Teoría De La Educación. Revista Interuniversitaria, 36(2), 79–98.

Aoun, J. E. (2017). Robot-proof: Higher education in the age of artificial intelligence. MIT Press.

Aria, M., & Cuccurullo, C. (2017). bibliometrix: An R-tool for comprehensive science mapping analysis. Journal of informetrics, 11(4), 959-975.

Atenas, J., Havemann, L., & Nerantzi, C. (2025). Critical and creative pedagogies for artificial intelligence and data literacy: an epistemic data justice approach for academic practice. Research in Learning Technology, 32.

Baker, T., Smith, L., & Anissa, N. (2019, December). Educ-AI-tion rebooted? Exploring the future of artificial intelligence in schools and colleges. Nesta Foundation.

Binns, R. (2018). Fairness in machine learning: Lessons from political philosophy. Proceedings of the ACM conference on fairness, accountability, and transparency, 1–9.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative research in psychology, 3(2), 77-101.

Bryson, J. J. (2018). Patiency is not a virtue: The design of intelligent systems and the question of moral responsibility. AI & Society, 33(2), 173–179.

Burgsteiner, H., Kandlhofer, M., & Steinbauer, G. (2016). IRobot: Teaching the Basics of Artificial Intelligence in High Schools. Proceedings of the AAAI Conference on Artificial Intelligence, 30(1).

Carolus, A., Koch, M. J., Straka, S., Latoschik, M. E., & Wienrich, C. (2023). MAILS-Meta AI literacy scale: Development and testing of an AI literacy questionnaire based on well-founded competency models and psychological change-and meta-competencies. Computers in Human Behavior: Artificial Humans, 1(2), 100014.

Cetindamar, D., Kitto, K., Wu, M., Zhang, Y., Abedin, B., & Knight, S. (2022). Explicating AI literacy of employees at digital workplaces. IEEE transactions on engineering management, 71, 810-823.

Cisco (2024). AI Readiness Index for Italy. Available at https://www.cisco.com/c/dam/m/en_us/solutions/ai/readiness-index/2024-m11/documents/cisco-ai-readiness-index-it.pdf

Cornejo-Plaza, I., & Cippitani, R. (2023). Ethical and legal considerations of artificial intelligence in higher education: Challenges and prospects. Revista de Educación y Derecho, 28, 43935.

Dash, S. A., & Bharathi, S. V. (2025). Using the Turing Test as a Key Measure for Understanding AI in Management Education. Journal of Educators Online, 22(2), n2.

Dignum, V. (2019). Responsible Artificial Intelligence: How to develop and use AI in a responsible way. Springer.

Domínguez Figaredo, D., & Stoyanovich, J. (2023). Responsible AI literacy: A stakeholder-first approach. Big Data & Society, 10(2), 20539517231219958.

Dwivedi, Y. K., Hughes, L., Ismagilova, E., Aarts, G., Coombs, C., Crick, T., ... & Williams, M. D. (2021). Artificial Intelligence (AI): Multidisciplinary perspectives on emerging challenges, opportunities, and agenda for research, practice and policy. International journal of information management, 57, 101994.

Erduran, S. (2023). AI is transforming how science is done. Science education must reflect this change. Science, 382(6677), eadm9788.

European Commission. (2024). Artificial Intelligence Act. Official Journal of the European Union. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32024R1689

Falagas, M. E., Pitsouni, E. I., Malietzis, G. A., & Pappas, G. (2008). Comparison of PubMed, Scopus, web of science, and Google scholar: strengths and weaknesses. The FASEB journal, 22(2), 338-342.

Fereday, J., & Muir-Cochrane, E. (2006). Demonstrating rigor using thematic analysis: A hybrid approach of inductive and deductive coding and theme development. International journal of qualitative methods, 5(1), 80-92.

Floridi, L., Cowls, J., Beltrametti, M., Chatila, R., Chazerand, P., Dignum, V., ... & Vayena, E. (2018). AI4People—an ethical framework for a good AI society: opportunities, risks, principles, and recommendations. Minds and machines, 28, 689-707.

Floridi, L., & Cowls, J. (2022). A unified framework of five principles for AI in society. Machine learning and the city: Applications in architecture and urban design, 535-545.

Gottardello, D., & Pàmies, M. D. M. (2019). Business school professors' perception of ethics in education in Europe. Sustainability, 11(3), 608.

Guzman, A. L. (2018). What is human-machine communication, anyway. Human-machine communication: Rethinking communication, technology, and ourselves, 117, 1-28.

Holmes, W., Bialik, M., & Fadel, C. (2019). Artificial Intelligence in Education: Promises and Implications for Teaching and Learning. Center for Curriculum Redesign.

Jobin, A., Ienca, M., & Vayena, E. (2019). The global landscape of AI ethics guidelines. Nature Machine Intelligence, 1(9), 389–399.

Johnson, C., & Mohamed, E. (2025). Responsible AI and action learning. Action Learning: Research and Practice, 1-13.

Kong, S. C., Cheung, W. M. Y., & Zhang, G. (2022). Evaluating artificial intelligence literacy courses for fostering conceptual learning, literacy and empowerment in university students: Refocusing to conceptual building. Computers in Human Behavior Reports, 7, 100223.

Long, D., & Magerko, B. (2020). What is AI literacy? Competencies and design considerations. Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems, 1–16.

Lu, W., & Lin, C. (2025). How do artificial intelligence literacy constructs work—based on a survey of university non-expert students. Education and Information Technologies, 1-27.

Luckin, R. (2025). Nurturing human intelligence in the age of AI: rethinking education for the future. Development and Learning in Organizations: An International Journal, 39(1), 1-4.

Luckin, R., Cukurova, M., Kent, C., & Du Boulay, B. (2022). Empowering educators to be AI-ready. Computers and Education: Artificial Intelligence, 3, 100076.

Majidi, M. (2024). Intelligence and consciousness as complementary dimensions: The role of management education in configuring the connection between intelligence and consciousness. International Journal of Interdisciplinary Social and Community Studies, 18(3), 1–13.

Masters, K. (2023). Ethical use of artificial intelligence in health professions education: AMEE Guide No. 158. Medical Teacher, 46(4), 389–396.

Miao, F., Holmes, W., Huang, R., & Toumi, J. (Eds.). (2020). AI and education: Guidance for policy-makers. UNESCO.

Mittelstadt, B. D. (2019). Principles alone cannot guarantee ethical AI. Nature Machine Intelligence, 1, 501–507. https://doi.org/10.1038/s42256-019-0114-4

Mittelstadt, B. D., Allo, P., Taddeo, M., Wachter, S., & Floridi, L. (2016). The ethics of algorithms: Mapping the debate. Big Data & Society, 3(2), 2053951716679946.

Molina-Espinosa, J.-M., & Ramírez-Montoya, M. S. (2025). Challenges of implementing ChatGPT on education: Systematic literature review. International Journal of Educational Research Open, 8, 100401.

Morley, J., Elhalal, A., Garcia, F., Kinsey, L., Mökander, J., & Floridi, L. (2021). Ethics as a service: a pragmatic operationalisation of AI ethics. Minds and Machines, 31(2), 239-256.

Morley, J., Floridi, L., Kinsey, L., & Elhalal, A. (2020). From what to how: an initial review of publicly available AI ethics tools, methods and research to translate principles into practices. Science and engineering ethics, 26(4), 2141-2168.

Ndungu, M. W. (2024). Integrating basic artificial intelligence literacy into media and information literacy programs in higher education: A framework for librarians and educators. Journal of Information Literacy, 17(2), 1–16.

Ng, D. T. K., Leung, J. K. L., Chu, K. W. S., & Qiao, M. S. (2021). AI literacy: Definition, teaching, evaluation and ethical issues. Proceedings of the association for information science and technology, 58(1), 504-509.

O'Dea, X., Tsz Kit Ng, D., O'Dea, M., & Shkuratskyy, V. (2024). Factors affecting university students' generative AI literacy: Evidence and evaluation in the UK and Hong Kong contexts. Policy Futures in Education, 14782103241287401.

OECD. (2023). AI in Education: Guidance for Policy Makers. OECD Publishing. https://www.oecd.org/education/ai-in-education-guidance-2023

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., ... & Moher, D. (2021). The PRISMA 2020 statement: an updated guideline for reporting systematic reviews. bmj, 372.

Patel, D. B. (2021). Ethical AI: Addressing Bias and Fairness in Machine Learning Models for Decision-making. Journal of Computer Science and Technology Studies, 3(1), 13-17.

Pierce, J. (2024). Special issue of the Asian Journal of Business Ethics on global survey of business ethics: GSBE reports 2022–2024 from Asia, Australia, and Russia. Asian Journal of Business Ethics, 12(1), 1–4.

Rome Business School - Report (2025). Artificial Intelligence and the Future Employability of Higher Education Students. Available at https://romebusinessschool.com/blog/artificial-intelligence-future-employability/

Ronaghi, M. H. (2024). A new approach to business ethics education: Virtual reality-based flipped learning. International Journal of Management Education, 22(3), 101076.

Schüller, K. (2022). Data and AI literacy for everyone. Statistical Journal of the IAOS, 38(2), 477-490.

Selbst, A. D., & Barocas, S. (2018). The intuitive appeal of explainable machines. Fordham Law Review, 87(1), 1085-1139.

Stahl, B. C., Andreou, A., Brey, P., Hatzakis, T., Kirichenko, A., Macnish, K., Laulhé Shaelou, S., Patel, A., Ryan, M., & Wright, D. (2021). Artificial intelligence for human flourishing – beyond principles for machine learning. Journal of Business Research, 124, 374–388.

Stolpe, K., & Hallström, J. (2024). Artificial intelligence literacy for technology education. Computers and Education Open, 6, 100159.

Su, J., & Yang, W. (2022). Artificial intelligence in early childhood education: A scoping review. Computers and Education: Artificial Intelligence, 3, Article 100049.

Thomas, D. R. (2006). A general inductive approach for analyzing qualitative evaluation data. American journal of evaluation, 27(2), 237-246.

Touretzky, D., Gardner-McCune, C., Breazeal, C., Martin, F., & Seehorn, D. (2019). A Year in K–12 AI Education. AI Magazine, 40(4), 88–90.

Umbrello, S., & van de Poel, I. (2021). Mapping value sensitive design onto AI for social good principles. AI and Ethics, 1(3), 283–296.

Vanhée, L., & Borit, M. (2022). Ethical by designer: How to grow ethical designers of artificial intelligence. Journal of Artificial Intelligence Research, 73, 1–17.

Vilaza, G. N., & Bækgaard, P. (2022). Teaching user experience design ethics to engineering students: Lessons learned. Frontiers in Computer Science, 4, 793879.

Wang, B., Rau, P. L. P., & Yuan, T. (2023). Measuring user competence in using artificial intelligence: validity and reliability of artificial intelligence literacy scale. Behaviour & information technology, 42(9), 1324-1337.

Weidener, L., & Fischer, M. (2024). Proposing a principle-based approach for teaching AI ethics in medical education. JMIR Medical Education, 10, e55368.

Wilton, L., Ip, S., Sharma, M., & Fan, F. (2022, July). Where is the AI? AI literacy for educators. In International conference on artificial intelligence in education (pp. 180-188). Cham: Springer International Publishing.

Yang, H., Zhang, D., Guo, W., & He, Y. (2024). Constructing a STEM projects design framework for middle school AI courses: Developing students' AI literacy as project goals. IEEE Access.

Yim, I. H. Y., & Su, J. (2025). Artificial intelligence literacy education in primary schools: a review. International Journal of Technology and Design Education, 1-30.

Yue, M., Jong, M. S. Y., Dai, Y., & Lau, W. W. F. (2025). Students as AI literate designers: a pedagogical framework for learning and teaching AI literacy in elementary education. Journal of Research on Technology in Education, 1-22.

Zarsky, T. (2016). The trouble with algorithmic decisions: An analytic road map to examine efficiency and fairness in automated and opaque decision making. Science, Technology, & Human Values, 41(1), 118-132.

Zawacki-Richter, O., Marín, V. I., Bond, M., & Gouverneur, F. (2019). Systematic review of research on artificial intelligence applications in higher education–where are the educators?. International journal of educational technology in higher education, 16(1), 1-27.

Zhang, H., Lee, I., Ali, S., DiPaola, D., Cheng, Y., & Breazeal, C. (2023). Integrating ethics and career futures with technical learning to promote AI literacy for middle school students: An exploratory study. International Journal of Artificial Intelligence in Education, 33(2), 290-324.

Zhao, L., Wu, X., & Luo, H. (2022). Developing AI literacy for primary and middle school teachers in China: Based on a structural equation modeling analysis. Sustainability, 14(21), 14549.

