

# Analysis of factors affecting the purchase of private label products by different age consumers

Purchase of  
private label  
products

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## Abstract

**Purpose** – The aim of this study is to determine how the different age of consumers impacts on some factors that drive consumers to the purchasing of private label products, considering differences and similarities of behaviors.

**Design/methodology/approach** – The research was conducted through the administration of a questionnaire to evaluate consumers' perceptions about private label food products. To collect data, the convenience sampling method has been used. The valid answers collected and analyzed are 358.

**Findings** – The results of this study highlight that the response of different age groups to the Private Label Brands (PLBs) must be considered in the light of the positioning adopted by the individual retailers. Value for money and satisfaction on previous consumption are relevant for purchasing decisions regardless of the retailer's strategy and the age of consumers. A third factor, price, is important for the whole sample. Focusing on the specific age clusters, the younger respondents seem to be attentive to factors such as healthy and in-store promotion, while the more experienced consumer are attentive to the origin and traceability of products.

**Originality/value** – An analysis of the main literature on Private Labels showed that the results of research about the role of consumer age in PLB choices are contrasting. This study aims at integrating the literature, measuring how the factors influencing the purchase of PLB products vary for different age groups of consumers.

**Keywords** Private label brand, Consumer behavior, Consumer age, Grocery retailing

**Paper type** Research paper



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## Introduction

In the past, consumers perceived Private Label Brands (PLBs) as low quality compared to national brands; this idea has started changing in the mid-90s in Western countries, where Private Labels (PL) started to be more developed. Hence, a more favorable attitude of consumers toward PLB (Gielens *et al.*, 2021; Kakkos *et al.*, 2015) emerged.

The increase in market shares of PLs has led the literature to investigate the reasons for purchasing PLB and the factors that play a role in purchasing decisions (Glynn and Chen, 2009; Jaafar *et al.*, 2012; Konuk, 2018; Sansone *et al.*, 2020).

In general, the evolution of consumers and consumption patterns still reveals, on the one hand, numerous aspects to be studied on the topic of consumer behavior (Makrides *et al.*, 2021), and on the other it makes necessary sector-specific, culture-specific and product-specific research (Giampietri *et al.*, 2016; Ahmed *et al.*, 2019; dos Santos *et al.*, 2022).

Focusing on PLB and considering socio-demographic features of consumers, in particular age, as a variable in buying PLB, results in literature seem to be contrasting. Some studies highlight how age does not influence purchasing decisions, others stressed how age is the most notable demographic factor that influences the relationship between the purchase intention and the factors that influence it (De and Singh, 2017; Kakkos *et al.*, 2015). For instance, the study of Valaskova *et al.* (2018) argues that the attitudes of consumers to PL products are determined by demographic variables, in particular by age, income and family status, while on the contrary, Diallo *et al.* (2013), assert that none of the socio-demographic variables considered (age, gender, household income and family size) have an effect on PLBs choice. Therefore, from previous studies inhomogeneous results emerged. Moreover, in both the aforementioned studies, age was taken only as a demographic variable without deeply investigating how consumers divided by age groups are differently influenced in the purchase of PLB. In the literature a comparison between different consumer segments as regards the main factors that drive them to the purchasing of private label products has never been conducted.

For this reason, this paper aims to cover this gap by analyzing how consumers of different age groups behave in PL choices, trying to better understand whether the most relevant variables identified in the literature (see Table 2 in the methodology section) change their influence depending on the age of consumers.

Since the existing literature is contrasting and incomplete, this study tries to determine how different elements that drive consumers to the purchasing of PL products, such as quality, packaging, price, advertising and promotions, imitation of leading brands, availability in store and others (see Table 2), differently impact on consumers depending on their different age using the analysis of variance (ANOVA). Therefore, the research question is:

*RQ1.* How consumers of different age groups are influenced in their purchasing behavior of PLB?

By answering this research question, the study contributes to the literature on PLB by comparing the behavior of different age consumers, which has not been previously investigated. Moreover, it also provides useful guidance to practitioners on PL strategies to be adopted, taking into consideration for the analysis, three Italian top retailers.

The paper is structured as follows: first, the theoretical background about the role of socio-demographic factors on consumers' buying orientation is presented, focusing on the role of age on purchasing decisions of PLBs. Then, the methodology adopted, results of the research and discussion are reported. The final section presents conclusions, theoretical and managerial implications, limitations and future research directions.

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## Theoretical background

The topic of consumer behavior is complex and extensively studied by the literature. Recent studies, highlighting how some factors (e.g. the increase of cultural and social flows across the world, new digital technologies, the globalization of marketing activities) have determined the evolution of consumers toward an increasing cosmopolitanism, show that the issues to be studied about consumer behavior are still manifold (Makrides *et al.*, 2021). Among the numerous research directions identified, Makrides *et al.* (2021) highlight the need to extend the existing literature as regards the role of demographic antecedents (e.g. age, education and gender). The complexity and the high interconnection between factors to be analyzed has led the literature on food consumer behavior to focus on sector-specific, culture-specific, product-specific aspects (Batt and Liu, 2012; Giampietri *et al.*, 2016; Ahmed *et al.*, 2019; dos Santos *et al.*, 2022), since without this, it is difficult to make general considerations on this topic. For some product/brand categories, demographic variables still seem to play an important role.

