European Commission

Pass-Through of Unfair Trading Practices in EU Food Supply Chains

Methodology and Empirical Application

Russo C. (editor)

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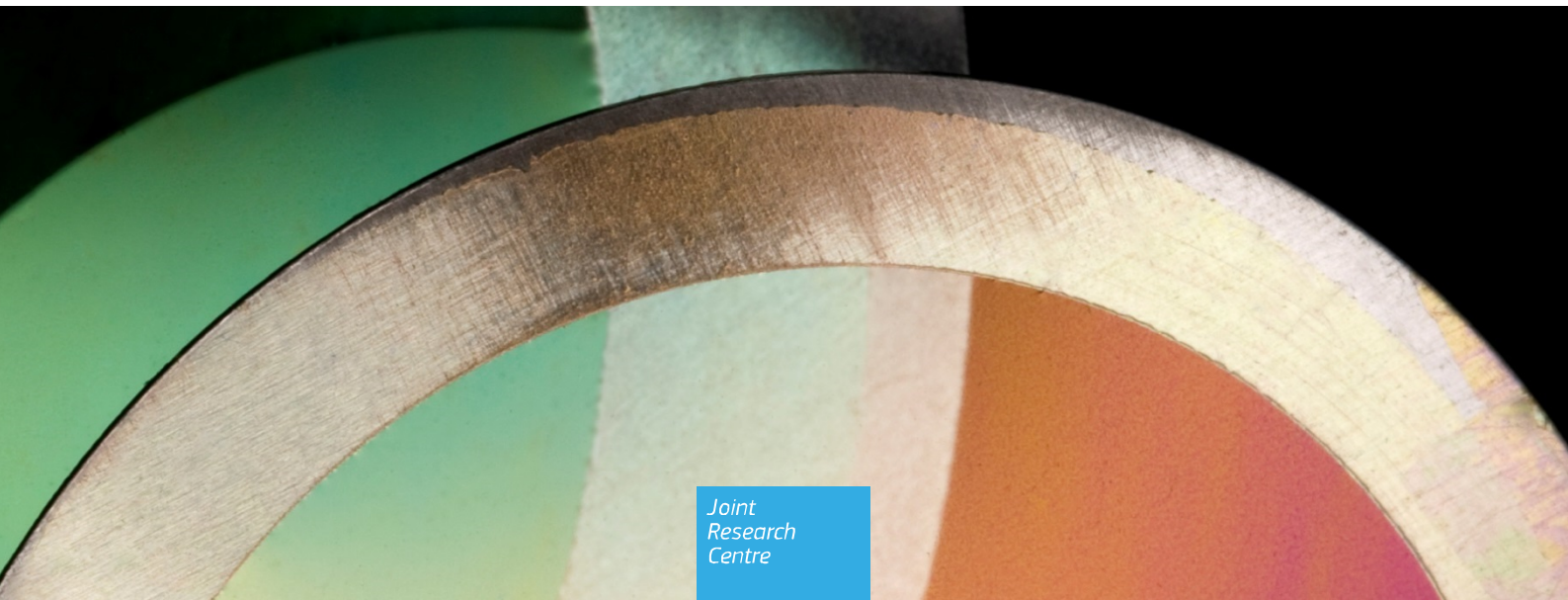

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Executive Summary

- This report presents the results of the research project "Pass-Through of Unfair Trading Practices in EU Food Supply Chains: Methodology and Empirical Application". The research was funded by the Joint Research Centre of the European Commission (JRC).
- The purpose of the project is to design and test a monitoring system of unfair trading practices (UTP) along the agri-food supply chain. The investigation has special focus on assessment of the "pass-through effect", defined as the consequences for the entire supply chain of UTPs adopted in a specific transaction.
- The research report includes
    - *a review of the economic literature* for a better understanding of the economic principles of UTPs (chapter 2).
    - *a review of available data sources and past experiences* in UTP monitoring (chapters 3 and 4).
    - *the illustration of two alternative approaches for UTP monitoring*: B-SEA (broad-scope empirical analysis, chapter 7) and IDEA (in-depth analysis, chapter 6). The B-SEA approach is designed to support *ex post* evaluation of public intervention, measuring the ability of the regulation to reduce the occurrence, impact and pass-through of a specific list of UTPs. The IDEA approach is meant to assist policy design, supporting policymakers in determining the most important UTPs and their corresponding economic rationale, possible contribution to the efficiency of the supply chain and pass-through effects.
    - *a test application of the two approaches* to the EU fresh fruit sector. The IDEA is applied to the Agro-Pontino kiwifruit netchain (Italy) and the Lake Constance apple netchain (Germany) (chapters 11–15). The B-SEA is applied to the Slovak fruit supply chain (chapter 8).
    - *a comparative analysis of the IDEA and B-SEA results* (chapter 16).
    - *a discussion of the implications of our research* (chapter 17).
- We grouped the main findings of our research into four areas of interest: i) understanding UTP economics, ii) design of a UTP monitoring system, iii) analysis of UTPs in the EU fruit industry, and iv) application of Directive 2019/633 by Member States.

- ***Understanding UTP economics***. We achieved important advancements in the understanding of UTPs compared to the 2017 JRC literature review on unfair trading practices in the EU food supply chain. Our analysis concluded that
    - contract theory is a useful framework for the economic analysis of UTPs. In particular, relational contracts can explain the emergence of several UTPs in the EU fruit supply chains (chapter 12).
    - UTPs are *heterogeneous, interdependent, multidimensional and transaction-specific* (chapter 2). This means that:
        - many UTPs may coexist in the same supply chains and firms can be exposed to different subsets. Therefore, a ban on specific practices may affect firms in the same supply chain differently.
        - the same practice may have a different impact and different "degree of fairness" depending on the nature of the transaction, including other (fair or unfair) adopted practices.
        - the banning of one practice—because practices in the same transaction are interdependent and jointly determined—might cause a change in the

overall organization of the entire transaction. The re-organization might result in a change in the efficiency of the supply chain and adoption of new practices (*unintended consequences* are possible). The assessment of the consequences of the regulation must consider explicitly the difference between the status quo *ante* and the emerging re-organization (*counterfactual approach*). An evaluation of a ban on given practices without a counterfactual approach (i.e., "keeping all other factor constant") is likely to provide biased results.

- in a supply chain, the organization of a transaction depends on the governance of upstream and downstream segments. This vertical interdependence originates the pass-through effect. The adoption of a UTP in a given segment of the supply chain is expected to trigger re-organization in the upstream and downstream segments. The actual nature and intensity of the pass-through effect depend on specific characteristics of the transaction.
- UTPs involve several aspects of the supply chain (including efficiency, sustainability, innovation, etc.). This multidimensional nature implies that scalar indicators are unable to give a complete representation of UTP impact and pass-through. The use of more comprehensive approaches results in a more precise, but less immediate, assessment. The lack of scalar indicators makes cross-chain comparison and policy evaluation more complex.

- ***Designing a UTP monitoring system***. In the recent past, there were few initiatives to investigate UTP empirically. Existing surveys (such as the YouGov-GCA survey in the UK) focus mainly on detecting the occurrence of UTPs and making an overall assessment of impact (chapter 4). In this report, we illustrate innovative strategies for monitoring UTPs. Our goal is to design a system able to identify trends over time and support the decisions of policymakers and stakeholders.
  - The design of the monitoring system depends on the objective of the investigation (chapter 5). We considered two possible goals:
    - *Assessment of protection from UTPs on a given list (*ex post *evaluation of existing regulation)*. In this case, the investigation assesses the occurrence and impact of a given set of UTPs over time (for example, the list of 16 black and grey practices from Directive 2019/633). This type of monitoring system can assess whether the regulation is able to reduce the occurrence of the target UTPs. We designed the B-SEA approach to meet this objective.
    - *Assessment of overall protection from UTPs (support to policy design)*. In this case, we assume that an *ex ante* list of UTPs either does not exist or is under consideration for updating by the regulator. Without a defined list, identification of UTPs becomes an issue that must be dealt with. Also, the investigation must estimate the possible unintended consequences of a ban on the identified practices, so that regulators can make informed decisions. Consequently, extensive information and use of economic theory are required. We designed the IDEA approach to meet this objective.
  - The B-SEA investigation is based on a set of sample surveys targeting various segments of the supply chain (chapter 7). We designed a monitoring system that minimises the use of *a priori* information and sector-specific solutions. This approach is motivated by our goal to make B-SEA applicable to heterogeneous

sectors with comparable results. The main design issues are related to the drafting of the questionnaires. In fact, a complete assessment of impact and pass-through requires an extensive questionnaire resulting in extreme respondent fatigue. In section 14, we illustrate a typical B-SEA set of questionnaires.
  - The IDEA approach is based on a mix of in-depth interviews, expert panels, sample surveys and economic modelling (chapter 6). The composite structure is the consequence of the complexity of the objectives. Expert panels are used to identify the main UTPs; in-depth interviews provide information about occurrence, impact and pass-through; sample surveys generalise the results; and economic theory is used to summarise the results in a consistent framework to be used for policy analysis. Given the composite structure of the investigation, reporting heterogeneous information in a compact and clear way is one of the main challenges.
  - Measurement of UTP occurrence, impact and pass-through (OIP) is a main issue. In our implementation of the two approaches we opted for subjective assessments based on respondents' personal evaluation using a 5-point Likert scale. Alternative measures based on objective data (such as accounting or contractual data) proved to be unfeasible with the available resources. In the use of subjective measures, we faced three main possible sources of bias: fear factor, self-representation and strategic response (section 17.1.3).
  - Our research concludes that IDEA and B-SEA are not alternative approaches. In section 17.1.4 we illustrate the organization and possible benefits of a monitoring system exploiting the complementarities between IDEA and B-SEA.

- ***Analysis of UTP in the EU fruit industry***. Parts III and IV of this report illustrate the results of an empirical investigation of the EU fresh fruit industry. We applied the IDEA protocol in Germany and Italy and the B-SEA approach in Slovakia. In total, we surveyed 327 firms (272 farmers, 45 middlemen and 10 retailers) between June and September 2019.
  - In general, UTPs in Directive 2019/633 occur at the middleman level. Large buyers are leading firms that possibly impose UTPs on cooperatives, private traders and other middlemen.
  - We found evidence of pass-through effects. Middlemen who are subjected to UTPs may decide to change the organization of their procurement. The decision depends on the nature of the UTPs and characteristics of the trade relationship. For example, Italian firms do not pass-through the misuse of confidential information but do pass-through late payments. UTPs at the retailer-middleman level result in three main *vectors of impact* on farmers (section 15.2): i) sales with prices to be determined, ii) on-farm investments and iii) price pressure. A fourth vector (strategic quality testing) was detected in IDEA semi-structured interviews, but it was not supported by the sample surveys.
  - The impact vectors include UTPs as well as a set of practices that—although not considered in Directive 2019/633—may have similar effects on farmers. In general, we found that the Directive list of UTPs does not fully capture unfairness at the farmer level in the fresh fruit supply chain.
  - We identified three degrees of pass-through. In first degree pass-through, a firm suffering a UTP imposes the same practice on the suppliers (for example, a middleman pays farmers only after being paid by the final buyer). In second degree pass-through, a firm suffering a UTP imposes a different UTP on suppliers

(for example, a middleman unilaterally renegotiates price with suppliers after being charged for product waste/loss at the final buyer's premises). Finally, in third degree pass-through, the firm reacts to a UTP by adopting fair practices (for example, farmers are asked to adopt strict quality standards to reduce future losses/waste). We found that firms may adopt a mix of different degrees of pass-through. Consistent with theory, firms may decide to pass-through only part of the cost of the UTP.

- UTPs are extremely frequent at the middleman level. Eighty-two percent of surveyed middlemen stated that they suffered from at least one of the 16 UTPs. The figures vary across the three countries, with Italy having 47% UTP occurrence and Germany and Slovakia being close to 100%.
- The most frequent UTPs are late payments and misuse of confidential information in Italy; grey practices and liability for loss/waste at the buyer's premises in Germany; and late payments and liability for loss/waste at the buyer's premises in Slovakia.
- UTPs are heterogeneous across space. For example, misuse of confidential information is not considered a major issue in Slovakia and Germany, and grey practices are not a main concern in Italy. We found heterogeneity within the same area as well, with high variance in firms' evaluations of the impact of the practices. These results confirm the theoretical findings that UTPs are heterogeneous and transaction-specific.
- Cooperatives and producer organizations are subjected to similar practices as private traders, but there are differences in the pass-through effects. The principle of *economic participation* allows cooperatives to incorporate the effects of downstream UTPs into the determination of end-of-year prices (facilitating third-degree pass-through). A noticeable consequence is that private traders may be perceived as more reliable and transparent with regards to price determination (when price is determined at delivery).
- The application of IDEA in Italy and Germany identified two possibly unfair practices not considered in Directive 2019/633: discretionary/unpredictable orders and imposition of unnecessary production standards.
    - Stakeholders complain that large buyers can place orders without notice and strategically in such a manner as to "keep suppliers on their toes". This practice was reported by 100% of German middlemen, 13% of Italian middlemen and 31% of Slovakian middlemen.
    - Seventy-five percent of Slovakian middlemen and 67% of German middlemen consider at least some of the production standards required by large buyers to be unnecessary (i.e., not important for consumers and not imposed by regulation). Noticeably, only 7% of Italian middlemen share this concern.
- We calibrated a contract theory model using the empirical results of IDEA. We found that several UTPs can play a critical role in the organization of the fresh fruit supply chain and in the management of supply, demand and procurement risk. In particular, renegotiation, arbitrary contract termination and unnecessary and upfront access costs (payments or investments) can increase the efficiency of large buyers' procurement systems. These practices can be used to implement well-known coordination mechanisms such as implicit threat and self-selection/screening. In this way, leading firms ensure that risks such as demand or production fluctuations are borne by the firms most efficient in preventing the

unfavourable event (regardless of the degree of risk aversion). This organization protects leading firms from possible opportunism (moral hazard and adverse selection), allowing them to "select and motivate the most efficient suppliers". The model concludes that banning UTPs may trigger a change in the organization of the fresh fruit supply chain, with possible unintended consequences for efficiency.

- ***Implications for the implementation of Directive 2019/633 by Member States.***
  - The empirical analysis found important differences in UTPs in the fruit netchains of different Member States (sections 14.3 and 14.4 and chapter 16). This result supports the decision allowing flexible implementation of the Directive.
  - The theoretical model suggests that a UTP ban may have unintended consequences (chapter 12). Member States considering an expansion of the list of banned practices might want to support the decision with extensive economic analysis in order to avoid undermining the efficiency of the supply chains.
  - Comparing the results of our investigation of the fresh fruit netchains with previous studies in other sectors (JRC dairy industry investigation), we found remarkable differences in the organization of transactions and in occurrence of UTPs. Also this result supports the decision to allow for flexible implementation of the Directive. Member States considering an expansion of the list of banned practices might want to target specific practices in one sector without imposing unnecessary constraints in other ones.
  - Our analysis concludes that enforcement plays an important role in determining the outcome of the UTP regulation. Section 12.7.1 provides a detailed discussion of how decisions about the scope of enforcement (yearly contract or entire long-term trade relationship) can affect the degree of supplier protection. In this regard, the harmonization of enforcement across Member States is an important issue. Heterogeneous enforcement strategies might result in possible distortion of trade within the single market.
  - Effective enforcement requires harmonization of the legal frameworks of Member States. In this perspective, coordination during the adoption period would be highly advisable.

1 Introduction

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1.1 Objective of the investigation

This report illustrates the results of the research project "Pass-Through of Unfair Trading Practices in EU Food Supply Chains: Methodology and Empirical Application" (ref JRC/SVQ/2018/D.4/0009/NC.). The main goal of the project is to define strategies for monitoring unfair trading practices (UTP) along the agri-food supply chain. The main focus of the investigation is the "pass-through" effect, i.e., the effects of a UTP on the entire supply chain for a given transaction.

The report was commissioned by the Joint Research Centre (JRC) of the European Commission in November 2018, during the final phase of the political debate about UTPs and a few months before the final approval of Directive (EU) 2019/633 (henceforth, "Directive 2019/633" or "the Directive"). The invitation followed previous JRC reports covering literature reviews and empirical analysis and explicitly asked for advancements in the understanding of the economics of UTPs and the development of theory-grounded, reliable monitoring systems. The demand is motivated by the emphasis that Directive 2019/633 puts on reporting the effectiveness of the regulation. In fact, the policy debate not only identifies a clear and present need for effective protection of farmers and small-and-medium size enterprises (SMEs) from UTPs but also expresses concern about the possible unintended consequences of regulation (including reduction in supply chain efficiency, overregulation, and detriment of consumer welfare). As a consequence, our research focuses on two main issues: how to measure the effectiveness of protection and how to identify possible unintended consequences of regulation.

The JRC invitation required an empirical application of the monitoring system. The trial implementation aims to prove the practical feasibility of the proposal. The report illustrates the results of the empirical analysis and the contribution the monitoring system can make to the debate about the implementation of Directive 2019/633 by Member States.

1.2 Two approaches for monitoring UTPs

In order to achieve the research objective, we developed two alternative approaches to the investigation of UTPs: an in-depth analysis (IDEA) and a broad-scope survey (B-SEA). The two approaches serve different purposes.

B-SEA is designed as an *ex post* evaluation of existing policies. The main focus is on the assessment of the effectiveness of protection with respect to a given set of UTPs. In practice, it tests occurrence, impact and pass-through (OIP) of a predetermined list of UTPs (for example, the 16 practices in Directive 2019/633).

IDEA is a tool for supporting policy design. It measures the general effectiveness of promoting fairness in supply chains and assesses the possible unintended consequences. It identifies existing UTPs regardless whether they are considered by existing regulation. The approach uses economic modelling to explain the role of UTPs in supply chains, identifying the possible unintended consequences of a ban. IDEA has more ambitious objectives than B-SEA. In chapter 16 we conclude that such ambitious objectives are achieved at the cost of more complexity in the organization of the investigation and less general results.

1.2.1 A trial application of the two approaches

In order to assess the strengths and weaknesses of the two approaches, we provide applications to the European fruit sector. IDEA is applied to the German apple and Italian kiwi industries. B-SEA is applied to the Slovak fruit sector.

Figure 1-1: The UTP monitoring system

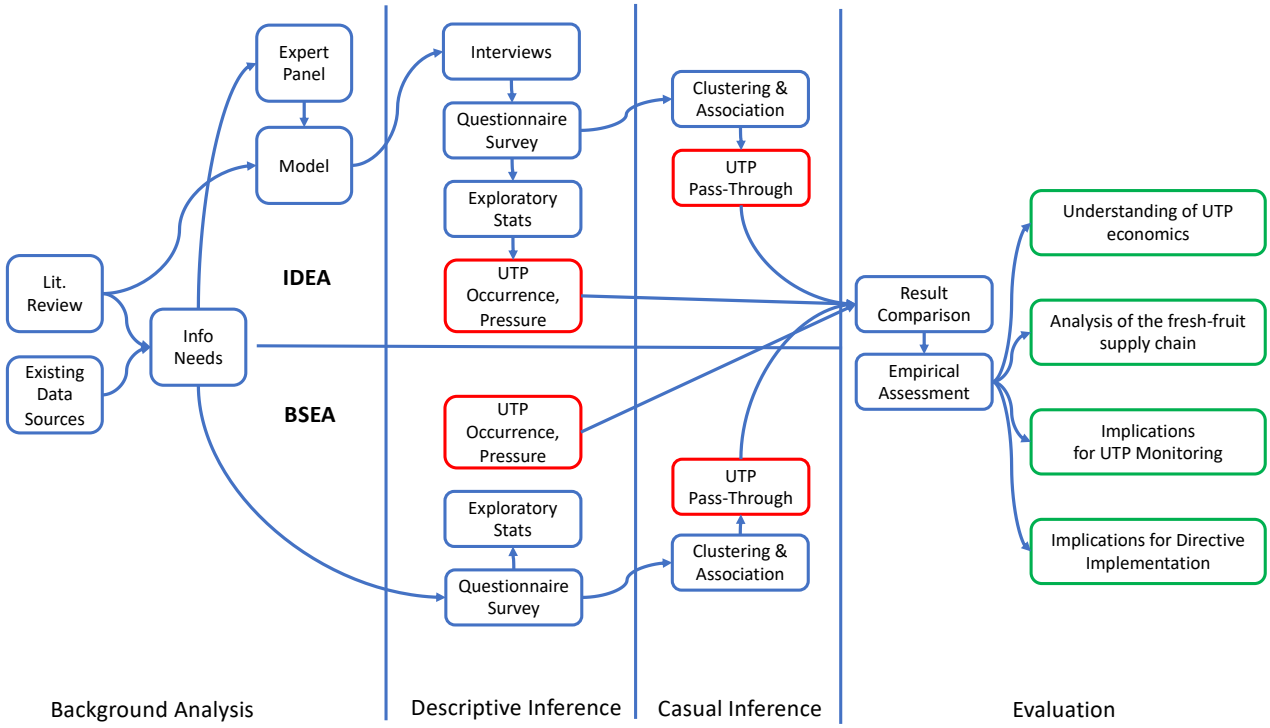

Figure 1-1 illustrates the structure of the monitoring system. The investigation strategy follows a typical process-tracing approach. This technique is particularly useful to investigate the process of causal diffusion of a phenomenon along a complex system. In our case, the phenomenon is the UTP, the system is the agri-food netchain, and the process is the pass-through effect.

Background information is used to create a consistent framework for the interpretation of the process and consequent design of the empirical investigation. A key difference between B-SEA and IDEA is the amount of required background information. The former uses a minimum amount of specific background information, while the latter heavily relies on expert panels, interviews and other specific sources of information to design the analysis. As a consequence, B-SEA provides general results, while IDEA provides a detailed analysis of specific cases.

The collection of empirical evidence is used for describing the phenomenon at various stages (descriptive inference). B-SEA uses questionnaire surveys for this purpose. IDEA is based on a mix of surveys and semi-structured interviews, addressing the organization of the supply chain and OIP of UTPs. Unlike B-SEA, IDEA is designed to investigate specific transactions in order to study UTPs in context.

The data collected in the descriptive inference step are examined jointly in order to identify the causal effect (causal inference). In B-SEA, this result is obtained with a simple comparison of the survey outcomes at different segments of the supply chain. In IDEA, we use economic modelling and analysis of individual transactions to understand the OIP of UTPs.

The results of causal inference are discussed in the evaluation phase. Our contribution pertains to four key areas: i) advancements in the understanding of UTP economics, ii) analysis of the EU fresh fruit supply chain, iii) implementation of a UTP monitoring system and iv) implications for the implementation of Directive 2019/633 by Member States.

1.3 Organization of the report

The report has five parts. In Part I we summarise background information regarding UTPs. We provide a review of the existing literature and a survey of existing data sources that can be used for UTP analysis. The objective of Part I is a consistent presentation of existing knowledge about UTPs.

Part II illustrates the design of the two monitoring approaches. We propose a review of existing empirical investigations of UTPs in chapter 4. Then, we illustrate the organization of IDEA and B-SEA in detail.

Parts III and IV report the results of the trial implementation of B-SEA and IDEA, respectively. In these parts, we discuss issues with the actual application of the monitoring strategies, including measurement problems, generality of results and information bias. The illustration of results provides insights into the organization of the fresh fruit industry.

We summarise our conclusions and the main findings of our research in Part V, which is composed of two chapters. In chapter 16 we provide a comparative assessment of IDEA and B-SEA, assessing the strengths and weakness of each one. In chapter 17 we describe the implications of our findings for the future implementation of a UTP monitoring system and the adoption of Directive 2019/633 by Member States.

PART I: Literature Review and Existing Data Sources

2 Unfair Trading Practices: A Review of the History and Literature

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2.1 Introduction

Unfair trading practices (UTPs) in the agricultural sector have come to the forefront of European policymaking in recent years, culminating in the approval of a European UTP Directive in March 2019. UTPs are defined as practices that "grossly deviate from good commercial conduct, are contrary to good faith and fair dealing and are unilaterally imposed by one trading partner on another" (European Commission 2013). They apply to business dealings between suppliers in the agri-food sector and their buyers. The practices included under the banner of UTPs vary considerably depending on the source, but the most prominent examples are late payments, unilateral changes to contracts, inclusion of ambiguous or incomplete contract terms, unfair termination or disruption of contracts and improper use of confidential information.

There are a wide variety of issues that policymakers, researchers, stakeholders and the general public perceive as "UTPs" when confronted with the concept. Literature making explicit mention of UTPs is, however, limited. This is a consequence of the relatively recent use of the concept of "unfair trading practices". That said, the issues underlying the concept of UTPs are the subject of a vast amount of literature going back many decades and covering fields including contract theory, industrial organization, supply chain governance, etc.

We begin in section 2.2 with an overview of the history of the UTP concept and related initiatives in EU policymaking, starting from the initial discussions in 2009 until the introduction of EU-wide regulation in 2019. We discuss the studies, publications and analyses specifically associated with UTPs.

In section 2.3, we discuss the concept of "(un)fairness", since this is a crucial element for the discussions and analyses, as well as the rest of this review and report. In spite of its central position within discussions on UTPs, a generally agreed upon definition for conceptual and empirical purposes has, so far, been absent.

We focus in section 2.4 on another concept central in the discussion and analysis of UTPs and in every study related to the occurrence, impact and pass-through of UTPs: (differences in) bargaining power. There is a vast literature about bargaining power, and we review the key insights instrumental for discussions about UTPs.

[1] This report is based on research conducted before Senne Vandevelde joined the European Commission. Any opinions expressed in this report are those of the authors and do not necessarily reflect the views of their respective institutions.

In section 2.5, we review useful insights from the literature regarding specific "business practices" that are often mentioned as UTPs. Specifically, we focus on four broad categories of UTPs: (i) unfair use of contract terms, (ii) excessive transfers of costs and risks, (iii) misuse of confidential information and (iv) unfair termination or disruption of contracts. We identify strands of literature in (business) economics that pertain to each of these and assess them based on their relevance for theory, empirical analysis and pass-through analysis, respectively.

Finally, in section 2.6, we outline some key implications and lessons for the remainder of the project and, more broadly, future analysis of UTPs.

2.2 History of UTPs

2.2.1 Structural changes and the emergence of the UTP discussion

The history of UTPs is related to several structural changes in the policies and market conditions facing EU farms and agri-food chains more generally.