# Artificial Intelligence and Research Integrity: A Framework for Accountability, Transparency, and Honesty

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## Abstract

To date, technologies based on artificial intelligence (AI) tools have transformed various work contexts, from the managerial to the academic field, supporting data analysis, decision-making, and research operations. However, the adoption of these technologies has raised questions not only about their functionality but also about the quality of the outputs generated. Research has highlighted the potential of these tools in increasing work efficiency by reducing work time, but it has also exposed various categories of risks. Among these are algorithmic biases, systematic distortions that influence the results generated by AI systems, which can lead to unfair decisions and various forms of discrimination, especially when the training data reflect pre-existing human judgments. Additionally, the issue of opacity in decision-making processes emerges, making it difficult to understand how an algorithm arrives at a certain conclusion. This phenomenon, known as the black-box problem, risks undermining user trust and the accountability of decisions, particularly in sensitive contexts such as healthcare, law, and education. In light of these issues, this study aims to analyze various AI tools to assess their integrity, focusing on fairness, reliability, and transparency, and to provide an ethical framework to stimulate critical reflection on their implementation and use in the academic field.

*Keywords: Artificial Intelligence (AI), AI integrity, Research Integrity, Academic Research.*

### 1.Introduction

In recent years, integrity in academic research, defined as the set of moral and ethical standards underlying various scientific activities (Zhaskylyk et al., 2023), has gained increasing importance. These standards encompass fundamental values such as honesty, transparency, reliability, and, more generally, responsible conduct at every stage of research. At the same time, artificial intelligence, increasingly integrated into daily life, has taken on a crucial role in both professional and academic contexts. The use of these tools has raised numerous ethical issues arising from their application (Mensah, 2023). The introduction of AI in research (defined here as observations, investigations, and experiments) has generated questions about the reliability, fairness, and transparency of the outputs. In this context, scientific integrity becomes a fundamental requirement, not only for AI models, processes, and methods but also for the researchers themselves. The latter must necessarily possess ethical competencies across three distinct dimensions: ethical sensitivity, reflective capacity, and dialogical capacity (Lacroix et al., 2017). Ensuring scientific integrity is essential to protect the credibility of the entire academic ecosystem. This requires the collective and continuous commitment of the academic community to define shared principles, correct behaviors, and timely responses to any violations of best practices. In light of these considerations, it becomes urgent to adopt a coherent approach that harmonizes the key concepts of academic integrity. Only in this way will it be possible to avoid the multiple interpretative ambiguities and promote behaviors aligned with

the principles of fairness in different disciplinary and cultural contexts (Tauginiene et al., 2019). In particular, the research questions this study aims to answer are as follows:

• RQ1: To what extent do the AI tools currently used in academic research adhere to the principles of honesty, reliability, and transparency?

• RQ2: What are the main challenges and strengths found in the different types of AI tools used in academic research?

## 2. Methodology

This study adopts a qualitative approach through a case study (Yin, 2019) in order to assess the level of integrity of different AI tools, with a particular focus on their application in academic research contexts. Specifically, the research concentrated on three potential integrity profiles: honesty, understood as the tool's ability to recognize its own limitations; transparency, meaning openness and technical accessibility; and reliability, in relation to the traceability, auditability, and accountability of the various outputs. A subset of 13 tools was selected through a multi-step filtering process from the initial corpus of 83 AI tools. Three criteria guided this reduction:

• Functional relevance: effective use or potential application within academic research workflows;

• Degree of diffusion: documented adoption or evidence of use in research or professional contexts;

•Application heterogeneity: representation of different clusters, including generative models, bibliographic exploration, data science, and ESG-related tools.

Specifically, 8 tools are focused on idea generation, literature exploration, and data science, while 5 are employed in the accounting/ESG domain (Moser & Korstjen, 2018). The inclusion of ESG-related AI tools is intentional. ESG reporting and monitoring constitute a paradigmatic domain where transparency, accountability and integrity are particularly critical. These tools reflect a rapidly expanding area of application, driven both by regulatory requirements and by societal demand for sustainability, and they directly influence policy-making as well as corporate behaviour (Lee et al., 2024). At the same time, the use of AI in this field raises significant methodological challenges, including the risk of undisclosed data sources and greenwashing practices, which undermine credibility and trust (Boedijanto et al., 2024; Moodaley et al., 2023). The reduction of the sample responds to the need for analytical feasibility and depth of analysis in order to compare the different AI tools, in line with the principles of qualitative research, whose goal—unlike quantitative studies—is to understand the phenomenon in a contextual and deep manner, rather than aiming for statistical generalization (Patton, 2002). In detail, to ensure greater reliability of the analysis results, a process of document triangulation (Denzin, 1978) was implemented, based on cross-examination of various sources for each AI tool: from technical manuals and official documentation to white papers, corporate communications, peer-reviewed scientific articles, and independent sources.

Information was ultimately collected according to the three dimensions of honesty, transparency, and reliability, to structure a comparative analysis. This process highlighted common trends, challenges of AI tools, and best practices, providing a foundation for broader reflections on the responsible use of AI in the production and management of knowledge.

## 3. AI Tools

In this study, the various AI tools were divided into two macro-clusters:

• AI for Management: This includes generative models, tools for literature exploration, and platforms for predictive analysis. Specifically, ChatGPT, Gemini, and DeepSeek represent advanced examples of Large Language Models, designed to understand natural language and generate text, code, or summaries that are theoretically coherent with the prompts provided.

Literature exploration tools, such as Connected Papers and Research Rabbit, use semantic algorithms to visualize connections between scientific articles and facilitate the discovery process in literature. RapidMiner, IBM Watson Studio, and BigML represent tools applied in the fields of data science and machine learning. They offer interfaces for building and training predictive models, with features oriented towards classification, regression, clustering, and advanced data analysis.

• AI for ESG Accounting: This cluster includes tools such as Green Watch, Sensefolio, Greenlytics, Climate TRACE, and ChatClimate. These integrate various sources: from climate and geospatial data to document-based sources, to support the assessment of environmental impacts and, more generally, non-financial reporting and monitoring of ESG performance.

### 3.1 Management AI Tools

This section is dedicated to the eight AI tools belonging to the "Management" macrocluster, listed in Table 1.

| Cluster | AI Tool | Main function |
|---|---|---|
| **Generative AIs** | GPT-4o | Text, code, summaries, and responses generation |
| | Gemini | Multimodal generation, Q&A, reasoning support |
| | DeepSeek | Open-source LLM with a focus on knowledge extraction |
| **Literature Exploration AIs** | Connected Papers | Visual map of semantically related articles |
| **Literature Exploration AIs** | Research Rabbit | Tracking and discovery of relationships between papers and authors |
| **Data Science AIs** | RapidMiner | Visual platform for predictive modeling and automated analysis |
| | BigML | Interpretable machine learning, with support for supervised models |
| | IBM Watson Studio | Environment for the development, training, and deployment of AI and AutoML models |

Table 1: Classification of the main AI tools by functional area.

### 3.2 ESG AI Tools

This section is dedicated to five AI tools belonging to the "ESG" macro-cluster, as shown in Table 2. The acronym refers to: Environment, Social, and Governance. These dimensions refer to the assessment of non-financial performance trends of organizations, offering a broader perspective compared to traditional performance indicators (Galbreath, 2013). Specifically, the AI tools are distinguished based on:

• The relevant ESG pillar;

• The type of AI: Driven or Plug-In. Driven AI refers to artificial intelligences that autonomously guide decisions, processes, and operational logic. They are roactive and often responsible for key decisions. Examples include ChatClimate and Climate TRACE. Plug-In AI, on the other hand, refers to artificial intelligences integrated into pre-existing systems. This means that, unlike Driven AI, the user retains control over the various functions, while the AI enhances certain support functionalities, such as translation, grammar correction, or analysis. Examples of Plug-In AI tools include Green Watch, Sensefolio, and Greenlytics.

| Cluster | AI Tool | Main function | ESG Pillar |
|---|---|---|---|
| **Greenwashing verification and contrast** | Green Watch | Analyzes corporate environmental claims and compares them with real emission data | E |
| **Scoring and ranking ESG** | Sensefolio | Calculates ESG scores for 30,000+ companies using NLP and ML on public sources | E + S + G |
| **Global Emission Tracking** | ClimateTRACE | Maps global GHG emissions with near real-time satellite data | E |
| **Educational conversational AI** | ChatClimate | Provides accessible answers on IPCC reports and climate-related topics through LLM | E |
| **Energy sustainability optimization** | Greenlytics | Applies predictive AI to support operational decisions in the energy sector | E |

Table 2: Functions and ESG areas of the main AI tools for sustainability.

## 4. Findings

From the analysis conducted on the heterogeneity of AI tools, it emerged that only a limited number of tools currently used in academic research adhere to the principles of honesty, reliability, and transparency. The main challenges include the lack of independent external audits, technical documentation, and transparency regarding the training data and the operational logic of the various models. Furthermore, systematic differences are evident between the different clusters of AI tools:

• Generative models exhibit high functional performance but low structural transparency, meaning that details on how they operate internally are unclear or inaccessible;

• Literature exploration tools are intuitive but not replicable or technically documented;

• Predictive platforms offer greater traceability, but only some (such as BigML) provide native explainability—defined as the explanation of how predictions or results are generated—and access to the models;

• Finally, within the ESG macro-cluster, there is significant heterogeneity between tools like Climate TRACE, which is highly documented, and others (such as Green Watch, ChatClimate, etc.) that have poor transparency and verifiability.

The evidence presented in the following subsections will provide a detailed analysis for each of the clusters reviewed.

### 4.1 Generative AI Tools

LLMs are highly powerful in terms of functionality. Technically, the documentation of the models is publicly accessible for all three AI tools analyzed, but there are significant differences in structural transparency:

• The training dataset is not publicly available for ChatGPT and Gemini, while it is partially documented for DeepSeek through technical reports;

• Audit systems are limited and internally managed by the development teams of ChatGPT and Gemini, while they are not provided for DeepSeek;

• The model code is partially available on GitHub for DeepSeek, whereas it is not accessible for ChatGPT and Gemini;

• The model architecture is briefly described for ChatGPT, published through technical reports for DeepSeek, and only available in the form of a company whitepaper for Gemini.

These elements highlight that, despite the accessibility and functional effectiveness of LLMs, there are still barriers related to transparency, replicability, and epistemic accountability. A comparative summary of the collected evidence is presented in Table 3.

| Aspect | ChatGPT | DeepSeek | Gemini |
|---|---|---|---|
| **Technical documentation** | Available and updated | Available and open source | Available via Google Cloud |
| **Training dataset** | Not public | Partially documented | Not public |
| **External audit** | Limited, internal only | Absent | Limited, internal only |
| **Model code availability** | No | Partial on GitHub | No |
| **Described architecture** | Brief description | Technical report | Google-only whitepaper |

Table 3: Comparison between ChatGPT, DeepSeek, and Gemini.

### 4.2 Literature Exploration AI Tools

The bibliographic exploration tools operate based on external bibliometric data, mainly sourced from Semantic Scholar, CrossRef, and PubMed. The technical architecture is not publicly documented, and the models that determine the relationships between articles are neither accessible nor explicitly described. Analyzing the two AI tools individually, for Research Rabbit, there is no available white paper, API, or detailed description of the algorithms used. In fact, the official website only provides an overview of how the tool works. The same applies to Connected Papers: the "About" webpage provides only generic information on the use of semantic similarity and graph construction but does not make the source code, internal architecture, or API available. A comparative summary of the collected evidence is presented in Table 4.

| Aspect | Connected Papers | Research Rabbit |
|---|---|---|
| **Technical documentation** | Partial, Outreach | Partial, Outreach |
| **Available dataset** | Non available | Non available |
| **Aspect** | **Connected Papers** | **Research Rabbit** |
| **External audit** | Absent | Absent |
| **Data source** | Semantic Scholar | Semantic Scholar, CrossRef, PubMed |
| **Replicable output** | No | No |

Table 4: Comparison between Connected Papers and Research Rabbit.

### 4. 3 Data Science AI Tools

Data science and predictive analytics tools, unlike the previous AI tools, have more comprehensive and well-organized technical documentation, but they differ in terms of openness and transparency. BigML, for example, offers greater accessibility to the models and native explainability (i.e., making its decisions understandable without requiring the user to adopt interpretation techniques), while Watson Studio tends to operate on more closed cloud-based logics. None of the three undergoes true independent external audits, despite the IBM team claiming to adopt strict internal ethical policies. A comparative summary of the collected evidence is presented in Table 5.

| Aspect | RapidMiner | BigML | IBM Watson Studio |
|---|---|---|---|
| **Technical documentation** | Extended | Very detailed | Extensive and professional |
| **Available dataset/model** | Partial | Wide access | Limited (depends on the plan) |
| **External audit** | Limited | Absent | Partial (internal only) |
| **Explainable output (XAI)** | Available | High level | Partial (not always) |

Table 5: Comparison between RapidMiner, BigML, and IBM Watson Studio.

### 4. 4 ESG AI Tools

Regarding AI tools focused on ESG issues, a strong heterogeneity has been observed between tools that seem similar in purpose but are very different in terms of transparency and reliability:

• ClimateTRACE is the most virtuous tool in ethical terms, thanks to the availability of detailed technical documentation, accessible datasets, and a methodological approach that focuses on replicability and verifiability of outputs.