According to the aim of this research, we focus on the literature about the role of age in food consumer behavior and purchase intentions. In this sense, several models have been developed over time with the aim to analyze and measure the effects of age on consumer behavior, purchase intention and consumers' goals and preferences. Through a review of previous studies, Yoon and Cole (2008) show how differences emerge for different age groups, in terms of search for information, evaluation of alternatives, purchase decisions and post-purchase behavior. However, they highlight that research tends to be focused on a few areas, in specific sectors or specific markets. In 2012, Madahi and Sukati showed a positive connection between demographic variables and purchase intention, indicating that as the age of consumers increases, the influence of age on purchasing choices decreases, if compared to other variables.

More recent research has highlighted the correlation between age and the emotional aspects that influence purchasing decisions, showing that older adults tend to remember fewer negative images vs positive or neutral images, and to remember more emotionally positive images (Mohammad and Drolet, 2019).

Among the studies on socio-demographic factors and consumer behavior, some of them have focused on the purchase of PL products (Miquel *et al.*, 2017; Košičiarová *et al.*, 2020; Kádeková *et al.*, 2020; De and Singh, 2017; Kakkos *et al.*, 2015). In 2013, Beneke *et al.* studied the impact of the key demographic variables (age, gender, income and racial group) on the *a priori* relationships between functional, financial, physical, psychological, social and time risks, and the intention to purchase premium PL brands within grocery assortments. The research underlined differences between demographic groupings, particularly on functional and time risk, that are perceived to a greater extent in the 26–45 age group, suggesting that businesses need further efforts to reassure consumers in working age on the authenticity of PL brands. A study of Miquel *et al.* (2017) deepens the role of gender and other psychological variables such as PL attitude, price consciousness, brand consciousness and commitment with the product in buying decisions.

A subsequent study of Valaskova *et al.* (2018) focuses on the preferences about PL products considering gender, age, education, income and consumer status of respondents. The results show a weak dependence from the variables age, income and respondent status in PL products buying decisions.

More recently, in 2020, research was conducted aimed at studying PLs from the point of view of millennial customers, highlighting high awareness and a high propensity to buy PLBs. Among the factors of influence, quality and good previous experience, as well as a combination of reasonable price and quality, emerged as the most important leading to purchase PLs (Košičiarová *et al.*, 2020).

Kádeková *et al.* in 2020 analyzed the perception by the young generation of Slovak consumers (under 25) about PLBs, focusing in particular on the impact of packaging in the

dairy segment on purchasing decisions. The results show that young consumers that buy PL products think that a unattractive packaging influences their purchasing decisions.

From the major part of the studies conducted, it seems that age is the most prominent demographic factor, followed by income, occupation, qualification, finally gender” (De and Singh, 2017), influencing purchase intentions (Kakkos *et al.*, 2015).

On the basis of these premises, at the current state of knowledge a research gap seems to emerge.

In fact, given the commonly demonstrated influence of age on PL products buying decisions, the way in which the different age groups behave in relation to the factors of choice is still not clear. About this, the results of the different cited studies are contradictory, and most of them suggest deepening this aspect in future studies (Kakkos *et al.*, 2015) also considering different categories of PL products (De and Singh, 2017). Thus, it seems useful *to fill a gap in the literature and to give retailers the possibility to plan PL strategies by segmenting them by age*. For this aim, we conducted an in-depth analysis about the role of age on purchase intentions of PLBs, in order to measure how the effect of factors influencing consumer decisions varies depending on the different age groups.

## Methodology

### *Sampling design*

The research was conducted through the administration of a questionnaire to evaluate consumers’ perceptions about PL food products. To collect data, the convenience sampling method, also known as availability sampling (Kitchenham and Pfleeger, 2002; Baltar and Brunet, 2012), has been used, using the Computer-Assisted Web Interviewing (CAWI) method through on-line questionnaires administered to a sample of final consumers in Italy. The convenience sampling method is increasingly widespread for online surveys (Leiner, 2016), since its main advantages are that it is inexpensive, fast and respondents are readily available (Schmidt and Hollensen, 2006; Wright, 2005). Moreover, researchers use convenience sampling in situations where additional inputs are not necessary for the principal research, that is, there are no criteria required to be a part of this sample, as in this situation. In this case, for data collecting, the questionnaire has been distributed among the main social networks. The selection of respondents has been fixed on having made purchases of food products at least once in the previous six months. The survey was conducted from June to July 2019 and consumers were accompanied in compiling the questionnaire by images and photos of products to facilitate the understanding of each question. The valid answers collected and analyzed are 358. Table 1 shows the profile of respondent.

The questionnaire has been divided into four sections: section 1 defines the socio-demographic profile of respondents, and sections 2, 3 and 4 are each reserved for the three PLBs, since three different PLBs of leading grocery retailers in Italy have been used as the subject of consumers’ evaluations. The possibility of answering the single sections 2 to 4 was subject to having previously made purchases in the last six months at the single retailer considered. The three sections (2–4) investigate 17 factors carried out on the basis of an analytical framework developed after a deep literature review analysis adapted from previous studies (Sansone *et al.*, 2020; Sansone and Colamatte, 2019). The factors considered that may have influenced consumers’ purchases of PL products are explained in Table 2.