First, past reforms of the Common Agricultural Policy (CAP)—especially the 1993 and 2003 reforms—have secured farm income support for European farmers, but they have also increased farmers' sensitivity to market fluctuations. By replacing instruments such as price supports and import tariffs with direct income support, global price fluctuations now have a larger impact on the prices received by EU farmers.

Second, changes to CAP have coincided with major volatility in global agricultural and food markets after 2006—specifically, the so-called food price crises of 2007 and 2008 with large price spikes, followed by strong declines in 2009 and resurging prices in 2010 and 2011. These price fluctuations were felt strongly at the farm level in particular, much more than in the processing and retail sectors (Swinnen, Knops and Van Herck 2014). Farmers complained about asymmetric price transmission, arguing that downward shifts in consumer prices were passed on to them in full while upward consumer price movements resulted only in marginal farmgate price increases—although the empirical evidence for this is mixed (see McCorriston 2015 for a review).

Third, concentration in downstream sectors of the EU agri-food chain has increased significantly in recent decades. While concentration up until the 1980s was mostly in the processing sector, technological innovations and major megers and acquisitions (M&As) led to strong concentration in the retail sector, which is still the case today (Swinnen and Vandeplas 2010). At the time of the price fluctuations, market shares of the top three retailers in several EU countries were already higher than 50 percent (FoodDrinkEurope 2011).

The combination of these factors triggered proposals for regulations to protect farmers in the food chains. For example, Copa-Cogeca, the primary EU farm organization, tabled an action plan aimed at rebalancing power in the food chain in 2007 (Copa-Cogeca 2007).

At that time, the main EU regulation that farms and other companies could refer to was the Unfair Commercial Practices Directive (UCPD, 2005/29/EC). While this directive regulated only interactions between businesses and their consumers and did not relate to dealings between businesses, it did introduce the notion of "fairness" in commercial relationships. As a result,

actors who were feeling unfairly treated by their business partners saw the UCPD as a potential avenue for having their grievances addressed.

2.2.2 EU and Member State initiatives

The European Commission—in particular, the Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs (DG GROW)—started in 2009 to discuss UTPs as a potential problem in the food supply chain. DG GROW took two initiatives: It published a communication titled "A better functioning of the food supply chain in Europe" (COM(2009)591) and established a High Level Forum on the topic.

The debate was fuelled by an initial and important survey, commissioned by the European Brands Association (AIM) and conducted by Dedicated Research (2011), which showed (based on a sample size of 686) that 96.4 percent of respondents across the food and non-food retail supply chains had experienced UTPs. This number has since been cited often in communications concerning UTPs. The study further developed the legal basis for EU-wide UTP legislation by exploring existing legislation in the different Member States and examining linkages between possible UTP legislation and other areas of competition and consumer law.

Member States did not wait for EU-level regulation and began to introduce their own legislation or launch voluntary initiatives. For example:

- Countries like France and the UK had already introduced, or were in the process of introducing, specific legislation. In France, the most important piece of legislation regarding UTPs is the *"Droit des pratiques restrictives"* which is a part of the commercial code (Renda et al. 2014). It is specifically aimed at dealing with unfair practices in vertical relations.
- Other Member States did not resort to new legislation, preferring to stretch their existing competition laws to apply to vertical business-to-business (B2B) relations. For instance, the German authorities expanded existing legislation to address UTPs: The Act Against Unfair Competition, which at first was only applicable to relations between companies and end consumers, was extended to include relationships between companies and their suppliers.
- Some Member States opted to tackle UTPs with voluntary initiatives. In Belgium, a scheme was established in the context of the so-called Agro Food Chain Consultation, which brings together representatives of all the different stages in the agricultural value chain, from farmers and input suppliers to processors to retailers. The Agro Food Chain Consultation started its operation in 2009, and the Code of Conduct for fair relationships between suppliers and purchasers was signed in the subsequent year (Agro Food Chain Consultation 2010).
- Other Member States, such as Denmark, did not take any specific measures.

The result was a large heterogeneity of UTP regulations and voluntary initiatives at the Member State level.

In the meantime, EU-level discussions and analyses continued. In 2013, DG GROW (2013) published the *Green Paper on Unfair Trading Practices in the Business-to-Business Food and Non-Food Supply Chain in Europe* (COM (2013) 37). This document included the first official definition of UTPs. UTPs are defined as "practices that grossly deviate from good commercial conduct, are contrary to good faith and fair dealing and are typically imposed in a situation of

imbalance by a stronger party on a weaker one and can exist from any side of the B2B relationship and at any stage in the supply chain" (European Commission 2013, page 3). The publication opened the debate to the wider public. Providing a series of 25 questions, the Green Paper would serve as the basis for a public consultation, which would increasingly crystallize different parties' positions. Importantly, the Green Paper concluded that the best way forward was to combine existing national legislation with voluntary initiatives at the EU level.

This conclusion was consistent with the findings of the High-Level Forum, which continued its operation from 2012 until 2014. Its final outcomes (European Commission 2014b) included a set of measures and insights that would ultimately serve further discussions and research into the topic. Among other things, the Supply Chain Initiative (SCI) was established, a voluntary code of conduct based on a range of principles of good practice aimed at bringing actors across the food supply chain together to address UTPs. Companies were free to register with the SCI, after which they had to follow a set of steps before their registration became official. Dispute resolution mechanisms were also provided: Both bilateral and aggregated disputes could be handled. Additionally, the report gave rise to new avenues for deeper research into the issue of UTPs.

In that context, several reports on the issue of UTPs were commissioned (by a variety of actors) and published, some of which are mentioned here. Two influential studies were conducted by Renda et al. (2014) and Gentile et al. (2016), both of which were prepared for DG GROW.

Renda et al. (2014) were mainly concerned with providing an overview of the possible legal treatments of the UTP issue. They analysed in great detail the different legal treatments existing at the Member State level, with the help of a survey sent to relevant authorities across the EU. They concluded by offering policymakers several recommendations, mostly to take into consideration the considerable fragmentation of rules that exists across Member States.

Gentile et al. (2016), on the other hand, took a more empirical approach to assess the implementation of the different initiatives to tackle UTPs at both the Member State level and European level (most notably, the Supply Chain Initiative). They found, among other things, that UTPs occur across all Member States and at all stages of the food value chain, yet there is still a degree of vagueness surrounding the issue.

They also argued that a majority of participants in the Supply Chain Initiative are satisfied, but at the same time a clear preference for more far-reaching legislation at the European level is present among the different stakeholders (especially among primary food producers).

Another study, published during the same time period by the Bureau for Appraisal of Social Impact for Citizen Information (BASIC 2015), links the increasing market power of retailers to the existence of UTPs in the banana value chain. It is one of the first studies to explicitly demonstrate how UTPs not only impact suppliers within Europe but also in third countries (most notably, developing countries).

One of the most relevant studies on UTPs, also published around the same time period, is by Maglaras, Bourlakis and Fotopoulos (2015), who explored the drivers of retailers' commercial practices in the Greek food chain. The identified practices nearly match with the UTPs that were under discussion at the EU level at that time. They surveyed items for "upfront payments", as well as "unanticipated changes in agreements", but only looked at the drivers for a composite indicator which encompassed those practices. There are two important limitations to this study: namely, it looked at practices from the perspective of power imbalance, and the survey only included suppliers of branded, packaged food products, thus excluding primary producers.

2.2.3 The 2019 EU Regulation

Over the course 2015, the UTP debate took on a greater urgency, partly as a result of falling prices for certain agricultural commodities and the Russian import ban on agricultural products (European Commission 2016). Combined with a general oversupply on world markets, these factors increased the attention on farmers. The result was mounting pressure to further deal with UTPs from farmers and different actors across the political spectrum, and this pressure eventually created an unstoppable impetus towards EU legislation.

A first push in this direction came in May 2015 from agriculture ministers of seven Eastern European Member States (Bulgaria, Czech Republic, Hungary, Poland, Romania, Slovakia and Slovenia). In a joint statement, they asked the European Commission to continue its work on UTPs and move decidedly in the direction of EU-wide legislation. The Commission, taking this advice to heart, published a new report on UTPs in January 2016 (following the one from 2014). The report (European Commission 2016) focused especially on the diverse UTP regulatory landscape in the EU and included a preliminary evaluation of the SCI and other voluntary initiatives in the Member States. Overall, compared to the Commission's previous report (2014a), this report took a more open stance towards the need for EU legislation, thus effectively paving the way for further steps in that direction.

Around that same time, the Directorate-General for Agriculture and Rural Development (DG AGRI), which increasingly took over the UTP file from DG GROW, created an Agricultural Markets Task Force (AMTF), a group of 12 experts tasked with finding ways to enhance the position of farmers in the food supply chain. The AMTF finished its proceedings towards the end of 2016, and the final report (AMTF 2016) concluded that voluntary initiatives (the SCI in particular) had insufficiently addressed the fear factor. It called for the introduction of "framework legislation at the EU level", going considerably beyond any other official EU communication published up until that point. The proposed EU framework would need to cover a baseline of certain UTPs and make sure that enforcement was conducted more effectively in the Member States. Another nudge came from the European Parliament, which in June 2016 voted with an overwhelming majority (600 to 48) in favour of a resolution urging the Commission to put forward EU-wide legislation. Finally, in December 2016 the Agriculture and Fisheries Council, taking note of the vote in the Parliament, called on the Commission to undertake an official impact assessment with regards to the issue of UTPs (Council of the European Union 2016).

With the ball now firmly back in the court of the Commission, the Joint Research Centre (JRC) together with DG AGRI organized an academic workshop to further develop the evidence base on UTPs, both from an economic and legal point of view (Fałkowski et al. 2017). Several experts argued that the evidence base on UTPs, both from a theoretical and empirical point of view, is rather limited and that further research is instrumental. At the same time, they examined the regulatory landscape at the EU and Member State levels and detailed how UTP legislation could be implemented in terms of types, enforcement and monitoring. In addition, DG AGRI started an Inception Impact Assessment (IIA), accompanied by a public consultation, to ascertain the levels of support and resistance to EU-wide legislation.

By the beginning of 2018, the push towards EU legislation had become unstoppable. A first official milestone at the European legislative level came when DG AGRI proposed a Directive on UTPs in April 2018. The proposal (European Commission 2018) aimed at introducing a common standard of protection across the EU. This included the prohibition of four UTPs: (i) late payments, (ii) short notice order cancellations for perishable food products, (iii) unilateral or retroactive changes to contracts and (iv) the forcing of suppliers to pay for wasted products.

Other UTPs would only be prohibited if they were not stipulated in the contract. Crucially, the proposal was only meant to apply to small- and medium-sized enterprises (SMEs) to protect them from their (usually bigger in size) buyers. As such, it would not apply to larger food processing companies subjected to UTPs by, for example, retail chains. According to the proposal, national authorities would become responsible for enforcement and the administration of sanctions. It also provided for a confidential complaint procedure.

The proposal passed, following the rules of the EU's ordinary legislative procedure, to the European Parliament where it would be handled by COMAGRI and its rapporteur on the file, Paolo De Castro. Over the summer of 2018, considerable amendments were made to the proposal by Parliament. The most crucial amendments related to the expansion of the scope of the proposal. First, the legislation would not only apply to food products but to the agri-food sector as a whole. Second, UTPs would be prohibited at every step of the supply chain regardless of the size of the firms, not only between SMEs and their immediate buyers. Finally, the Development Committee of the European Parliament urged the extension of the scope of the proposal to include third-country suppliers. The parliamentary negotiating position was adopted in October 2018 and confirmed by an overwhelming majority in a plenary vote on October 25th (European Parliament 2018). That same month, the Council adopted its negotiation stance, now broadly in favour of maintaining the scope laid out by the Commission Directive Proposal (apart from the expansion towards products other than just food).[2] With both negotiation positions in place, the so-called trilogue meetings between the Commission, Parliament and Council were ready to start, with the scope of the legislation becoming the biggest point of contention.

Eventually, after a series of deliberations between the Commission, Parliament and Council, an agreement was reached in December 2018, and the Directive (European Parliament 2019) was accepted in a plenary vote on March 12th, 2019, bringing a decade of EU policymaking to a close. The Directive was accepted with considerable amendments compared to the Commission proposal, significantly enlarging the scope of the legislation. The final text details a list of 16 UTPs to be outlawed (compared to the original four in the proposal), and the law applies to all agri-food companies (including farmers, processors, retailers, input providers, etc.) with a turnover of less than €350 million (as opposed to only SMEs). The legislation takes the form of a minimum harmonization Directive, which means that every Member State must, at the very least, incorporate and implement the stipulations of the EU Directive (within a period of two years), but is free to go above and beyond those rules should it wish to do so.

The UTP Directive outlaws a list of 16 individual UTPs: ten so-called "black" practices (which are prohibited regardless of the circumstances) and six "grey" practices (which are only allowed if buyer and supplier agree on them in a clear and unambiguous manner). The black practices revolve around prohibiting late payments, unduly transfers of costs and risks from buyer to supplier and unilateral changes to (or even the absence of) written contracts. The grey practices aim at ensuring that payments for marketing, promotion or advertising by the supplier are stipulated clearly in the contract. A full list of the outlawed UTPs can be found in Appendix I.

[2] https://www.consilium.europa.eu/en/press/press-releases/2018/10/01/better-protection-for-farmers

Table 2-1: Thresholds of protection from UTPs based on annual turnover of buyers and suppliers

Suppliers of ...	Protected against buyers of ...
< € 2 million	> € 2 million
> € 2 million & < € 10 million	> € 10 million
> € 10 million & < € 50 million	> € 50 million
> € 50 million & < € 150 million	> € 150 million
> € 150 million & < € 350 million	> € 350 million

As mentioned, another striking feature of the new EU UTP Directive is its scope. While the original European Commission proposal was primarily aimed at protecting SME suppliers from bigger buyers, this was considerably expanded in the final Directive. The principle (namely, protecting smaller suppliers from bigger buyers) has remained intact but now applies to all stages of the supply chain, not just SMEs. The criterion for who is protected from whom is based on a "step approach" using annual turnover and can be summarized using Table 2-1.

In terms of enforcement, the Directive ensures that every country will have a dedicated national enforcement authority to handle complaints and, if needed, impose penalties. Every enforcement authority should be able to receive confidential complaints and launch its own (so-called *ex officio*) investigations. In an attempt to diminish the "fear factor"[3], suppliers who lodge a complaint are given the possibility of doing so anonymously. They may also choose the enforcement authority (either where the supplier is located or the buyer is located). Finally, the Directive provides a cooperation regime, under supervision of the European Commission, between the different national enforcement authorities to ensure continuous exchange of information and best practices.

In the background of the recent legislative push, more research is being done to better understand the conceptual workings behind the UTP issue and empirically assess its breadth. Di Marcantonio, Ciaian and Falkowski (2018), for instance, examine the drivers of UTPs in the dairy supply chain in different EU Member States. They find that UTPs are especially prevalent among medium-sized farms and that farms connected to cooperatives, as well as those with more access to information, have a lower risk of becoming a victim of UTPs.

2.3 What is "unfair" about UTPs?

A crucial challenge for the ensuing review and analysis will be to address the notion of **fairness**. The existing literature offers clear examples of the difficulties in evaluating the fairness of a trading practice. Consider a slotting allowance (see later in section 2.5.2) charged for the introduction of a new product. The practice is unfair if the amount exceeds the value of the service (providing shelf access). Yet, at the same time, the fees transfer the risk of innovation to the supplier, who is the agent with more information about the likelihood of the innovation's

[3] A particular feature of UTPs and a big argument in favour of specific rules on the issue is the so-called 'fear factor', which prevents victims of UTPs from acting out of fear of losing their business altogether. One can imagine that this factor is even more acute in situations of extreme imbalance in market power between buyers and suppliers, as is often the case in the food supply chain.

success (Sullivan 1997). The example illustrates a crucial point regarding UTPs: A practice can, at the same time, be unfair under a given perspective (in this example, cost transferring) and fair under a different one (risk allocation). The conceptual (and empirical) model must consider this problem explicitly.

In general, in this report we use Bowie's (1988) definition of unfairness. According to the author, two necessary conditions for fairness are equality of bargaining and non-coerciveness (p. 96). In this regard, firm A *"intentionally coerces B into doing X, only to the extent that:*

> *(1) B is strongly inclined not to do X,*
> *(2) A wants B to do X, even though A knows it is contrary to B's prior interests, and*
> *(3) A intentionally puts B in the position of having no acceptable alternative to doing X" (Bowie 1988, p. 96).*

Finally, B has no acceptable alternative to doing X if and only if:

> *"(a) all of B's known alternatives to doing X are worse in B's judgment than doing X, and*
> *(b) each alternative involves a significant net hardship either for B, someone B cares about, or someone whose interest B has an obligation to protect." (ibidem)*

Although Bowie's definition is not unanimously accepted in the literature, we found it extremely practical and useful for our analysis of UTPs. The definition is a key tool for identifying UTPs in the IDEA investigation in Part IV of this report. In that setting, we consider a practice to be unfair if all five of Bowie's conditions are met, regardless of whether it is included in the Directive 2019/633 list.

Unfairness is broadly defined in the current UTP regulatory framework. Mainly, it refers to overarching criteria such as proportionality, rights to confidentiality or predictability. The concrete application of these principles requires a careful case-by-case evaluation, because the boundaries between a fair and unfair practice may not be clear. The EU UTP Directive (European Union 2019, p. 13) states explicitly:

"When deciding whether a particular trading practice is considered unfair, it is important to reduce the risk of limiting the use of fair and efficiency-creating agreements agreed between parties."

While some practices (such as excessive payment delays or unilateral retroactive changes) "are considered as unfair by their very nature and should not be subject to the parties' contractual freedom" (ibid.), other practices are unfair only if certain conditions apply. A considerable effort is made to achieve a workable legal definition that can be used for regulatory purposes. Yet, from an empirical and statistical perspective, the definitions are still ambiguous, and clear identification is difficult.

For example, a contract renegotiation may be fair or unfair, depending on whether it was agreed upon or unilateral. The mere detection of a change in the contract (objective circumstance) is not sufficient. It is necessary to investigate whether it was unilateral, freely negotiated or negotiated under a bargaining disadvantage (for example, threat of future trade disruption). This challenge suggests that direct surveys aiming at collecting data about the context of the practices may be necessary (more on that in the next section). It also limits the usefulness of econometric models based on standard secondary data only. Fairness is not only case-specific but can be perceived differently by each actor within the food system. Hellberg-Bahr and Spiller (2012) empirically show that farmers have different perceptions about the notion of fairness.

Recognizing this, Hendrickson et al. (2018) develop a framework for assessing fairness in agricultural markets using three conditions: deviations from the expectations of structural equivalence, time consistency and basic freedom.

Another issue is the actual definition of fairness. While it is an inherently subjective concept and should probably be addressed as such in an empirical analysis, its conceptual boundaries should be made clear beforehand. After all, fairness could be considered in narrow economic terms (cost versus benefit, recovering certain investments, etc.) or interpreted in a much broader way (e.g., as a sociological construct).

One way to consider fairness in a broader way is to use prominent general theories of justice. These include the principles: i) "according to which resources should be allocated in proportion to some pre-existing claims, or rights to the resources that each player has" (Aristotle's equity principle); ii) "to give priority to the players that are the least well off" (Rawlsian justice); or simply iii) if both parties are better off engaging in the contract regardless of the distribution of surplus (Bertsimas, Farias and Trichakis 2011). The notion of fairness further depends on the specific moment or transaction under consideration. For example, fairness can be defined i) in the process of determining how resources are allocated (procedural justice); ii) in the distribution of resources (distributional justice); iii) in the assignment of punishment for wrongs and compensation for injury (restorative justice); iv) in the relative distribution of power within network structures of two or more parties (structural justice) (Hendrickson and James Jr 2016). A general consensus on the different elements of the notion of fairness would facilitate the empirical analyses of UTPs.

2.4 Bargaining power and UTPs

In this section, and before delving into the specifics of the different practices, we explore a concept that has been central to the discussion on UTPs in the agri-food value chain: bargaining power.

2.4.1 From market power to bargaining power

Bonanno, Russo and Menapace (2018) review market power and bargaining in the agri-food sector. The literature has evolved from focusing on market power to using the broader concept of bargaining power. This evolution is central to UTPs.

Traditionally, the literature on market power concerned itself mainly with investigating the extent and effects of consolidation in certain markets (Mason 1939; Bain 1951, 1954). Empirically, the focus was on calculating market power through a series of indices (such as the Herfindahl-Hirschman Index (HHI)) and regressing a series of outcomes on those indices (Bonanno, Russo and Menapace 2018). In the 1980s, this literature developed further with the formalization of micro-economic frameworks that allowed the study of market power (Bresnahan 1982; Lau 1982). It came to be known as the New Empirical Industrial Organization (NEIO) and was widely applied in agricultural policy analysis (McCorriston 2002; Russo, Goodhue and Sexton 2011). Another development was the attempt to create empirically tractable dynamic models of non-competitive behaviour, which was applied in the agri-food context by Karp and Perloff (1989, 1993a, 1993b).

As a consequence of changing circumstances in agricultural markets, such as the rise in importance of quality (Caswell and Mojduszka 1996) and credence attributes (Darby and Karni 1973), the traditional tools to assess the competitive environment were not sufficient anymore (Bonanno, Russo and Menapace 2018). As such, agricultural economists started thinking about new ways to model market power taking into account these new evolutions. A first step in that direction were demand models allowing researchers to better address the competitive implications of increased product differentiation using more game theoretical strategic considerations (traceable to Schmalensee 1982). For example, discrete choice demand models—whereby consumers obtain utility from product attributes rather than the monolithic product itself—soon found their way into the analysis of price and promotion competition (Richards 2007), profit margins and product entry (Di Giacomo 2007) and the welfare appraisal of new regulations (Bonanno, Huang and Liu 2015). Refinements of these demand models have also been introduced in agricultural economics, such as the Distance Metric (DM) method (Pinkse, Slade and Brett 2002) and the nested multivariate logit model, which can take into account complementarities between the products of a single retailer (Kwak, Duvvuri and Russell 2015). Likewise, collective reputation mechanisms—another dimension of quality that has a clear impact on the competitiveness of markets—have been addressed through the introduction of institutional concerns into theory (Moschini, Menapace and Pick 2008).

All aforementioned theories and methods have relied and focused on a traditional definition of market power, in the sense of being able to put and maintain prices (or quantities) above the expected levels under perfect competition. When considering the context of UTPs, however, such a narrow understanding of power in agricultural value chains does not suffice to adequately analyse the issue. Likewise, especially in the context of high levels of concentration and increasingly coordinated forms of vertical relationships in the food value chain (McCorriston 2002; Saitone and Sexton 2017; Sexton 2000, 2013; Sexton and Lavoie 2001; Sexton and Zhang 2001), traditional tools and definitions to assess market power fall short, in spite of the many innovations. Indeed, Bonanno et al. (2018) argue that one has to move beyond these definitions and turn to the broader concept of bargaining power (which can be traced to Nash 1950, 1953). Bargaining power is defined by Kirkwood (2005, p.33) as "the power to obtain a concession from another party by threatening to impose a cost, or withdraw a benefit, if the party does not grant the concession."

Bargaining power manifests itself in many different forms, mostly based on who in the value chain exerts power over whom. Buyer power denotes (according to the definition used in Bonanno et al. (2018)) the power held by downstream buyers over upstream suppliers, while seller power refers to the reverse. Countervailing power is power exerted by a firm with the aim to counter another firm's power (Bonanno, Russo and Menapace 2018), usually referring to a weak firm's power to go up against the stronger party. This last concept is particularly useful in the discussion on UTPs, as any type of legislation to protect firms in the agri-food value chains could be categorized under this heading.

The switch from the traditional understanding of market power to bargaining power and its related concepts has considerably altered the way in which agricultural markets are analysed. It has allowed researchers to disentangle oligopoly and oligopsony situations and assess the specific impact of each type of market power. It has also allowed for better analysis of contracts in agriculture, which can be considered the most basic form of vertical coordination between buyers and sellers. Consider, for example, the so-called hold-up problem, which refers to a situation where one party in the contract can exploit the other as a consequence of the latter's contract-specific sunk costs and investments (Swinnen et al. 2015). Bargaining power in this framework is approximated by a so-called sharing rule (how surplus is divided in the

relationship). Swinnen et al. (2015) make a distinction between *ex ante* and *ex post* sharing rules, whereby the former characterises the situation under perfect enforcement of contracts and the latter denotes what happens when there is a possibility of hold-up. In other words, hold-up allows the party with the stronger bargaining position to accrue a larger share of the surplus in the relationship. Using these and other related concepts, Mérel and Sexton (2017) go on to show that—in contrast to what the traditional market power framework suggests—the hold-up problem is actually less important in more concentrated industries. The reason is that higher concentration allows for easier coordination and in turn a higher internalization of benefits at other stages of the value chain. Hence, in this new framework, different forms of power can be a force for good and do not necessarily have to be welfare-reducing (Inderst and Valletti 2011; Inderst and Wey 2007).

A final (nascent) strand of literature that attempts to analyse power in agricultural markets is the so-called governance framework (Gereffi and Korzeniewicz 1994). Instead of immediately focusing on certain metrics (as in the traditional framework) or dyadic bargaining between different actors (as in the bargaining framework), the governance framework first considers the institutional factors of the agri-food value chain. In particular, it assesses which actors, so-called leading firms, have the power to set the conditions and create the rules under which bargaining in the entire value chain will take place (Ménard 2018). In doing so, it tries to address the growing complexity of arrangements and coordination in agri-food value chains. Empirically, this new framework manifests itself as a qualitative analysis to inform where, how and, ultimately, which variables should be collected.

Still, the debate about the issue of power in the agri-food sector is far from over (as illustrated, among other things, by the debate on UTPs) and is increasingly focused on retailer power. In these discussions, retailers are alleged to be misusing their strong position in the market to engage in practices that are detrimental to their upstream suppliers. A detailed analysis of these different practices (which are, in effect, considered UTPs) will be left for the sections following.

2.4.2 Bargaining power and the UTP discussion

Bargaining power is a central concept in the debate about UTPs. This is not only true in the sense that bargaining power is often quoted as the main driver of the occurrence of UTPs, but also because it interacts with other factors that play an important role. These include: switching costs, information asymmetries, product perishability and contract enforcement

Switching costs can be defined as the costs of switching from one buyer/supplier to another. They are a possible driver of UTPs as they have the potential to create lock-in in any dyadic buyer-supplier relationship from which exit is (too) costly. Switching costs often come in the form of the loss of a contract-specific investment that cannot be recuperated outside of the negotiated agreement. This, in turn, increases the likelihood of hold-up, whereby the stronger party in the agreement can demand concessions from the weaker one (Cungu et al. 2008; Swinnen et al. 2015). Those concessions can often be earmarked as UTPs. Of course, we should also be mindful of the fact that switching costs themselves can be considered a materialization of differences in bargaining (or market) power between buyer and supplier. Indeed, as we have demonstrated in the previous section, a hold-up situation is more likely to occur when one party in a relationship can force the other party to make certain relationship-specific investments. As such, switching costs should be considered both a consequence and means of increasing differences in bargaining power.