• In contrast, tools such as Green Watch, Sensefolio, ChatClimate, and Greenlytics are characterized by limited or absent technical documentation, a lack of independent external audits, and unspecified or vaguely indicated data sources.

Furthermore, when analyzed based on the Plug-In or AI Driven classification, tools like Green Watch and Greenlytics do not explain their internal models or decision making processes, reducing transparency and hindering ethical assessment. ClimateTRACE and ChatClimate, on the other hand, take a more active role in data generation and interpretation, but only the former, among the last two mentioned, meets the minimum integrity requirements. A comparative summary of the collected evidence is presented in Table 6.

| Criterio | Green Watch | Sensefolio | ClimateTRACE | ChatClimate | Greenlytics |
|---|---|---|---|---|---|
| **Technical documentation** | Limited | Limited | Detailed | Limited | Limited |
| **Available dataset** | Not available | Not available | Available | Not available | Not available |
| **External audit** | Not specified | Not specified | Not specified | Not specified | Not specified |
| **Data source** | Not specified | Generic public sources | Satellites and sensors | IPCC | Not specified |

Table 6: Comparison between Green Watch, Sensefolio, ClimateTRACE, ChatClimate, and Greenlytics.

## 5. Discussions

Following the results that emerged, it is necessary to recap how the integrity of different AI tools radically varies depending on their application domains and the type of tool itself (AI Driven or Plug-In): Generative models exhibit significant structural deficiencies in terms of transparency, especially regarding the lack of access to training datasets, the unavailability of source code, and the absence of independent control and verification systems. Additionally, when faced with questions for which they lack appropriate knowledge, these models tend to generate seemingly plausible but unfounded answers, rather than recognizing the inability to provide a correct response (Shen et al., 2023). Bibliographic exploration tools prove useful in the early stages of research work, but the lack of technical documentation on similarity algorithms and the inaccessibility of underlying architectures hinder methodological replicability, a key element in scientific contexts. Predictive analysis and data science platforms show a better balance between functionality and document openness.

However, due to the absence of independent external audits, they cannot be classified as fully reliable tools. Among ESG tools, only Climate TRACE exhibits a high level of methodological integrity, unlike tools such as Green Watch, Sensefolio, ChatClimate, and Greenlytics. Consequently, the adoption of AI tools in research requires careful evaluation not only of performance but also of the ethical and scientific consistency of the tools used. AI integrity is an essential requirement, especially in areas where the quality of knowledge and trust in results are crucial, as it impacts both the validity of the scientific process and the public trust in science. For this reason, it is critical to adopt a critical stance when using such technologies, always requiring verification of the information obtained. Ethical principles are not only necessary for ensuring high-quality academic production, but also facilitate collaboration among researchers, shared responsibility, and the protection of the collective interest (Resnik D. B., 2024). In a context increasingly permeated by the human-AI symbiosis, ethics thus becomes a necessary critical lens to ensure behavior, impact, and use of technologies that are collectively accepted. The goal is to ensure dignity, equity, and freedom in research and the production of knowledge. Possessing and disseminating a solid culture of integrity in research is a fundamental prerequisite for the scientific community to maintain its foundational values and make a tangible, credible, and responsible contribution to the development of society (Zhaksylyk et al., 2023), reaffirming the importance of the collective responsibility of researchers, institutions, journals, and readers in safeguarding the quality, credibility, and reliability of scientific knowledge.

## References

ALLEA (2023). The European Code of Conduct for Research Integrity – Revised Edition 2023. Berlin. DOI 10.26356/ECOC.

Bjelobaba, S., Waddington, L., Perkins, M., & Foltýnek, T. (2024). Research integrity and GenAI: A systematic analysis of ethical challenges across research phases.

Blau, W., Cerf, V. G., Enriquez, J., Francisco, J. S., Gasser, U., Gray, M. L., Greaves, M., Grosz, B. J., Jamieson, K. H., Haug, G. H., Hennessy, J. L., Horvitz, E., Kaiser, D. I., London, A. J., Lovell-Badge, R., McNutt, M. K., Minow, M., Mitchell, T. M., Ness, S., Parthasarathy, S., Perlmutter, S., Press, W. H., Wing, J. M., & Witherell, M. (2024). Protecting scientific integrity in an age of generative AI.

Boedijanto, R., Vinuesa, R., Funk, S. (2024). Potentials and Challenges of Artificial Intelligence–Supported Greenwashing Detection Tools.

Denzin, N. K. (1978). The Research Act: A Theoretical Introduction to Sociological Methods.

Galbreath, J. (2013). ESG in Focus: The Australian Evidence.

Herrera-Poyatos, A., Del Ser, J., López de Prado, M., & Wang, F.-Y. (2025). Responsible artificial intelligence systems: A roadmap to society's trust through trustworthy AI, auditability, accountability, and governance.

Herrera-Poyatos, A., Del Ser, J., López de Prado, M., Wang, F.-Y., Herrera-Viedma, E., & Herrera, F. (2025). Responsible artificial intelligence systems: A roadmap to society's trust through trustworthy AI, auditability, accountability, and governance.

Korstjens, I., & Moser, A. (2018). Series: Practical guidance to qualitative research. Part 4: Trustworthiness and publishing.

Lacroix, A., Marchildon, A., & Bégin, L. (2017). Former à l'Éthique en Organisation – Une Approche Pragmatiste.

Lee, S. U., Bae, J., & Choi, J. (2024). Integrating ESG and AI: A Comprehensive Responsible AI Assessment Framework.

Lim, B., Seth, I., & Rozen, W. M. (2023). The role of artificial intelligence tools on advancing scientific research.

Macfarlane, B., Zhang, J., & Pun, A. (2012). Academic integrity: A review of the literature.

Mensah, G. B. (2023). Artificial Intelligence and ethics: A comprehensive review of bias mitigation, transparency, and accountability in AI systems.

Moodaley, L., Mhlongo, S., & Gcabashe, N. (2023). Greenwashing, Sustainability Reporting, and Artificial Intelligence.

Patton, M. Q. (2002). Qualitative Research and Evaluation Methods.

Resnik, D. B. (2024). What Is Ethics in Research & Why Is It Important?

Sabourin Laflamme, A., & Bruneault, F. (2024). Redefining academic integrity in the age of generative artificial intelligence: The essential contribution of artificial intelligence ethics.

Shen, X., Chen, Z., Backes, M., & Zhang, Y. (2023). In ChatGPT we trust? Measuring and characterizing the reliability of ChatGPT.

Steblianskaia, E., Vasiev, B., Denisov, A., Bocharnikov, V., Steblyanskaya, A., & Wang, Q. (2023). Environmental-social-governance concept bibliometric analysis and systematic literature review: Do investors becoming more environmentally conscious?

Tauginienė, L., Gaizauskaite, I., Razı, S., & Glendinning, I. (2019). Enhancing the taxonomies relating to academic integrity and misconduct.

Zhaksylyk, A., Zimba, O., Yessirkepov, M., & Kocyigit, B. F. (2023). Research Integrity: Where We Are and Where We Are Heading.

# Track 8 - Digital Marketing

# Strategic Implementation of Artificial Intelligence in Media Industries: Value Chain Impact and Operational Challenges in the Digital Age

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## Abstract

The strategic business implications of artificial intelligence (AI) in the digital era remain insufficiently explored across various sectors, including the media industry, despite its proliferation of digital products and expansive advertising potential. The impact of AI on media-related domains continues to be ambiguous, primarily because its demonstrated utility in material-intensive industries does not readily extend to the media sector. The distinctive characteristics of the media market may account for the divergent applications and outcomes of AI in comparison to other fields. This study examines the operational integration of AI within media enterprises, focusing on its influence across the value chain and the implementation challenges that arise in the process. Contemporary applications of AI in media include content recommendation algorithms that facilitate audience discovery, interactive functionalities that enhance user engagement, improvements in user experience, and the optimization of messaging strategies. A persistent challenge lies in organizations' efforts to balance operational efficiency with strategic effectiveness, particularly as they navigate the inherent tension between algorithmic decision-making and human cognitive processes.

*Keywords: AI in Media; Media Value Chain; Digital Media Operations; Human-Machine Collaboration; Audience Engagement Technologies.*

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## 1. Introduction

The industry widely accepts artificial intelligence (AI) as the transformative power of the digital age which functions as a new electricity for our times to fuel everything (Ng, 2017). AI capabilities have become so essential that businesses now must choose between adopting AI immediately or facing strategic delays in their implementation. AI creates its greatest worth through developing organizational capabilities instead of providing single tools (Edeigba, 2025). AI continues to expand at a fast pace while transforming entire industries which makes "wait and see" an impractical approach to risk avoidance. The strategic adoption of AI skills has become essential for maintaining business success in industries that historically relied on human judgment and creative decision-making including media (Wang et al., 2025). The media industry

experienced a complete transformation when tech giants Netflix, Amazon, Apple, Google and Facebook entered the market. The competitive advantages of media companies face a major challenge in this unstable market environment. Artificial intelligence stands as the following defining technology according to Bilow (2022) due to its revolutionary capabilities. The growing body of literature about AI applications and their consequences does not include sufficient research about the media industry. The media industry operates with unique characteristics because it requires both intuition and interpretation skills along with creativity and communication abilities and specific market and audience patterns (Picard, 2005). The sector's unique characteristics create doubts about AI's ability to achieve the same impact in media industries as it does in physical goods industries. Media companies face obstacles when they try to implement AI in their platform systems and editorial offerings because of societal implications from media content. This research investigates the essential strategic advantages of AI in media operations alongside its position in the value creation process and the difficulties that arise during implementation. This research centres on strategic implementation rather than theoretical exploration (Dissanayake et al., 2024; 2025).

## 2. Literature Review

Research about artificial intelligence (AI) business applications represents a recent academic development. Research on this subject remains scarce because scientific inquiry demands strict methodological standards according to Duan et al. (2019) and others (Brynjolfsson & McAfee, 2017). According to Brynjolfsson & McAfee (2017), AI has achieved its most important development through enhancing perception capabilities (for instance, image or voice recognition) and cognition capabilities (such as claim automation) within business processes. According to Agrawal et al. (2019), AI functions best when predicting uncertain scenarios to enable better decision-making. Academic research has evaluated AI's role in human-machine collaboration and innovative business models and digital ecosystems and its impact on labour markets and value creation within sectors (Bolton et al., 2018; Garbuio & Lin, 2019; Kelley et al., 2018). The industrial value chain benefits from AI implementation because it transforms actor relationships and enables new business platforms and better data utilization according to research. Through operational decision automation it achieves better efficiency and effectiveness alongside improved expert performance and innovative process optimization (Kelley et al., 2018). According to Duan et al. (2019), AI has established its most important application through decision-making support functions as well as human judgment replacement capabilities. Additional research should investigate three critical areas regarding AI adoption: measurement approaches for AI usage and its effects on system implementation and decision-making processes along with cultural and ethical and legal aspects of AI adoption. Businesses experience both economic benefits and risks when they implement AI solutions. The challenges of interpreting human-machine interactions along with verification problems emerge from statistical truths and ethical dilemmas among regulators and employees (Brynjolfsson & McAfee, 2017; Wright & Schultz, 2018). Zhang et al. (2018) assert that the value chain functions as a basic framework for understanding business AI deployments. Firms can use Porter's (1985) established framework to establish strategic activities by applying it to their operations. The framework allows organizations to study their operational structures to discover cost patterns and find value sources and competitive differentiators. The framework provides a useful structure to study AI value creation in the media sector through activity identification for technological transformation. Porter defines business activities into two main categories which include primary and support. Businesses perform three main primary activities when creating products or services and promoting them and delivering them to clients and providing follow-up services. Support activities serve as the foundation for primary activities by supplying essential infrastructure and resources. However, this model has faced criticism. Various researchers point out that this framework fails to represent firm globalization while showing better fit for physical products instead of services and maintains a linear view of value creation and ignores emerging actors such as venture capital firms and underestimates the value networks compared to internal processes (Hasen & Birkinshaw, 2007). A media company does not require complete vertical integration of all its value chain activities. The traditional businesses within this sector choose to focus on acquiring content while creating it and promoting it through advertising and

distribution channels (Picard, 2002). The relationship between media and technology exists because content distribution systems and access systems create strong connections between them. Research supports the need for a user-centred model which includes external user actions and social media and interfaces that generate internal operational changes through feedback mechanisms. The media value chain receives contribution from audiences through their content production and their ability to provide advertisers with important market data (Chan-Olmsted & Shay, 2016). Multiple potential applications of AI in media operations have been identified by researchers in existing studies. The existing research lacks both completeness and a systematic framework to describe these findings (Feher, 2024).