Table 3 shows the different features of the retailers considered in the study and the corresponding PL policies. Information that could violate the privacy of the retailer has not been entered. We decided to consider these three Italian leading grocery retailers as main reference companies for the analysis, since they are present in the “Global Powers of Retailing” world rankings (<https://www2.deloitte.com/>). This ranking is promoted every year by Deloitte, and it is based on data published annually by companies. The choice to analyze

		<i>n</i>	%	Purchase of private label products
Age	18–24	145	40.5	
	25–34	117	32.7	
	35–44	59	16.5	
	45–54	21	5.9	
	> 54	16	4.5	
Gender	Male	108	30.2	
	Female	250	69.8	
Education	Primary and Middle School Diploma	11	3.1	
	High School Diploma	162	45.4	
	Bachelor/Master Degree	133	37.0	
	PhD	52	14.6	
Occupation	Employee worker	112	31.3	
	Self-employed	35	9.8	
	Housewife	5	1.4	
	Student	173	48.3	
	Retired	6	1.7	
	Unemployed	27	7.5	
Average family members		3.30		<b>Table 1.</b> Socio-demographic features of the sample

Factors	References	
Quality	Ailawadi <i>et al.</i> (2008), Dolekoglu <i>et al.</i> (2008) and Jaafar <i>et al.</i> , (2012)	
Price	Gòmez and Rubio (2008), Glynn and Chen (2009) and Cuneo <i>et al.</i> (2019)	
Variety of formats and sizes	Wells <i>et al.</i> (2007) and Kuvykaite <i>et al.</i> (2009)	
Design of packaging	Wells <i>et al.</i> (2007), Kuvykaite <i>et al.</i> (2009) and Aribarg <i>et al.</i> (2014)	
Values conveyed by communication and advertising messages	Nochai and Nochai (2011)	
Promotions	Nochai and Nochai (2011)	
Imitation of the main market leading brands	Van Horen and Pieters (2012)	
Availability in store	Kahn <i>et al.</i> (2014) and Gao and Simonson (2016)	
Trust in the brand	Glynn and Chen (2009) and Jaafar <i>et al.</i> , (2012)	
Value for money	Glynn and Chen (2009) and Jaafar <i>et al.</i> , (2012)	
Easy identification on the store shelf	Koschate-Fischer <i>et al.</i> (2014) and Godderidge <i>et al.</i> (2016)	
Satisfaction in the previous consumption	Koschate-Fischer <i>et al.</i> (2014) and Godderidge <i>et al.</i> (2016)	
Satisfaction with the overall assortment of the trusted shop	Koschate-Fischer <i>et al.</i> (2014) and Godderidge <i>et al.</i> (2016)	
Store loyalty	Koschate-Fischer <i>et al.</i> (2014) and Godderidge <i>et al.</i> (2016)	
Healthiness of products	Rodrigues <i>et al.</i> (2018) and Sobhanifard (2018)	
Origin and traceability	Tirelli and Pilar Martinez-Ruiz (2014) and Rodrigues <i>et al.</i> (2018)	
Taste	Tirelli and Pilar Martinez-Ruiz (2014) and Rodrigues <i>et al.</i> (2018)	<b>Table 2.</b> Factors affecting PLB purchase

the Italian context, rather than a wider context, was due to the need to examine consumer practices considering a specific cultural and economic context, since it would influence consumer behavior.

	Retailer	Private label
<i>Label 1</i>	<p>Retailer #1 (R1) has been operating on the Italian market since 1967, spreading throughout the country, and it involves eighteen regions and adopts a multi-channel strategy according to which the store formats are differentiated (proximity supermarkets and supermarkets, medium supermarkets and hypermarkets and superstores). The distribution network consists of 1,136 points of sale (2,120, including franchising and subsidiaries – updated to 2019). Retailer #1 pays great attention to sustainable strategies that involve all stakeholders (it promotes information campaigns on environmental awareness, reduces the transport of goods to reduce CO<sub>2</sub> pollution); it pays particular attention to the sustainability of packaging, offering the best solutions in terms of environmental impact prevention. It is careful to integrate the offer of private label products with the inclusion of 100 new references in the last year and an investment in research and development that exceeds 5 million euros  MARKET SHARE: 12.9%  TURNOVER: 14.3 billion euros  ROI: 0.0 (2019)  ROE: -4.6  WAREHOUSE ROTATION: 26 days  SUPPLIER EXPANSION: 63 days  Turnover/sqm: 6,036 euros  AVERAGE STORE SURFACE: 1,162 sqm</p>	<p>The PL #1 brand product is now divided into 10 lines for a total of 4,500 products, of which over 100 launched in 2019. Since their birth they have been characterized by transparency, ethics of the supply chain (the historical adhesion to SA8000 reinvigorated by a recent campaign advertising), high quality and convenience (on average –30% compared to the corresponding branded products). “Our data continues to be positive and overall, the share of our product on the total turnover reaches 30% in volume, with a value of almost 3 billion euros, of which about 40% comes from fully traceable supply chains, a unicum in Italy”, underlines the General Manager of PL #1  Share/turnover: 30%  PLB TURNOVER: 3 bln euros</p>
<i>Label 2</i>	<p>Retailer #2 (R2) has been operating in the Italian market since 1962, spreading throughout the country, with over 3,800 stores and over 60,000 employees. The coverage of the national market takes place through various store formats, ranging from superettes, supermarkets to hypermarkets  The sales concepts respond to the purchasing propensities of Italians, who are increasingly oriented toward combining products and services, quality and convenience, integrating 42 fuel distributors, that 2 generated a value of 492 million euros, 139 parapharmacies, 50 professional opticians work in the 15 Optical of Retailer #2 concepts and 42 Pet Stores (26 in 2018) which reached 23 million euros in turnover  MARKET SHARE: 14.8%, +1% in 2020, with leadership in the supermarket channel with a share of 24.2%  TURNOVER: € 15.7 billion (+10.2%) in 2020 (the figure should also be read considering the integration of new stores)  ROI: 6.6 (2019);  ROE: 8.0;  WAREHOUSE ROTATION: 15 days  SUPPLIER EXPANSION: 58 days  Income/sqm: 6,600 Euros  AVERAGE STORE SURFACE: 653 sqm</p>	<p>The PL #2 products strategy is based on the value of the Italian nature of the production chain as a response to the needs of quality, safety and convenience expressed by customers. With 4,978 products - of which 500 new launches - the PLB is worth 4.5 billion euros, up 20% in value, and represents more than 30% of the total Italian value. Another element that characterizes the PLB strategy is sustainability; PL #2 employs 6,900 local suppliers for a turnover of over 2.6 billion euros of fresh and very fresh goods; it aims to have branded products in environmentally friendly packaging in the shortest possible time, to invest to reduce CO<sub>2</sub> emissions and increase compensation with reforestation programs  Share/turnover: 30.3%, (9.5% points above the Italian average)  PLB TURNOVER: 4.5 bln euros</p>