Asymmetries in information also affect bargaining power. If one party in the agreement has more information about market conditions, final consumers, product attributes (chief among which is quality in agricultural markets) or technologies, that party can shift costs and risks to the weaker party (Di Marcantonio, Ciaian and Falkowski 2018).

A good's degree of perishability influences the likelihood of UTPs. In the terms of Rubinstein's (1982) theory, high perishability means high interest rates and therefore low bargaining power, a situation that could lead to UTPs. Perishability limits the outside options of actors in the agri-food chain wanting to sell their produce.

Contract enforcement institutions and access to dispute resolution mechanisms matter, obviously. Contract dispute resolution can be organized in a myriad of ways: through voluntary mechanisms (like the Supply Chain Initiative), through the courts or through governmental institutions (like the competition authorities). Especially when disputes have to be resolved through the courts, there is a possibility of huge discrepancies in the quality of legal services that different parties in the agreement can or want to afford. After all, most small farms do not have the financial resources to pay the legal fees required to prevail against their (often considerably larger) buyers. Related to this is the so-called "fear factor", which refers to a contractual party's fear of losing business should they complain to third parties about their relationship with the other contractual party (Fałkowski et al. 2017; Renda et al. 2014).

2.5 UTP categories

The literature explicitly mentioning UTPs is sparse. However, the literature on different business practices, which may or may not constitute UTPs, is large. In this section, we discuss different contributions from the literature, organized into four widely recognized categories of UTPs: (i) the retroactive misuse of unspecified, ambiguous or incomplete contract terms; (ii) the excessive and unpredictable transfer of costs or risks of one trading partner to its counterparty; (iii) the misuse of confidential information; and (iv) the unfair termination or disruption of a commercial relationship. Within these four broad categories, we attempt to match the different practices and findings in the literature to their corresponding UTP categories in the EU UTP Directive, which are also listed in Annex I (European Union 2019).

Per category, we map the state of the art along three dimensions: theory, empirics and pass-through (if present). The literature included in our review should not be considered exhaustive, including all contributions on UTPs. Rather, it constitutes a selection aimed at offering the best possible background for the purpose of this project—namely, to develop a conceptual and empirical model for measuring the occurrence, impact and pass-through of UTPs in the food supply chain. Priority is given to economic contributions using quantitative approaches. Where appropriate, several descriptive or exploratory studies are also taken into account. Along the way, the most important takeaways for either the conceptual or empirical model in this project are highlighted.

All contributions discussed are summarized in Table 2-2. Here are listed the different categories and associated individual UTPS, along with the studies that can be classified within each. The type of analysis used in each study is also listed. In particular, it shows whether a particular study includes an analysis on occurrence, impact and/or pass-through; whether the study in question is directly related to the food value chain; and whether (un)fairness is explicitly included in the analysis.

Table 2-2: UTP categories and contributions

O: Occurrence, I: Impact, P: Pass-Through, F: Focus on (un)fairness, VC: Food vale chain

Type of UTPs		Literatures	O	I	P	F	VC
(i) Retroactive misuse of unspecified, ambiguous or incomplete contract terms	Unilateral contract changes	Bolton (1990)		x			
		Bartling and Schmidt (2015)	x				
		Hart and Tirole (1988)	x				
		Herweg et al. (2018)	x				
		Kunte et al. (2017)	x				x
		Maglaras et al. (2015)	x				x
		Morgan et al. (2007)	x	x	x		x
		Provan and Skinner (1989)	x				x
		Rokkan et al. (2003)	x				
		Salas (2016)				x	x
		Trada and Goyal (2017)	x				
		Wang et al. (2017)	x				
		Wu and Roe (2007)		x		x	x
	Refusal of written confirmation	Goodhue et al. (2002)	x				x
		Huo et al. (2016)	x				
		Roxenhall and Ghauri (2004)	x				
(ii) Excessive and unpredictable transfer of costs or risks of a trading party to its counterparty (continues)	Risk of loss and deterioration transferred to the supplier*	Ebers and Semrau (2015)	x				
		Hammoudi et al. (2009)		x			x
		Vukina and Leegomonchai (2006)		x			x
		Wagner and Bode (2014)		x			
	Delayed payment	Cungu et al. (2008)		x			x
		Dries and Swinnen (2004)	x				x
		Dries et al. (2009)	x				x
		Gow et al. (1998)		x			x
		Gow et al. (2000)		x			x
	Return of unsold products	Arya and Mittendor (2004)		x			
		Hahn et al. (2004)		x			x
		Padmanabhan and Png (1997)		x			
		Pasternack (1985)		x			x
		Shen et al. (2015)		x			
	Payment by supplier for stocking, display and listing (continues)	Baake and von schlippenbach (2014)		x			
		Bloom et al. (2000)	x				
		Chambolle and Christin (2017)	x	x		x	
		Foros et al. (2009)	x				
		Hamilton (2003)		x	x		x
		Hamilton and Innes (2017)		x			
		Innes and Hamilton (2006)		x			x
		Klein and Wright (2007)	x				
		Maglaras et al. (2015)	x				x

(Continues)

Table 2-2 (continued): UTP categories and contributions

O: Occurrence, I: Impact, P: Pass-Through, F: Focus on (un)fairness, VC: Food vale chain

Type of UTPs		Literatures	O	I	P	F	VC
(ii cont.ed) Excessive and unpredictable transfer of costs or risks of a trading party to its counterparty	(cont.ed) Payment by supplier for stocking, display and listing	Marasteanu et al. (2011)	x				x
		Marx and Shaffer (2007)		x			
		Miklós-Thal et al. (2011)	x				
		Piccolo and Miklós-Thal (2012)		x			
		Patterson and Richards (2000)		x			
		Shaffer (1991)	x				
		Sexton et al. (2002)	x				x
		Sudhir and Rao (2004)	x				
		Sullivan (1997)	x	x			x
		Wright (2007)		x			
		Wang et al. (2012)		x			
	Off-invoice payment**	Dimitri et al. (2003)	x				x
		Patterson and Richards (2000)		x			
		USDA (2001)	x				x
(iii) Misuse of confidential information	Misuse of trade secrets by buyers	Bechtold and Hoffler (2011)		x			
		Budden et al. (1996)	x				
		Myerson and Satterthwaite (1983)		x			
		Tan et al. (2016)	x				
(iv) Unfair termination or disruption of a commercial relationship	Commerical retaliation	Ganglmair (2009)	x	x			
		Larsen and Lyngsie (2017)	x				
		Lee et al. (2008)		x		x	x
		Lewin-solomons (2000)		x			x
		Wu (2010)		x		x	x
Others	Cost Pass-through	Bonnet et al. (2013)			x		
		Kim and Cotterill (2008)			x		x
		Loy et al. (2015)			x		x

* Studies are concentrated on transaction-specific investment.

** Off-invoice payment includes payment by the supplier for the promotion, marketing, advertisement, or staffing of the buyer fitting out premises.

2.5.1 Retroactive misuse of unspecified, ambiguous or incomplete contract terms

The first category of UTPs envelops two important "black" practices from the EU UTP Directive, namely, unilateral contract changes and refusal to provide written confirmation. The existence of these types of UTPs are, in part, a consequence of the high degree of uncertainty inherent in agricultural production. Dependence on natural conditions creates unforeseeable contingencies in the agricultural contract, and some dimensions of performance are often necessarily omitted in the contract because specifying all possible contingencies is costly to design (Salas 2016).

Theory

Theoretically, this category of UTP can best be addressed using background provided by the extensive literature on **contract renegotiation** (Huberman and Kahn 1988; Hart and Tirole 1988). Renegotiation is defined as a change in a contract after it was signed. Typically, there is an incentive to renegotiate an incomplete (or costly-to-enforce) contract if: i) new information is discovered or ii) at least one of the parties takes an irreversible decision at some point (Dewatripont and Maskin 1990). For example, a contract regulating the transaction between a buyer and seller might be renegotiated after consumer willingness to pay is revealed (new information) or when the seller invests in highly specific assets such as private standards or listing fees (irreversible decision).

For our purposes, we should be mindful that not every renegotiation is necessarily inefficient. For that reason, a distinction between pareto-optimal renegotiation and unilateral renegotiation is of paramount importance. Renegotiation can be a useful institution to improve the efficiency of transactions under uncertainty. Non-renegotiable contracts (perfect commitment) may lead to underinvestment and inefficient allocations under specific circumstances (e.g., Edin and Hermalin 2000). A pareto-efficient renegotiation allows the parties business flexibility in an uncertain and evolving market. For this reason, banning renegotiation can be a sub-optimal policy. An example of pareto-optimal renegotiation is a change in production standards once consumer preferences for a new product are revealed (assuming all parties benefit from the change).

Unilateral renegotiation, on the other hand, happens when new information or irreversible investments alter the bargaining power of the parties. For example, over time a buyer might discover the exact cost structure of a supplier and use this information to renegotiate a price reduction (as in Hart and Tirole 1988, p. 3). Once the supplier invests a sizable amount of money in building the production capacity required by the buyer, he/she depends on future orders to recover the cost of the specific asset and cannot refuse new contract terms (the hold-up problem in Williamson 1985; Schmitz 2001). In such an instance, the buyer can decide to behave "opportunistically", defined as "self-interest seeking with guile" (Williamson 1985). Unlike pareto-optimal renegotiations, in this case the emphasis of the analysis is on the redistribution of the benefits from trade. Unilateral renegotiation is not necessarily efficient and, if allowed, can lead to underinvestment and inefficient allocation because the weak party can refuse to trade in fear of future unfavourable developments (e.g., Bolton 1990). **To arrive at meaningful policy implications, the difference between pareto-optimal and unilateral renegotiations should be made clear, both conceptually and empirically. Yet, in practice, distinguishing between the two might not be simple.**

One attempt to model the distinction between pareto-optimal renegotiation and unilateral renegotiation is using non-cooperative trade game approaches. Based on the assumption that a buyer is risk (or loss)-averse, Wang, Guo and Wang (2017) propose a coordinating contract mechanism for parties trading bilaterally to reveal their true private information, which maximizes profit in the supply chain. Maintaining similar assumptions, Herweg, Karle and Müller (2018) expand this analysis to the renegotiation stage and assumesthat the incomplete contract at the initial stage shapes a reference point for renegotiation, similar to Bartling and Schmidt (2015). Salas (2016) presents an analytical framework featuring aspects of agricultural contracting. The model identifies policy effects by demonstrating how the producer's bargaining power affects surplus distribution. It suggests that other factors, such as informal institutions or implicit contracts, be considered in policies attempting to balance bargaining power.

For this particular category of UTP, it is often emphasised in the conceptual literature that regulations, with respect to contract specifications, are as important as (if not more important than) soft measures, i.e., informal mechanisms aimed at building trust between the different parties. In times of conflict, trading parties can rely on the informal procedure instead of solving the problem through contracts (Roxenhall and Ghauri 2004). Informal mechanisms may be also useful when the usage of contracts is considered a mere formality. The role of informal mechanisms in governing UTPs is also emphasised by other authors (Gorton, Lemke and Alfarsi 2017; Fałkowski 2017; Sexton 2017). In particular, Sexton (2017) focuses on the difficulty distinguishing UTPs from normal competitive behaviours and the risk of rigid enforcement of overregulation. In that context, he mentions informal institutions as a potential solution to UTPs. **Therefore, how farmers use contracts and the potential downsides of regulation may leave room for the involvement of informal institutions.**

In this context, attention should also be paid to auctions, one of the most commonly used agricultural market mechanisms. Auctions may stifle communication between buyers and sellers (Bajari, McMillan and Tadelis 2009), hindering the establishment of informal institutions. Furthermore, using auction settings in experiments, Fehr, Hart and Zehnder (2015) find that, under incomplete contracts, buyer opportunistic behaviour on the part of the buyer can occur. Such behaviour may trigger strong, negative responses from suppliers, and reaching a resolution may be costly. From a slightly different angle, it is claimed that auctions connect small farms and consumers directly and therefore may serve as an alternative beneficial marketplace for small farmers (Tourte and Gaskell n.d.; Tubene and Hanson 2002). **It would be interesting to understand the interplay between different market mechanisms and UTPs.**

Empirics

Empirically, researchers have started conducting surveys based on the definition of opportunism, using perceptual scales for measurements. The questionnaire items on the opportunism scale differ with each study, but here, we limit ourselves to those scales most closely related to the context of UTPs. Provan and Skinner (1989), who have been cited in numerous studies for the scale they developed, examine the drivers of opportunistic behaviour between farmers and power equipment dealers in the upstream sector of the food supply chain. Interestingly, while acknowledging that opportunistic behaviour can arise from either party regardless of the strength of its position, the authors assume that the weaker bargaining party (i.e., dealers) exhibits opportunistic behaviour as a last resort. This assumption is also found in Rokkan, Heide and Wathne (2003), in which the empirical context is the relationship between manufacturers of building materials and their distributors. **Yet, empirically, it is useful to also examine whether the weaker party might engage in opportunistic behaviour as well.**

Two additional relevant studies in this literature are Rokkan, Heide and Wathne (2003) and Trada and Goyal (2017). Although the topics lie outside the agricultural context, the two studies are notable as they touch upon the issue of interdependence and multiple dimensions of UTPs. In both studies, transaction-specific investments are considered one of the drivers for opportunism, showing the interdependence of UTPs. Further, Rokkan, Heide and Wathne (2003) deal with the multiple dimensions of UTPs by testing whether this UTP has an expropriation or bonding effect.

Liu et al. (2017) also discuss multiple dimensions of UTPs, yet from a slightly different angle. They utilize the concept of boundary-spanning interfaces and acknowledge that parties can coexisting goals of maximizing their private benefits and mutual collective gains. This is in line with the argument of Crespi, Saitone and Sexton (2012) and Fałkowski et al. (2017), who question the economic reasoning behind UTPs, examining why buyers whose profits depend on relationships with suppliers, would engage in UTPs. However, Liu et al. (2017) do not reveal the

patterns of the coexisting goals or explore the mechanisms, but merely show the salience of the coexistence. **As such, conceptually and empirically, it is important to note that UTPs should always be considered in context. A given UTP might in some contexts be seen as detrimental to business, but in other contexts be a necessary and even desirable price to pay for maximizing the total value in a relationship.**

Many contributions coming from the marketing literature use survey data obtained both from buyers and suppliers, taking into account their dyadic relationships in order to assess the contracts between them (Trada and Goyal 2017; Rokkan, Heide and Wathne 2003; Bhattacharya, Singh and Nand 2015; Liu et al. 2017; Yang et al. 2018; Liu, Luo and Liu 2009). This type of data collection requires additional measures to increase the response rate due to the limited samples, but the dyadic data—because it obtains information from both suppliers and buyers—can provide greater credibility by giving a neutral perspective through parallel analyses (Bhattacharya, Singh and Nand 2015). **This is particularly important when the survey questions involve sensitive issues like UTPs to account for possible response biases.**

Laboratory experiments (in combination with regression analysis) have also been used to assess contracts in agriculture (Kunte, Wollni and Keser 2017; Wu and Roe 2007). Kunte, Wollni and Keser (2017) examine the role of informal mechanisms of contract enforcement, while Wu and Roe (2007) focus on government enforcement. In particular, the latter does not consider the unilateral adjustment of contracts as unfair, but rather as an informal contract-enforcing mechanism.

With regards to the **refusal of a written confirmation** of a supply agreement, the empirical literature is scarce. The relevant contributions mostly focus on which contract terms are included in written form and which are not. Goodhue et al. (2002) examine the determinants of contract terms in relation to the specific production requirements and price provision for wine production in California. For instance, the longer the trade history with buyers and the longer the experience of the business, the higher the likelihood of the inclusion of specific production terms in a contract. Huo et al. (2016) provide support for outlawing this particular UTP by statistically showing that a detailed contract can mitigate the occurrence of opportunism.

Pass-through

The economic literature has devoted little attention to the pass-through effects of renegotiation and the lack of written contracts. However, theory suggests that a renegotiation at any stage of the value chain can trigger an adjustment at other stages. The magnitude of the pass-through depends on the market characteristics and the ability of the firms to impose contractual changes on counterparties.

One of the few studies on pass-through (or spill-over) in the empirical literature is Morgan, Kaleka and Gooner (2007). It contributes to the study of UTPs by attempting to look at the spill-over (i.e., horizontal) effect of a focal suppliers' opportunistic behaviour to non-focal suppliers. The assumption is that it is the focal supplier, not the retailer (i.e., buyer), who exhibits opportunistic behaviours. In a similar vein, Towill (2005) focuses on "category captains", defined as major suppliers who manage their category in partnership with the supermarket, also noted in supply chains in the UK. As such, the "focal supplier" approach seems a legitimate way to investigate contracts and their design and the pass-through of certain practices (both vertically and horizontally) in the food value chain. **This implies and confirms again that the pass-through of UTPs is inextricably linked with the organizational structure of the value chain**.

2.5.2 Excessive and unpredictable transfer of costs or risks from one trading party to its counterparty

The second, and by far most encompassing, category of UTPs is the **excessive and unpredictable transfer of costs and risks**. This category contains many different individual UTPs, such as the transfer of specific investments, delayed payments, reverse margin practices (RMP)[4], short-notice cancellations of perishable agri-food products and payments not related to a specific transaction. Because of the heterogeneity of these practices, a wide variety of approaches, both conceptually and empirically, has developed over the years.

Theory

Conceptually, the different practices have been addressed using different models and approaches, although not to the same extent. For example, there is a sizable literature and debate on service fees (or reverse margin practices), but a lack of contributions on delayed payments. Nevertheless, each of these will be discussed here in turn.

The literature on **service fees** developed after the emergence of practices such as slotting allowances or listing fees (e.g., Shaffer 1991; Klein and Wright 2007). The main focus of the debate was the possible anti-competitive nature of the practice, with arguments being made for both sides (Bloom et al. 2000). **Slotting fees** have largely been modelled using insights from game theory (Chambolle and Christin 2017; Innes and Hamilton 2006; Hamilton and Innes 2017; Hamilton 2003; Wright 2007; Baake and von Schlippenbach 2014; Foros, Kind and Sand 2009; Miklós-Thal, Rey and Vergé 2011; Wang, Lau and Wang 2012; Bloom, Gundlach, and Cannon 2000; Sullivan 1997; Patterson and Richards 2000; Sexton, Richards and Patterson 2002). They have especially been applied in fixed settings, such as vertical food value chains, dealing with homogeneous farm products and/or competitive retail sectors. This conceptual literature further developed by slightly altering these assumptions and the general context. For example, Hamilton (2003) models the effect of slotting allowances on welfare when the allowances are initiated by food processors in a competitive retail sector for duopsonistic food manufacturers, while Innes and Hamilton (2006) consider what happens when the fee is paid at the initiative of retailers under imperfect competition in both the manufacturing and retailing sectors for multiple products. Slotting fees seem to have different impacts depending on who pays. Sexton, Richards and Patterson (2002) conclude that the fee demanded by retailers is beneficial only for those retailers (even though this type of fee may be efficient), and the fee voluntarily paid by suppliers to monopolize their distribution channel has an anti-competitive effect.

The conceptual literature on this topic illustrates the typical issues in UTP studies. Usually, the service fee is modelled as an upfront payment in a non-linear pricing scheme (Marx and Shaffer 2007; Bonnet, Dubois and Simioni 2006). Almost all contributions investigate the practice (service fees) regardless of its (un)fairness (i.e., whether it is disproportionate). The typical study compares the outcome from a profit-maximizing fee with the outcome in the absence of any fee. To the best of our knowledge, no contribution uses a "fair fee" as a benchmark. As a consequence, although the impact of generic service fees on the agri-food system has been thoroughly studied, there is little knowledge about the effects of unfair fees as opposed to fair

[4] Reverse margin practice refers to "the purchase of goods by buyers with some additional services which buyers offer to suppliers for a charge" (Fałkowski et al. 2017). Those include listing fees, slotting allowances, negotiation fees, participation to quality programmes, and new store opening etc. However, there is only a wealth of contributions on slotting allowances.

ones. The study by Chambolle and Christin (2017) is the only one to address the potential unfairness of slotting fees in the sense that it acknowledges the fact that retailers can be the sole beneficiaries of such practices without paying any of the costs. **The lack of consideration for (un)fairness in the literature again emphasizes the groundwork that still needs to be done to arrive at an operational definition and empirical consideration for the concept of fairness in the analysis phase of this project.** This is especially important for this specific practice, given that slotting fees in the EU UTP Directive are labelled as a "grey practice", meaning they are only deemed illegal when not specified in a contract. As a result, it is not the existence per se, but the perceived fairness (however measured or assessed) of slotting fees that eventually determines the legality of the practice.

The vast literature about the strategic use of Private Food Safety Standards (PFSS) provides a solid background for the analysis of the **transfer of specific investments** (Swinnen et al. 2015; Fulponi 2006). A relevant strand of literature argues that PFSS can improve coordination along food supply chains (Hammoudi, Hoffmann and Surry 2009). By transferring specific investments, a firm saves costs and at the same time can enforce an implicit threat mechanism to compel suppliers to follow directions. Other contributions consider disproportionate, transaction-specific investments as a given. This is because of assumptions from transaction theory, where the focus is on the governance structure used to deal with the dependency and potential hazard created by asymmetric specific investments. In contrast, Ebers and Semrau (2015) apply resource dependency theory and identify the drivers of the disproportional allocation of the specific investment for the case of the construction industry.

The role of **risk transferring** in the vertical organization of agri-food systems has been explored by extensive literature (e.g., Boehlje, Hofing and Schroeder 1999; Wever, Wognum, Trienekens and Omta 2012). The contractual approach to the problem is particularly promising given the research objectives (Allen and Lueck 2002). The vast majority of these contributions concern efficient contract design, that is, the design of contracts such that the risk is borne by the least risk-averse agent (Stiglitz 1974; Grossman and Hart 1983). Once again, also for this practice, further research is needed to qualify the unfairness criterion (Sexton 2017).

The literature on **delayed payments** mostly originated in the context of the transition period in Central and Eastern Europe (Cungu et al. 2008; Gow, Streeter and Swinnen 2000; Gow et al. 1998; Dries, Germenji and Noev 2009; Dries and Swinnen 2004). Since the occurrence of delayed payments is largely attributed to this economic transition, many of the contributions look at their impact. However, often the focus of the studies is not the delayed payments themselves: some put potential solutions for delayed payments in the centre (Gow, Streeter and Swinnen 2000; Gow et al. 1998), while others are built around the restructuring of the agricultural sector during the transition (Dries and Swinnen 2004; Dries, Germenji and Noev 2009). The former suggests that delayed payments, causing declines in investment, can be solved by private contract enforcement and foreign direct investment. The latter mainly concerns the emergence of vertical coordination and its impact on farms, and briefly mentions that delayed payments are less likely to occur as a result of these restructurings.

Studies on the practice of the **return of unsold products** are mostly accumulated in theoretical works on the impact of return policies. Padmanabhan and Png (1997) study the effect of return policies on retail competition and their effect on the profit of a manufacturer. Under the condition of uncertainty in demand, the implication for manufacturer profits depends on the number of retailers in the market. When there is a single retailer, a return policy decreases manufacturer profits. The change in results by the number of retailers is also found in Pasternack (1985), who looks at the optimality of return policies for perishable products.

Although it is often the case that suppliers bear at least part of the costs (Shen et al. 2015) or have their profits decreased (Padmanabhan and Png 1997) from the return of unsold products, some studies take a more positive view of return policies. It is shown using a theoretical model that when the retailer holds advance knowledge about the market conditions in highly uncertain environments, a manufacturer may be willing to offer a return policy as an efficient means of eliciting the retailer's private information (Arya and Mittendor 2004). The benefits of a new return policy are quantified in Hahn, Hwang and Shinn (2004), in which all involved parties are likely to see additional benefits from the policy. A new return policy gives suppliers some discount on the wholesale price in return for accepting the unsold perishable product.

Empirics

Theoretically, the literature on **slotting fees** is quite dense. Empirical studies on the occurrence of slotting fees seem to be equivocal. Sullivan (1997) presents evidence that slotting fees could have been caused by an increase in the supply of products rather than retail concentration, whereas Bloom, Gundlach and Cannon (2000) provide retailer survey results showing that the occurrence of slotting fees has increased as a result of greater retail influence on transactions.

The empirical analyses of slotting fees are limited to the category of processed food. Marasteanu, Jaenicke and Dimitri (2011) and Sudhir and Rao (2004) both manage to conduct surveys and regression analyses, in spite of the proprietary nature of the data. Marasteanu, Jaenicke and Dimitri (2011) identify the factors that influence the relative size of slotting fees in organic packaged and prepared products relative to their non-organic counterparts, without taking fairness into account. However, by asking about the magnitude relative to non-organic counterparts, it was possible to avoid revealing private information. Opting for binary response also allows Sudhir and Rao (2004) to bypass the fear factor. There are two other important key takeaways in Sudhir and Rao (2004). **First, we should take into consideration the size of manufacturers in our analysis, as the role of slotting allowances is different for large and small manufacturers. Second, the importance of dyadic data is emphasized as "each data point may be a consequence of a particular level of information asymmetry that are specific to that transaction" (Sudhir and Rao 2004, p.3).**

The more general literature about **off-invoice fees, i.e., payments for promotion, marketing or advertising**, often discusses the different types of fees, with an emphasis on slotting fees. The USDA (2001) relies on interviews and publicly available data to find the prevalence of the trade practices, of which promotional fees are the second most frequently requested fee.[5] Likewise, Patterson and Richards (2000) assess promotional allowances in addition to slotting fees with an anti- or pro-competitive viewpoint and suggest further studies on the welfare implication. Aside from the off-invoice fees, Dimitri, Tegene and Kaufman (2003) identify the occurrence of marketing services requested by retailers by conducting interviews. Among the services identified,[6] private-label produce items, category management and electronic data interchange are found to be the most common practices. The authors do not study the drivers of the services; instead, they express the need to determine whether these practices are the result of retailer market power. Overall, the research methodology of this type of UTP literature is restricted to interviews, owing to difficulty in accessing the data.