## 3. Preliminary Results

### 3.1 Contents recommendation.

The largest tech-media company Netflix demonstrates the most powerful use of artificial intelligence to recommend content and help users discover new content. The company stands out as one of the pioneers that tested algorithms for multiple public decision-making processes. The core business model of Netflix relies on AI to deliver personalized content according to Lynch (2022). The algorithms at Netflix control all elements of user experience through their influence on homepage row selection and title display and image presentation for films and alternative title suggestions. News and audio companies use natural language processing (NLP) technologies to create more accurate products for their user base. The mobile application developed by Quartz used NLP to find articles that match specific people, events or thematic content. The audio domain benefits from NLP through two applications which enable users to search evergreen content contextually and discover podcasts and on-demand radio shows more effectively (Chen et. al, 2020). The intelligent content recommendation and discovery capabilities of AI have become vital for maintaining audience satisfaction and loyalty because digital on-demand content continues to expand at an exponential rate. Many consumers who belong to younger demographics now prefer to find content through visual search methods using images according to Yang et al. (2017).

### 3.2 Public engagement

Cognitive technologies serve to improve audience interaction by creating more significant and meaningful experiences. The three key areas that show the most notable improvements are real-time engagement, rapid participation and the use of AI-powered assistants. Machine learning is used by OTT content providers to manage metadata which results in the collection of useful information to optimize audience engagement (Pihlajarinne & Alén-Savikko 2022). The Washington Post uses the "Knowledge Map" cognitive tool to correlate complex data which provides readers with a straightforward way to follow ongoing news stories and adds context and deeper insights when needed. The Guardian has tested Facebook chatbots as a tool to help users find articles and information. Virtual voice assistants have revolutionized audience interaction throughout the content search process and discovery phase and navigation phase. AI technologies that interpret linguistic features and emotional tone and user intent enable these interactions to become more fluid and natural. The National Basketball Association together with its teams uses AI-powered chatbots on social media platforms and websites to deliver statistics and match updates and instant ticket sale and availability information (Gabriel et al., 2024). AI-enhanced real-time and context-aware audience engagement in today's fragmented media landscape creates a strong bond between media brands and their audiences.

### 3.3 Message improvements

The application of artificial intelligence for personalizing marketing communications through message optimization represents the main focus of this context. The effective implementation of this technology delivers advantages to both audiences and media companies. The real-time analysis of content through AI enables video product indexing. The analysis of content through AI enables advertising partners to deliver messages that match their target audience while maintaining both contextual relevance and strategic marketing alignment (Lieb, 2017). The system improves both advertiser visibility and transparency and accountability according to Pihlajarinne & Alén-Savikko (2022). The same principle

applies to audio content. The delivery of appropriate messages through digital audio ad servers becomes possible through AI technology which also introduces new tracking methods for campaign analysis particularly useful for data attribution and modelling. The advancement brings radio media into alignment with digital media platforms according to Chen et al. (2017). The optimization of ad delivery through AI technology demonstrates strong potential to develop user experiences that are both coherent and satisfying.

## 4. Implications: towards a conclusion

The adoption of artificial intelligence technologies according to Castellanos (2018) extends to multiple industries which includes the Internet sector. Media companies face a crucial decision regarding cognitive technology implementation because they must decide when to establish an AI foundation that will boost current operations and identify fresh business opportunities. The real matter revolves around using AI capabilities in transparent and equitable ways rather than questioning its potential for evil actions (Browne, 2018). The review backs previous research findings by showing how AI enables automation and generates insight while enhancing audience engagement through perception and cognitive processes (Duan et al., 2019; Locker et al., 2018). The term "automation" describes the use of data to perform repetitive low-value tasks which are currently done by humans. Machine learning implementation by The New York Times reduced the time needed for article comment moderation thus improving operational efficiency through automated moderation. The second aspect refers to the ability of machines to interpret large datasets which enables real-time decision-making support for human operators. The algorithm used by Netflix analyses viewer data to generate strategic recommendations for content promotion and development strategies. Lachman & Joffe (2021) identifies this context as one of the most complex yet promising areas for media companies because it demands solutions to departmental data fragmentation while preserving human judgment together with machine intelligence. The achievement of this equilibrium needs workers who possess exceptional expertise. The implementation of these systems needs organizations to maintain solid alignment and substantial resource investments according to Locker et al. (2018). The definition of engagement consists of enabling large-scale consumer interaction while maintaining consistent quality and relevance in services. Media companies can now create value through AI-generated interactions using voice assistants and chatbots. The development of natural language processing (NLP) technology will make consumer communication interpretation increasingly difficult. The process of assessing consumer comfort levels together with thematic choices during automated conversations will prove especially challenging. Research on human–machine interaction and communication will need to expand significantly because of its importance for audience engagement and strategic decision-making and innovation. Media firms must address three critical obstacles to maximize AI benefits: uniting human and machine intelligence through interaction and developing analytical skills for AI implementation in existing operations. The research uses exploratory and descriptive methods to examine limited theoretical frameworks supported by academic literature. This study aims to provide a detailed examination of a vital matter within media management. Future research should investigate how AI implementation affects market performance through specific application studies and primary firm data collection.

## References

Agrawal, A., Gans, J. S., & Goldfarb, A. (2019). Exploring the impact of artificial intelligence: Prediction versus judgment. Information Economics and Policy, 47, 1-6.

Bilow, S. (2022). The ever-growing importance of AI and machine learning in media and entertainment. SMPTE Motion Imaging Journal, 131(3), 6-6.

Bolton, C., Machová, V., Kovacova, M., & Valaskova, K. (2018). The power of human–machine collaboration: Artificial intelligence, business automation, and the smart economy. Economics, Management, and Financial Markets, 13(4), 51-56.

Bostrom, N. (2016). Fundamental issues of artificial intelligence (Vol. 376, p. 520). V. C. Müller (Ed.). Berlin: Springer.

Browne, R. (2018). Elon Musk warns AI could create an 'immortal dictator from which we can never escape,'. CNBC Tech, 6.

Brynjolfsson, E., & Mcafee, A. N. D. R. E. W. (2017). The business of artificial intelligence. Harvard business review, 7(1), 1-2.

Castellanos, S. (2018). Awaiting the AI-enabled revolution, experts put in a good word for humans. The Wall Street Journal.

Chan-Olmsted, S. M. (2019). A Review of Artificial Intelligence Adoptions in the Media Industry. International Journal on Media Management, 21(3–4), 193–215.

Chan-Olmsted, S., & Shay, R. (2016). Understanding Tablet Consumers: Exploring the Factors That Affect Tablet and Dual Mobile Device Ownership. Journalism & Mass Communication Quarterly, 93(4), 857-883.

Chen, T., Chen, H. H., Chang, Z., & Mao, S. (2020). Intelligent radio: when artificial intelligence meets the radio network. IEEE Wireless Communications, 27(1), 6-8.

Dissanayake, H., Manta, O., Iddagoda, A., & Palazzo, M. (2024). AI applications in business: Trends and insights using bibliometric analysis. The International Journal of Management Education, 22(3), 101075.

Dissanayake, H., Manta, O., Iddagoda, A., & Palazzo, M. (2025). Artificial intelligence and management Education: Bibliometric analysis. The International Journal of Management Education, 23(3), 101222.

Duan, Y., Edwards, J. S., & Dwivedi, Y. K. (2019). Artificial intelligence for decision making in the era of Big Data–evolution, challenges and research agenda. International journal of information management, 48, 63-71.

Edeigba, J. (2025). Generative AI in Accounting Practice: Hype or Help?. In Artificial Intelligence for Financial Risk Management and Analysis (pp. 223-248). IGI Global Scientific Publishing.

Feher, K. (2024). Exploring AI media. Definitions, conceptual model, research agenda. Journal of Media Business Studies, 21(4), 340-363.

Gabriel, P. M., Eugen, C. D., Antonius, S. V., Daniel, P. L., Laurentiu, D. D., & Catalin, P. M. (2024). Artificial Intelligence In The Sports Sector. Annals-Economy Series, 3, 109-116.

Garbuio, M., & Lin, N. (2019). Artificial intelligence as a growth engine for health care startups: Emerging business models. California Management Review, 61(2), 59-83.

Hansen, M. T., & Birkinshaw, J. (2007). The innovation value chain. Harvard business review, 85(6), 121.

Kelley, K. H., Fontanetta, L. M., Heintzman, M., & Pereira, N. (2018). Artificial intelligence: Implications for social inflation and insurance. Risk Management and Insurance Review, 21(3), 373-387.

Lachman, R., & Joffe, M. (2021). Applications of artificial intelligence in media and entertainment. In Analyzing future applications of AI, sensors, and robotics in society (pp. 201-220). IGI Global.

Lieb, R. (2017). Content-the atomic particle of marketing: The definitive guide to content marketing strategy. Kogan Page Publishers.

Lynch, A. (2022). Quality telefantasy: How US quality TV brought zombies, dragons and androids into the mainstream. Routledge.

Picard, R. G. (2002). US newspaper ad revenue shows consistent growth. Newspaper Research Journal, 23(4), 21-33.

Picard, R. G. (2005). Unique characteristics and business dynamics of media products. Journal of media business studies, 2(2), 61-69.

Pihlajarinne, T., & Alén-Savikko, A. (2022). Introduction to Artificial Intelligence and the Media. In Artificial Intelligence and the Media (pp. 1-6). Edward Elgar Publishing.

Porter, M. E., & Advantage, C. (1985). Creating and sustaining superior performance. Competitive advantage, 167, 167-206.

Wang, S., McKinnon-Crowley, J., Long, T., Loong Lua, K., Henderson, K., Crowston, K., Nickerson, J.V., Hansen, M., Chilton, L.B. (2025). The Role of Human Creativity in the Presence of AI Creativity Tools at Work: A Case Study on AI-Driven Content Transformation in Journalism. arXiv preprint arXiv:2502.05347.

Wright, S. A., & Schultz, A. E. (2018). The rising tide of artificial intelligence and business automation: Developing an ethical framework. Business Horizons, 61(6), 823-832.

Yang, F., Kale, A., Bubnov, Y., Stein, L., Wang, Q., Kiapour, H., & Piramuthu, R. (2017, August). Visual search at ebay. In Proceedings of the 23rd ACM SIGKDD international conference on knowledge discovery and data mining (pp. 2101-2110).

Zhang, J., Fan, M., Gu, B., Mookerjee, V., Zhang, B., & Zhao, J. L. (2018). Business values/implications of AI and machine learning. Data and Information Management, 2(3), 121-129.

Zhang, X., Ming, X., Liu, Z., Yin, D., Chen, Z., & Chang, Y. (2019). A reference framework and overall planning of industrial artificial intelligence (I-AI) for new application scenarios. The International Journal of Advanced Manufacturing Technology, 101, 2367-2389.

# The Mimicry of Negative Valence in Online WOM: A Cognitive Approach

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## Introduction and Theoretical Framework

We document the linguistic mimicry of negative valence in online word-ofmouth (WOM) as a diagnostic component of review's information value. One field study and two experiments conducted in different consumption settings (hotels, study areas, and work experiences) demonstrate that consumers, when writing reviews, tend to mimic the negative valence of proximate posts. Using a decompositional technique, we also provide evidence that online linguistic mimicry is part conscious and part nonconscious. Our results suggest that the nonconscious component of review mimicry is six times that of the conscious element. Given that consumers heavily rely on online reviews to inform their purchasing decisions, managers and webmasters need to recognize that consumers,
regardless of their consumption experiences, tend to systematically express more negative opinions about a product when negative evaluations are included in nearby reviews.
Further research might explore potential interventions to curb this bias.

*Keywords: WOM, Mimicry, Negative Valence, Nonconscious processing.*

Although positive reviews are more prevalent (De Angelis et al., 2012), negative reviews pose a problem for firms as they impact sales (e.g., Chevalier & Mayzlin, 2006; Varga & Albuquerque, 2023). One might think that negative content in reviews comes exclusively from negative customer experiences. However, extant research in online WOM has indicated the presence of systematic biases in both the likelihood of consumers leaving reviews and the characteristics of the contributed content (Godes & Silva, 2012; Moe & Schweidel, 2012; Schlosser, 2005, 2009). The present work provides empirical evidence of consumers systematically mimicking the negative valence of proximate reviews.
Prior research on the impact of negative reviews on subsequent posters shows mixed results. On the one hand, Schlosser (2005) demonstrates how consumers adjust their evaluations downward as a self-presentational strategy only when previous reviewers have posted negative opinions about the target product. She theorizes that these negative evaluations are perceived as a signal of higher competence and standards. In contrast, Moore and McFerran (2017) predict and find that only positive words are mimicked in online reviews since consumers seek to affiliate; by contrast, negative words do not aid in affiliation. In the present work, we extend the work begun by Schlosser (2005), Moore, and McFerran (2017) on linguistic mimicry in online WOM by providing supporting evidence of the mimicry of negative valence from a cognitive perspective rather than the dominant social perspective in linguistic mimicry.
We also make a significant theoretical contribution to the domain of mimicry by demonstrating the proportion of linguistic mimicry that occurs consciously versus nonconsciously. While the literature has suggested that mimicry can occur either consciously or nonconsciously (e.g., Ki & Kim, 2019), using process dissociation methodology, we uniquely show the proportion of online review mimicry attributable to each process. In summary, we hypothesize:

**H1:** Consumers mimic the review negative valence of proximate reviews such that the greater the negative valence of the proximate reviews, the greater the negative valence of the focal review.