**Table 3.**  
Feature description of the PLB involved in the study

(continued)

Retailer	Private label
<p><i>Label 3</i></p> <p>Retailer #3 (R3) has been present on the Italian territory since 2000 and its points of sale are located in 19 Italian regions; the store formats are differentiated (proximity supermarkets, supermarkets, hypermarkets and cash and carry)</p> <p>The distribution network consists of 1,460 points of sale divided into: 48 hypermarkets, 469 markets, 939 express and 13 Cash &amp; Carry</p> <p>In the last year, it has made investments of approximately 400 million euros for the strategic development of the network, deemed necessary to meet the needs of the market, with the implementation of new channel strategies (including e-commerce). The new investments in channel strategies seem to derive from a supervening need to downsize the network formats, also implying a problem of redundancy of staff equal to about 5% of the employees</p> <p>For some time, the brand has been diversifying its offer by focusing on new formats in line with the renewed consumer trends. The latest experiment focuses on the circular economy and sustainability; Retailer #3 is partnering with other companies to launch a space that supports sustainable consumption by allowing customers to buy and sell second-hand items with a focus on phones, high-tech items, video games, jewelry, computer items, books, CDs and dvd</p> <p>MARKET SHARE: 5.6%</p> <p>TURNOVER: 5,019 billion</p> <p>ROI: -6.1 (2019)</p> <p>ROE: -10.4</p> <p>WAREHOUSE ROTATION: 31 days</p> <p>SUPPLIER EXPANSION: 74 days</p> <p>Income/sqm: 5,199 euros</p> <p>AVERAGE STORE SURFACE: 844 sqm</p>	<p>The strategies related to PL #3 focus on the control of supply chains also through blockchain technology, greater accessibility to organic products for all, defense of small local producers, efficient and innovative services and enhancement of food and wine excellences throughout the Italian territory</p> <p>In 2020, the PLB strategy aimed at a general relaunch and restyling, starting with the image and packaging</p> <p>SHARE/Turnover: 25% on average, therefore above the market standard, at around 20%</p> <p>PLB TURNOVER: approx. 1 bln euros</p>

Table 3.

### Measures

The aim of the research was to develop an exploratory analysis (Malhotra and Grover, 1998) using an inductive research approach (Eisenhardt, 1989), in order to analyze how the factors influencing the purchase of PL products vary according to the age of the purchasing consumers. A pilot survey (Malhotra and Grover, 1998) has been developed before proposing the questionnaire to the whole sample of consumers.

Descriptive analysis was performed to describe the sample profile of respondents. A five-point Likert scale was used to evaluate the relevance of the 17 items previously described in PLB purchasing.

To test the reliability of the items, Cronbach's alpha values were computed, considering only values greater than 0.60 as suggested by Markowski and Markowski (1990).

The analysis of variance (ANOVA) was performed using *F*-tests to statistically test the equality of means (Nunnally and Bernstein, 1994) and analyze the different perception of the 17 items by consumers of different age groups. According to Brooks and Johanson (2011), ANOVA accepts a minimum sample size of at least one participant in each group and more participants than the coefficients to be estimated are. This means for instance for a one-way



ANOVA on five groups it is needed at least 5 + 1 participants for each group. Therefore, the 358 responses were sufficient for methodological rigor.

Furthermore, the one-way analysis of variance (ANOVA) was used to determine whether there are any statistically significant differences between the means of two or more independent (unrelated) groups (Gamage and Weerahandi, 1998). Therefore, it has been considered as the exact tool to reach the aim of this research, that is to determine how the different age of consumers impacts on the factors that drive them to the purchasing of PL products, considering differences and similarities of behaviors between different age groups.

The results relating to the three PLBs considered were examined considering the different characteristics of the corresponding retailers and the policies they adopt in terms of PL products, prices, promotions, loyalty, etc., as summarized in Table 2.

The researchers collected data from respondents regarding exogenous constructs and endogenous constructs at the same time by using a questionnaire. Hence, there is a chance that the common method bias (CMB) issue might happen and disturbs the study data (Kraus *et al.*, 2020; Rehman *et al.*, 2021a, b). In order to remove the possibility that CMB might have occurred, during the data collection all respondents were assured of full confidentiality and that their responses would be used only for research purposes. All the respondents were requested to read all items carefully and provide honest responses. In addition, in the pilot study, the researchers verified that the questionnaire was error-free and written in plain language (Kraus *et al.*, 2020; Afraz *et al.*, 2021; Rehman *et al.*, 2021a, b).