For the impact of **transaction-specific investments**, Vukina and Leegomonchai (2006) empirically show that a higher level of asset specificity leads to the under-investment of growers in the broiler industry, where the number of integrators offering contracts is small. There is also

[5] The most commonly provided type of fee is 'Volume incentives/discount' (USDA 2001).

[6] Other services include: 'Third-party food certification', 'Returnable containers/pallets', and 'Automatic inventory replenishment'.

evidence from Wagner and Bode (2014), who study the impact of specific investments on product and process innovation in the automotive industry.

The empirical analysis of the phenomenon of **delayed payments** relies mostly on descriptive analyses and case studies, with one exception: Cungu et al. (2008) conduct a representative country-wide survey investigating the impact of delayed payments on capital investment in farming enterprises in Hungary. When it comes to dealing with the fear factor, Cungu et al. (2008) paraphrase the survey question about the incidence of delayed payments as a perceptual question. In order to account for the reluctance in giving responses, respondents are asked whether the delayed payment could be an important issue for their business activities, instead of being asked directly whether they have been victims of delayed payments. **So, as emphasized before, the transition period context once again confirms that the emergence and occurrence of UTPs cannot be separated from their context, which can be temporary or exceptional.**

Finally, regarding the **return of unsold products**, Ghosh and Eriksson (2019) document the occurrence of the practice using evidence from the Swedish bread industry. Their descriptive analysis is especially meaningful, as their case study is based on a unique dataset obtained from medium-sized bread suppliers. These bread suppliers actually experienced the large costs of the returns of unsold bread and eventually had exit the market due to high revenue losses. The authors give a warning about increasing concentration in the bread supply chain, where only larger players can survive because of their greater negotiating power.

Pass-through

As with the previous type of UTPs, there is a lack of conceptual and empirical literature on the pass-through of excessive risk and cost transfers in the supply chain. As with the general literature on this type of UTP, the most developed insights come from the realm of slotting fees.

The theoretical framework in Hamilton (2003) covers the pass-through of slotting fees by applying three-stage bargaining games. The model shows that the slotting fee paid by food processors raises farm and retailer profits as well as consumer welfare. Other authors conclude that slotting fees can favour collusion (Piccolo and Miklós-Thal 2012) or exclude smaller suppliers (Marx and Shaffer 2007), reducing supply. In general, the outcome depends on the model assumptions regarding competition and market parameters (Fałkowski 2017).

2.5.3 Misuse of confidential information

In contrast with the other types of UTPs in this overview, the **misuse of confidential information** category comprises just one UTP outlined in the EU UTP Directive, namely, the misuse of trade secrets by buyers. Given the proprietary nature of the information needed to conduct analyses on this type of business practice, the existing literature (and the empirical literature especially) is limited.

Theory

The conceptual economic literature largely debates the protection of confidential information with respect to innovation and protection of intellectual property rights (Grunert and Traill 2012). The theory can be applied to study the dissemination of a trading partner's trade secrets regarding production technology. However, this approach does not encompass the entire scope to which this UTP category applies. The category of confidential information is broader than just

technology alone and includes other elements such as trading terms, future strategies, and market access. In a trade relationship, a firm may reveal confidential information explicitly (at the partner's request) or implicitly (through business behaviour). This information can be exploited by the trading partner to his/her own advantage.

The literature about the economics of insider trading (i.e., the use of non-public information for security trading) is extensive (Ausubel 1990; Macey 1991) but only partially applicable to the case of UTPs because of the focus on the effects on stock markets and investors. Instead, the UTPs concern trading relationships. The breach of confidentiality in trading relationships is an issue explored mainly by legal scholars (e.g., Lederman 1989). Yet, the inherent case-by-case approach of legal studies is of limited use for the purpose of this project.

A promising approach is the application of the vast literature about bargaining with incomplete information (Fudenberg and Tirole 1983; Ausubel, Cramton, and Deneckere 2002). By using confidential information, a firm can bargain more effectively with a trading partner and improve its bargaining position in other trades. Noticeably, the firm does not need to reveal the confidential information to reap benefits. Just using the knowledge in bargaining with a third party provides a possibly unfair benefit.[7] This literature illustrates a critical issue for the analysis of UTPs: **UTPs can involve transactions with third parties.** Therefore, focusing on the analysis of an individual transaction might underestimate the extent of UTPs.

Empirics

Concerning empirical analysis of the **misuse of trade secrets by buyers**, a study by Bechtold and Hoffler (2011) seems to be the most relevant. The authors conduct an economic analysis of trade-secret protection and show that fines for information leaks increase welfare. Even though the optimal size of the fine is less clear in their analysis, it is shown that trade-secret protection is desirable when the informed party can undertake relation-specific investments to increase their gains from trade. Using case studies, Tan, Wong and Chung (2016) identify two factors (natural and human) causing information and knowledge leakage. They find that proprietary information and explicit knowledge leakages have significant adverse effects on firms' performances. Finally, Budden, Jones and Budden (1996) provide managerial solutions for reducing the risks of information misappropriation.

Pass-through

Given the general lack of evidence on this type of UTP, it should come as no surprise that the literature on the pass-through of this practice is virtually non-existent. The few contributions that do deal with trade secrets in relationships between buyers and suppliers do not go beyond looking at the relationship in isolation. **Clearly, the absence of any evidence in this field (and on the pass-through of business practices more generally) represents a crucial challenge for the analysis in this project.**

[7] Myerson and Satterthwaite (1983) found that, given two parties with independent private valuations, *ex post* efficiency is attainable if and only if it is common knowledge that gains from trade exist. Assume that a buyer is negotiating with a supplier A whose cost structure is private information. The information asymmetry allows the supplier an information rent. In a bargaining setting, supplier A can claim high production costs in order to negotiate a higher price. Confidential information from a competing trading partner B can help a firm obtain a more precise estimate of A's cost structure, reducing the information rent. Noticeably, if A is a possible replacement for B, the latter has a disadvantage from the use of confidential information, because now A offer goods for a lower price.

2.5.4 Unfair termination or disruption of a commercial relationship

The final category of unfair business practice discussed in this literature review is the **unfair termination or disruption of a commercial relationship**. Even though this was always treated as an important UTP in the decade leading up to the EU UTP Directive (see, among others, European Commission 2014a), it has not been included explicitly as a UTP in the final legislation. The UTP that could most closely be placed in this category is commercial retaliation by the buyer. After all, such retaliation would be impossible without some form of disruption (or even termination) of the commercial relationship. So, while this category will be treated in a general sense, commercial retaliation should be kept in mind as the legislative translation of the discussion presented here.

Theory

Termination or disruption of commercial relationships is a key threat in agri-food value chains. Agri-food value chains, which typically require multiple suppliers to satisfy orders and are thus confronted with supplier selection problems (Scott et al. 2015), are more susceptible to this type of UTP. Further, agri-food firms with high asset specificity (such as farmers) are particularly vulnerable. In a bargaining power framework (see section 2.4), the ability to terminate the trade relationship is a key bargaining advantage. A party able to credibly threaten termination can obtain sizable concessions, especially if the counterparty is locked into the transaction.

For this business practice, a key source of models for analysis is a piece of US legislation aimed at protecting producers from practices similar to those in the EU UTP Directive. Called the Producer Protection Act, it provides a list of regulations designed to protect growers and provide them with some bargaining power in the event they are involved in contract disputes with large food processors. Unlike the EU UTP regulation, though, the act does not prevent certain practices from occurring; rather, it is an aid for farmers when they want to recover damages in court. Most contributions dealing with this legislation (and with the unfair termination of commercial relationships) are based on game theoretical models (Lee, Wu and Fan 2008; Wu 2010).

Lee, Wu and Fan (2008) examine the effect of contract termination damages on efficiency and redistribution using a principal-agent game. Based on their results, we can expect that UTP regulations in the form of awarding damages would result in no efficiency loss, given that incomplete contracts are predominant in agriculture and rent will be redistributed from processors to growers. The contract-specific investment paid by growers is taken into account in their model, but similar to other studies, (un)fairness is of no concern. Wu (2010) develops this context further such that i) it is also possible to recover damages for growers in the existing contract law but with enforcement errors; ii) the act reduces the enforcement errors; and iii) the level of relationship-specific investments is considered both exogenously and endogenously. The main conclusion is that new legislation can either protect growers at the expense of decreases in efficiency or decrease growers' welfare with an increase in efficiency, depending on whether growers find it difficult to collect damages under the existing law.

Lewin-Solomons (2000) finds different results, namely that the restriction is generally distortionary and could cause harm to growers. Although Wu (2010) extends his model to assume the level of relationship-specific investments as endogenously determined and adds details to better reflect reality, Lewin-Solomons (2000) studies the impact of direct restriction on contract termination (in contrast to the termination damages studied by Wu (2010)). In line with this, Ganglmair (2009) shows theoretically that allowing buyer's an early-termination option can be a solution to induce efficiency. It is suggested that the positive effect of early termination

on the buyer's returns on investment could be one economic rationale behind this behaviour. **This finding shows the risk in regulating efficiency-enhancing practices**. Farmers (or other actors in the food chain) are not necessarily better off when unfair contract termination is deemed illegal. A more efficient solution, one currently not included as an option in the EU UTP Directive, could be to allow for damages to be paid in the event of such a termination.

Empirics

Empirically, Larsen and Lyngsie (2017) study premature relationship termination in service-provider industries using regression analysis. However, the authors attribute the premature termination of exchange relationships to the contractual parties' non-conformity with the contract, and their survey question regarding the occurrence of termination is not necessarily associated with unfairness.

The question of unfair termination of relationships crucially hinges on how the length of those relationships is perceived by the different parties in the relationship and the relevant authorities. Recent empirical studies point out that large buyers organize transactions as a sequence of short-term (one or two year) contracts, even if the trading relationship spans over a longer time period, sometimes decades (Italian Anti-Trust Authority 2013). At each expiration date, the parties are free to write a new agreement—if both find that profitable—or let the contract expire. Technically, this is not a termination because of the short-term nature of the contract. Yet, recent anti-trust decisions consider the refusal to renew such a contract to be an illegal disruption of a long-term implicit trading relationship (Italian Anti-Trust Authority 2015). **This case suggests that a monitoring tool must evaluate the real economic nature of the trading relationship and that potential discrepancies in how the length of the trading relationship is perceived can lead to difficulties in the enforcement of the rules of the EU UTP Directive.**

Pass-through

While the unfair termination or disruption of a given trading relationship in the supply chain quite clearly has an impact on other (mostly upstream) relationships within the chain, the pass-through of this type of UTP has, to the best of our knowledge, not been addressed explicitly in the literature. This might be because of the difficulty in accessing or collecting the types of data needed for analysis of this issue, as well as the relative lack of conceptual understanding of the pass-through of such practices. Again, this represents a considerable challenge for the conceptual and empirical analysis in this project.

2.6 Lessons and implications

In this final section of the literature review, a summary of all takeaways and implications for the rest of the project is presented. First, findings relevant for the conceptual model are distilled, with a special consideration for the concept of fairness. Second, an overview of the different empirical methods identified throughout the literature review is presented, along with an assessment of their usefulness for the purposes of this project. Finally, the (limited) insights with respect to the analysis of pass-through are summarized and a possible way forward suggested.

2.6.1 Implications for the conceptual model

The short historical and conceptual overview of bargaining power, outlined in section 2.4 , allows us to consider how bargaining power should be addressed when analysing UTPs. Given the importance accorded to it in this literature review, any conceptual framework on UTPs would be incomplete without the inclusion of bargaining power. Not only here, but also in almost all discussions that led to the EU UTP Directive, differences in bargaining power between downstream (most notably, retailers) and upstream actors in the agri-food value chain are seen as the driving force behind UTPs. Conceptually, this means that it should become clear how and through which pathways discrepancies in bargaining power lead to UTPs (establishing a clear-cut theory of change). Related to this, a conceptual model should allow that causal relationships can be established between drivers of UTPs and the occurrence of UTPs themselves, as it has been demonstrated that the directionality of the two is not always clear. More specifically, it is possible to distil four key findings:

- First, UTPs could be considered a reflection of the past and the ongoing changes to competitive behaviour in the agri-food sector and the analysis thereof. Since the rise of coordinated and concentrated value chains and the associated increase in concern for unfair practices, the traditional market power toolkit is no longer sufficient to address new phenomena, resulting in the rise to prominence of the bargaining power framework. **As a result, it is inevitable that only techniques and frameworks which go beyond a simple analysis of price and quantity are innovative enough to properly analyse the bargaining power dimensions of UTPs.**
- Second, the historical overview has demonstrated that bargaining power should by no means be dismissed as a driver of UTPs in the agri-food sector. It has also shown, however, that it is not clear in which direction UTPs are influenced by this important driver. Indeed, as the analysis of Mérel and Sexton (2017) would suggest (even though they only focus on price and quantity and not on UTPs explicitly), **there is no *a priori* reason to suggest that UTPs would occur more in more concentrated industries** (even though concentration is consistently given as one of the main reasons for the need for UTP legislation).
- Third, it is clear that, regardless of the size or direction of the impact of (market) power on UTP occurrence, impact and pass-through, **there is a definite conceptual need for an actionable measure, or even a model, for bargaining power in dyadic relationships**. Inspiration could be taken from Draganska, Klapper and Villas-Boas (2010), who define bargaining power as a function of exogenous retailer and manufacturer characteristics. Or one could look to Richards, Bonnet and Bouamra-Mechemache (2018), who use a "shopping-basket" approach to assess retailers' market power over manufacturers.
- Finally, **institutional arrangements matter**. A thorough understanding of the governance of the value chain under scrutiny is indispensable to adequately assess who holds the power over entry, rules and the conditions under which bargaining takes place.

Considering the role of bargaining power in the discussions on UTPs over the past decade (see section 2.4.2), there are three additional insights that need to be addressed in the conceptual analysis. First, **it is clear that many different drivers of UTPs interact with, are caused by or, at the very least, have an impact on discrepancies in bargaining power**. As a result, conceptually, it will be important how these different drivers interact to ultimately cause

the UTPs we are observing. Second, and related to this, **there is a fine line between what should be considered a UTP and what should be seen as a driver**. In terms of the conceptual and empirical framework, this means we need to be careful about the differences in the cause and effect of different factors and drivers of UTPs. While this is an artefact of the still rather vague definition of UTPs, it is crucial to make clear delineations before embarking on the empirical analysis to avoid circular argumentations. Finally, since the list of important factors should by no means be considered exhaustive, **an open mind should be kept to other potential factors**. This might not only further refine the conceptual model but could potentially also inform the empirical analysis.

Second, if there is one takeaway that follows from the entire analysis in section 2.5 , it is that **UTPs are highly context-specific**. A practice that is patently unfair in one context might actually be considered by all parties to the arrangement as a normal way of doing business. This is particularly true in the case of UTPs, which have the potential of enlarging total value in the buyer-supplier agreement. For example, consider marketing contributions paid by the supplier to the buyer: it is not unthinkable that a supplier would be willing to pay such a fee, if the benefits attached to it outweighed the contribution itself and especially if the benefits are distributed in a fair way across business partners. Thus, for both the conceptual and empirical analysis, it is instrumental to always take into account both the costs and benefits attached to a given UTP. In particular, because contracts play such an important role in the presence of UTPs, it is crucial to identify those actors in the agri-food value chain with the power to determine what is included in the contracts. This is confirmed by the analysis in section 2.5 , where the notion of "category captains" and "focal suppliers" seems to point in that same direction. As such, an important element in determining the context of UTPs is to conceptually and empirically establish a clear picture of the value chain and subsequently, who wields power within it.

Finally, as argued in section 2.5 , no known studies on business practices have put fairness at the centre of their analyses. The majority of contributions only look at the practice as given, without consideration for the notion of fairness.[8] Maglaras, Bourlakis and Fotopoulos (2015), who conduct a survey for trade practices similar to the UTPs we are considering, make a clear distinction between unfair/fair issues, stating explicitly that it is beyond the purposes of their work. Further, it is hard to find any economic studies involving this notion in a straightforward way. In the broadest sense, Chambolle and Christin (2017) consider slotting fees unfair because retailers take benefits from the by-products of their activity without paying costs. A handful of studies find a trade-off between efficiency and distribution of profits for the involved parties. Given that UTPs are highly context-dependent, it seems obscure whether the equal distribution of profits could be deemed fair. Hence, it is important to define and carefully evaluate fairness in the empirical analyses.

2.6.2 Implications for empirical analysis

In this section, the different empirical approaches identified in the literature are listed and, based on a set of criteria, evaluated in terms of their applicability to the context of UTPs. In Table 2-3, we identify six different methodological approaches among the contributions of this literature

[8] Trada and Goyal (2017) consider the effect of perceived unfairness explicitly into their analysis. However, we consider it less relevant to our UTP literature, as the unfairness is not directly involved with a specific practice.

review: (i) exploratory descriptive statistics, (ii) surveys, (iii) case studies, (iv) large datasets, (v) economic theoretical models, and (vi) lab experiments.

Among the studies investigated in this literature review, the most common empirical approach is surveys, and the survey has been applied to the widest range of UTPs. The second most widely used approach for investigating UTPs is not empirical in nature at all, namely the use of theoretical models to elucidate certain mechanisms behind the occurrence and impact of UTPs. Exploratory descriptive statistics are used in a number of cases, while the use of large datasets, lab experiments and case studies is limited overall. Of course, while the presence of certain empirical approaches in the setting of UTPs already provides an indication of which approach could be taken, it does not offer conclusive evidence on which approach is the most suitable.

Table 2-3: Empirical approaches in the literature

E: Exploratory descriptive statistics, S: Surveys, C: Case studies, LD: Large dataset, T: Economic theoretical models, LE: Lab experiments

Type of UTPs	Literature	Empirical approach					
		E	S	C	LD	T	LE
(i) Retroactive misuse of unspecified, ambiguous or incomplete contract terms	Bolton (1990)					x	
	Bartling and Schmidt (2015)						x
	Hart and Tirole (1988)					x	
	Herweg et al. (2018)					x	
	Kunte et al. (2017)						x
	Maglaras et al. (2015)	x	x				
	Morgan et al. (2007)		x				
	Provan and Skinner (1989)		x				
	Rokkan et al. (2003)		x				
	Salas (2016)					x	
	Trada and Goyal (2017)		x				
	Wang et al. (2017)					x	
	Wu and Roe (2007)						x
	Goodhue et al. (2002)		x				
	Huo et al. (2016)		x				
	Roxenhall and Ghauri (2004)	x					

Continues

Table 2-3 (continued): Empirical approaches in the literature

E: Exploratory descriptive statistics, S: Surveys, C: Case studies, LD: Large dataset, T: Economic theoretical models, LE: Lab experiments

Type of UTPs	Literature	Empirical approach					
		E	S	C	LD	T	LE
(ii) Excessive and unpredictable transfer of costs or risks of a trading party to its counterparty	Ebers and Semrau (2015)		x				
	Hammoudi et al. (2009)	x					
	Vukina and Leegomonchai (2006)		x			x	
	Wagner and Bode (2014)		x				
	Cungu et al. (2008)		x				
	Dries and Swinnen (2004)	x					
	Dries et al. (2009)		x				
	Gow et al. (1998)			x			
	Gow et al. (2000)			x			
	Arya and Mittendor (2004)					x	
	Hahn et al. (2004)					x	
	Padmanabhan and Png (1997)					x	
	Pasternack (1985)					x	
	Shen et al. (2015)					x	
	Baake and von Schlippenbach (2014)					x	
	Bloom et al. (2000)		x				
	Chambolle and Christin (2017)					x	
	Foros et al. (2009)					x	
	Hamilton (2003)					x	
	Hamilton and Innes (2017)					x	
	Innes and Hamilton (2006)					x	
	Maglaras et al. (2015)	x					
	Marasteanu et al. (2011)		x				
	Miklós-Thal et al. (2011)					x	
	Patterson and Richards (2000)		x				
	Piccolo and Miklós-Thal (2012)					x	
	Shaffer (1991)					x	
	Sexton et al. (2002)	x					
	Sudhir and Rao (2004)		x				
	Sullivan (1997)	x					
	Wright (2007)				x		
	Wang et al. (2012)					x	
	Dimitri et al. (2003)		x				
	Patterson and Richards (2000)	x					
	USDA (2001)	x					

Continues

Table 2-3 (continued): Empirical approaches in the literature

E: Exploratory descriptive statistics, S: Surveys, C: Case studies, LD: Large dataset, T: Economic theoretical models, LE: Lab experiments

Type of UTPs	Literature	Empirical approach					
		E	S	C	LD	T	LE
(iii) Misuse of confidential information	Bechtold and Hoffler (2011)					x	
	Budden et al. (1996)	x					
	Myerson and Satterthwaite (1983)					x	
	Tan et al. (2016)			x			
(iv) Unfair termination or disruption of a commercial relationship	Ganglmair (2009)					x	
	Larsen and Lyngsie (2017)		x				
	Lee et al. (2008)					x	
	Lewin-Solomons (2000)					x	
	Wu (2010)					x	
Others	Bonnet et al. (2013)				x	x	
	Kim and Cotterill (2008)				x	x	
	Loy et al. (2015)				x	x	

The assessment of advantages and disadvantages of methodologies for the empirical investigation of the existence, impact and pass-through of UTPs is important in providing direction for our own empirical analyses. Based on a mapping of the literature (section 2.5), a set of criteria is chosen for evaluation. Our preliminary analysis suggests the following five criteria:

- Feasibility. An appropriate methodology must be feasible under a broad set of circumstances. In particular, the required information must be available or obtainable at a reasonable cost. The computational burden must not be excessive. Methodologies using publicly available data rank high in the feasibility criterion, while approaches relying on the use of private information rank lower.
- Cost efficiency. A monitoring tool must be financially sustainable, meaning that the overall cost of the assessment is proportional to the benefit (i.e., the value of information). Highly cost-efficient approaches are required for regular, periodic investigation. Ad-hoc investigations may use more expensive tools, if needed.
- Completeness. This criterion refers to the ability to capture the many types of UTPs. Several existing methodologies focus on a limited subset of practices. In this case the completeness score is low. Approaches that are able to investigate all kinds of UTPs have a high score.
- Reliability. Providing accurate assessments of the existence of UTPs and unbiased estimations of their impact and pass-through effects is critical. A reliable methodology minimizes the probability of missing false positives or false negatives when assessing the existence of UTPs (i.e., claiming that a practice is unfair when it is fair or vice versa, respectively). A reliable methodology also fully appreciates the consequences of UTPs, including the effects of interdependencies.
- Generality. In order to provide useful policy support, the empirical analysis must grant general conclusions, not just case-specific results. Analyses based on special cases may

fail to give policymakers useful information. Similarly, models relying on restrictive assumptions may be hardly applicable in practice.

Using these five criteria, in combination with what is available in the literature, it is now possible to assess each of the different empirical strategies by their suitability for a full-fledged analysis of UTPs.

Large datasets would score high in terms of feasibility, cost efficiency and generality. But, given the conclusion from Table 3 that such datasets are not readily available, the usefulness of such an empirical strategy quickly diminishes. After all, in the absence of any datasets, one would have to construct them from scratch, reducing the cost efficiency. Furthermore, collecting large amounts of data on UTPs would inevitably mean that the information could not be as context-specific as required.

While **case studies** score highly on feasibility, completeness (it is not difficult to get all information from one specific case) and reliability (a case study allows intimate familiarity with a certain context), they do considerably worse in terms of generality and cost efficiency. Keeping in mind the lack of usage of case studies for the issue of UTPs (see Table 2-3), the applicability of this type of empirical strategy becomes questionable. Especially for the purposes of policy analysis, one can wonder if a deep understanding of one specific context is enough to design or evaluate regulations.

Exploratory descriptive statistics have been used in quite a number of analyses on UTPs, most notably in the many reports and studies published in the lead-up to the approval of the EU UTP Directive. Such approaches are feasible and cost-effective because most of the information is publicly available and free and the computational burden is minimal. The downside of this approach is the low reliability of the results: most studies do not run formal testing, providing only stylized facts and time trends. This approach may also suffer from low generality (conclusions are hardly applicable for general cases).

Lab experiments have definitely proven their worth, but only for a limited number of UTPs. This empirical approach scores high on feasibility and reliability but does poorly on generality and cost efficiency. It should be seen as a useful complementary analysis for some UTPs, but not as the chosen way to analyse a multitude of UTPs in real-world circumstances.

As evident from Table 2-3, quite a few studies employ **theoretical models** to examine UTPs, either as the main contribution or to guide the empirical analysis. Such an approach does score well in terms of generality and cost efficiency (no data needs to be collected), but is by no means complete. As such, in the study of UTPs, it appears theoretical models play an indispensable role in informing the empirical analysis but cannot stand on their own. For the purposes of this project, a theoretical model will be used to examine which variables, factors and drivers should be included in the empirical analysis.

The strengths of methodologies based on **surveys and interviews** are completeness and generality of the analysis. These studies can cover the largest set of practices, and their conclusions are general (conditional to the sampling design). Whether context specificity can be addressed depends to a large extent on how the survey is designed. The approach is definitely feasible, but data collection can be costly, especially if general results are sought. A possible limitation is reliability, mostly related to response biases. The problem could be addressed by using psychometric tools (scale measures) to introduce a degree of subjectivity to the analysis.

To summarize, over the course of this literature review many insights have surfaced with respect to which empirical strategy is the most appropriate for measuring the occurrence, impact and pass-through of UTPs. In terms of data collection, it is clear that a trade-off will have to be made

between gathering context-specific data at higher cost (and possibly lower sample sizes) and gathering more general information from a larger number of respondents. Given the importance of context in the case of UTPs, the former certainly seems to win the argument. However, our analysis here shows that **a survey instrument will be indispensable to assess this issue**. There are very few large datasets that could be used for UTPs, but as none of them focus on fairness, (unstructured) interviews and case studies are too limited for comparability purposes, and exploratory studies would not fill the gap we are trying to address.

Another element important to the empirical analysis that flows quite naturally from the literature review is the need to collect dyadic data, i.e., data on the specific relationship between two (or more) trading partners. In the case of UTPs, this means collecting data at the level of the relationship (and possibly, the contract) between buyers and suppliers. Only in that way is it possible to achieve a complete (and potentially less biased) picture of the occurrence and impact of UTPs. To assess pass-through of UTPs and their impact, different iterations of dyadic data collection would have to occur across the value chain in order to arrive at a complete picture.