**H2:** The mimicry of negative valence in consumer reviews is primarily driven by non-conscious (vs. conscious) processes.
We adopt a multimethod approach, supporting H1 with results from a field study (TripAdvisor hotels) and two controlled experiments (Study 2: study areas; Study 3: work experiences). We employ a dissociative procedure in Study 3 to support H3. Based on previous research on evaluative content in reviews (e.g., Schindler & Bickart, 2012), we measured the negative valence of reviews in all our studies by calculating the number of negative words using the LIWC 2022 dictionary ('tone_neg').

**Study 1: Reviewers mimicking the negative valence in the field (hotels)**

We relied on an older dataset of Tripadvisor reviews (from 2004-2008) wherein reviews were always displayed in reverse chronological order to every visitor (Wang & Chaudhry, 2018). Upon examining various websites (TripAdvisor, Airbnb, Yelp), we observe that three reviews are typically visible on a webpage. Therefore, we capture the negative valence of each focal review and the average of its three proximate reviews, which were previously written for the same hotel. The following equation[1] illustrates the general model of mimicry. For focal review *i* of hotel *j* of reviewer *k* at time *t,*

$$\boldsymbol{NegVal_{ijkt}} = \beta_0 + \boldsymbol{\beta_1 NegVal_{ijk}(Average\ t{-}1\ to\ t{-}3)} + \beta_2 NegVal\ Reviewer_{i(j-1)k(t-1)}$$

$$+\theta_n Content\_Controls_{ijk}(Average\ t{-}1\ to\ t{-}3) + \delta_n Hotel\_Controls_j + \alpha_k + \gamma_t + \varepsilon_{ijkt}$$

*Results:* Supporting H1, a Negative Binomial (NB) regression yielded significant results, showing that the greater the average negative valence of the proximate reviews, the greater the negative valence of the subsequent review (model without controls: $\beta$*Negative Valence ijk (Avg. t-1 to t-3)* = .13, $p < .001$; and with controls: $\beta$*Negative Valence ijk (Avg. t-1 to t-3)* = .02, $p = .039$).

**Study 2: Reviewers mimicking the negative valence in the lab (study areas)**

Consistent with Study 1, we presented participants with three reviews allegedly written by fellow students and then asked them to write about their own experiences using the study areas at their university [https://aspredicted.org/MGV_ZK8]. The reviews they read were either lower or higher in negative valence, with the same length, and similar levels of emotionality and extremity across conditions. 459 undergraduate students (53.2% female, *M*age = 21.3 years) completed the online study in exchange for partial course credit. The manipulation worked as intended.

*Results:* Supporting H1, an NB regression showed consistent and significant results.
Participants who read higher negative reviews wrote 68% more negative words compared to their peers who read lower negative reviews ($\beta$*HigherNeg* = .52, $p < .01$, *MLowerNeg* = .25, *MHigherNeg* = .42).

**Study 3: Conscious vs. Nonconscious Components of Mimicry (work experiences)**

We employ a process dissociation technique (Kramer & Block, 2008; Fitzsimons & Williams, 2000), which utilizes simultaneous equations based on experimental conditions. These must include one scenario where conscious and nonconscious processes align (magnification) and another where they conflict (reduction). The study used a 2 (context: negative review vs. neutral control passage) × 2 (helpfulness rating of the content's author: magnification vs. reduction) × 2 (attention: full vs. divided) between-subjects design.[2]

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[1] $NegVal_{ijkt}$ (focal review's negative valence), $NegVal_{ijk(Avg\ t-1\ to\ t-3)}$ (average negative valence for the three proximate reviews), $NegVal\ Reviewer_{i(j-1)k(t-1)}$ (negative valence of the previous review written by the same reviewer), $Content\_Controls_{ijk(Avg\ t-1\ to\ t-3)}$ (vector representing content control variables on the proximate reviews, including length, length squared, emotion, certitude, language complexity, topic overlap, and linguistic style matching LSM), $Hotel\_Controls_j$ (vector representing control variables accounting for hotel characteristics, including average hotel rating, price, and Hotel Travel Index HTI), $\theta$n and $\boldsymbol{\delta_n}$ (vectors of regression coefficients capturing the impact of the *N (where n* = 1 to N) control variables on the outcome, $\beta$s (regression coefficients, which capture the impact of each variable on the outcome of interest), $\gamma_t$ (time effects), and $\varepsilon_{ijkt}$ (error term).

[2] The context factor tests for negative-valence mimicry, expected under the review condition but not the control condition. Helpfulness manipulates the strength of mimicry by providing participants with a rational motivation to mimic or not mimic, while attention is altered through a multitasking audio task. This enables calculation of the mimicry effect across four conditions: FM(full-attention-

magnification), FR(full-attention-reduction), DM(divided-attention-magnification), and DR(divided-attention-reduction) detailed in Table 1.

| | |
|---|---|
| (1) $FM = NC + CS_f + CSHelp_f$<br>(2) $FR = NC + CS_f - CSHelp_f$<br>(3) $DM = NC + CS_d + CSHelp_d$<br>(4) $DR = NC + CS_d - CSHelp_d$ | $NC$ (nonconscious component), $CS_f$ (conscious component under full attention), $CS_d$ (conscious component under divided attention), $CSHelp_f$ (component due to conscious reduction-magnification manipulation under full attention), and $CSHelp_d$ (component due to the conscious reduction-magnification manipulation under divided attention). |

Table 1 Set of equations- Process Dissociation Technique

Results: Supporting H1, an NB regression showed that participants who read the review wrote reviews with a significant higher number of negative words than the participants who read the control passage (Mreview = .66, SD = .04, Mcontrol = .38, SD =.04; □ review=.59, z =2.55 p =.01). See Figure 1 to see the means pattern.

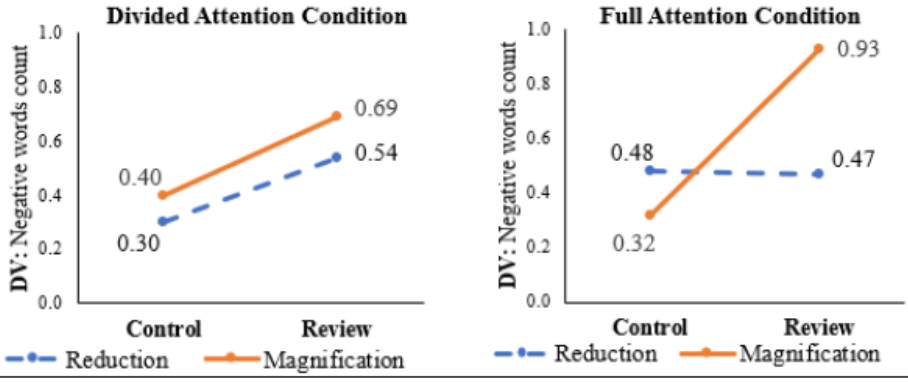



Figure 1 Negative Valence Mimicry, Study 3

We computed the total effect of mimicry, both conscious and nonconscious, as represented by the equations in Table 1. The magnitude of the mimicry effect is represented by the difference in negative words between a condition that was shown the negatively-valenced review and one that was not. We find that the conscious component of this effect (derived from the context manipulation) leads to a 12.32% increase in negative words (CSf = .04, 6.56% of FM). By contrast, the nonconscious component of the mimicry effect contributes an increase in the number of negative words of 80.10% (NC = .26, 42.62% of FM), approximately six times the relative size of the conscious effect (CSf) observed.

## Discussion

We document a systematic bias in the online WOM generation where consumers mimic the negative valence of proximate reviews. We adopt a cognitive perspective to expand the understanding of this phenomenon and estimate the conscious and nonconscious components behind the mimicry of negative valence in online WOM. We find that the nonconscious component is six times the conscious component. It appears that consumers do not engage much in this type of mimicry strategically. Instead, this phenomenon predominantly manifests beneath the threshold of conscious awareness. Further research might explore potential interventions to curb this negativity, especially when it is induced via mimicry. Extant research in online WOM has documented several potential interventions to mitigate negative reviews, such as providing firm's responses over time (e.g., Wang & Chaudhry, 2018; Herhausen et al., 2019). One potential path is to propose and test methods not to mitigate negative reviews but the mimicry of negative valence in reviews, motivating consumers' authenticity and uniqueness in their reviews, and creating awareness of the detrimental mimicry phenomenon.

Chevalier, J. A., & Mayzlin, D. (2006). The Effect of Word of Mouth on Sales: Online Book Reviews. Journal of Marketing Research, 43(3), 345-354.

De Angelis, M., Bonezzi, A., Peluso, A. M., Rucker, D. D., & Costabile, M. (2012). On Braggarts and Gossips: A Self-Enhancement Account of Word-of-Mouth Generation and Transmission. Journal of Marketing Research, 49(4), 551-563.

Fitzsimons, G. & Williams, P. (2000). Asking questions can change choice behavior: Does it do so automatically or effortfully? Journal of Experimental Psychology: Applied, 6(3) 195-206. doi: 10.1037//1076-898X.6.3.195.

Godes, David and Silva, José C. (2011) Sequential and Temporal Dynamics of Online Opinion. Marketing Science, 31(3):448-473.

Herhausen, D., Ludwig, S., Grewal, D., Wulf, J., & Schoegel, M. (2019). Detecting, Preventing, and Mitigating Online Firestorms in Brand Communities. Journal of Marketing, 83(3), 1–21.

Ki, C.-W. C., & Kim, Y.-K. (2019). The mechanism by which social media influencers persuade consumers: The role of consumers' desire to mimic. Psychology & Marketing, 36(10), 905–922.

Kramer, T., & Block, L. (2008). Conscious and nonconscious components of superstitious beliefs in judgment and decision making. Journal of Consumer Research, 34(6), 783–793.

Moe, Wendy, and David Schweidel (2012). Online Product Opinions: Incidence, Evaluation, and Evolution, Marketing Science, 31 (3), 372–86.

Moore, S. G., Lafreniere, K. C. (2020). How online word-of-mouth impacts receivers. Consumer Psychology Review, 3, 34-59.

Moore, S. G., & McFerran, B. (2017). She said, she said: Differential interpersonal similarities predict unique linguistic mimicry in online word of mouth. Journal of the Association for Consumer Research, 2 (2), 229–45.

Schindler, R. M., & Bickart, B. (2012). Perceived Helpfulness of Online Consumer Reviews: The Role of Message Content and Style. Journal of Consumer Behaviour, 11(3), 234–43. doi: 10.1002/cb.1372

Schlosser, A. E. (2005). Posting versus lurking: Communicating in a multiple audience context. Journal of Consumer Research, 32(2), 260–265.

Schlosser, Ann E. (2009). The Effect of Computer-Mediated Communication on Conformity vs. Nonconformity: An Impression Management Perspective. Journal of Consumer Psychology,19 (3), 374–88

Varga, M., & Albuquerque, P. (2023). The Impact of Negative Reviews on Online Search and Purchase Decisions. Journal of Marketing Research (JMR), 1.

Wang, Y., & Chaudhry, A. (2018). When and how managers' responses to online reviews affect subsequent reviews. Journal of Marketing Research, 55(2), 163–177.

# Track 10 - Services Marketing

# Ethical Organizational Culture and Service Design: Pathways to Decent Work and Human Thriving

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## Abstract

This study outlines a research design conceived to examine the impact of Ethical Organizational Culture and Service Design on Human Thriving, with decent work serving as a mediator, ultimately supporting human thriving Although previous research highlights the significance of decent work and psychological well-being, few studies have combined these concepts within a service-oriented framework that considers organizational factors and contextual differences. This study is currently under development and employs a crosssectional design to investigate the proposed relationships between EOC, Service Design, Decent Work, and Human Thriving, drawing on survey data from employees in various European service industries. Structural Equation Modeling (SEM) is applied to test the proposed relationships and use multi-group analysis to examine how service context influences these relationships. Our research suggests that organizations that prioritize ethical organizational culture and service design are more likely to create work environments that respect dignity, autonomy, fairness, and inclusion, essential elements of decent work. These conditions boost employees' vitality and learning, which are key to human thriving. The strength of these relationships may differ across service sectors due to specific constraints or enablers, such as institutional norms, client interaction intensity, and resource availability. Ultimately, the research endeavours to offer a theoretically sound and empirically testable model that aids scholars and practitioners in understanding how valuesbased organizational strategies can lead to sustainable and thriving workplaces within service sectors.