Furthermore, Harman's single-factor test was performed to assess the absence of CMB. A value of total variance higher than 50% reveals that a CMB issue exists, while a value of CMB less than 50% indicates that there is no CMB issue. The test showed that a single-factor enlightens 26.407% of the total variance. Hence, in this study, CMB can be excluded (Kraus *et al.*, 2020).

## Results

Through the analysis of variance, the 17 items defined were analyzed for each PLB, highlighting the differences between different consumer groups. As for PL #1 (see Table 4), the most relevant items defined by the whole sample are value for money, the satisfaction obtained in previous consumptions and price.

Giving evidence only to those items with statistically significant differences, for PL #1 packaging design seems to be more considered from 35 to 44 years old age group, compared to younger consumers, which give greater importance to the fact that PL products imitate leading brands, to their easy availability in store and also to promotions. As regards the latter factor, it is the age groups ranging from 18 to 44 years that consider it with greater relevance, compared to the more mature consumers' group (age >54). On the contrary, the easy identification of the product on the shelf, which is very important for consumers of more than 54 years of age, has much less relevance for the other categories.

As regards PL #2 (Table 5), the most relevant items defined by the whole sample are, with the same importance, value for money, price and the satisfaction on previous consumption, followed by taste, availability in store and trust in the brand. However, all the items are highly evaluated by consumers (with mean values that exceed the threshold value of 3), except for packaging design and the imitation of leading brands.

Considering the items that show statistical significance among different age groups, only origin and traceability is relevant and it is considered as more important by age groups from 35 to 54 and less important for consumers with more than 54 years of age.

Finally considering PL #3 (see Table 6), the elements evaluated as most relevant when buying PL products by the entire sample are value for money, the satisfaction on previous consumptions and the satisfaction with the overall assortment of the trusted shop; almost the



	PL #1 Total sample n. 191 (100%) Mean SD	PL #1 Age 18-24 n. 105 (55.0%) Mean SD	PL #1 Age 25-34 n. 49 (25.7%) Mean SD	PL #1 Age 35-44 n. 22 (11.5%) Mean SD	PL #1 Age 45-54 n. 6 (3.1%) Mean SD	PL #1 Age >54 n. 9 (4.7%) Mean SD	F	Sig.						
Quality	3.35	0.851	3.33	0.884	3.43	0.736	3.18	0.853	3.33	0.516	3.56	1.236	0.456	0.768
Price	3.70	0.873	3.74	0.870	3.55	0.914	3.82	0.958	3.33	0.548	3.89	0.601	0.693	0.597
Variety of formats and sizes	3.12	0.880	3.04	0.880	3.16	0.874	3.18	0.958	3.33	0.816	3.56	0.726	0.919	0.454
Packaging design	2.44	0.967	2.27a	0.839	2.65b	1.052	2.73b	1.077	2.33	1.211	2.67	1.225	2.077*	0.085
Values conveyed by communication and advertising messages	3.03	1.023	3.02	0.975	3.02	1.051	3.14	1.125	2.67	1.211	3.22	1.202	0.327	0.859
Promotions	3.45	1.016	3.59a	0.981	3.41a	0.998	3.45a	1.011	3.17	1.329	2.33b	0.707	3.501***	0.009
Imitation of the main market leading brands	2.80	1.025	3.00a	0.975	2.55b	1.022	2.68	0.945	2.67	1.506	2.22c	1.093	2.615**	0.037
Availability in store	3.43	0.961	3.59a	0.866	3.08b	1.017	3.41	0.908	3.17	1.722	3.67	0.866	2.64**	0.035
Trust in the brand	3.58	0.891	3.56	0.834	3.55	0.914	3.68	0.839	3.50	1.378	3.89	1.269	0.377	0.825
Value for money	3.87	0.809	3.93	0.700	3.80	0.935	3.68	1.041	3.67	0.816	4.11	0.601	0.848	0.496
Easy identification on the store shelf	3.02	1.034	3.02	1.043	2.78a	0.963	3.23	1.020	3.00	1.265	3.89b	0.782	2.581**	0.039
Satisfaction in the previous consumption	3.73	0.776	3.73	0.757	3.71	0.842	3.64	0.790	3.83	0.753	4.00	0.707	0.379	0.823
Satisfaction with the overall assortment of the trusted shop	3.34	0.939	3.42	0.856	3.14	1.000	3.45	0.858	3.00	1.673	3.44	1.130	1.050	0.383
Store loyalty	3.36	0.948	3.38	0.883	3.24	0.947	3.59	0.908	3.00	1.673	3.56	1.236	0.821	0.513
Healthiness of products	3.29	0.996	3.33	0.950	3.12	1.013	3.32	0.945	3.50	1.378	3.67	1.323	0.770	0.546
Origin and traceability	3.46	0.864	3.48	0.859	3.39	0.786	3.55	0.800	3.17	1.169	3.56	1.333	0.350	0.844
Taste	3.54	0.877	3.56	0.912	3.45	0.891	3.64	0.848	3.50	0.548	3.56	0.726	0.209	0.933
Cronbach's alpha								0.903						

**Note(s):** Score within the same statement followed by different letters is significantly different (i.e. "a" is different from "b" but not from "ab"). Significantly different average scores \* =  $p < 0.10$ ; \*\* =  $p < 0.05$ ; \*\*\* =  $p < 0.01$ . Bonferroni Post Hoc Test was applied