Other empirical factors that should be included for consideration are listed here.

- UTPs are not unidirectional and could potentially originate with weaker party.
- We have to make sure to keep an open mind in terms of the potential solutions to UTPs. For instance, the UTP Directive rules could be combined with informal mechanisms, and it will be important to also ask the different actors in the agri-food value chain about their preferences for those types of initiatives.
- Size and context matter: the literature review has demonstrated that the occurrence and impact of certain UTPs may differ considerably between small and large actors, even within the same level of the value chain. As such, in the empirical analysis, it will be crucial to account for a whole range of variables affecting the incidence of UTPs.
- Inquiring about UTPs is a sensitive issue, especially for those suffering from them (cfr. the 'fear factor'), which could introduce all types of biases into the analysis. Minimizing those biases will be a crucial challenge for the empirical analysis.

2.6.3 Implications for pass-through analysis

Modern agri-food systems are structured as value chains encompassing several vertically inter-related markets. A well-known characteristic of vertical models is that the equilibria in interdependent markets are jointly determined (e.g., Gardner 1975). A perturbation in the equilibrium at any stage of the value chains triggers adjustments in all other stages (e.g., Muth 1964; Holloway 1991). **Yet, as demonstrated by the findings in section 2.5 , the literature on UTP pass-through is significantly lacking**. To our knowledge, the only studies on pass-through concern multiple-stage games that show theoretically that the impact of certain practices can indeed reverberate from one level of the chain to others. Additionally, horizontal spill-over effects are empirically shown among focal suppliers and non-focal suppliers.

In the economic literature in general, the term "pass-through" along the supply chain has been largely equated with cost or price pass-through, indicating the transfer of cost and price changes from the upstream sector to the downstream sector or consumers (Kim and Cotterill 2008). Some estimate the rate across different brands and outlets (Loy et al. 2015), while others take

a completely different view and analyse the pass-through of price cuts offered by manufacturers to consumers via retailers' opportunism (Kumar, Rajiv and Jeuland 2001).

So, while most of the literature focuses on cost or price pass-through, a similar concept can be applied to UTPs. For example, consider a retailer asking a supplier cooperative to match a lower price offered by a competitor under the implicit threat of termination of the trade relationship. This can be considered a UTP under the current definitions (renegotiation and unfair termination). The practice is expected to have an impact on farmers, who will receive a lower price for their products. An impact on consumers is possible, too, if the buyer lowers consumer prices as a consequence of the success of the UTP. Similarly, a trader paying high service fees to a retailer without a corresponding benefit can lower the price paid to farmers in order to gain enough per-unit margin to recover the fixed cost (Bonnet et al. 2013). We refer to the changes in the trade relationships along the value chain due to the adoption of a UTP at a given stage of the value chain as "UTP pass-through". These examples suggest that UTPs may have an impact on several agents along the value chain. A comprehensive assessment requires the analysis of these different stages.

A key conclusion of existing literature is that the intensity of price and cost pass-through depends on the specific characteristics of the market (such as demand and supply elasticity, the type of vertical agreements, the degree of market/bargaining power) (Gaudin 2016). As a consequence, **the evaluation of the intensity of pass-through is an empirical question requiring a careful institutional analysis of the transaction**. A similar approach is advisable for the analysis of UTP pass-through.

UTP pass-through differs from price pass-through because of its intrinsic multi-dimensional nature. UTPs involve several dimensions of the value chain in addition to price and quantity. Examples of such dimensions include quality (Yehezkel 2014), variety of the assortment (Baake and von Schlippenbach 2014; Hamilton and Innes 2017) market access (Marx and Shaffer 2007) and innovation (Sullivan 1997). Consequently, the characterisation of the UTP pass-through intensity must be multi-dimensional. Unlike price or cost pass-through, a scalar index is not a sufficient measure, and a system of indicators is advisable.

Our preliminary review suggests that ***process tracing*** **(PTr) would be a promising methodological approach** for the empirical investigation of UTP pass-through (George and Bennett 2005; Waldner 2012). PTr is defined as *"[…] an analytic tool for drawing descriptive and causal inferences from diagnostic pieces of evidence – often understood as part of a temporal sequence of events or phenomena"* (Collier 2011).

PTr is an inductive approach using empirical evidence (such as case studies or interviews) to investigate a sequence of events with a temporal or logical order. The approach is widely used in social science studies to explore complex phenomena from a qualitative perspective. Although PTr is not used to address pass-through issues in the economic literature, it proved a useful approach for investigating causal relationships in the social sciences when quantitative methods (such as econometrics or inference) were difficult to apply (Trampusch and Palier 2016). PTr can be used to uncover and specify causal mechanisms, such as the causal relationship between a UTP at a given stage of the value chain and the adoption of practices along the chain. Also, the method can use diagnostic information to evaluate explanatory hypotheses (Collier 2011).

In practice, PTr collects information at the various points of the process, and it relates that information to (i) existing knowledge (e.g., theoretical framework, stylized facts or theory as defined in Waltz (1979)) and (ii) information from other points in the process. The approach is based on a characterisation of the key steps in the process (the so-called *descriptive inference*

in Collier (2011)), which in turn permits a solid analysis of change and sequence (the so-called *causal inference*).

From a PTr point of view, a (fair or unfair) trading practice involving farmers can be considered the outcome of a process along the supply chain. For example, a manufacturer might impose a unilateral contract change on a farmer because the terms of trade with the final retailer have suddenly changed. The application of PTr methodology to UTPs consists in point-analyses of the transactions ("snapshots", in PTr jargon). The data are interpreted using existing knowledge, such as economic theory or background analysis, of the supply chains. Then the comparison of snapshots is used to infer about causality in the process. In PTr the point-analyses may be independent, sequential (when the information from one point is used to guide the analysis of another) or iterative.

Given the multidimensional nature and complexity of UTPs and the limitations of existing quantitative studies (section 2.5), it is argued here that PTr is a promising framework to guide the conceptual and empirical analyses of UTP pass-through.

Appendix I: UTPs in the EU Directive

Black practices:

1. Payments later than 30 days for perishable agricultural and food products
2. Payments later than 60 days for other agri-food products
3. Short-notice cancellations of perishable agri-food products
4. Unilateral contract changes by the buyer
5. Payments not related to a specific transaction
6. Risk of loss and deterioration transferred to the supplier
7. Refusal of written confirmation of supply agreement by the buyer, despite request of the supplier
8. Misuse of trade secrets by the buyer
9. Commercial retaliation by the buyer
10. Transferring the costs of examining customer complaints to the supplier

Grey practices:

11. Return of unsold products
12. Payment of the supplier for stocking, display and listing
13. Payment of the supplier for promotion
14. Payment of the supplier for marketing
15. Payment of the supplier for advertising
16. Payment of the supplier for staff of the buyer, fitting out premises

3 Review of Existing Data Sources on UTPs

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Monitoring unfair trading practices using existing sources of economic data related to the organization and functioning of the food supply chain, appears to be complicated at both the European and national levels. The analysis of existing sources, other than direct interviews or surveys targeting different supply chain's actors, make clear these sources are not designed to collect quantitative and qualitative data that could help identify unfair practices. Despite this lack of direct links, data collected systematically about the food sector at a national level might be useful for gaining information about those practices related to price developments along the supply chain and payments transactions between retailers and suppliers. In this respect, data collected by price observatories at a national level (where existing) and national Farm Accountancy Data Networks (FADN) could provide some hints about possible transactions or relations at risk to be unfair. The national FADNs, for instance, collect a number of data related to the movements and balances of farms accounts that, if sufficiently detailed, might give some indication about costs and/or delayed payments potentially linked to farmers' relations with retailers. The same applies to data collected by price observatories that outline price developments along the supply chain, which also may give some indication about unfair practices. However, the main goals of the above-mentioned tools are to ensure transparency in the definition of prices (particularly to protect consumers) and, in the case of the national FADNs, provide economic and structural information about the farming sector. For this reason, data collected are not necessarily appropriate for monitoring UTPs, but they might form a basis for setting up a specific platform for this purpose.

The antitrust authorities at a national level could also be considered relevant sources for understanding if relations between actors in the supply chains might be considered unfair. The French Antitrust Authority (DGCCRF), for example, publishes annually a report on the occurrence of delayed payments in different sectors, including agri-food. The 2018 report mentions the following main practices identified in the food sector: invoices issued by food product suppliers later than envisaged by the law for payment (30 days); summary invoices listing the reference date for payment as the date of issue, not the date of the product delivery, as set by law; and lack of knowledge of the payment deadlines that apply to different products. These authorities undertake, usually, fact-finding inquiries to investigate some sectors or specific relations that can jeopardize regular competition (e.g., the inquiry just started by the Italian AGCM into one of the main cereal seed breeding companies). The actions of these authorities are more effective when they have the mandate to summon a company for a potential unfair practice without a formal complaint from the injured party.

The activities of these national bodies are relevant mainly because their decisions represent an important legal basis that can be used to identify UTPs, particularly those categories related to retaliation measures and unilateral renegotiations of contracts. National bodies can identify and possibly stop practices that are already happening or that are likely to happen in the near future, but they are not necessarily appropriate for preventing and monitoring such practices. Hence, setting up a monitoring system for UTPs would require identification of the key information to be collected, both qualitative and quantitative, summing up what is already available and then integrating it with that data (which at the moment is not recorded).

Table 3-1: Selected sources of data that can contribute to UTP identification

Database	Country/ Organiz.	Brief description and possible use for monitoring UTPs
EUROSTAT	EU	Eurostat records structural and economic data on agriculture, forestry and fisheries, but this does not seem to be relevant for identifying unfair practices. Food price monitoring tool: https://ec.europa.eu/eurostat/web/experimental-statistics/food-price-monitoring. This tool was introduced in EUROSTAT following the period of high price volatility in Europe. It aims to give information about how prices develop across the different stages of the production chain. This might give some indication on how costs are related to potential unfair practices.
Food-chain analysis network (FDAN)	OECD	Launched in 2010 as an expert group within the OECD Committee of Agriculture, the food-chain analysis network aims to gather and exploit food system data to identify food policy practices, particularly in relation to price developments.
Federal Institute of Agricultural Economics	Austria	The Federal Institute provides agricultural economic statistics and data. It also collects farm accounts data, which might give some indications for UTPs (as highlighted for the Italian case).
SPF Economie, P.M.E, Classes moyennes et Energie	Belgium	Every year, the Federal Public Service for Economy runs an analysis (*Fonctionnement du marché en Belgique: un screening horizontal des secteurs marchands*) of the state of the art of the main sectors in the country, including the food processing industry. This analysis considers the level of concentration in the industry, and this could give some insight into the possibility that unfair practices might develop within a specific industry.
France AgriMer – *Observatoire de la formation des prix et des merges de produits alimentaires*	France	France AgriMer provides detailed information about the different stakeholders active in food chains, with the aim to improve stakeholder relations and identify cost transmission mechanisms, variations in upstream and downstream prices, and retail trade concentrations. It includes the economic results achieved at each step in the supply chains in different industries and for different commodities. The data is aggregated, making it complicated to gain insight into possible unfair practices occurring between players; nevertheless, economic performance is analysed at different stages, and this might mean material for further investigations.

(Continues)

Table 3-1 (continued): Selected sources of data that can contribute to UTP identification

Database	Country/ Organiz.	Brief description and possible use for monitoring UTPs
RICA – National Farm Accountancy Data Network	Italy	This database includes extensive data collected from a sample of Italian agricultural holdings. Some of the data from different sections of the database could be of use to identify UTPs. In the section "Movements and balances of the accounts", information about the following categories are recorded: - Revenues from sales (production, animals, revenues from animal husbandries, services provided to third parties, etc.) - Revenues effectively received - Products' delivery to cooperatives (to be sold through it) - Operating costs This data could help identify possible UTPs, particularly in relation to delayed buyers' payments and extra charges passed on to the suppliers. Establishing a direct and strong link between this data and UTPs, however, would require a thorough examination of the balance sheet of the holdings and, possibly, some adjustments to the collection of data, which is not performed with the aim to identify such practices.
Autorité Belge de la Concurrence	Belgium	A number of judgements related to unfair practices in the food sector, such as abuse of dominant position, are reported. The case-law of the Belgian Authority for Competition might give some insights about possible actions to be undertaken to identify unfair practices.
DGCCRF - *Direction générale de la concurrence, de la consommation et de la répression des frauds*	France	The DGCCRF completes annually a report on delayed payments in different sectors, including the food sector. The 2018 report identifies the following as main practices in the food sector: invoices issued by food product suppliers later than envisaged by the law for payment (30 days); summary invoices listing the reference date for payment as the date of issue and not the date of product delivery, as set by law; and lack of knowledge of the payment deadlines that apply for different products. It includes other information not specifically related to the food sector but that might be relevant. The DGCCRF also publishes the summary of the case-law related to the identification of unfair practices in different sectors, including the food sector.

(Continues)

Table 3-1 (continued): Selected sources of data that can contribute to UTP identification

Database	Country/ Organiz.	Brief description and possible use for monitoring UTPs
Hungarian Competition Authority	Hungary	The Hungarian Competition Authority has been very active in the identification of UTPs in the agri-food sector. The published case-law can, also in this case, give important insights for spotting unfair practices.
AGCM – *Autorità Garante della Concorrenza e del Mercato*	Italy	AGCM regularly checks on the state of competition within the national markets. It publishes the case-law related to the identification of unfair practices. The case COOP ITALIA-CELEX appears to be of particular interest because it recognises some practices which had been going on for years between the two counterparts that were identified as unfair, in particular: discounts on the market price and fees payed to the retailers but not included in the contract; provision of additional discounts, included within the national promotion plan of COOP, decided unilaterally by COOP and communicated to CELOX only afterwards; the unilateral interruption of the contract after several years, considering the fact that CELOX undertook specific investments to meet the conditions to be a supplier of COOP. Judgements like this might provide relevant hints for identifying and better framing, from a legal point of view, unfair practices.

PART II: Designing a Monitoring Tool

In Part II of this report, we illustrate the design of the UTP monitoring system. We describe two approaches: In-Depth Empirical Analysis (IDEA) and Broad Scope Empirical Analysis (BSEA). The former is suited to support policy makers in identifying the most important UTPs in specific netchains and understanding the possible unintended consequences of regulations. The latter is designed to assess occurrence, impact and pass-through of a given list of UTPs in the EU food supply chains.

Both approaches are based on primary data collection such as questionnaires, surveys and interviews. Our choice is supported by the results of our review of empirical studies in section 2.6.2 , where we conclude that direct data collection is the most efficient approach to UTP monitoring.

4 Investigating UTPs: Past Experiences

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Although several empirical studies on individual practices exist (section 2.6.2), there are remarkably few comprehensive investigations of the entire set of UTPs. We focus our review on three examples: the 2011 CIAA-AIM survey, the YouGov annual survey on behalf of the UK Grocery Adjudicator and the JRC 2017 survey on UTPs in the dairy sector.

4.1 The 2011 CIAA-AIM survey

To the best of our knowledge, the 2011 CIAA-AIM survey was the first empirical investigation tackling UTPs explicitly (instead of single practices).[9] The study surveyed 686 firms in 15 EU countries, providing the first estimate of UTP occurrence. The report concluded that 96.4% of the sample was exposed to UTPs. The data had a great impact on the public debate and was quoted by several official papers as justification for public intervention.

The empirical strategy was based on a direct question regarding UTPs. Respondents were asked if they had been confronted with the following situations (numbers in parentheses report the percent of respondents who claimed to suffer from the practice at least once in 2009):

- The non-respect of contractual terms by some customers (84% of cases)
- De-listing threats to obtain unjustified advantages (77%)
- Unilateral deductions on invoices with no solid business reasons (63%)
- Paying for no services (60%)
- Providing payments clearly in no relation with the level of services (60%)
- Paying retrospectively for items not foreseen in the contract (55%)
- Unilateral disruption of business relationship to obtain advantages (51%)
- Imposing clearly one-sided contractual provisions (48%)
- Unilateral cessation of contracts without commercial reasons, notice (32%)
- Use of privileged information to develop competing brands (28%)
- Non-respect of confidentiality (23%)
- Refusal to sign confidentiality agreement without reason (14%)

Interestingly, respondents were on average subject to six UTPs, suggesting that multiple practices emerge at once. The survey detected differences across Member States. For example, the most common UTP (breaking contractual terms) was reported by 92% of respondents in Germany versus 51% in Finland.

The study included a report on the self-assessment of the economic impact of UTPs. On average, the reported cost of these practices represents 0.5% of the turnover of the sample companies. Also, the report provided a first assessment of the fear factor. Data showed that only 13% of respondents challenged UTPs. In 65% of cases, the lack of action was due to fear of commercial sanctions.

[9] The study referred to “unfair commercial practices in Europe”.

The CIAA-AIM survey provided a first estimate of UTP occurrence and was one of the first studies to frame critical issues such as fear factor and economic impact. However, it presented several limitations and cannot be used for investigating pass-through. Firstly, it follows a firm-based approach. UTPs are detected at firm level, but no information about the organization of the supply chain is provided. This approach does not allow researchers to investigate the economic determinants of the UTPs, and it does not establish how the practices are passed along to other segments of the chain. Secondly, the questionnaire is based on self-reporting. As a consequence, the evaluations of occurrence and impact may be subjective. Thirdly, each UTP is investigated independently. As a consequence, the measure of the impact might be biased, as the interaction effect might have been overlooked.

4.2 The 2018 JRC investigation of UTPs in the dairy sector

In 2018, the JRC published the results of an empirical investigation of UTPs in the dairy sector. The study involved 1248 farms in five regions, chosen using a stratified multi-stage sampling procedure with random selection of the final sample units. The sample included farmers who managed a dairy farm in 2016/2017 and for at least two previous consecutive years.

The main focus of the survey was i) detection of barriers to change buyer, ii) identification of contract characteristics and iii) a set of UTPs. Unlike the CIAA-AIM survey, the JRC dairy project aimed at establishing a link between contract characteristics (namely, completeness) and UTPs. The list of considered UTPs was the following (Table 20, p. 44):

- **UTPs in the contract content**
  - Buyer can refuse or adjust milk delivery conditions
  - Imposition of marketing/supply constraints
  - No protection for farmer if the buyer fails to fulfil the contract
  - Buyer has better contract cancellation terms than farmer
  - Imposed dairy-specific investment in the past 10 years
  - Price is set unilaterally by the buyer
- **UTPs during contract execution**
  - Dairy paid lower price than contracted
  - Dairy did not collect milk or refused to accept milk delivery
  - Dairy paid only after a delay
  - Dairy required milk quality or quantity different from that agreed
  - Dairy imposed additional fees/deductions
  - Price changed unilaterally by the buyer
  - Required quality changed unilaterally by the buyer
  - Required quantity changed unilaterally by the buyer
  - Buyer changed other terms of contract (e.g., credit, information provision, milk collection)
- **UTPs after contract finalization**
  - Contract ended by the buyer unilaterally before expiration
  - Fear factor

The survey found that UTPs are extremely frequent. More than 97% of respondents reported confronting at least one UTP. The analysis showed a weak correlation between the number of UTPs and completeness of the contract.

The JRC survey provided deep insight into trade practices in the dairy industry. The use of ancillary information (contract features, farm characteristics, etc.) allowed researchers to compute correlation and speculate about the determinants of UTPs, an important step forward compared to the CIAA-AIM survey. However, the approach is based on a farm-level survey and not intended as an investigation of pass-through effects.

4.3 YouGov GCA annual survey

The UK Groceries Code Adjudicator commissions YouGov to conduct a yearly survey of the groceries sector. This is an example of UTP monitoring over time, and the yearly reports put special emphasis on defining trends over time. The survey is presented as a part of the Adjudicator's yearly report.

The 2018 survey involved 911 direct suppliers of supermarkets, 113 indirect suppliers and 28 trade associations. The objective of the investigation is to measure the compliance of supermarket chains with the UK's Groceries Code. Firms are asked if they experienced practices that might violate the Code and whether they would consider raising issues with the Adjudicator (and—if not—why). Also, the survey investigated firm awareness of the code and other related issues (such as training and understanding).

A distinctive characteristic of the analysis is the focus on supermarket chains. Results are presented by supermarket chain and provide an implicit "fairness" ranking. The inclusion of indirect suppliers in the survey is a clear attempt to include pass-through effects in the analysis.

Noticeably, the YouGov GCA survey findings are remarkably different from those of the CIAA-AIM and JRC's investigations. In 2018, 45% of respondents stated that they had not experience of code violations (43% claimed violations, 12% were not sure or refused to answer). When asked about a broader set of unfair practices (including a subset not covered by the Code), 35% of the sample reported no violations. UTPs are extremely frequent in the YouGov GCA survey but not as ubiquitous as reported by other studies. Possibly, the survey's more precise definition of unfairness (due to the reference to the Code) reduced the number of claims.

The YouGov survey is a monitoring initiative aimed at evaluating the effectiveness of the Adjudicator in promoting a fairer and more efficient agri-food supply chain. The focus is on retail chains and supermarkets that are considered leading firms in the supply chain. However, the survey does not provide an economic interpretation of the practices and ignores interdependencies among the practices.

4.4 Lessons from past experiences

The three examples of UTP surveys provide insights into the monitoring strategy. The design of our approach is based on such experiences.

The three surveys are based on interviews with firms that are possibly subjected to UTPs. The key part of the questionnaires is asking these firms to look at a list of practices and confirm whether they have confronted one or more of them. The approach is particularly useful in the case of the YouGov-GCA, where the Code provides an exact reference. When exploring the occurrence of generic UTPs, the approach is vulnerable to the possibility of overlooking important

practices. When designing a monitoring system, special consideration must be given defining objectives. If the objective is to evaluate a specific regulation (such as the Groceries Code or Directive 2019/633), a questionnaire concerning the occurrence of practices given in a list may be efficient. If the objective is generic assessment of "fairness" along the agri-food supply chains, using pre-defined lists might be problematic. The lists are unlikely to be exhaustive, and therefore key practices might be missed.

Interviewing farmers alone does not allow for pass-through analysis. The JRC analysis of the dairy sector, for example, assesses the occurrence of UTPs at farm level, without investigating the role of downstream industries. Similarly, the CIAA-AIM survey ignores pass-through. The YouGov survey considers the possible impact of supermarket practices on indirect suppliers. The result is achieved by grouping respondents by supermarket chains. In principle, differences across chains might provide enough variation to perform statistical inference. However, the approach is limited by the relatively small number of supermarket chains. Pass-through analysis requires that an investigation considers the structure of the supply chain.

5 UTP Monitoring Systems

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The design of a UTP monitoring system is the core of this research. In chapters 6 and 7, we present two approaches to monitoring UTPs: In-DEpth Analysis (IDEA) and Broad-Scope Empirical Analysis (B-SEA).

Figure 5-1: Alternative UTP monitoring systems.

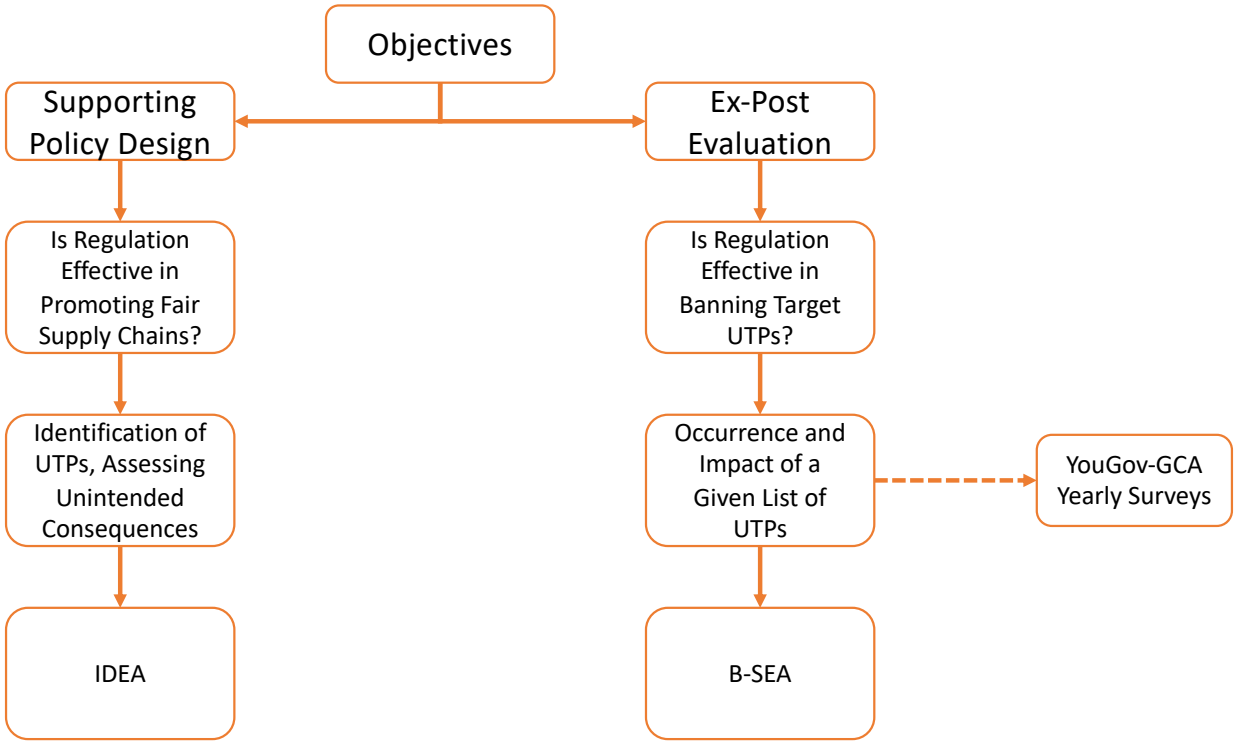

Figure 5-1 illustrates the different rationales for the two approaches. The difference lies in the objective of the investigation. If the goal is to assess whether the regulation is effective in reducing the occurrence and impact of a given set of UTPs, a general survey is sufficient. The YouGov-GCA annual survey (section 4.3) is a typical example of this approach. The investigation is based on an existing list of practices (the Code), and respondents are asked whether they have experienced such practices. If yes, they are asked about the cost for the firm and what was done about it. The survey is an *ex post* evaluation of a policy already in place, with the clear objective of assessing a trend in the occurrence of UTPs. In chapter 7, we illustrate the B-SEA survey design that follows this approach. For example, B-SEA can be used to monitor the occurrence of the 16 UTPs in Directive 2019/633 over time. The results of a first application of B-SEA are reported in Part III.