*Keywords: Transformative Service Research, Ethical Organizational Culture, Service Design, Decent Work, Human Thriving*

### 1. Introduction

In today's knowledge-based economy, service organizations must promote employee wellbeing, learning, and meaningful engagement. At the heart of these goals is decent work, defined as productive work carried out with freedom, equity, security, dignity, and alignment with social values (Deranty & MacMillan, 2012; Duffy et al., 2016; Ragadu & Rothmann, 2023). While the importance of decent work for well-being is widely acknowledged (Deci & Ryan, 2000), current models predominantly focus on how individual and contextual factors such as marginalization and career adaptability influence decent work. In doing so, they tend to overlook organizational-level factors, particularly within service ecosystems. Meanwhile, research at the intersection of needs theory and humanistic management has underscored the role of job resources such as ethical leadership, autonomy, and supportive work design in promoting employee thriving (Demerouti et al., 2001; Duffy et al., 2016; Ryan & Deci, 2017). However, macro-level

organizational factors such as ethical organizational culture and service design, which can significantly shape work quality (Sreejesh & Roy, 2024), have received comparatively less empirical attention. Although decent work is increasingly emphasized as central to work and well-being, its systemic and organizational origins remain underexplored. These limitations are particularly relevant as scholars continue to call for transformational, system -level approaches in service management research (Blustein et al., 2016; Colbert et al., 2018).

To address this gap, this paper outlines a research design aimed at empirically examining the influence of Ethical Organizational Culture (EOC) and Service Design on Human Thriving, with Decent Work serving as a key mediating construct. EOC refers to the values, norms, and managerial practices that promote dignity, fairness, transparency, and integrity in interactions and decisions (DeBode et al., 2013). Service Design encompasses the structure and coordination of service processes, stakeholder engagement, and holistic planning across service ecosystems (Lynn Shostack, 1982). We argue that these organizational-level constructs are essential enablers of decent work in service settings.

Drawing on the principles of humanistic management, EOC directly supports dignity (Melé, 2016) and inclusive decision-making that respects all stakeholders (Duffy et al., 2016), which are foundational to meaningful and well-being-centered work environments (Melé, 2016; Pirson & Lawrence, 2010). Likewise, from the perspective of Transformative Service Research (TSR), service design is valued for its systemic and inclusive nature, contributing to both individual and societal well-being (Anderson et al., 2013). Integrating these perspectives, our model explains how organizational ethics and systemic service design translate into decent work experiences, ultimately enabling human thriving, which is characterized by psychological vitality, continuous learning, and meaningful engagement at work (Brown et al., 2017).

Our study aims to create a model that is both theoretically robust and empirically grounded, using a quantitative, cross-sectional survey design to examine the proposed connections between EOC, Service Design, Decent Work, and Human Thriving. This will help scholars and practitioners better understand how value-driven organizational strategies, namely ethical culture and human-centered service design, foster decent workplaces that promote human flourishing. By clarifying these connections, our model provides practical guidance for designing sustainable, high-performing service industry work environments.

## 2. Literature Review

### 2.1 Hypothesis development

Organizations with a strong ethical culture create a work environment that values fairness, integrity, and trust (DeBode et al., 2013). This leads to positive psychological and behavioral outcomes. Prior studies have shown that a work climate focused on ca ring and integrity can improve employees' emotional well-being by providing them with meaningful experiences (Joplin, 2024). Additionally, studies on organizational behavior suggest that employees are more committed and engaged when their values align with the company's values and moral standards (Huhtala & Feldt, 2016). In the context of decent work, a work environment that prioritizes ethics provides the necessary resources for employees to work decently and productively (Ragadu & Rothmann, 2023). Based on this, we prop ose the following hypothesis:

H1a: *Ethical Organizational Culture will have a significant positive impact on Decent Work.*

Service design is about planning processes, interactions with stakeholders, and underlying infrastructure to improve user experiences (Lynn Shostack, 1982). These ecosystem -level design efforts not only benefit users but also impact job characteristics, increasing the variety of skills, the meaning of tasks, and autonomy. According to JD–Resources theory, meaningful design enhances psychological states (Huang & Hsu, 2009).) and working conditions (Pagliaro et al., 2018). These better job conditions align with the elements of decent work, such as autonomy, work-life balance, and fair treatment, suggesting that service design fosters decent employment environments. Therefore, we propose that:

H1b: *Service Design will have a significant positive impact on Decent Work.*

Human thriving, characterized by vitality and continuous learning, is a key outcome of positive job design and supportive work environments. It highlights that decent work satisfies essential human needs, directly contributing to improved well-being and flourishing (Ragadu & Rothmann, 2023). Empirical meta - analyses confirm strong positive links between decent work and indicators such as mental health, career adaptability, and subjective well-being. Based on these, we hypothesize that:

H2: *Decent Work will have a significant positive impact on Human Thriving.*

Although both ethical culture and service design promote thriving, their effects are indirect. Earlier studies show that ethical work environments boost employee well-being primarily through channels like meaningful work and aligning with values (Joplin et al., 2021; Schwepker et al., 2021). Likewise, some other studies highlight decent work as the key link between external work conditions and psychological outcomes (Ragadu & Rothmann, 2023). Decent work is essential for turning ethical culture and service design into a foundation for human well-being by addressing psychological needs and preserving dignity (Melé, 2016; Pirson, 2017). It offers access to resources, opportunities for growth, and overall well-being, particularly in service industries where job security is often uncertain (Zientara et al., 2024). In environments characterized by inequality or bias, decent work helps reduce frustration and flourishing (Che et al., 2022; McCrudden, 2014). Service design improves job roles by boosting autonomy, skill variety, and clarity. These features closely align with decent work, providing resources that drive positive results. Studies have shown that job design plays a key role in promoting work settings that are both livable and flourishing (Ragadu & Rothmann, 2023). As a result, well-organized and ethical systems within organizations support human thriving primarily by shaping the quality of work conditions. Therefore, we hypothesize that:

H3a: *The positive impact of Ethical Organizational Culture on Human Thriving is mediated by Decent Work.*

H3b: *The positive impact of Service Design on Human Thriving is mediated by Decent Work.*

## 3. Methodology

This study is currently under development. This study will use a quantitative, crosssectional survey design to empirically examine the proposed relationships between EOC, Service Design, Decent Work, and Human Thriving. Adopting a deductive approach, grounded in existing theory and literature, we aim to validate a proposed research model using Structural Equation Modeling (SEM). The target population comprises frontline service employees across various European service sectors, including healthcare, education, and hospitality. These sectors are selected because of their importance in delivering peoplecentered services (Dodds et al., 2022; Hunter-Jones et al., 2023; Sanz et al., 2021), where organizational values, job design, and employee well-being are especially significant (Bansal et al., 2025; Rezapouraghdam et al., 2019; Wang et al., 2024). Participants will be recruited using a non-probability purposive sampling method via Prolific, a reputable online platform known for its high data quality and diverse respondent pool. A minimum sample size of 384 will be targeted to meet SEM requirements for model stability and accurate parameter estimation (Hair et al., 2019).
Participants will complete an online survey independently, and participation will be optional and confidential. Informed consent will be obtained from respondents before their participation, outlining the study's purpose, data protection, and how to contact them if needed. All constructs will be measured using validated multi-item scales adapted from previous research, including 15 items scale of decent work by Duffy et al. (2017), human thriving scale of 10 items by Porath et al. (2012), and EOC scale by DeBode et al. (2013) with 32 items. Control variables will include gender, age, tenure, sector, and education level.

Data analysis will proceed in multiple steps, using SPSS for descriptive statistics and reliability testing, and SmartPLS for SEM.

## 4. Findings and discussion

Despite the extensive literature affirming decent work as a crucial determinant of well-being (Duffy et al., 2016), there is a lack of empirical research on its organizational antecedents. This study bridges this gap by focusing on ECO and service design as crucial drivers of decent work. Our proposed research model builds upon the TSR model, suggesting that systemic changes in services can enhance well-being (Anderson et al., 2013). We anticipate demonstrating how an employee-centered approach to service design, combined with an ethical culture, can improve internal work environments, promote human well-being, and thriving.

Frontline service employees often face emotional demands, inherent unpredictability, and a high risk of burnout. By concentrating on this group, the study is expected to offer targeted insights into how service organizations can retain, empower, and support this vital workforce. Furthermore, given the varying levels of institutional protection and prevalent cultural norms across Europe, the empirical validation of our model in this diverse context will offer valuable cross-national implications, thereby enriching the international human resources and organizational behavior literature

5. Practical and Managerial Implications

This study is poised to offer practical implications for managers seeking to build an ethical organizational infrastructure, including formal elements such as codes of conduct, leadership training, and transparent reporting systems, by showing how such systems help to create a psychologically safe environment that supports decent work and enhances human thriving in the service industry. Our findings will advocate for service Design processes that extend beyond customer experience mapping to include employee journey mapping. By developing an inclusive service architecture where employee voices shape workflows, organizations can enhance autonomy, purpose, and staff retention. Rather than viewing well-being initiatives as optional, organizations should strive to create an environment where people can thrive, linking this goal to their ethical culture and design choices. Companies across various service sectors can utilize this model to evaluate their ethical climate and design practices, informing HR actions based on evidence. This model directly supports Sustainable Development Goal 8, which focuses on Decent Work and Economic Growth. Moreover, Organizations can also use this framework for enhanced corporate reporting and alignment with broader ESG goals.

**References are available upon request.**

# Abstracts

## Track 2 - Consumer Behavior

## Real-Time Biometric Framework for Marketing Automation: Reshaping Consumer Behaviour through IoT-CGM Integration

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### Abstract

The evolution of marketing automation is increasingly shaped by real-time data analytics, predictive modelling, and hyper-personalisation. Yet, the growing availability of information and consumer choice may result in cognitive overload and decision fatigue, leading to disempowerment, rather than empowerment.
Drawing on Daniel Kahneman's dual-process theory and building on the previously developed GIRTM framework, this study reframes marketing automation through a biometric dimension, focusing on glucose as a strategic proxy for cognitive and behavioural patterns. Indeed, literature has demonstrated that glucose significantly influence decision-making; particularly, lower glucose levels are associated with heuristic-based responses. In this perspective, glucose emerges as a valuable and novel biometric indicator, made measurable thanks to the convergence of IoT technologies with Continuous Glucose Monitoring (CGM) systems, that enable continuous and real-time tracking of glucose data. Thus, IoT-CGM systems offer a promising avenue for integrating biometric insights into marketing automation strategies, supporting applications such as dynamic personalisation and campaign optimisation. Through a review of current literature, this conceptual contribution advances the understanding of how glucose through IoT-CGM systems can enrich real-time consumer behaviour analysis and lead to a new frontier in marketing automation.

*Keywords: brand identification; brand advocacy; higher education marketing; brand management; crowdfunding*

### References

Amosu, O. R., Kumar, P., Fadina, A., Ogunsuji, Y. M., Oni, S., & Adetula, K. (2024). Harnessing real-time data analytics for strategic customer insights in e-commerce and retail. World Journal of Advanced Research and Reviews, 23(2), 880–889. https://doi.org/10.30574/wjarr.2024.23.2.2407

Broniarczyk, S. M., & Griffin, J. G. (2014). Decision difficulty in the age of consumer empowerment. Journal of Consumer Psychology, 24(4), 608–625. https://doi.org/10.1016/j.jcps.2014.05.003

Dian, F. J., Vahidnia, R., & Rahmati, A. (2020). Wearables and the Internet of Things (IoT), applications, opportunities, and challenges: A survey. IEEE Access, 8, 69200–69211. https://doi.org/10.1109/ACCESS.2020.2986329

Gurtner, N., Gurtner, S., Laub, L., Zuber, A., & von Däniken, T. (2024). Same same, but different: Consumers' decision-making process and psychological disempowerment in the digital society. Journal of Interactive Marketing, 68, 470–500. https://doi.org/10.1080/10696679.2024.2361431

Kahneman, D. (2011). Thinking, fast and slow. Farrar, Straus and Giroux.