**Table 4.**  
Evaluation of the different perception of PL #1 by consumer age

**Table 5.**  
Evaluation of the  
different perception of  
PL #2 by consumer age

	PL #2 Total sample n. 304 (100%)		PL #2 Age 18-24 n.126 (41.4%)		PL #2 Age 25-34 n. 99 (32.6%)		PL #2 Age 35-44 n. 47 (15.5%)		PL #2 Age 45-54 n. 20 (6.6%)		PL #2 Age >54 n. 12 (3.9%)		F	Sig.
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
Quality	3.58	0.828	3.57	0.784	3.60	0.801	3.72	0.877	3.50	0.827	3.09	1.221	1.389	0.238
Price	3.87	0.839	3.89	0.822	3.82	0.875	3.89	0.866	3.75	0.851	4.08	0.669	0.398	0.810
Variety of formats and sizes	3.30	0.922	3.33	0.885	3.28	0.948	3.17	0.985	3.40	0.940	3.42	0.900	0.387	0.818
Packaging design	2.49	1.073	2.41	1.037	2.50	1.036	2.53	1.139	2.65	1.309	2.83	1.115	0.599	0.664
Values conveyed by communication and advertising messages	3.06	1.05	3.09	1.004	3.06	1.044	3.13	1.055	2.70	1.261	3.08	1.240	0.656	0.623
Promotions	3.63	0.999	3.66	0.939	3.63	1.042	3.68	1.065	3.20	1.105	3.91	0.701	1.200	0.311
Imitation of the main market leading brands	2.96	1.1	3.03	1.027	2.90	1.110	2.89	1.165	2.84	1.259	3.09	1.375	0.348	0.845
Availability in store	3.62	0.916	3.62	0.857	3.63	0.987	3.62	0.945	3.40	1.046	4.00	0.447	0.761	0.552
Trust in the brand	3.62	0.879	3.59	0.803	3.65	0.951	3.66	0.867	3.45	1.099	3.82	0.751	0.411	0.801
Value for money	3.88	0.828	3.92	0.755	3.89	0.893	3.91	0.775	3.75	0.967	3.55	1.036	0.666	0.616
Easy identification on the store shelf	3.09	1.082	3.10	1.094	3.03	1.036	3.02	1.105	3.05	1.191	3.73	1.009	1.081	0.366
Satisfaction in the previous consumption	3.87	0.76	3.90	0.667	3.91	0.834	3.83	0.732	3.65	0.933	3.73	0.905	0.638	0.636
Satisfaction with the overall assortment of the trusted shop	3.61	0.883	3.59	0.842	3.65	0.906	3.70	0.805	3.25	1.020	3.82	1.168	1.174	0.322
Store loyalty	3.54	0.97	3.58	0.889	3.51	1.030	3.62	1.012	3.40	0.883	3.27	1.348	0.466	0.761
Healthiness of products	3.27	0.974	3.29	0.970	3.22	0.954	3.36	1.051	3.35	0.875	3.09	1.136	0.302	0.877
Origin and traceability	3.42	0.869	3.35	0.865	3.41	0.865	3.62a	0.848	3.70a	0.571	2.91b	1.221	2.338**	0.055
Taste	3.76	0.766	3.81	0.701	3.72	0.830	3.78	0.814	3.79	0.631	3.45	0.934	0.653	0.625
Cronbach's alpha								0.899						

**Note(s):** Score within the same statement followed by different letters is significantly different (i.e. "a" is different from "b" but not from "ab"). Significantly different average scores \* =  $p < 0.10$ ; \*\* =  $p < 0.05$ ; \*\*\* =  $p < 0.01$ . Bonferroni Post Hoc Test was applied

	PL #3 Total sample n. 86 (100%)		PL #3 Age 18-24 n. 24 (27.9%)		PL #3 Age 25-34 n. 33 (38.4%)		PL #3 Age 35-44 n. 16 (18.6%)		PL #3 Age 45-54 n. 6 (7.0%)		PL #3 Age >54 n. 7 (8.1%)		F	Sig.
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD		
Quality	3.21	0.947	3.33	0.816	3.12	1.023	3.13	0.806	3.17	1.329	3.43	1.134	0.293	0.882
Price	3.40	0.997	3.33	0.917	3.15a	1.064	4.06b	0.443	3.50	1.225	3.14	1.215	2.620**	0.041
Variety of formats and sizes	3.17	0.992	3.26	1.010	2.97	1.062	3.44	0.727	3.17	1.169	3.14	1.069	0.659	0.623
Packaging design	2.81	0.927	2.71	0.955	2.64	0.859	3.13	0.957	3.17	1.169	3.00	0.816	1.126	0.35
Values conveyed by communication and advertising messages	2.81	1.029	2.83	1.090	2.42a	0.902	3.31b	0.873	3.60	0.548	2.86	1.345	3.147**	0.019
Promotions	3.22	1.089	3.08	1.100	3.27	1.126	3.38	0.885	3.33	1.633	3.00	1.000	0.273	0.895
Imitation of the main market leading brands	2.89	1.047	3.00	1.142	2.82	1.014	3.13	1.025	2.80	1.095	2.43	0.976	0.645	0.632
Availability in store	3.31	0.913	3.13	1.154	3.18	0.846	3.81	0.403	3.50	0.837	3.17	0.983	1.786	0.140
Trust in the brand	3.24	1.005	3.29	0.908	3.09	1.128	3.25	0.683	3.83	0.983	3.29	1.380	0.714	0.585
Value for money	3.58	0.804	3.63	0.711	3.45	0.754	3.88	0.619	3.83	1.472	3.14	0.900	1.455	0.224
Easy identification on the store shelf	3.13	0.923	3.13	0.900	2.88	0.976	3.50	0.966	3.50	0.548	3.14	0.690	1.533	0.201
Satisfaction in the previous consumption	3.51	0.843	3.50	0.834	3.34a	0.787	3.69	0.479	4.40b	0.548	3.29	1.496	2.114*	0.087
Satisfaction with the overall assortment of the trusted shop	3.49	0.891	3.38	0.924	3.42	0.751	3.63	0.806	4.17	0.753	3.29	1.496	1.205	0.315
Store loyalty	3.42	0.993	3.17a	0.963	3.25	1.078	3.75	0.577	4.33b	0.816	3.57	1.134	2.554**	0.045
Healthiness of products	3.07	0.955	3.38a	0.824	2.70b	0.951	3.19	0.403	3.17	1.329	3.43	1.512	2.329*	0.063
Origin and traceability	3.10	1.006	3.29	0.859	2.82	1.014	3.31	0.793	3.17	1.329	3.29	1.496	1.115	0.355
Taste	3.33	0.851	3.33	0.868	3.13	0.871	3.56	0.629	3.67	1.033	3.43	0.976	1.023	0.400
Cronbach's alpha							0.944							