The main limitation of the B-SEA is the focus on a predetermined list of UTPs. Obviously, if the list is incomplete, B-SEA fails to give an unbiased assessment of fairness, and the level of

protection may be overestimated. The survey might miss important features of the supply chain or specific UTPs of extreme importance. If the objective of the investigation is an assessment of fairness in the supply chain, the alternative IDEA approach is preferable. IDEA derives the target UTPs from a background analysis of the specific value chain and considers the governance of the value chain explicitly. The objective of the analysis is to identify all relevant UTPs and build counterfactual scenarios in order to assess the possible unintended consequences of a ban. IDEA is designed as a tool to support policy design. For example, it can provide useful information for the implementation of Directive 2019/633 by Member States or future revision of the regulation. The details of this approach are provided in chapter 6, and the results of the application to apple and kiwi chains are illustrated in Part IV of this report.

6 In-Depth Analysis (IDEA)

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The IDEA approach makes extensive use of *a priori* information to support the design of the investigation. The objective is to tailor the analysis to specific characteristics of the netchain in order to gain a deep understanding of the underlying economic forces. By construction, IDEA is suited to investigate homogeneous and relatively small netchains so that *a priori* information is easy to collect and organize.

IDEA is designed to support policy decisions regarding possible changes to the list of black or grey practices in Directive 2019/633 by Member States or by the European Union. The extensive use of economic modelling provides useful information about the possible unintended effects of the ban. Because IDEA does not rely on a predetermined list of practices, the survey can investigate multiple dimensions of fairness. It can be used to assess if the list from Directive 2019/633 is complete and relevant and evaluate the cost and benefits of banning additional practices.

In the following sections, we illustrate the theory of the IDEA approach. In Part IV we report on its application to the fruit sector, explaining the issues and limitations of the analysis.

6.1 IDEA design

The objective of IDEA is to trace the pass-through and spillover processes along the netchain. The approach is derived from a vast literature about process-tracing (PTr) methods (e.g., George and Bennet 2005, chpt. 9). PTr is defined as:

> *"[…] an analytic tool for drawing descriptive and causal inferences from diagnostic pieces of evidence – often understood as part of a temporal sequence of events or phenomena" (Collier 2011).*

PTr is an inductive approach using empirical evidence (such as case studies or interviews) to investigate a sequence of events with a temporal or logical order. The approach is widely used in social science studies to explore complex phenomena from a qualitative perspective. Although PTr is not used to address pass-through issues in economic literature, it proves to be a useful approach in investigating causal relationships in social sciences when quantitative methods (such as econometrics or inference) are difficult to apply (Trampusch and Palier 2016). PTr can be used to uncover and specify causal mechanisms, such as the causal relationship between a UTP at a given stage of the value chain and the adoption of practices along the chain. Also, the method can use diagnostic information to evaluate explanatory hypotheses (Collier 2011).

We represent the pass-through effect as a diffusion process along the supply chains. The process starts from *focus transactions*, i.e., transactions where a strong imbalance in the parties' bargaining power determines the first occurrence of UTPs. The UTP exerts *pressure* on the weak firm, which must adjust their business organization and the way it interacts with other firms. Such adjustment may determine subsequent adjustments along the supply chain. We define the

pass-through effect as the sequence of adjustments along the supply chain that occur due to the adoption of a UTP in a focus transaction.

IDEA identifies focus transactions and traces the sequence of adjustments along the supply chain. The core of process-tracing is the comparison of *diagnostic evidence* collected at various *stages* of the process with a stock of *existing knowledge* in order to identify and explain the causal mechanism of a process. The literature about elite interviews is also applied to the design of the point estimate action (e.g., Aberbach and Rockman 2002).

The application of IDEA is a three-step process: (i) acquisition of *a priori* information, (ii) point estimation and (iii) generalization of results (Exhibit 1).

Exhibit 1: Provisional organization of IDEA activities

Acquisition of information
• Desk analysis • Expert panel • Calibration of theoretical model • Interview design
Point estimation
• Semi-structured interviews • Validation of *a priori* information and theory • UTP identification: occurrence and interdependence • Impact evaluation and pressure assessment at firm level • Comparison of interviews and pass-through assessment
Generalization
• Survey design based on point estimation results • Estimation of frequency • Impact evaluation and pressure assessment at layer, chain and netchain levels • Pass-through and spill-over assessment at netchain level

(i) *A priori* information is acquired from a desk analysis and brainstorming with a panel of experts. The organization of the expert panel analysis is illustrated in Figure 6-1. The guided interaction considers two main aspects. First, we focus on analysis of the netchain to obtain information about opportunities and threats; identify the main drivers of competitive advantage; define what efficiency means for the industry; and understand the role and importance of performance dimensions such as innovation, sustainability, quality and safety. Second, we consider the organization of the transactions along the netchain (governance). This activity has two major objectives: (a) identify lead firms, chains and focus transactions and (b) describe the way lead firms coordinate transactions (contract features). The first objective is instrumental to identify the targets of the semi-structured interviews. The second objective includes listing the most common practices with a subjective assessment of their fairness, based on Bowie's (1988) definition (section 2.3). These results are used to develop and calibrate a theoretical model explaining the economics of UTPs. Insights from the expert panel ensure that the model addresses specific issues of the netchain and defines the questions and topic of interest for the interviews.

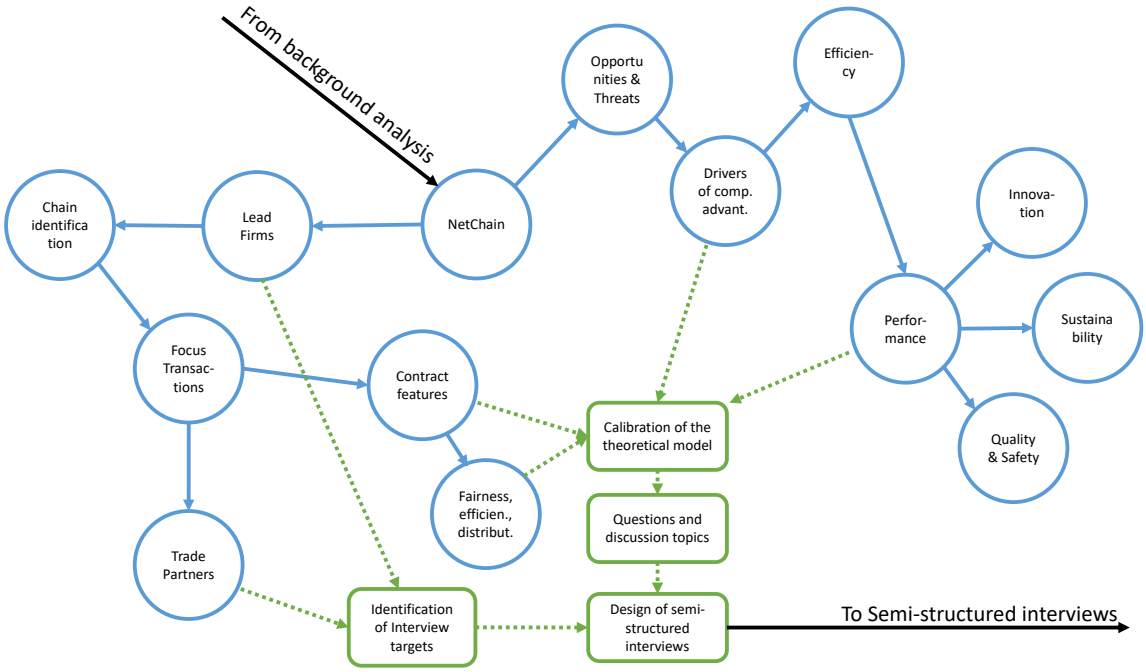
(ii) The point estimation collects information about UTPs in specific transactions (i.e., the focus transactions identified by the panel). Data are collected through semi-structured interviews. Based on *a priori* information, firms' representatives are asked about existing practices, the fairness of these practices, the motivation for their adoption and their impact on business

organization and performance. In particular, the interviews collect data about occurrence of UTPs (existence and fairness of practices); the impact on the outcome of the transaction (on multiple dimensions such as efficiency, redistribution, sustainability and quality/safety); and the pressure on trade partners. Given the likely reluctance of lead firms to answer questions regarding UTPs, the interviews must be designed to extract sufficient information from trade partners. Indirect and qualitative questions are suggested to deal with the fear factor. The semi-structured interviews improve understanding of the netchain and measure how the adoption of UTPs affects the organization and performance of a trading relationship. The transaction-based analysis is of fundamental importance for disentangling the effects of multiple UTPs along the same chain.

This action has two critical characteristics:

- Dyadic approach. Both the lead firm and one (or more) trade partners are interviewed. A comparison of the two points of view provides key information about the efficiency and redistribution effects. As will be mentioned in Part IV, this is one of the most critical and difficult features of IDEA.
- Snowball technique. In order to map the pass-through, the interviewer collects the contact information for the respondent's trading partners. Similar interviews are then conducted with the new contacts. Although the limitations of snowball sampling are well-known, specific goals of process-tracing make this approach preferable to random sampling (Sadler et al. 2010). Noticeably, the use of expert panels allows us to start the sampling from the focus transactions and then trace the pass-through along the netchain. The standard process-tracing technique uses a backward approach, starting from the outcome of interest (for example, the consequences of UTPs on farmers or consumers) and going back to the original cause (for example, Van Evera 1997). The discussion of IDEA application in Part IV illustrates the difficulties due to the fear factor.

Figure 6-1: Illustrative organization of expert panel analysis for IDEA



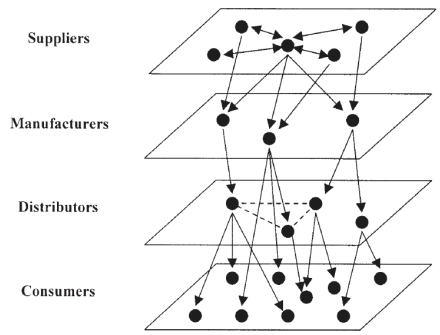
(iii) The third action of IDEA is the generalization of the results of point estimate. The output of the interviews gives detailed representation of the transaction of interest, but it does not provide any assessment about the general validity of the results. In theory, it is possible that the coordination mechanisms in other parts of the netchain are different. The risk of a misleading conclusion is particularly high if the number of interviews is limited or the expert panel fails to report important information. We propose a survey to validate and generalize the results from the point estimate. Most importantly, the survey is necessary to assess the pass-through effects to layers of the netchains not directly involved in the focus transactions. We propose a random stratified sample by chain and layer in order to (a) avoid sampling bias and (b) place the information along the netchain so that the vertical and horizontal links can be exploited for interpretation.

6.1.1 Definition of the boundaries of the analysis: A netchain focus

A key element of the IDEA approach is the identification of the set of firms of interest. In a typical study, researchers identify the transaction of interest and centre the empirical analysis on it. For example, Bonnet and Dubois (2010) investigate the transaction between manufacturers and retailers in the French mineral water industry. Wright (2007) focuses on the transaction between US military commissaries and their suppliers. The focus on a single transaction allows for immediate identification of the parties.

When the focus of the research is the pass-through effect, the empirical analysis must consider a sequence of interrelated transactions. Firms who engage in transactions with the parties involved in the UTPs must be included in the domain of the analysis as well. The computation of the cascade effect requires expanding the focus of the analysis even further.

The preliminary analysis suggests addressing the boundary problem using a netchain approach.



An example of a generic netchain
Source: Lazzarini et al. 2001

A netchain is a "set of networks comprised of horizontal ties between firms within a particular industry or group, such that these networks (or layers) are sequentially arranged based on the vertical ties between firms in different layers" (Lazzarini et al. 2001, p. 7). The ability of the netchain approach to model the role of PO and other forms of horizontal coordination motivates the choice. Although the boundaries of the netchain can be uncertain, the concept offers an analytical tool for identifying the set of firms of interest.

Compared to the standard supply chain approach, netchains provide the theoretical tools for assessing the spill-over effect of UTPs. In fact, the adoption of a UTP in a transaction can trigger adjustments in other firms in the same layer, in addition to vertically interrelated firms.

To the best of our knowledge, the use of netchains in UTP studies is an innovative contribution of the proposal. It has the advantage of including in the analysis firms that exited a given supply chain because of UTPs. These firms are usually ignored by traditional supply chain analyses, with a consequent downward bias in the impact assessment.

The second boundary issue concerns the set of target practices. There is a consensus in the literature that unfairness is a vague and elusive concept (e.g., Sexton 2017). The regulatory effort to define unfairness helps in the design of the empirical analysis. Directive 2019/633 provides a set of 16 black and grey practices (section 2.2.3) that are unambiguous, well-defined and easily explained to respondents. Yet, limiting the analysis to such practices might provide an incomplete representation of the UTP phenomenon. For example, a survey based on a closed list might fail to detect the emergence of new UTPs. At the same time, using general definitions (such as Bowie 1988) might result in an ambiguous setting, where the response is affected by the personal interpretation of the question by the respondent. This preliminary analysis suggests that the working definition of UTPs must carefully consider the trade-off between generality and clarity. General definitions may be vague, but specific examples may be incomplete. The analysis of background information and interaction with the expert panel must provide a working definition of a UTP that is a clear statement identifying the practice and defining its fairness.

The issue is particularly important because the taxonomy of UTPs is expected to evolve over time, as new practices emerge in agri-food netchains. Consequently, the working definition of a UTP must be flexible over time. Also, Member States may have different definitions of UTPs based on national regulation (Cafaggi and Iamiceli 2018). The methodology must account for a possibly evolving and heterogeneous legal framework.

Finally, we remark that the unfairness of given practices may depend on the specific conditions of the transaction. The same practice can be fair in one context and unfair in another. For this reason, it may be necessary to collect auxiliary information about the transaction. Limiting the focus to the objective characteristics of the practices may induce error in measurement. The boundaries of the analysis must include auxiliary information regarding relative bargaining power and the possible efficiency justifications for the practices.

6.1.2 Definition of a theoretical framework for UTP pass-through

A solid theoretical framework is needed for designing an empirical investigation of UTP impact and pass-through. This groundwork activity is necessary to define the information required and interpret the results of the analysis.

The discussion in chapter 2 pointed out two major shortcomings of existing UTP theories: (a) the focus on individual practices and (b) overlooking vertical interactions along the netchain. The proposed framework must provide a theoretical tool to explain these two components.

IDEA moves from the assumption that in agri-food netchains "*lead firms"* may exist. We define lead firms as enterprises that "exert the power of setting the conditions for inclusion of economic agents in the netchain and the gains that accrue to them" (Lee et al. 2012, p. 12326). Examples of lead firms include traders holding the property rights for a club variety, retailers granting or denying shelf-access, and monopsonistic buyers in local markets. Lead firms have some degree of discretion in granting access and can affect the value distribution among participants. Noticeably, netchains can have more than one lead firm, even in the same layer.

Lead firms use (formal or informal) contracts to coordinate the transactions. The set of contracts shapes the governance of the netchain (Gereffi et al. 2005). Contracts are the outcome of a bargaining process and determined by relative bargaining power (Sorrentino et al. 2016). UTPs can emerge as part of the contract when the distribution of bargaining power is imbalanced.

The use of contract theory (and relational contracts in particular) is functional for multiple purposes. First, it defines the context of the transaction and, consequently, assesses the actual unfairness of the practice. Second, it considers the possible joint effect of multiple practices (contract clauses). Third, it allows for vertical interaction since vertical ties can be modelled as constraints in contract design. Chapter 12 illustrates the application of contract theory to the analysis of UTPs in the EU fruit industry.

6.1.3 Pass-through and spill-over

Modern agri-food systems are structured as value chains encompassing several vertically inter-related markets. A well-known characteristic of vertical models is that the equilibria in the interdependent markets are jointly determined (e.g., Gardner 1975). A perturbation in the equilibrium at any stage of the value chain triggers adjustments in all other stages (e.g., Muth 1964; Holloway 1991). Extensive literature has come about concerning the so-called "pass-through" problem, which is the measurement of the price change along a value chain due to an exogenous price shock at a given stage of the value chain (e.g., Weyl and Fabinger 2013).

Most of the literature focuses on price pass-through. Yet, a similar concept can be applied to UTPs. For example, consider a retailer who charges a supplier PO for product deterioration that occurred when the goods were already on the buyer's premises (a black practice under Directive 2019/633, see also chapter 0). This practice is expected to have an impact on farmers, who will receive a lower price for their products. Similarly, a trader paying high service fees to a retailer without a corresponding benefit may lower the price paid to farmers in order gain enough per-unit margin to recover the fixed cost (Bonnet et al. 2013). We refer to changes in trade relationships along the value chain due to the adoption of a UTP at a given stage of the value chain as "UTP pass-through". These examples suggest that UTPs may impact several agents along the value chain. A comprehensive assessment requires the analysis of different stages.

A key conclusion of existing literature is that the intensity of price pass-through depends on the specific characteristics of the market (such as demand and supply elasticity, type of vertical agreements, degree of market/bargaining power) (Gaudin 2016). As a consequence, the evaluation of the intensity of pass-through is an empirical question requiring careful institutional analysis of the transaction. A similar approach is advisable for the analysis of UTP pass-through.

UTP pass-through differs from price pass-through because of its intrinsic multi-dimensional nature. UTPs involve several dimensions of the value chain, not just price and quantity. Examples of such dimensions include quality (Yehezkel 2014), variety of the assortment (Baake and von Schlippenbach 2014; Hamilton and Innes 2017), market access (Marx and Shaffer 2007), and innovation (Sullivan 1997). Consequently, the characterization of UTP pass-through intensity must be multi-dimensional. Unlike price pass-through, a scalar index is not a sufficient measure, and a more comprehensive approach is required.

Unlike the typical price/cost pass-through studies, PTr does not estimate a parameter. Instead, it characterizes a complex, multidimensional process with a mix of descriptive analysis and quantitative indicators. This makes the output of PTr more difficult to interpret than, for example, a regression output. Nevertheless, PTr ensures more information and reduces the risk of misinterpreting the outcome.

From a PTr point of view, a (fair or unfair) trading practice involving farmers can be considered as the outcome of a process along the supply chain. For example, a manufacturer might impose a unilateral contract change on a farmer because the terms of trade with the final retailer have

suddenly changed (see section 14.4.5). The PTr approach is suited for identifying the causal relationship in a complex, multidimensional environment.

We applied IDEA to the Agro-Pontino Kiwi netchain in Italy and to the Lake Constance Apple netchain in Germany. The investigation of two netchains in the fruit industry allowed us to conclude that UTPs are netchain-specific and to assess the differences. The results of the IDEA application are reported in Part IV of this report.

7 B-SEA Design

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The IDEA approach is complex, requiring extensive background information and analysis. In some instances, the objective of the investigation is such that simpler surveys may be more efficient. As discussed in chapter 5, if the goal is just to assess the effectiveness of regulation banning a predetermined set of practices, the structure of IDEA is redundant and unnecessary. For this reason, we designed the B-SEA survey with the specific objective of testing the list of practices in Directive 2019/633. The core of the analysis is a set of questionnaires assessing the occurrence and impact of the UTPs on the predefined list. Like the UGov-GCA survey (section 4.3), the B-SEA is designed as a recurring survey, so that trends can be ascertained.

B-SEA can be more efficient than IDEA in other cases as well. Information regarding the structure and governance of a netchain may not be available to researchers or too costly to acquire. Also, transaction-level analysis may be unfeasible if the number of transactions to be investigated is high. For example, if the scope of the empirical analysis is broad, involving several sectors and/or Member States, running IDEA might be not economically feasible. In these cases, the number of focus transactions is too high, and the empirical investigation cannot cover enough observations to provide a meaningful representation of the netchains.

B-SEA consists of a sequential, survey-based tracing process:

- In the first step, we organize prior knowledge under the assumption that only a list of UTPs and a general description of the netchain are available.
- In second step of B-SEA, we design a sequence of surveys for each layer of the netchain. The samples are random and stratified by layers only (e.g., farmers, traders, manufacturers, retailers), as the chains are unobservable. The survey collects data about the occurrence of UTPs and their drivers, as well as firms' adjustments in their organization and relationships with other trading partners (pressure). According to standard process-tracing methodologies, we plan a sequence of surveys starting with farmers and then moving downstream. The outcome of each survey is used to support the design of the next one. Descriptive inference provides a characterization of UTPs at each segment of the netchain
- In the causal inference of B-SEA, information about the individual firms is aggregated in order to infer the effects of UTPs on the netchain. The key difference with the causal inference in IDEA is that, in B-SEA, individual observations are at the firm level instead of transaction level. As a consequence, the UTPs cannot be attached to specific transactions, but they are assumed to involve the entire firm. Because of the absence of information about vertical links, the estimation of the pass-through can be obtained only by an economic analysis of the results of the surveys at the different layers.

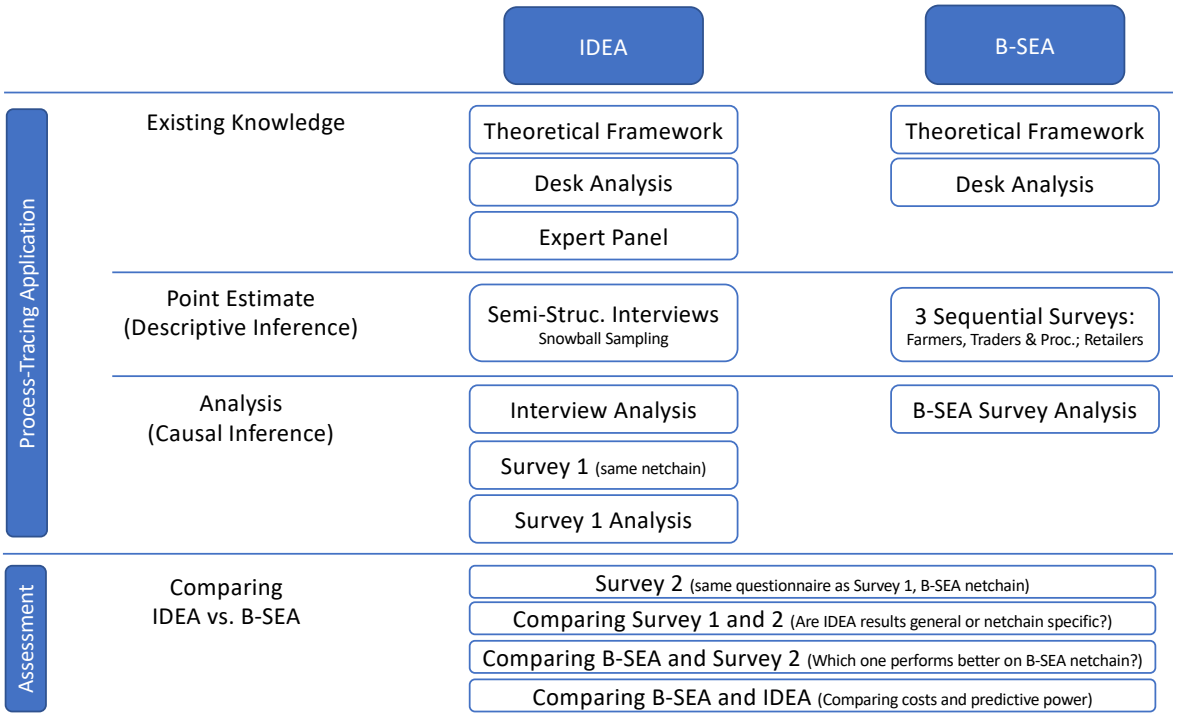
We applied the B-SEA approach to the Slovak fruit industry. The results are discussed in Part III of this report.

7.1 Comparing IDEA and B-SEA

Because B-SEA uses minimal a priori information to design an investigation, we expect the information output to be more limited than the one provided by IDEA. One of the objectives of the empirical analysis is to assess the loss of information.

Figure 7-1 presents a comparison of IDEA and B-SEA. In the assessment step, we conducted an auxiliary survey in Slovakia. We administered the IDEA survey questionnaires to a sample of Slovak farmers and middlemen. Because those questionnaires were designed based on information collected in Germany and Italy, we could assess the generality of the IDEA approach. Then, we compared the outcomes of IDEA and B-SEA for Slovakia. In this way we could assess the possible information loss with B-SEA. The results of the comparison are reported in chapter 16.

Figure 7-1: Comparing IDEA and BSEA results



The differences between the B-SEA and IDEA are due to the different sets of information available when the empirical analysis is designed. Note that the two procedures describe extreme situations in which information is either complete or missing. However, in practice, in-between cases of incomplete information may exist. If partial information is available, it is possible to develop ad-hoc analyses to limit information loss. For example, if the vertical structure of the netchain is unknown but there is information about the lead firms (and the focus transactions), a snowball survey structure can be designed to track the chains and solve the identification problem. The optimal monitoring strategy depends on the objectives and the scope of the analysis. In section 17.1.4 we illustrate an example of a monitoring system built on the results of the trial application of B-SEA and IDEA.

PART III: Investigating UTPs: B-SEA

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Part III of the report illustrates the results of the B-SEA investigation of the Slovak fruit industry. As discussed in chapter 7, the objective of B-SEA is assessment of the degree of protection with respect to a predetermined list of UTPs. In this application, we tested the 16 UTPs covered in Directive 2019/633. The investigation targets the entire Slovak fruit sector, without focusing on specific netchains (unlike IDEA, see Part IV). Because B-SEA does not use specific *a priori* information regarding the organization of a target supply chain, it is possible to run general surveys and obtain comparable results.

The implementation of B-SEA follows a basic process-tracing technique, as described in chapter 7. The investigation is structured as a sequence of sample surveys, collecting point estimations and supporting descriptive inference about the occurrence and impact UTP. For this purpose, we surveyed a sample of 66 farmers and six supermarkets. The causal inference and assessment of the pass-through effect are based on comparison of the results of the two surveys.

Part III is composed of three chapters. In chapter 8 we provide a concise description of the organization of the Slovak fruit industry. The discussion summarizes the *a priori* knowledge that was used in the process-tracing approach. Chapter 9 illustrates the results of the surveys and elaborates on descriptive and casual inference. Chapter 10 discuss the implications of the findings for the design of future UTP-monitoring systems and implementation of Directive 2019/633 by Member States.