Masicampo, E. J., & Baumeister, R. F. (2008). Toward a physiology of dual-process reasoning and judgment: Lemonade, willpower, and expensive rule-based analysis. Psychological Science, 19(3), 255–260. https://www.jstor.org/stable/40064920

McElroy, T., Dickinson, D. L., & Levin, I. P. (2020). Thinking about decisions: An integrative approach of person and task factors. Journal of Behavioral Decision Making, 33(5), 538–555. https://doi.org/10.1002/bdm.2175

Prasad, A., Rastogi, T., Paolo, T., Tyagi, U., & Benedetto, F. (2023). Optimization of outcomes: Professional perspectives on mastering data-driven marketing. In E. Smith & J. Doe (Eds.), Data engineering for data-driven marketing (pp. 217–234). Springer

Rodríguez-Rodríguez, I., Campo-Valera, M., Rodríguez, J.-V., & Lok Woo, W. (2024). IoMT innovations in diabetes management: Predictive models using wearable data. Expert Systems with Applications, 238, 121994 https://doi.org/10.1016/j.eswa.2023.121994

Wang, X.-T. (2018). Resource signaling via blood glucose in embodied decision making. Frontiers in Psychology, 9, 1965. https://doi.org/10.3389/fpsyg.2018.01965

# Track 4 - Business-to-Business Marketing

## Rethinking B2B Networks through Digital Transformation and Value Co-Creation

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### Abstract

Companies today operate in rapidly changing environments marked by high levels of uncertainty and pressure, under the impact of exogenous disruptive events.
Digital transformation (DT) profoundly influences organizational capabilities and broader societal change, reshaping business models, strategic approaches, marketing practices, customer engagement, and supply chain dynamics. DT has the capacity to affect all dimensions of business activity, with marketing emerging as one of the most impacted domains. In order to sustain competitive advantage in the digital era, it is essential for the marketing function to undergo continuous adaptation (Caliskan et al., 2021). While the rapid progression of digital technologies has spurred increased scholarly attention toward DT and marketing, a significant gap persists in research examining its implications within the broader business landscape—especially regarding the interaction between enabling factors and implementation challenges (Vial, 2021).
In such volatile environments, leveraging established business relationships is frequently regarded as a strategic means of navigating unpredictable external phenomena, whereby firms utilize existing resources to pursue a range of potential outcomes (Sarasvathy, 2001). Nevertheless, these same relationships can become liabilities, exacerbating the impact of exogenous disruptive events due to the interconnected nature of business networks (Abosag et al., 2016). More broadly, firms must develop the capacity to adapt, recover rapidly, and enhance organizational resilience (Williams et al., 2017). As a result, scholarly interest in business marketing has increasingly focused on how business-to-business (B2B) firms cultivate and adapt themselves in complex networked environments (Gölgeci and Kuivalainen, 2020).
In particular, business networks are composed of diverse actors who collaborate to generate greater value than providers could deliver independently (Hofacker et al., 2020). Therefore, understanding the network context in which value is co-created is essential for comprehending how these actors interact with and respond to their surrounding environment, including the effects of exogenous disruptions (Munksgaard et al., 2024). DT has given rise to new forms of interaction and relationship-building that have become central to value creation in B2B companies, while also reshaping actor engagement and resource integration (Corsaro and Anzivino, 2021). In this regard, Hofacker et al. (2020) emphasize the critical need to explore the transformative and disruptive effects that digital technologies exert on value co-creation processes within B2B settings. Given the ongoing reconfiguration of industrial market structures and dynamics driven by these technologies, a thorough and systematic investigation into their effects on business environments remains crucial (Matt et al., 2023). Specifically, scaling technology adoption—for example, in relation to emerging technologies such as generative AI—requires a supportive external environment in which user trust and readiness, viable business model economics, regulatory clarity, and talent availability play critical roles. Moreover, managers are facing increasing complexities and must align

long-term objectives related to technology adoption with internal resources, while also considering the broader external ecosystem to effectively integrate new technologies into their operations (McKinsey, 2024).
Therefore, the present study explores the impact of DT on business networks, placing specific emphasis on how it shapes value co-creation dynamics within B2B environments. Thus, the main research question is: How does digital transformation impact business networks for value co-creation?
In detail, particular attention will be devoted to understanding this impact through the identification of the dimensions most affected by DT, as well as the effects of DT on the value co-creation process. For this reason, in order to address the macro research question, the study focuses on two sub-research questions: (SubRQ1) What are the main dimensions affected by digital transformation? And (SubRQ2): What are the main specific effects of digital transformation on the value co-creation processes on business networks?
Therefore, a qualitative research method was employed, including 30 semi-structured interviews with key informants and secondary data analysis. The study reveals three key dimensions influenced and impacted by the DT: execution of activities, strategic adjustment of resource allocation, and redefinition of stakeholder roles. The research highlights the multifaceted impact of DT on B2B network. Its originality lies in identifying that three main value processes involved in value co-creation within business networks are affected by specific effects related to the three dimensions influenced by DT. Furthermore, the study provides a practical framework to guide managers in navigating technological transition and fostering value co-creation throughout their networks.

*Keywords: digital transformation, network, B2B, value co-creation, relationships, value co-creation processes*

# Track 8 - Digital Marketing

# Investigating Intergenerational dynamics in voice search behavior: implications for brand engagement

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## Abstract

Voice search behavior is becoming increasingly pervasive, driven by advancements in artificial intelligence (AI; Ford et al., 2023). Users now rely on voice commands for a variety of tasks, such as navigating while driving, setting timers, controlling smart home devices, and searching for products via platforms like Google. Our homes are increasingly equipped with smart speakers (Lee and Cho, 2020, Ford et al., 2023) whose global sales continue to grow and are projected to exceed 350 million units by 2029 (Statista, 2023). Virtual assistants such as Alexa, Siri, Cortana, and Amazon Echo— accessible through smartphones and other digital devices—enable users to search for information and complete purchases using voice commands. Despite this incessant use of AI in our daily life, scholars report a growing feeling of skepticism and fear toward technology-based tools as pervasive elements of our life (Zhou et al., 2024). This leads to a need for a better and deeper understanding of the underlying behavioral dynamics, especially of the youngest generation, such as Gen Alpha as they are primarily relying on voice search behavior: do they embrace totally AI tools – such as voice search behavior – or do they show some typologies of reluctance in such technologies as older generations? Through a mixed method approach this study aims at shedding light on the intergenerational dynamics in relying on voice search behavior and its implications on engagement with the brand.

*Keywords: voice search behavior, brand engagement, AI trust, social learning.*

According to Statista (2023), approximately 25% of individuals report using voice speakers multiple times per day. Users engage in voice search because it is fast, convenient, and hands-free. Recent scholars found that, compared to conventional typed search queries, dictated searches provide more specific and detailed description of what consumers are looking for (Melumad, 2023). Hence, 'vocalized search' is increasingly perceived as more effective and satisfying. This mode of searching is particularly well-suited to multitasking and is commonly used in situations such as driving, traveling, or cooking— contexts in which typing on a phone or tablet becomes increasingly impractical. Voice search is based on AI and operates through systems of speech recognition, which are processed by natural language models and subsequently integrated with search algorithms (Sun et al., 2019). From the user's perspective, voice queries tend to be more informal and conversational, allowing for longer and more natural question formats compared to traditional typed searches.

For advertisers, users' engagement in voice search represents an enormous opportunity to get closer to the potential customer, to increase engagement with the brand thanks to a more personalized and intimate

interaction (Sands et al., 2025), to provide relevant and in-the-moment recommendations, thus customizing the customer journey based on AI (Longoni and Cian, 2022).

Among the individuals most inclined to rely on voice search—due to its perceived ease of use and convenience—are members of Generation Alpha. Defined as those born from 2010 onward, Gen Alpha represents a distinct cohort of emerging consumers with unique digital behaviors (Patrick and Arora, 2025). Growing up entirely in the 21st century, they are deeply immersed in technology and highly value personalized, interactive digital experiences. They move fluidly across multiple platforms, making them particularly receptive to microtargeted advertising and gamified shopping environments (Patrick and Arora, 2025). Consequently, marketers and advertisers are increasingly encouraged to tailor search optimization strategies to meet the expectations of this generation— adopting longer and more conversational queries, platform-specific keywords, and interactive content formats that resonate with younger users eager to engage with brands through technologically mediated experiences (Hollebeek et al., 2024).

However, despite their digital fluency, Gen Alpha consumers are still children and pre-teens. Their technology use and consumption behaviors are significantly influenced—and often mediated—by their parents, who belong to Millennial or Gen Z cohorts. While these parents may be less instinctively inclined to use voice search, their proximity to Gen Alpha may expose them to it indirectly.

According to Social Learning Theory (Bandura, 1977), individuals can acquire behaviors not only through personal experience but also through observation of others. This suggests that voice search practices may evolve through both individual trial and modelled behavior within the family unit: specifically, as Gen Alpha children demonstrate fluency and comfort with voice AI, skeptical or less tech-savvy parents may become more open to trying it. Yet, does the opposite social learning influence work? In other words, what is the influence of parents' traditional use of typed search on their children search behavior?

At the same time, existing research shows that many adult consumers exhibit forms of algorithm aversion or skepticism toward AI-based technologies (Arango et al., 2023; De Freitas et al., 2023). These tendencies—such as reluctance to trust or delegate decisions to algorithms—may contrast with the attitudes of Gen Alpha, who are growing up with AI as a natural art of their environment. This intergenerational dynamic raises important questions about how voice search behavior and trust in AI are shaped through both direct interaction and social learning within families and challenges the overall effectiveness of voice search in terms of engagement with the brand

This leads to three central research questions:

• RQ1: How do Gen Alpha and their parents differ in how they phrase

voice search?

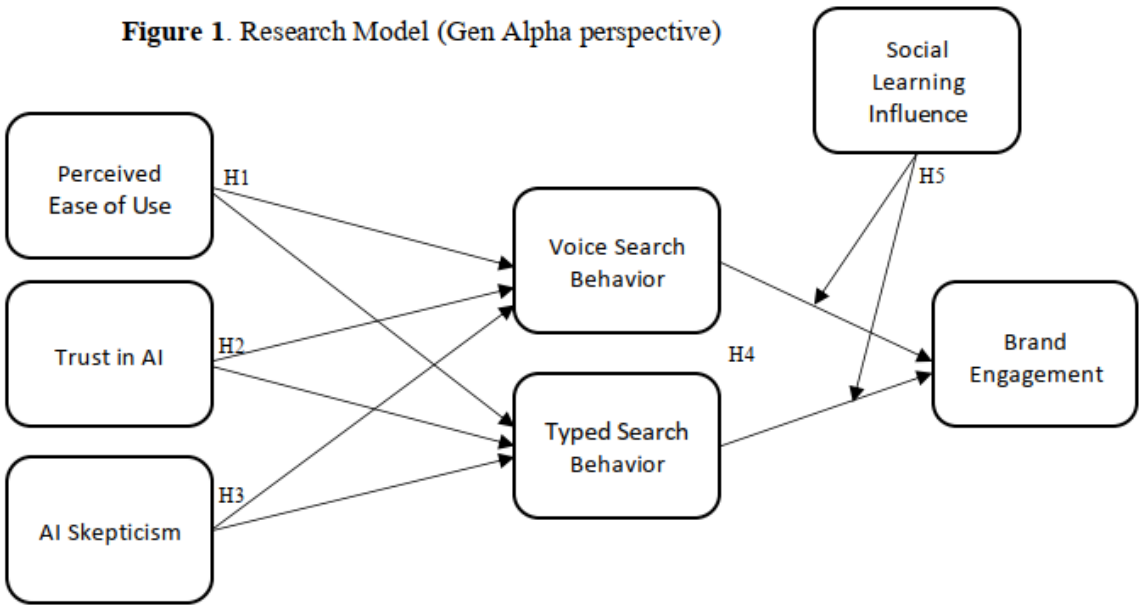
• RQ2: How do trust levels in voice AI vary between Gen Alpha and

their parents, and to what extent are younger users influenced by their parents' skepticism and vice versa?

• RQ3: how should advertisers adapt voice search optimization strategies to increase brand engagement, while accounting for generational differences in language use, query structure and trust in AI based search results?

Building on this, we propose the following conceptual model:

**Figure 1**. Research Model (Gen Alpha perspective)




By adopting a mixed-method approach that combines individual surveys with direct observation of parent–child dyads performing voice searches, this study aims to explore intergenerational differences in voice search behavior. Specifically, it investigates how patterns of usage, phrasing, and trust in voiceactivated technologies differ between Gen Alpha consumers and their parents, while also examining the dynamics of mutual influence and social learning within the dyad. Through the integration of observational and self-reported data, the study seeks to uncover how voice search practices are not only individually shaped but also co-constructed within family interactions.

In addition to its theoretical contribution to understanding social learning and AI trust gaps, the study also offers practical implications for advertisers and marketers. By analyzing the language patterns and behavioral responses observed across generations, the research provides actionable insights for refining voice search optimization (VSO) strategies with the aim of increasing consumers' engagement with brands. This includes adapting content, query structure, and keyword targeting to align with the distinct habits and expectations of both younger and older users in voice-assisted environments.

## References

Bandura, A, (1977) Social Learning Theory. Oxford, England: Prentice-Hall. Arango, L., S.P. Singaraju, and O. Niininen. 2023. Consumer responses to AI-generated charitable giving ads. Journal of Advertising 52, no. 4: 486– 503.

De Freitas, J., Agarwal, S., Schmitt, B., & Haslam, N. (2023). Psychological factors underlying attitudes toward AI tools. Nature Human Behaviour, 7(11), 1845-1854.

Ford, J., Jain, V., Wadhwani, K., & Gupta, D. G. (2023). AI advertising: An overview and guidelines. Journal of Business Research, 166, 114124.

Hermann, E., & Puntoni, S. (2024). Artificial intelligence and consumer behavior: From predictive to generative AI. Journal of Business Research, 180, 114720.

Hollebeek, L. D., Menidjel, C., Sarstedt, M., Jansson, J., & Urbonavicius, S. (2024). Engaging consumers through artificially intelligent technologies: Systematic review, conceptual model, and further research. Psychology & Marketing, 41(4), 880-898.

Lee, H., & Cho, C. H. (2020). Uses and gratifications of smart speakers: Modelling the effectiveness of smart speaker advertising. International Journal of Advertising, 39(7), 1150-1171.

Longoni, C., & Cian, L. (2022). Artificial intelligence in utilitarian vs. hedonic contexts: The "word- of-machine" effect. Journal of Marketing, 86(1), 91-108.