Note(s): Score within the same statement followed by different letters is significantly different (i.e. "a" is different from "b" but not from "ab"). Significantly different average scores \* =  $p < 0.10$ ; \*\* =  $p < 0.05$ ; \*\*\* =  $p < 0.01$ . Bonferroni Post Hoc Test was applied

Table 6. Evaluation of the different perception of PL #3 by consumer age

same items defined previously but with lower average values than the ones found with previous Labels. Considering the differences among age groups, it seems that consumers between 35 and 54 years of age are those that perceive the main benefits from buying PL #3 products. In detail, the category 35–44 appreciates the price and values conveyed by communication and advertising more than younger consumers, and respondents between 45 and 54 are satisfied with previous consumption, and they are more loyal to the store than younger ones. As for healthiness of products, this is perceived in a relevant way by young consumers between 18 and 24 more than by the others.

### Discussion

The aim of the study was to investigate how consumers of different age groups are influenced in their purchasing behavior of PLB. First evidence deriving from the research is that some factors are relevant for purchasing decisions regardless of the retailer's strategy and the age of consumers: value for money and satisfaction on previous consumption. A third factor, price, is important for the whole sample (no age differences emerge), for two of the analyzed retailers (R1–R2) and is important for a specific cluster of R3, namely 35–44 years of age. More in depth, focusing on the PLBs price strategy applied by R1 and R2, we can see that R1 attributes greater importance to lower prices compared to national brand products, but also to a high product quality. Similarly, in recent years R2 aimed at a more competitive price positioning, with a strategy of price decrease on PLBs products. These results, considering the whole sample and not the comparison between different age groups, confirm what the literature reported about the role of value for money, satisfaction after consumption and price as the main factors influencing the purchase of PLBs products. Consumers, regardless of age, still seem to recognize in the value for money and price the key factors that have been considered over the years as fundamental drivers that guided them toward PL products compared to national brands (Batra and Sinha, 2000; Pauwels *et al.*, 2002; Ailawadi *et al.*, 2008; Ashokkumar and Gopal, 2009; Dolekoglu *et al.*, 2008; Danziger *et al.*, 2014).

In accordance with the gap identified, interesting considerations emerge from the results by consumers' age. In contrast to what has been found by Diallo *et al.* (2013), it seems that there is a greater dependence between age and different consumer behaviors, even if the results show a heterogeneous situation among the three retailers examined. This aspect may be due to the different consumer perception of PLBs resulting from the different PLB positioning strategies; In fact, consumers seem to have a different sensitivity to the effects of the different retailer's positioning strategies. The results show that consumers aged from 25 to 34 and from 35 to 44 years consider packaging to be one of the most important determinants of R1's PLB purchase; in fact, retailer #1 seems to pay particular attention to product packaging. In addition to the use of recycled or recyclable materials, R1 favors the use of biodegradable or compostable materials in packaging design, the use of certified paper from sustainable sources and the introduction of new packaging formats with the aim of reducing unnecessary materials. Again, the results show that consumers aged 35–44 and 45–54 years consider the origin of products and traceability as the main factors determining the purchase of PLBs by R2; retailer #2, on the other hand, has created an extensive line of PL food products (meat, fish, fruit and vegetables, packaged products) in which the origin is declared at each stage of the supply chain. These products are sourced from certified suppliers and controlled throughout the production process, from harvesting in the fields to feeding the animals, to final consumption. Finally, the results show that consumers aged 35–44 years consider price and communication as a determining factor when purchasing R3's PLBs; retailer #3 adopts a communication strategy in which it emphasizes its proximity to customers' needs by offering them a selection of high-quality products at low prices; it communicates the application of lower and locked-in prices on hundreds of PLB references.

Considering the results obtained, what has been highlighted by [Madahi and Sukati \(2012\)](#), who reported that the influence of age on purchasing intention is reduced as the age of consumers increases, cannot be confirmed. Similarly, also the fact that older adults tend to remember more emotionally positive images is not confirmed. Age groups are influenced by some aspects in the purchase of PL products, but first of all it is the strategy of the PLB itself that leads them toward certain choices. In fact, focusing on the specific age clusters, the younger respondents (18–24) seem to be attentive to factors such as the healthiness of food, as it typically happens for younger generations ([Ares and Gámbaro, 2007](#)), and in-store promotion. The latter factor is linked to the spending capacity of young people, which on average is lower. Therefore, it is not only Millennials that put importance to the combination of reasonable price and quality as stated by [Košíčiarová et al. \(2020\)](#), but also the Z Generation, made up of even younger consumers, pay attention to these aspects.