8 Characteristics of the Fruit Industry in Slovakia

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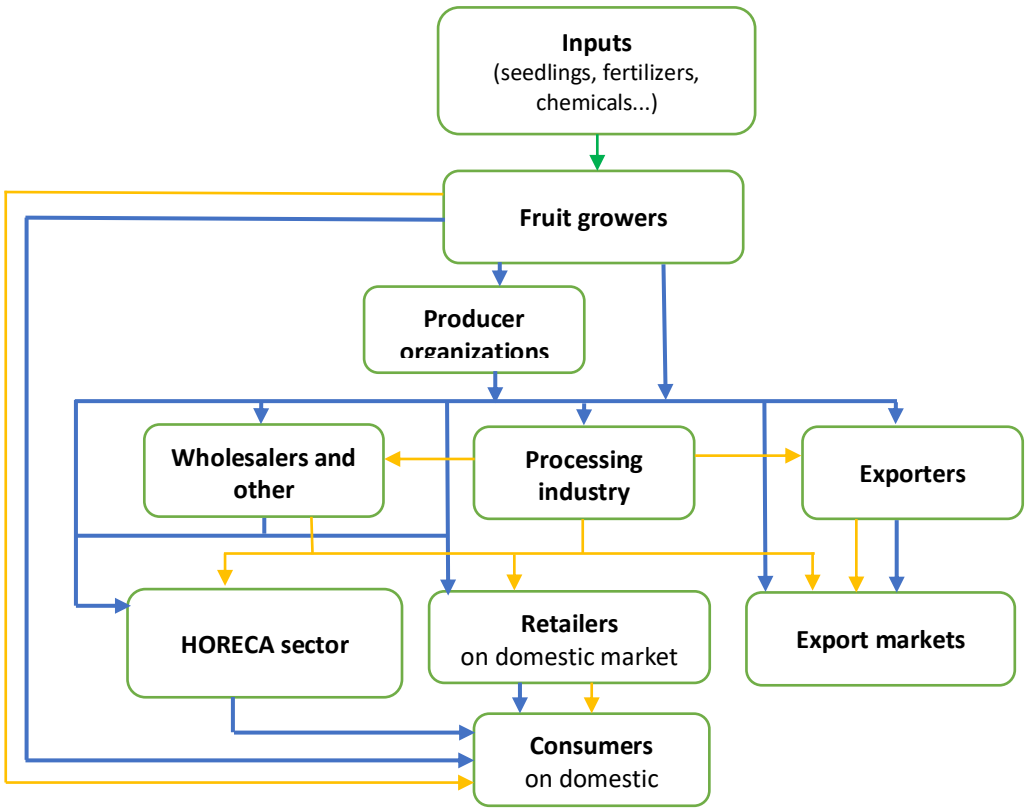
The fruit sector in Slovakia is one of the oldest branches of agricultural production. Slovakia, together with Austria and northern Italy, has some of the best conditions in Europe for growing temperate fruit. These conditions are the result of a favourable geographic location associated with good climatic and irrigation conditions. In addition, significant differences between night and day temperatures provide brightly coloured fruits with good flavour characteristics (Matoskova et al. 2010). However, this potential is not fully exploited in Slovakia. Despite favourable natural conditions, Slovakia has only a 0.32% share of total apple production in the EU. For the past several years, there have been labour shortages in the fruit-growing sector. Fruit growers are not able to collect all their crops, and for this reason many of them have reduced planting area. The Slovak Fruit Union estimates that it could not collect around 20,000 tons of fruit from its members in 2018.

8.1 Description of the fruit (apple) supply chain in Slovakia

The main actors in the fruit value chain in Slovakia are input providers, fruit growers, producer organizations (POs), wholesalers and middlemen and retailers.

Figure 8-1: Stylized representation of the fruit value chain in Slovakia



*Explanation: Blue arrows refer to trade flows of unprocessed fruits, yellow arrows are trade flows of processed products.

According to data from the register of fruit orchards in Slovakia, there were 442 fruit-growing entities as of December 2017. Only 10% of them (45) are members of the Slovak Fruit Union. However, these 45 members together produced 85% of the total fruit production in Slovakia. The Slovak Fruit Union is an association engaged in the production of quality fruit, fruit plants, establishment and restoration of orchards and promotion of integrated fruit production. It also supports the association of its members into producer organizations (POs).

In Slovakia there are two recognized producer organizations which bring together 23 fruit growers. Producer organization BONUM has 15 members: Plantex, s.r.o.; Bioplant, s.r.o.; Š. Ťažár, SHR; O. Ťažár, SHR; Danubius Fruct, s.r.o.; PD Hrušov; B. Ťažár, SHR; Pomi, s.r.o.; Agrislov, s.r.o.; Viliam Kompas, SHR; Dunaj Fruit, s.r.o.; Csicsói Alma, s.r.o; Žitava fruct, s.r.o.; Slovberry, s.r.o.; and Boni-fructi, spol. s r.o. These members together manage 800 ha of intensive orchards. Their total apple production is at the level of 17,000 t per year. The second producer organization, SK Fruit, has eight members: Fructop, spol. s r.o.; PD Trhové Mýto; PD Čachtice; PD Tvrdošovce; Agrotop Topoľníky; PD Prašice; Poľnohospodár Nové Zámky, a.s.; OVD – Ovocinárske družstvo. Together they manage approximately 700 ha of intensive orchards. Annual production of this PO reaches 15,000 t, consisting mainly of apples (93%), peaches (3%) and plums (3%). Although these POs together represent only 5% of all registered fruit-growing entities, their production in 2017 made up 81% of total fruit production in Slovakia.

The main activity of producer organizations is concentrating the supply of production of its members and placing it on the market. For this reason, they are essential for the realization of the Common Market Organization. POs have a better bargaining position with buyers (especially supermarket chains) than individual farmers. Moreover, POs provide their members with coordination of cultivation practices, advise them in implementation and maintenance of quality systems, provide for centralised purchasing of chemicals and—most importantly—provide storage facilities and post-harvest treatment. PO BONUM sells fruit to other traders and middlemen and also directly to supermarkets. PO SK Fruit sells fruit to food-processing firms and other traders and middlemen, who then supply fruit to supermarkets. SK Fruit does not trade directly with supermarkets. Producer organizations are committed to buying at least 80% of its members' production.

Fruit growers who are not members of producer organizations sell their production through wholesalers and other intermediaries or use export companies. Wholesalers and other intermediaries purchase mainly produce of high quality in pre-specified quantities. Only a small proportion of growers who are not members of the POs deliver fruit directly to supermarkets.

A large proportion of fruit growers, especially small growers, sell their production directly to final consumers. The farmers sell directly at the farm, and many farmers offer customers the option to self-pick. Some fruit growers process the fruit themselves, producing fruit juices, ciders, dried fruits, alcoholic beverages and other products.

Many fruit growers deliver their products to the processing industry, as well as the HORECA sector (hotels, restaurants, catering). Other growers deliver fruit to fruit processing plants. In 2017, the Slovak Canning Association consisted of only four companies that process fruits. Members include Novofruct SK, A+Z Rišnovský Halász, RISO-R, and Tomata, and they are primarily focused on the production of compotes and baby food. The main fruit used in their production is apples. In 2017 members of the Slovak Canning Association used 2,615 t of apples to produce various fruit products. Besides apples, they processed 2,259 t of other types of fruit (VUEPP 2018). Fruit in Slovakia is also processed by distilleries. The most important are Gas Familia, STOCK Slovensko, St. Nicolaus, Old Herold, and the Fruit Distillery Cooperation. Some growers sell non-standard fallen apples abroad (mainly to Austria, where large industrial canning plants are built).

9 Analysis of Unfair Trading Practices—Results of the Sample Survey

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In order to provide an assessment of the occurrence of UTPs in the fruit industry, we conducted a sample survey in the fruit netchain in Slovakia, with the primary focus being apple growers. The main objective was to estimate occurrence and pass-through of the 16 UTPs in Directive 2019/633.

We surveyed 66 farmers and six supermarket representatives. This chapter reports the results of the survey.

9.1 Questionnaire design

Following the B-SEA approach, the questionnaire was not tailored to the specific characteristics of the fruit chain but rather included the UTPs from Directive 2019/633 and a selection of practices identified during the literature review.

9.1.1 The farmer questionnaire

The farmer questionnaire was designed to cover the following main aspects:

- general information about the farm and farm manager,
- information about the trade relationship with the main buyer,
- information about specific trade practices based on EU Directive on UTP,
- information about other trade practices, and
- overall evaluation of the trade relationship with the main buyer.

The issues were investigated by asking the farmers to rate how often certain practices occurred in their relationship with the main buyer. When evaluating the severity and impact of UTPs, a 5-point Likert scale was used. Questions with the possibility of multiple answers were used to identify farmers' opinions about the reasons why certain practices occur.

Because the measurement needs to relate to a specific trade relationship, the questions were centred on a relationship with the main buyer. The main buyer is the one who buys the largest share (in value) of apples/fruits in the current year.

9.1.2 The supermarket questionnaire

The supermarket questionnaire has three main sections: information about the firm, the firm's perception about a general overview of the industry and occurrence of UTPs, and information about the procurement channel. The structure of the questionnaire reflects general reluctance of retailers to participate in surveys and provide information about relationships with their suppliers and the practices they engage in.

To gain a picture about retailers' general overall perceptions of the industry, the respondents were asked to agree or disagree on a set of statements using a 5-point Likert scale. Regarding UTPs, they were asked to rate the likelihood of an occurrence of a group of practices also using a 5-point Likert scale. The last section of questionnaire was focused on the procurement channel of retailers—how it is organized, what are the most important criteria when choosing apple/fruit suppliers, information about commitments and delivery obligations, specific requirements and whether retailers have de-listed a supplier in the last five years and why.

9.2 Sample description

As a sampling frame we used the register of orchards in Slovakia, provided by the Central Control and Testing Institute in Agriculture (UKSUP). The database of UKSUP contains data on orchards for all fruit species grown in Slovakia. Many farms in Slovakia grow several fruit species. The survey focused on apple growers; however, due to the small number of apple farms and because of a low response rate, we included in the sample growers of other fruits. In total, 82% of surveyed farmers were apple growers. Data was collected mainly through face-to-face interviews (68%). Some farmers (32%) refused personal meetings but agreed to fill out an electronic or paper version of the questionnaire. Data was collected for the year 2018. Face-to-face interviews lasted on average between 45 minutes and an hour.

9.2.1 Sampling approach

The study implemented a stratified sampling procedure with a random selection of the final sample units (i.e., apple/fruit farms). The sample was stratified by orchard size. The sample design and data collection involved the following steps:

1. In the first stage, a list of fruit growers in Slovakia was acquired from the Central Control and Testing Institute in Agriculture (UKSUP) which is responsible for the register of orchards in Slovakia.

As of December 2017, there were 442 subjects growing fruit. However, in a majority of orchards with areas less than three ha, fruit is grown only for personal consumption; thus, these growers do not encounter unfair trading practices. Therefore, based on the data provided and a pilot phase, we excluded orchards smaller than one ha.

2. In the second stage, the sampled fruit farms were randomly selected.

The contact details for fruit farmers were provided together with database of fruit orchards by the Central Control and Testing Institute in Agriculture (UKSUP).

Table 9-1: Sample size of B-SEA farm survey

Size of Fruit Orchard (ha)	N. of farms (in 2017, UKSUP)		Sample		Weight
	N. of fruit growers	%	N. of fruit growers	%	
1 - 10 ha	201	57%	27	41%	7.44
10 - 50 ha	123	35%	30	45%	4.10
50 - 100	19	5%	6	9%	3.17
> 100 ha	9	3%	3	5%	3.00
Total	352	100%	66	100%	5.33

The sample selection was based on orchard size in order to include fruit growers of different sizes and reflect distribution at the national level. Table 9-1 shows the number of fruit farmers in Slovakia divided into groups according to fruit orchard size (in ha) and the distribution of the sample by fruit orchard size. The final sample consisted of 66 interviews. Fruit growers owning an orchard of less than ten ha represent 41% of our sample. Fruit growers with orchards bigger than ten but smaller than 50 ha are the most heavily represented in our sample (45%). The largest fruit growers, owning orchards of a size greater than 100 ha, represent 5% of our sample. They are also the smallest group among all fruit growers in Slovakia.

The representativeness of a sample was checked by a chi-square test (χ^2 test). Because χ^2 = 7.806 < critical value = 7.815 (alfa = 0.05), we fail to reject the null hypothesis, which means that the distribution in a sample does not significantly differ from the population distribution.

In total, 176 farmers were contacted by phone and. They were explained the purpose of the survey. If they agreed to participate, the place and time of the interview (usually at home or at farm) were agreed. Some farmers preferred an electronic or paper version of the questionnaire rather than a personal meeting.

The response rate was 37.5%. Farmers were reluctant to participate in the survey for several reasons. Some farmers did not want to share information about trade relationships with their buyers, since they consider this information confidential; moreover, they were afraid that participation in the survey could threaten the trade relationship with their main buyer. Therefore, the reluctance to participate can be partly attributed to "fear factor". Fear factor was implied as a reason not to participate in approximately 20% of cases. Around 9% of contacted farmers had newly established orchards without any harvest yet. Fifteen percent of contacted farmers reported that the orchards they own are old and abandoned and do not produce for the market. The rest of the contacted farmers declined to participate in the interview mainly because they have very small orchards and small production of apples. They organize fruit self-picking at their farms. Moreover, 19% of farmers who agreed to a personal meeting sell production to final consumers and therefore do not face UTPs. These farmers are small and therefore unable to deliver production to shops and retailers.

For the B-SEA supermarkets questionnaire, all big supermarket chains (11) in Slovakia were contacted. The Slovak market is dominated by foreign supermarket chains, which account for approximately 80% of total food retail turnover. These chains include Tesco, Lidl, Kaufland, Billa and Metro. There are also Slovak supermarket chains which have important positions on the market: Fresh Market, CBA Slovakia, Coop Jednota, Terno, Yeme and Nitrazdroj. Six representatives of supermarkets (both domestic and foreign) agreed to participate in the survey.

9.3 Results of the BSEA farmer sample survey

9.3.1 Farm characteristics

In recent years, the number of fruit farmers has increased slightly in Slovakia. In our survey, family farms make up only 20% of all respondents, private corporations make up 62%, and the remaining 18% are cooperatives.

Forty-four percent of fruit growers specialize in apple production, 6% of farms grow various types of fruit, and 50% of fruit growers do not specialise specifically in fruit production but also cultivate other crops and keep animals, too. The average size of the farms that grow fruits is 729.8 ha, while the average size of an apple orchard is 28.3 ha.

Regarding storage facilities, 62% of farms do not have on-farm storage, 12% have on-farm storage for the entire production and the rest (26%) have on-farm storage for some portion of the output.

Interviews were conducted with farm managers (94% of cases). Males manage 82% of the surveyed fruit farms. Farm managers usually work exclusively and full-time on the farm (91%). The average age of farm managers is 51 years. The level of education attained by managers is in the majority of cases a university degree or higher (67%), while the rest (33%) received at least a high school diploma.

Table 9-2: Selected characteristics of farms in the fruit sector

Type of farm:	
- Family farm	19.7%
- Incorporated	62.1%
- Cooperative	18.2%
Farm's turnover (in mil. EUR)	
0 - 2 mil. EUR	66.7%
2 - 10 mil. EUR	31.8%
10 - 50 mil. EUR	1.5%
Specialization of the farm	
Specialized in apple production	44%
Specialized in fruit	6%
Not specialized	18%
Specialized in other	32%
Apple varieties	
Club	33%
Free	100%
Average size of the farm (ha)	729.8
Average size of apple (fruit) orchard (ha)	28.3 (9.0)

9.3.2 Farmers' marketing channels

Almost 26% of the fruit growers surveyed are members of POs. Sixty-four percent of the surveyed farmers sell their production to private traders. Only 14% of farmers deliver their production directly to retailers (either small or large). Thirty-five percent of farmers stated that

they deliver their production through other channels, namely processors (e.g., baby food producers, juice producers, distilleries). A majority of farmers (84.8%) sell their production directly to consumers or at farmer markets. In recent years, a popular form of selling different kinds of fruits is organising self-picking. Twenty percent of farms sell their entire production only through self-picking.

Table 9-3: Sales channels used by surveyed farmers

Sales channels	% of farmers
Local traders	45.45%
Other traders	18.18%
Coop/PO	25.76%
Consumers	84.85%
Small retailers	1.52%
Large retailers	12.12%
Other	34.85%

9.3.3 Main buyer

Investigation of the occurrence of UTPs focuses on the trade relationship between the farmer and the main buyer. In this section we describe findings about the trade relationships of farmers with their main buyers.

In Slovakia, members must deliver at least 80% of their production to POs. Therefore, POs are the main buyers for all their members (26% of respondents). Small farmers selling directly to consumers make up 20% of all respondents. Twenty-eight percent of farmers sell to private traders. Less than 10% of farmers deliver directly to retailers. The remaining 17% sell to other buyers (baby food producers, juice producers, distilleries, etc.). Farmers deliver to their main buyer on average 73% of their production. All apple farmers deliver free apple varieties to their main buyer, and 31% reported they also deliver club apple varieties.

Table 9-4: Type of the main buyer

Main buyer	% of farmers	Average orchard size (ha)
Local traders	16.67%	12.91
Other traders	10.61%	11.89
Coop/PO	25.76%	49.08
Consumers or farmer markets	19.70%	7.94
Small retailers	1.52%	9.00
Large retailers	9.09%	11.08
Other	16.67%	36.05
Total	100%	24.76

Farmers were asked about the size of their main buyer (Table 9-5). Twenty-four percent of farmers were not able to estimate the turnover of their main buyer, while 44% of farmers identified their main buyer as a firm with turnover above 10 mil. EUR. Ninety-eight-and-a-half percent of farmers have a turnover less than 10 mil. EUR (Table 9-2), which implies buyers are bigger and more powerful than farmers. From this point of view, the fear factor can be justified. The bigger the imbalance of power between farmer and buyer, the bigger the farmer's fear of possible retaliation.

Table 9-5: Size of the main buyer (turnover in mil. EUR)

Turnover of the main buyer in mil. EUR	% of farmers
0 - 2 mil. EUR	1.52
2 - 10 mil. EUR	10.61
10 - 50 mil. EUR	28.79
50 - 150 mil. EUR	9.09
150 - 350 mil. EUR	0.00
Exceed. 350 mil. EUR	6.06
Don't know	24.24
Selling to consumers only	19.70
Total	100.00

Table 9-6: Ranking of two main reasons for a decision to trade with a main buyer

	1st main reason (% of farmers)	2nd main reason (% of farmers)
Best price	7.58	7.58
Best overall terms	16.67	21.21
Takes large volumes	39.39	13.64
Reputation	3.03	4.55
Is the only buyer I can sell to	7.58	13.64
Proximity	6.06	7.58
Non-business related reasons	0.00	6.06
Technical assistance	0.00	0.00
Services	0.00	6.06
N.A.	19.70	19.70

Regarding the length of trade relationships, 38% of the surveyed farmers declared their trade relationship with the main buyer to last longer than 10 years. Fourteen percent of farmers stated they had a trade relationship with the main buyer for less than ten but more than five years; 48% of farmers have had a trade relationship with the main buyer for less than five years; and 21% stated they had traded with their main buyer only once.

In the context of the trade relationship's length, it is interesting to look at the factors which fruit farmers consider as the most important reasons to trade with their main buyer. Farmers were asked to rank the two most important reasons for trading with their main buyer from a list of options (Table 9-6). Most of the surveyed farmers (40%) chose "buyer takes large volumes" as the most important reason. "Best overall terms" were chosen by 17% of surveyed farmers. Price—one of the most crucial factors in any trade relationship—was chosen by only 8% of farmers as the main reason for a trade relationship with a main buyer. The same number of farmers chose "best price" as the second most important reason. "Best overall terms" offered by a buyer were ranked by 21% of farmers as the second most important reason in a trade relationship with the main buyer.

Concerning farmers' satisfaction with their main buyer, 24% of farmers stated they are totally satisfied. Almost 29% of farmers said they are satisfied but open to new opportunities. By contrast, 30% of farmers stated they are not satisfied and thus are either looking for alternatives, will change buyer soon, or simply have no other options. Satisfaction considerably differs according to the type of main buyer.

Table 9-7: Satisfaction with the main buyer

	Private traders	Coop/PO	Consumers	Retailers	Other	Total
N.A.	0.00	0.00	100.00	0.00	0.00	19.70
Yes, totally	22.22	47.06	0.00	14.29	27.27	24.24
Yes, but I am open to new opportunities	22.22	52.94	0.00	28.57	36.36	28.79
No, I am looking for alternatives	27.78	0.00	0.00	57.14	0.00	13.64
No, I will change buyers soon	16.67	0.00	0.00	0.00	36.36	10.61
No, but I have no other options	11.11	0.00	0.00	0.00	0.00	3.03
No but I have non-business/personal reasons to keep the buyer	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00

Table 9-8: Farmers' evaluation of main buyer's marketing skills in promoting and selling the product to the retailer/consumer

	Local traders	Other traders	Coop/PO	Consumers	Small retailers	Large retailers	Other	Total
N.A.	0.00	0.00	0.00	100.00	0.00	0.00	0.00	19.70
Very strong negotiator	0.00	14.29	23.53	0.00	0.00	16.67	0.00	9.09
Strong negotiator	18.18	28.57	23.53	0.00	0.00	0.00	18.18	15.15
Average negotiator	9.09	14.29	41.18	0.00	0.00	83.33	18.18	24.24
Poor negotiator	9.09	14.29	0.00	0.00	0.00	0.00	9.09	4.55
Very poor negotiator	27.27	0.00	0.00	0.00	0.00	0.00	0.00	4.55
Don't know	36.36	28.57	11.76	0.00	100.00	0.00	54.55	22.73
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Farmers were also asked to evaluate the marketing skills of their main buyers (Table 9-8). While 23% of farmers were not able to evaluate it, 24% of respondents think their main buyer is an average negotiator. Looking more closely at the results according to the type of buyer, 47% of PO members consider a PO to be a strong or very strong negotiator.

It is well established in the literature that an imbalance in the bargaining power of trade partners is one of the factors for the occurrence of UTPs. The ability to easily replace a trading partner can be partly perceived as a sign of more power in a trade relationship. We asked farmers if their main buyer could easily find other farmers to replace them, and if farmers could replace the main buyer easily. The following two tables report farmers' perceptions about the ability to replace and to be replaced, by the type of main buyer.

Table 9-9: Can the buyer find other farmers to replace you as a trade partner?

	Private traders	Coop/PO	Consumers	Retailers	Other	Total
N.A.	0.00	0.00	100.00	0.00	0.00	19.70
Yes, easily	50.00	0.00	0.00	71.43	63.64	31.82
Yes, with some effort	33.33	0.00	0.00	0.00	0.00	9.09
Not easily	16.67	0.00	0.00	28.57	36.36	13.64
Cannot be replaced	0.00	0.00	0.00	0.00	0.00	0.00
I am a member of the buyer (coop/PO)	0.00	100.00	0.00	0.00	0.00	25.76
Total	100.00	100.00	100.00	100.00	100.00	100.00

Table 9-10: Can you replace the buyer easily?

	Private traders	Coop/PO	Consumers	Retailers	Other	Total
N.A.	0.00	0.00	100.00	0.00	0.00	19.70
Yes, easily	22.22	0.00	0.00	0.00	0.00	6.06
Yes, but it would be costly	50.00	17.65	0.00	85.71	36.36	33.33
No, I cannot	27.78	82.35	0.00	14.29	63.64	40.91
Total	100.00	100.00	100.00	100.00	100.00	100.00

Our results show that farmers selling to middlemen, retailers and also to other buyers perceive themselves as more easily replaceable than those who sell to POs. On the other hand, 41% of farmers reported that they cannot replace their main buyer because it would be too costly (81%), there is no other buyer (70%) and the farmer has non-business/personal obligations (11%). Thirty-three percent reported they can replace their buyer, but it would be too costly—contract terms would be worse (59%), on-farm investments would be required (50%), farmer would have to pay an exit fee (9%). As these results imply, the costs are higher when trading with private traders, retailers and other buyers than with POs.

9.3.4 Information about the trade relationship with the main buyer

Farmers were asked how their transactions with the main buyer are organized. With respect to supply agreement, 44% of farmers have no supply agreement with the main buyer, and 3% have only an informal agreement. The most prevalent form of organization of transactions is a formal supply agreement with no orders. This category consists mainly of PO members.

When the buyer has a commitment to buy a certain amount of production, farmers enjoy more certainty, because they do not have to worry that the buyers will refuse their production. On the other hand, buyers (traders, retailers) want to be sure that farmers will deliver the agreed amount, and therefore supply agreements may specify this obligation. We asked farmers whether their buyer has a commitment to buy products and whether farmers have a delivery obligation.

Table 9-11: Organization of transactions with the main buyer

	No Supply Agreement	Informal Supply Agreement	Formal Supply Agreement
No orders	24.24	0.00	25.76
Informal orders	18.18	3.03	6.06
Formal orders	1.52	0.00	21.21
Total % of farmers	43.94	3.03	53.03

Table 9-12: Does the buyer have a commitment to buy?

	Private Traders	Coop/PO	Consumers	Retailers	Other	Total
N.A.	0.00	0.00	100.00	0.00	0.00	19.70
Yes, total production	0.00	17.65	0.00	0.00	18.18	7.58
Yes, a minimum quantity	5.56	82.35	0.00	0.00	9.09	24.24
No	94.44	0.00	0.00	100.00	72.73	48.48
Total	100.00	100.00	100.00	100.00	100.00	100.00

Table 9-13: Do you have a delivery obligation?

	Private Traders	Coop/PO	Consumers	Retailers	Other	Total
N.A.	0.00	0.00	100.00	0.00	0.00	19.70
Yes, total production	0.00	11.76	0.00	0.00	0.00	3.03
Yes, a minimum quantity	5.56	88.24	0.00	14.29	9.09	27.27
Yes, any quantity the buyer asks for	5.56	0.00	0.00	0.00	45.45	9.09
No	88.89	0.00	0.00	85.71	45.45	40.91
Total	100.00	100.00	100.00	100.00	100.00	100.00

In 25% of cases, farmers reported that their buyers have a commitment to buy a minimum quantity, and another 8% reported that their buyers have a commitment to buy their total production. These buyer commitments were mainly reported by members of POs. In 95% of cases these commitments are formal.

On the other hand, all members of POs reported that they have a delivery obligation either for total production (12%) or for a minimum quantity (88%). Compared to other buyers, this implies a more balanced relationship between POs and their members. In the case of other buyers, 55% of farmers reported they have obligation to deliver either a minimum quantity or any quantity the buyer asks, but only 25% of farmers reported that the buyer also has a commitment to buy their production. Ninety-two percent of farmers reported that they have a formal obligation.