Melumad, S. (2023). Vocalizing search: How voice technologies alter consumer search processes and satisfaction. Journal of Consumer Research, 50(3), 533-553.

Patrick, M., & Arora, P. (2025). Understanding Consumption Behavior: Insights into Generation Alpha's Preferences and Trends. International Business Review, 34(2).

Sands, S., Demsar, V., Ferraro, C., Wilson, S., Wheeler, M., & Campbell, C. (2025). Easing AI-advertising aversion: how leadership for the greater good buffers negative response to AI-generated ads. International Journal of Advertising, 1-21.

Statista (2023) "Voice Technology".

Sun, C., Shi, Z. J., Liu, X., Ghose, A., Li, X., & Xiong, F. (2019). The effect of voice AI on consumer purchase and search behavior. NYU Stern School of Business, 1.

Zhou, L., Zeng, Z., & Cheng, K. (2024). Navigating the Intrusiveness Paradox: A Comprehensive Literature Review on AI Marketing and Consumer Perception. Advances in Consumer Research, 1(1).

# Seen Together: How the Visual Co-Presence of Helpers and Victims Affects Social Media Engagement

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## Introduction and Theoretical Framework

In the last decade, social media has become a strategic tool for nonprofit organizations (NPOs) to raise awareness, engage supporters, and secure funding. Institutions like the UNDP describe this environment as a fast-moving, overcrowded space where attention is fleeting and continuous adaptation is essential (UNDP, 2024). In this context, visual storytelling is critical to capturing attention and fostering emotional engagement. Research shows that human faces, especially those of identifiable beneficiaries, foster empathy and prosocial behavior (Small & Loewenstein, 2003; Nikulina et al., 2024). As research has largely focused on the persuasive role of beneficiaries, with little attention to operators' visual presence, this study examines how the co-presence of operators and beneficiaries, compared to beneficiaries alone, influences Instagram engagement. A long-standing body of research in social psychology demonstrates that individuals are less likely to engage in helping behavior when others are perceived to be present, a phenomenon known as the bystander effect. As originally proposed by Darley and Latané (1968), the Diffusion of Responsibility Theory posits that when multiple potential helpers are present, the responsibility to intervene becomes psychologically shared, leading to a reduced sense of personal obligation to act. This process is well documented through the lens of the bystander effect (Kuppuswamy & Bayus, 2017) whereby observers may feel that the moral "quota" has already been met by others, thus reducing their own motivation to help. In particular, the presence of humanitarian workers in visual content might lead viewers to infer that someone is already "taking care of it", thereby reducing their own felt responsibility. For this reason, we state:

**H1:** The co-presence of both beneficiaries and operators in an image is associated with lower engagement.

If co-presence of operator and beneficiary reduces engagement, possibly through diffusion of responsibility, it is crucial to examine whether face visibility can weaken or strengthen this effect. In co-presence conditions, showing operator's face may help counterbalance the negative effect of shared responsibility by introducing a recognizable prosocial agent into the visual narrative. The face of the humanitarian worker may trigger a different psychological response, such as identification with the helper, admiration, or a sense of social connection with those providing aid. Drawing on theories of social presence (Short et al., 1976), emotional contagion (Hatfield, Cacioppo, & Rapson, 1993), and prosocial modeling (Bandura, 1977), we propose the following hypothesis:

**H2**: When both a beneficiary and a operator are depicted in the image (co-presence), showing the face of the operator increases engagement.

While prior studies have demonstrated that showing a beneficiary's face increases empathy and engagement (Small & Loewenstein, 2003), these effects may not generalize to all visual configurations. Specifically, when a humanitarian worker is also present in the image, the emotional impact of the beneficiary's face may be altered. One possible explanation is that the presence of a second actor (the

humanitarian worker) modifies how viewers interpret the image. According to the Persuasion Knowledge Model (Friestad & Wright, 1994), when emotional cues appear embedded within an explicitly designed narrative, viewers may perceive the image as strategically crafted, reducing authenticity and prompting resistance. Accordingly, we posit:

**H3**: When both a beneficiary and an operator are depicted in the image (co-presence), showing the face of the beneficiary decreases engagement.

## Methodology

We conducted a field study analyzing Instagram posts from seven major Italian nonprofit organizations. Data were collected via Apify, which enabled automated scraping of public posts published between May and August 2024. Only image-based posts were included; videos were excluded to ensure visual consistency.
Each image was manually annotated for: co-presence of beneficiaries and operators (e.g., humanitarian workers), visibility of each subject's face, presence of logos, and overlay text (TO). We also extracted caption data and coded the following control variables: word count, emoji count (using the Para classifier; Luangrath et al., 2022), valence/arousal scores (computed via the VAD lexicon; Mohammad, 2018), organization's sector, follower count. The dependent variable (Total Engagement) is a non-negative count variable, highly right-skewed, with variance ($2639.1^2$) far exceeding the mean (1287.3), indicating overdispersion.

## Results

The overall model was statistically significant, and the test for overdispersion confirmed the appropriateness of the negative binomial specification over a Poisson model. Results show that co-presence of beneficiaries and operators was significantly associated with a decrease in total engagement, compared to posts featuring only beneficiaries **(**B= - 1.110, $p < .001$), confirming H1. The interaction between copresence and operator's face visibility was positive and significant (B=1.380, p=.005), possibly indicating that when both subjects are present, the visibility of the operator's face may help counteract the negative effect of co-presence, in line with H2. Conversely, the interaction between co-presence and beneficiaries' face visibility was negative and statistically significant (B= -1.018, p=.023) coherently with H3.

## Conclusions and Future Development

These findings highlight how subtle variations in visual composition may influence how viewers interpret nonprofit imagery. This study is not without limitations. First, as a field study based on real-world data, it may be affected by contextual and platformspecific factors that cannot be fully control. For this reason, we plan to conduct experimental studies to test the effect of co-presence on engagement under controlled conditions and to investigate the psychological mechanisms, such as perceived authenticity, diffusion of responsibility, empathy, and reactance, that may help explain the patterns observed in the field.

## Selected References

Bandura, A. (1977). Social learning theory. Englewood Cliffs, NJ:Prentice Hall

Darley, J. M., & Latané, B. (1968). Bystander intervention in emergencies: Diffusion of responsibility. Journal of Personality and Social Psychology, 8(4), 377–383. https://doi.org/10.1037/h0025589.

Fischer, P., Krueger, J. I., Greitemeyer, T., Vogrincic, C., Kastenmüller, A., Frey, D., & others. (2011). The bystander-effect: A meta-analytic review on bystander intervention in dangerous and non-dangerous emergencies. Psychological Bulletin, 137(4), 517–537. https://doi.org/10.1037/a0023304.

Friestad, M., & Wright, P. (1994). The persuasion knowledge model: How people cope with persuasion attempts. Journal of Consumer Research, 21, 1–31.

Herd, K. B., Mallapragada, G., & Narayan, V. (2021). Do Backer Affiliations Help or Hurt Crowdfunding Success? Journal of Marketing, 86(5), 117-134. https://doi.org/10.1177/00222429211031814 (Original work published 2022).

Hatfield, E., Cacioppo, J. T., & Rapson, R. L. (1993). Emotional Contagion. Current Directions in Psychological Science, 2(3).

Kuppuswamy, Venkat and Barry L. Bayus (2017), "Does My Contribution to Your Crowdfunding Project Matter?" Journal of Business Venturing, 32 (1), 72–89.

Luangrath, A. W., Xu, Y., & Wang, T. (2022). Paralanguage Classifier (PARA): An Algorithm for Automatic Coding of Paralinguistic Nonverbal Parts of Speech in Text. Journal of Marketing Research, 60(2), 388-408. https://doi.org/10.1177/00222437221116058.

Lee, S., & Feeley, T. H. (2016). The identifiable victim effect: A metanalytic review. Social Influence, 11(3), 199215.

M+R. (2025). 2025 M+R Benchmarks Study. Retrieved from https://mrbenchmarks.com Mohammad, S. (2023). The NRC Valence, Arousal, and Dominance Lexicon. [https://arxiv.org/abs/2304.12029]

Nikulina, O., van Riel, A. C. R., Lemmink, J. G. A. M., Grewal, D., & Wetzels, M. (2024). Narrate, Act, and Resonate to Tell a Visual Story: A Systematic Review of How Images Transport Viewers. Journal of Advertising, 53(4), 605–625.

Slovic, P. (2007). "If I look at the mass I will never act": Psychic numbing and genocide. Judgment and Decision Making, 2(2), 79–95.

P. Slovic, D. Västfjäll, A. Erlandsson, & R. Gregory, Iconic photographs and the ebb and flow of empathic response to humanitarian disasters, Proc. Natl. Acad. Sci. U.S.A. 114 (4) 640-644, https://doi.org/10.1073/pnas.1613977114 (2017).

Short, J., Williams, E., & Christie, B. (1976). The social psychology of telecommunications. Wiley.

Small, D. A., & Loewenstein, G. (2003). Helping a victim or helping the victim: Altruism and identifiability. Journal of Risk and uncertainty, 26, 5-16.

United Nations Development Programme. (2024). 10 tips to enhance social media presence for non-profits. UNDP Blog.

# Track 9 - Sustainable Marketing and Inclusivity

## Monetary and Non-Monetary Interventions to Stimulate Green Purchase Behavior

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## Abstract

Consumers state they value sustainability, yet green purchasing remains low. We study price discounts and descriptive social norm nudges, separately and combined, expecting lower perceived monetary sacrifice and higher green trust to produce the largest immediate impact and the strongest habit formation in green purchase behavior.

*Keywords: Green purchase behavior, Monetary Intervention, Non-monetary Intervention, Trust*

### Introduction and Theoretical Background

Many firms promote green practices, yet consumers often bypass green options due to higher prices, doubts about green claims, and perceived sacrifices (Acuti et al., 2022). A large intention to behavior gap remains, and evidence on effective interventions is mixed (Shehawy, 2023; He & Li, 2025). We focus on two interventions: price discounts that reduce perceived monetary sacrifice and descriptive social norm nudges that build green trust. Perceived monetary sacrifice is a key barrier; discounts can lower this cost and raise green purchases (Monroe, 2003; Tseng, 2016). Social norms guide behavior, so showing that many choose green can increase trust and purchase (Cialdini et al., 1991; Ng et al., 2025). We propose that using both together strengthens effects by lowering monetary sacrifice and raising trust, and we test habit formation to see whether gains persist once incentives end (Greene et al., 2024; von Mutius & Huchzermeier, 2021).

### Overview of the studies

This research uses two pretests, one online experiment, and one field study. Pretest 1 selects a familiar, frequent purchase category. Pretest 2 calibrates the discount using market data and value ratings. Study 1, between subject with four conditions (discount, social norm, combined, control), tests main, joint, and mediation effects via perceived monetary sacrifice and green trust. Study 2 randomizes the same four conditions in a supermarket and records real choices.

### Conclusion

Combining monetary discounts with descriptive social norm nudges advances green consumption research and clarifies mixed findings on green purchase behavior. We expect the results point to lower perceived monetary sacrifice, higher green trust, and habit formation; guiding retailer led strategies at scale.

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## References

Acuti, D., Pizzetti, M., & Dolnicar, S. (2022). When sustainability backfires: A review on the unintended negative side-effects of product and service sustainability on consumer behavior. Psychology & Marketing, 39(10), 1933-1945.

Cialdini, R. B., Kallgren, C. A., & Reno, R. R. (1991). A focus theory of normative conduct: A theoretical refinement and reevaluation of the role of norms in human behavior. In Advances in experimental social psychology (Vol. 24, pp. 201-234). Academic Press.

Greene, D., Demeter, C., & Dolnicar, S. (2024). The comparative effectiveness of interventions aimed at making tourists behave in more environmentally sustainable ways: A meta-analysis. Journal of Travel Research, 63(5), 1239-1255.

He, A., & Li, A. (2025). Intervention policies for promoting green consumption behavior: An interdisciplinary systematic review and future directions. Journal of Environmental Management, 373, 123917.

Monroe KB. 2003. Pricing: Making Pro fi table Decisions. McGrawHill, New York: NY.

Ng, P. M., Chan, J. K., Lit, K. K., Cheung, C. T., Lau, M. M., Wan, C., & Choy, E. T. (2025). The impact of social media exposure and online peer networks on green purchase behavior. Computers in Human Behavior, 165, 108517.

Sharma, K., Aswal, C., & Paul, J. (2023). Factors affecting green purchase behavior: A systematic literature review. Business Strategy and the Environment, 32(4), 2078-2092.

Shehawy, Y. M. (2023). In green consumption, why consumers do not walk their talk: a cross-cultural examination from Saudi Arabia and UK. Journal of Retailing and Consumer Services, 75, 103499.

Tseng, C. H. (2016). The effect of price discounts on green consumerism behavioral intentions. Journal of Consumer Behaviour, 15(4), 325-334.

von Mutius, B., & Huchzermeier, A. (2021). Customized targeting strategies for category coupons to maximize clv and minimize cost. Journal of Retailing, 97(4), 764-779.

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