Furthermore, the origin and traceability of products as relevant factors cover a larger part of the sample, 35–54, but only for R2: the more experienced consumers seem to be attentive to the origin and traceability of PL products. This result could be due to the retailer's increasing focus on transferring values and trust linked to the origin of products. In fact, by introducing a premium PLB, with typical and selected food products (regional specialties), R2 emphasizes the importance of the origin of products, addressing the corresponding values to an attentive and aware customer.

The literature, over the years, deepened the topic of the country of origin of products, as a variable able to influence the decision-making processes of consumers ([Usunier, 2006](#); [Rosenbloom and Haefner, 2009](#)). Moreover, it worth highlighting that product traceability is the most important criterion for supplier selection by food retailers for PL products ([Zhang et al., 2021](#)), and traceability systems are gaining importance among the measures used to ensure food safety and quality of products ([Banterle et al., 2009](#)). As reported by [Xiang \(2015\)](#), food traceability is a tool for food safety management, helping consumers to distinguish false information and fraud.

Both packaging and other communication tools through which retailers transfer to consumers the brand value are significant for the age cluster 33–44, but only for retailers R1 and R3, for which the brand-building strategies appear to be effective. The communication campaigns of R1 and R3, indeed, are mostly focused on linking values such as quality, safety and trust to PL products.

This confirms what [Kádeková et al. \(2020\)](#) found regarding the importance of packaging on PLB buying decision. However, while Slovak consumers (the country where the study by Kádeková was conducted) seem to be influenced by unattractive packaging, for the three PLBs considered in this study the good strategy developed, aimed at the creation of innovative packaging, has prompted not only young consumers but also those of an intermediate age group.

## Conclusion, implications and future research directions

This research contributes to the literature on the role of age in the purchasing behavior of PLBs. Until today, no earlier study has examined different segments of consumers by age and their behavior in relation to the main factors (resulting from retailers' PL positioning strategies) that lead consumers to purchase PLBs. Therefore, the main theoretical contribution of this work refers to age segments. If data on the total sample of consumers confirm what has been demonstrated by the literature, recognizing value for money and price as the key drivers for the choice of PL products, by focusing on age segments, differences emerge about consumers perceptions in relation to the positioning strategies of retailers. The differences that emerged put in light a relationship between the individual retailer's positioning and consumers' approach to PL buying choices. For example, aspects such as traceability, product quality and value for money, find greater sensitivity in the older age

groups, who seem to evaluate the importance of these characteristics more rationally, but only in the case of retailers with a positioning based on a value-for-money proposal, for which quality control and traceability provide guarantees that the low price does not compromise the safety of products. On the other hand, young people are more influenced by factors related to communication/promotion policies of retailers and the healthy character of assortments, especially for those retailers that declare a strong attention to the health of consumers, their well-being and respect for the environment.

Again, the contribution to the existing literature can also be found in the evidence of what differentiates consumers' attitude toward PLBs, providing generalizable considerations on differences between age groups. The study found a strong relationship between younger consumer groups and their attention to promotions, health aspects of food and to grabbing imitations of the leader brands, due to a definitely lower willingness to pay than more mature consumers, who instead point to the easy identification of products within the store and to retailers' reliability. Finally, middle-aged consumers seem to be oriented to pay attention to origin and traceability of products when buying PL products.

On the other hand, some factors have been found to be relevant for purchasing decisions of PLBs regardless of the retailer's strategy and the age of consumers, such as value for money and satisfaction on previous consumption. Therefore, it appears imperative to the retailers to provide branded assortments that better suit consumers' changing shopping preferences.

At the managerial level, the implications of this study refer to both the emphasis to be put in communication policies for PLBs by retailers, and the positioning of PL assortments.

As for communication policies, the relevance of factors like value for money, price and previous consumption experience confirm the primary role of PLs which is to compete on price, provided that an overall satisfaction on products is guaranteed. This means that not only the product offer must be based on an acceptable level of quality but also communication on the retailer's reliability and the positive features of its PLBs must be emphasized by, for instance, reporting customers' positive opinions on social networks or adopting testimonial campaigns.

About positioning strategies of PLBs, they must be preceded by a clear segmentation of retailers' customers, also from the point of view of their age. Indeed, this issue takes on importance as the weight of the elderly people increases, being no longer considered a residual target. Another positioning-related implication is about the traditional product-based approach in defining PL assortments, based on the product features (price, quality, value-for-money, traceability). This approach should be accompanied and complemented by a customer-based approach, with PL product lines addressed not only to specific age groups (see above) but also to other types of customers, such as lifestyles-related social groups (e.g. healthy food) or others.

The analysis of the relationship between factors of choice for PLBs and demographic/social groups undoubtedly requires further in-depth studies that may be the subject of future empirical research, trying to identify more clearly those features of the retailing mix that have more influence on PLBs depending on customers clusters to be more clearly identified in addition to the age-based segmentation.

As for the main limitations of this study, the first one could be linked to the quantitative methodology used for the analysis, which helped in measuring the distribution of responses but did not allow in-depth evaluations. Given the dependence of results from the differences in retailers' market positioning, future research should investigate the reasons identified by this study through qualitative interviews, in order to obtain more in-depth information on the motivations of demographic/social groups for approaching PLBs. The second limitation concerns the comparison made considering only Italian PLBs and the corresponding retailers. A comparison with other European countries would be relevant, in order to evaluate if the same age groups are driven to purchase PLBs for different reasons, which may derive from both cultural aspects of the country and the different PL policies adopted by retailers.

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