The price of a product, quantity the buyer is willing to buy and quantity the farmer is able to deliver are key elements in any trade relationship. Table 9-14 implies a level of uncertainty when it comes to a price, since the majority of farmers have a reliable estimate of the selling price after harvest or after the products have been delivered to the buyer.

Table 9-14: When do you have a reliable estimate of the sale price of your fruit/apples?

	Private Traders	Coop/PO	Consumers	Retailers	Other	Total
N.A.	0.00	0.00	100.00	0.00	0.00	19.70
When planting the new trees	0.00	0.00	0.00	0.00	0.00	0.00
Before the harvest season	11.11	0.00	0.00	0.00	36.36	9.09
After harvest	72.22	0.00	0.00	42.86	63.64	34.85
After the products have been delivered to the buyer	16.67	100.00	0.00	57.14	0.00	36.36
After the buyer sells the products	0.00	0.00	0.00	0.00	0.00	0.00
Total	100.00	100.00	100.00	100.00	100.00	100.00

Regarding the estimate of the quantity the buyer will buy, only 11% of farmers have a long-term agreement that specifies quantity, and 29% of farmers have a reliable estimate before the harvest of the quantity the buyer will buy every year. This is especially true in the case of POs and other buyers. In the case of retailers, farmers tend to receive unpredictable orders throughout the year.

Table 9-15: When do you have a reliable estimate of the quantity the buyer will buy?

	Private Traders	Coop/PO	Consumers	Retailers	Other	Total
N.A.	0.00	0.00	100.00	0.00	0.00	19.70
When planting the new trees	0.00	0.00	0.00	0.00	0.00	0.00
I have a long-term agreement that specifies quantity	11.11	17.65	0.00	0.00	18.18	10.61
Yearly, before harvest season	16.67	58.82	0.00	14.29	45.45	28.79
Yearly, after harvest	55.56	17.65	0.00	14.29	27.27	25.76
Receive unpredictable orders throughout the year	16.67	5.88	0.00	71.43	9.09	15.15
Total	100.00	100.00	100.00	100.00	100.00	100.00

Decisions about what and how to produce are exclusively in the hands of the farmer, but buyers may have special requirements regarding the product or production process. While 47% of farmers reported they have to follow general standards, one third of farmers must follow specific instructions and 42% must comply with product standards. Specific instructions are especially required by retailers and other buyers, while product standards are required by private traders and POs.

Table 9-16: The farmer follows the buyer's production specifications (multiple answer)

	Private Traders	Coop/PO	Consumers	Retailers	Other	Total
N.A.	0.00	0.00	100.00	0.00	0.00	19.70
No, free to produce what and how he/she wants	38.89	11.76	0.00	0.00	0.00	13.64
Yes, must follow general standards (global gap, etc.)	33.33	88.24	0.00	14.29	81.82	46.97
Yes, must follow specific instructions (harvesting, delivery time, etc.)	11.11	35.29	0.00	71.43	81.82	33.33
Yes, must comply with product standards	55.56	64.71	0.00	28.57	45.45	42.42
Yes, must use buyer's on-farm technical assistance	0.00	0.00	0.00	0.00	0.00	0.00
Yes, must grow required varieties	0.00	5.88	0.00	0.00	27.27	6.06

However, meeting these requirements is not always easy, with 50% of the surveyed farmers finding it difficult to do and 48% saying it is not so easy. Some farmers stated they would not be able to comply with these requirements without technical assistance (2%). We asked farmers what happens if they fail to comply with product specifications. As Table 9-17 shows, light and severe violations lead mainly to price reductions or fines, while repeated violations cause reductions in future orders.

Farmers were also asked to evaluate the consequences for the buyer if they fail to fulfil product specifications. Most of the farmers (91%) reported that, in the case of a light violation, the consequences for buyer are minimal. According to farmers, severe and repeated violations lead to increases in the buyer's costs.

Table 9-17: What are the consequences you might expect if you fail to comply with the product specification (if any)? (multiple answer)

	Light violation	Severe violation	Repeated violation
Nothing/minimal	27.27	0.00	0.00
Price reductions/fines	77.27	52.27	11.36
Product rejection	2.27	88.64	47.73
Reduction in future orders	0.00	31.82	75.00
Non-renewal at expiration	0.00	2.27	9.09
Contract termination	0.00	0.00	13.64

Table 9-18: What are the consequences for your main buyer if you fail to comply with the product specification? (multiple answer)

	Light violation	Severe violation	Repeated violation
Minimal (can reject and replace the product easily)	90.91	20.45	15.91
Cost increase (can reject and replace at a cost)	13.64	81.82	65.91
Critical (cannot reject or replace, lost business opportunities)	0.00	0.00	9.09
Reduction in future orders	0.00	0.00	9.09

A written contract defines and regulates the relationship between trade partners by setting the conditions under which fruit will be delivered and clarifying the most important elements (prices, quality, and quantity). The written form of a contract is important in order to take legal action towards a trading partner in the event of a breach of contract terms. Farmers in our survey have with their main buyer either a formal contract (38%) or a contract based on membership in a PO (28%). Twenty-six percent of farmers reported they have no agreement with a buyer. These farmers sell fruit directly to consumers or trade with private traders.

Table 9-19: The terms of the contract/agreement are the same for all farmers in the area

	Private Traders	Coop/PO	Consumers	Retailers	Other	Total
A formal contract	61.1	0.0	0.0	100.0	63.6	37.9
An informal/tacit/customary agreement	11.1	0.0	0.0	0.0	36.4	9.1
Coop/PO membership	5.6	100.0	0.0	0.0	0.0	27.3
No agreement (spot markets)	22.2	0.0	100.0	0.0	0.0	25.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

Sometimes, farmers are able to negotiate with their main buyer special terms which are different from the contracts of other farmers. Only 22% of farmers reported that the terms of their contract are different from those of other farmers in the area. But 59% of farmers stated that they actually do not know what type of contract is offered to other farmers.

The way in which the contract terms are agreed upon between trading partners reflects the (im)balance of power of the contracted parties. When the contract terms are imposed by the buyer with no room for negotiation, it implies that the buyer is much more powerful. Eighteen percent of farmers said that terms of contract are fully imposed by the buyer, while 6% said

there is only a little room for negotiation. This way of making agreements occurs particularly in the case of private traders.

Table 9-20: The terms of the contract/agreement

	Private Traders	Coop/PO	Retailers	Others	Total
Imposed by the buyer (take it or leave)	35.7	5.9	0.0	27.3	18.4
There is little room for negotiation	21.4	0.0	0.0	0.0	6.1
Key terms (such as, price, quantity or quality) are negotiated	35.7	11.8	42.9	45.5	30.6
The entire contract/agreement is negotiated	7.1	82.4	57.1	27.3	44.9
Total	100.0	100.0	100.0	100.0	100.0

Regarding the duration of the contract, more than half of farmers (51%) reported that they have a contract for a fixed period. Ninety-one percent of these farmers reported a duration of one year, and 9% reported a duration of five years. Five percent of farmers stated that the duration of the contract is not clear to them. The rest of the farmers stated that there is no expiration date (45%).

Regardless of the form of the contract (formal or informal), farmers were asked if they would like to continue trading with the same buyer in the future. Forty-two percent of farmers reported they would like to continue, 12% of farmers do not want to continue, and the rest of farmers are undecided. Eighty-eight percent of farmers want to continue in a trade relationship with POs. The biggest number of farmers (57%) do not want to continue in a trade with retailers.

Table 9-21: Do you expect to trade with the same buyer after the expiration of the contract (or in the future, if no contract)?

	Private Traders	Coop/PO	Retailers	Others	Total
N.A.	0.0	0.0	0.0	0.0	19.7
Yes	22.2	88.2	14.3	72.7	42.4
Maybe	44.4	11.8	28.6	18.2	21.2
No	16.7	0.0	57.1	9.1	12.1
I don’t know	16.7	0.0	0.0	0.0	4.5
Total	100.0	100.0	100.0	100.0	100.0

Farmers were asked to choose and rank up to three contract terms they would like to change. Fifty-five percent of farmers would welcome a change in pricing rules in the first place. Answers are more diverse for the second and third terms they would like to change (Table 9-22).

Table 9-22: If you could change one or more terms of the trade relationship, which one(s) would you choose?

	1st term	2nd term	3rd term
Pricing rules	**54.55**	12.12	10.61
Timing of payments (late payments, etc.)	4.55	1.52	15.15
Buyer's production requirements	0.00	10.61	4.55
Product quality standards	9.09	**18.18**	7.58
Quality testing/rejection	6.06	9.09	**24.24**
Upfront payments	0.00	0.00	0.00
Fines or liabilities for standard violations	0.00	4.55	1.52
Liability for product wastage	0.00	1.52	4.55
Short notice on orders	0.00	6.06	0.00
Buyer's order cancelation on short notice	0.00	0.00	0.00
Investment requirement	0.00	1.52	0.00
Buyer's lack of commitment to buy the product	4.55	3.03	1.52
Delivery obligations	1.52	10.61	3.03
Buyer's unilateral renegotiations	0.00	0.00	4.55
Duration of contract: too short	0.00	0.00	0.00
Duration of contract: too long	0.00	0.00	0.00
N.A.	19.70	19.70	19.70

9.3.5 Information about specific trade practices (based on EU UTP Directive)

The following section of the questionnaire focused on the occurrence of practices listed in the EU Directive on UTPs. For each practice, farmers were asked a series of same/similar questions. First, they were asked how often a certain practice occurs and how severe the impact of the practice is on their business. In case a practice causes an important problem for them, they were also asked whether they are able to give a rough estimate of the cost of this practice for their business per year. Farmers were also asked to evaluate the fairness/unfairness of the practice on their business with a 5-point Likert scale. Lastly, they were asked to give an opinion why the practice is in place.

Late payments for perishable food

Fruits are perishable products. A product should be considered perishable if it can be expected to become unfit for sale within 30 days from the last act of harvesting, production or processing by the supplier. This is regardless of whether the product is further processed after sale and regardless of whether after sale the product is handled in accordance with other applicable rules, in particular food safety rules. Late or slow payments are a massive problem, especially for small businesses. According to the EU Directive on UTP, payments after 30 or more calendar days following receipt of the supplier's invoice, or payments after 30 calendar days following the delivery, are prohibited.

We asked farmers questions related to payments for their products and whether there are delays in payments from their main buyer. As Table 9-23 shows, the majority of farmers send the invoice to the buyer either at delivery or before (48%) or within 30 days from delivery (27%).

Table 9-23: When is the invoice sent to the buyer?

	N.A.	At delivery or before	Within 30 days from delivery	After more than 30 days from delivery	At the end of the season/ at agreed upon times	There is no invoice	Total
Private traders	0.00	83.33	16.67	0.00	0.00	0.00	100.00
Coop/PO	0.00	47.06	35.29	0.00	17.65	0.00	100.00
Consumers	100.00	0.00	0.00	0.00	0.00	0.00	100.00
Retailers	0.00	57.14	42.86	0.00	0.00	0.00	100.00
Other	0.00	45.45	54.55	0.00	0.00	0.00	100.00
Total	19.70	48.48	27.27	0.00	4.55	0.00	100.00

Table 9-24: How often are payments late?

	N.A.	Never	Seldom	Sometimes	Often	Very often	Almost always	Always	Total
Private traders	0.00	50.00	5.56	27.78	11.11	0.00	5.56	0.00	100.00
Coop/PO	0.00	76.47	17.65	5.88	0.00	0.00	0.00	0.00	100.00
Consumers	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Retailers	0.00	0.00	14.29	28.57	14.29	0.00	42.86	0.00	100.00
Other	0.00	36.36	9.09	18.18	0.00	9.09	27.27	0.00	100.00
Total	19.70	39.39	9.09	15.15	4.55	1.52	10.61	0.00	100.00

Delays in payments seem to be an important issue. Thirty-two percent of farmers reported payment from the main buyer is sometimes to always late. This issue is associated primarily with retailers and other buyers. There is significant difference between POs and other buyers, with 76% of farmers reporting that payments from POs are never late.

Late payments pose an important problem for 44% of farmers, and for 26% it is an unsustainable problem in the long-run. However, when asked to estimate the cost of this practice for their business per year, 90% of farmers were not able to answer. The average estimate by the rest of the farmers was 12,500 EUR/year. Most of the farmers consider this practice unfair or totally unfair.

Table 9-25: How severe is the impact of late payments on your business, and do you consider the practice fair or unfair?

Impact severity of practice	% of farmers
An inconsequential problem	7.41%
A mild problem	18.52%
An important problem	44.44%
A severe problem	3.70%
An unsustainable problem in the long-run	25.93%

Impact of practice	% of farmers
Totally unfair	37.04
Unfair	55.56
Neither fair nor unfair	7.41
Fair	0.00
Totally fair	0.00

Table 9-26: In your opinion, the practice is in place (multiple answers) because:

	% of farmers
The buyer wants to increase its profits	29.63
The buyer is reacting to somebody else's practices	14.81
It's customary	22.22
The buyer wants to offer a better service/deal to his/her customers	0.00
The buyer knows I cannot do anything about it, although this creates problems for me	77.78

When asked why this practice is in place, 78% of farmers think that buyers are late with payments because they know farmers can do nothing about it.

Short-notice cancelation of orders

Cancelling orders on short notice does not allow producers to find an alternative to market or use their products, posing a significant problem for all producers. This is particularly an issue for farmers, since the perishable nature of their products decreases the time they have to find an alternative in case the buyer cancels orders. According to the UTP Directive, a notice of less than 30 days is considered short.

We asked farmers how often their main buyer cancels orders on short notice. According to the results, short-notice cancelation of orders does not seem to be a serious issue in the fruit sector. Only 9% reported that it happens often or very often and only in relationship with private traders. For a majority of these farmers (54%), this issue poses an important problem.

Table 9-27: How often do buyers cancel orders on such short notice that it is not possible to find another buyer offering similar conditions?

	N.A.	Never	Seldom	Sometimes	Often	Very often	Almost always	Always	Total
Private traders	0.00	22.22	33.33	11.11	16.67	16.67	0.00	0.00	100.00
Coop/PO	0.00	58.82	35.29	5.88	0.00	0.00	0.00	0.00	100.00
Consumers	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Retailers	0.00	28.57	0.00	71.43	0.00	0.00	0.00	0.00	100.00
Other	0.00	81.82	9.09	9.09	0.00	0.00	0.00	0.00	100.00
Total	19.70	37.88	19.70	13.64	4.55	4.55	0.00	0.00	100.00

Table 9-28: How severe is the impact of this practice on your business, and do you consider the practice fair or unfair?

Impact severity of practice	% of farmers
An inconsequential problem	7.14
A mild problem	25.00
An important problem	53.57
A severe problem	10.71
An unsustainable problem in the long-run	3.57

Impact of practice	% of farmers
Totally unfair	32.14
Unfair	53.57
Neither fair nor unfair	14.29
Fair	0.00
Totally fair	0.00

Most of the farmers (68%) think that the practice is in place not only because the buyer is reacting to somebody else's practices, but also because the buyer is aware that farmers can do nothing about it (57%).

Table 9-29: In your opinion, the practice is in place (multiple answers) because:

	% of farmers
The buyer wants to increase its profits	7.14
The buyer is reacting to somebody else's practices	67.86
It's customary	25.00
The buyer wants to offer a better service/deal to his/her customers	0.00
The buyer knows I cannot do anything about that although this creates problems for me	57.14

Unilateral renegotiation of the contract/agreement

When it comes to changes in the supply agreement, 20% of farmers (those who have formal/informal multi-order contracts or agreements) reported that every order has its own rules. For 35% of farmers there is a change in the supply agreement once a year. Six percent of farmers stated there are changes more than once a year.

Changes in the supply agreement are not necessarily considered bad or unfair. It depends how these changes are made. In order to consider any change as fair, it should be agreed between both parties. However, when changes are imposed, it might be considered an unfair practice. The following tables show the changes in different terms of contracts/agreements experienced by the surveyed farmers, as per type of buyer.

Table 9-30: On average, how often do the terms of the contract/agreement change?

	Any order has its own rules	More than once a year	Once a year	Less than once a year	Less than once every three years	Only at expiration (if any)	Never	Total
Private traders	50.00	0.00	14.29	0.00	0.00	21.43	14.29	100.00
Coop/PO	0.00	0.00	76.47	0.00	17.65	5.88	0.00	100.00
Consumers								
Retailers	42.86	0.00	14.29	0.00	0.00	42.86	0.00	100.00
Other	0.00	27.27	9.09	27.27	0.00	18.18	18.18	100.00
Total	20.41	6.12	34.69	6.12	6.12	18.37	8.16	100.00

Table 9-31: Changes in prices

	Changes in prices				
	Private traders	Coop/PO	Retailers	Other	Total
Not negotiated (imposed)	20.00	0.00	0.00	66.67	20.00
Negotiated in part	60.00	41.18	75.00	0.00	37.14
Entirely negotiated	20.00	47.06	25.00	33.33	37.14
Not renegotiated	0.00	11.76	0.00	0.00	5.71
Total	100.00	100.00	100.00	100.00	100.00

Table 9-32: Changes in terms of payments and delivery

	Changes in terms of payments					Changes in terms of delivery				
	Private traders	Coop/PO	Retailers	Other	Total	Private traders	Coop/PO	Retailers	Other	Total
Not negotiated (imposed)	0.00	0.00	0.00	66.67	17.14	0.00	0.00	0.00	44.44	11.43
Negotiated in part	0.00	5.88	25.00	0.00	5.71	0.00	0.00	25.00	0.00	2.86
Entirely negotiated	100.00	76.47	75.00	33.33	68.57	80.00	88.24	75.00	55.56	77.14
Not renegotiated	0.00	17.65	0.00	0.00	8.57	20.00	11.76	0.00	0.00	8.57
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 9-33: Changes in quality and quantity

	Changes in quality					Changes in quantity				
	Private traders	Coop/PO	Retailers	Other	Total	Private traders	Coop/PO	Retailers	Other	Total
Not negotiated (imposed)	20.00	0.00	75.00	44.44	22.86	40.00	0.00	0.00	22.22	11.43
Negotiated in part	60.00	29.41	0.00	0.00	22.86	40.00	11.76	25.00	44.44	25.71
Entirely negotiated	20.00	70.59	25.00	55.56	54.29	20.00	70.59	75.00	33.33	54.29
Not renegotiated	0.00	0.00	0.00	0.00	0.00	0.00	17.65	0.00	0.00	8.57
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 9-34: Changes in investments and services

	Changes in investments					Changes in services				
	Private traders	Coop/PO	Retailers	Other	Total	Private traders	Coop/PO	Retailers	Other	Total
Not negotiated (imposed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Negotiated in part	0.00	0.00	0.00	0.00	0.00	0.00	5.88	0.00	0.00	2.86
Entirely negotiated	0.00	76.47	25.00	22.22	45.71	80.00	70.59	25.00	0.00	48.57
Not renegotiated	100.00	23.53	75.00	77.78	54.29	20.00	23.53	75.00	100.00	48.57
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

The most problematic is the renegotiation of changes in prices and quality. In the case of prices, 20% of farmers reported that these changes are imposed on them. In the case of changes in quality, 23% of respondents reported that changes are imposed. Specifically, this is a problem when the main buyer is a retailer.

Table 9-35: How severe is the impact of this practice on your business, and do you consider the practice fair or unfair?

Impact severity of practice	% of farmers
Inconsequential	51.43
A mild problem	20.00
An important problem	17.14
A severe problem	11.43
An unsustainable problem in the long-run	0.00

Impact of practice	% of farmers
Totally unfair	0.00
Unfair	25.71
Neither fair nor unfair	60.00
Fair	14.29
Totally fair	0.00

Eighty-nine percent of farmers think these practices occur because it is customary. This implies that farmers perceive renegotiation as an ordinary practice in the industry, which also explains why a majority of farmers consider these changes neither fair nor unfair.

Table 9-36: In your opinion, the practice is in place (multiple answers) because:

	% of farmers
The buyer wants to increase its profits	11.43
The buyer is reacting to somebody else's practices	11.43
It's customary	88.57
The buyer wants to offer a better service/deal to his/her customers	0.00
The buyer knows I cannot do anything about that although this creates problems for me	34.29

Unilateral renegotiation of single orders

We asked farmers the same questions related to the renegotiation of single orders. The following tables report the farmers' answers.

Table 9-37: How often are the terms of the order changed, after the order has been placed?

	Never	Seldom	Sometimes	Often	Very often	Almost always	Always	Total
Private traders	27.78	11.11	22.22	38.89	0.00	0.00	0.00	100.00
Coop/PO	23.53	64.71	11.76	0.00	0.00	0.00	0.00	100.00
Retailers	0.00	14.29	85.71	0.00	0.00	0.00	0.00	100.00
Other	54.55	9.09	36.36	0.00	0.00	0.00	0.00	100.00
Total	28.30	28.30	30.19	13.21	0.00	0.00	0.00	100.00

Thirty percent of farmers reported that single orders are changed sometimes, and 13% reported that these changes happen often. Again, the way these changes are negotiated is important, because the change does not always result in worse conditions.

Table 9-38: Changes in prices

	Changes in prices				
	Private traders	Coop/PO	Retailers	Other	Total
Not negotiated (imposed)	69.23	7.69	57.14	0.00	36.84
Negotiated in part	15.38	61.54	14.29	80.00	39.47
Entirely negotiated	15.38	7.69	28.57	20.00	15.79
Not renegotiated	0.00	23.08	0.00	0.00	7.89
Total	100.00	100.00	100.00	100.00	100.00

Table 9-39: Changes in terms of payments and delivery

	Changes in terms of payment					Changes in terms of delivery				
	Private traders	Coop/PO	Retailers	Other	Total	Private traders	Coop/PO	Retailers	Other	Total
Not negotiated (imposed)	30.77	0.00	14.29	0.00	13.16	7.69	0.00	0.00	0.00	2.63
Negotiated in part	46.15	38.46	57.14	0.00	39.47	53.85	30.77	28.57	20.00	36.84
Entirely negotiated	23.08	61.54	28.57	0.00	34.21	30.77	53.85	57.14	60.00	47.37
Not renegotiated	0.00	0.00	0.00	100.00	13.16	7.69	15.38	14.29	20.00	13.16
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 9-40: Changes in quality and quantity

	Changes in quality					Changes in quantity				
	Private traders	Coop/PO	Retailers	Other	Total	Private traders	Coop/PO	Retailers	Other	Total
Not negotiated (imposed)	38.46	38.46	0.00	0.00	26.32	38.46	0.00	14.29	0.00	15.79
Negotiated in part	53.85	38.46	57.14	0.00	42.11	53.85	46.15	0.00	20.00	36.84
Entirely negotiated	7.69	23.08	42.86	60.00	26.32	7.69	38.46	85.71	80.00	42.11
Not renegotiated	0.00	0.00	0.00	40.00	5.26	0.00	15.38	0.00	0.00	5.26
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 9-41: Changes in investments and services

	Changes in investments					Changes in services				
	Private traders	Coop/PO	Retailers	Other	Total	Private traders	Coop/PO	Retailers	Other	Total
Not negotiated (imposed)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Negotiated in part	0.00	0.00	0.00	0.00	0.00	7.69	7.69	0.00	0.00	5.26
Entirely negotiated	15.38	0.00	28.57	0.00	10.53	38.46	7.69	14.29	0.00	18.42
Not renegotiated	84.62	100.00	71.43	100.00	89.47	53.85	84.62	85.71	100.00	76.32
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Thirty-six percent of farmers reported that changes in prices are not negotiated (imposed), and 26% of farmers reported that changes in quality are imposed on them. Imposed changes in prices refer mainly to private traders and retailers, while changes in quality refer mainly to private traders and POs.

Table 9-42: How severe is the impact of this practice on your business, and do you consider the practice fair or unfair?

Impact severity of practice	% of farmers
An inconsequential problem	10.53
A mild problem	36.84
An important problem	36.84
A severe problem	13.16
An unsustainable problem in the long-run	2.63

Impact of practice	% of farmers
Totally unfair	10.53
Unfair	50.00
Neither fair nor unfair	34.21
Fair	2.63
Totally fair	2.63

Table 9-43: In your opinion, the practice is in place (multiple answers) because:

	% of farmers
The buyer wants to increase its profits	13.16
The buyer is reacting to somebody else's practices	36.84
It's customary	57.89
The buyer wants to offer a better service/deal to his/her customers	0.00
The buyer knows I cannot do anything about that although this creates problems for me	52.63

Payments not related to sales of the supplier's agri-food product

Another practice which the EU Directive marks as "black" is payments required by the buyer which are not related to a specific transaction. We asked farmers whether this is an issue in fruit sector.

As results show, 15% of farmers reported that their buyers require these kinds of payments often, and less than 2% reported that it happens always. Only 24% of farmers saw it as an important problem, and 60% of farmers consider this practice as fair or totally fair.

Table 9-44: How often does the buyer ask for payments not directly *related to the sales of your product?*

	N.A.	Never	Seldom	Sometimes	Often	Very often	Almost always	Always	Total
Private traders	0.00	88.89	0.00	5.56	5.56	0.00	0.00	0.00	100.00
Coop/PO	0.00	0.00	23.53	41.18	29.41	0.00	0.00	5.88	100.00
Consumers	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Retailers	0.00	14.29	0.00	28.57	57.14	0.00	0.00	0.00	100.00
Other	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Total	19.70	42.42	6.06	15.15	15.15	0.00	0.00	1.52	100.00

Table 9-45: How severe is the impact of this practice on your business, and do you consider the practice fair or unfair?

Impact severity of practice	% of farmers
An inconsequential problem	28.00
A mild problem	48.00
An important problem	24.00
A severe problem	0.00
An unsustainable problem in the long-run	0.00

Impact of practice	% of farmers
Totally unfair	8.00
Unfair	20.00
Neither fair nor unfair	12.00
Fair	48.00
Totally fair	12.00

Table 9-46: In your opinion, the practice is in place (multiple answers) because:

	% of farmers
Buyer wants to increase its profits	4.00
Buyer is reacting to somebody else's practices	0.00
It's customary	64.00
Buyer wants to offer a better service/deal to his/her customers	32.00
Buyer knows I cannot do anything about it although this creates problems for me	24.00
Other (specify)	16.00

Payments for waste

The transfer of risk of loss and deterioration to the supplier is listed as another black practice in the EU Directive on UTP. An example of such a practice is payments for spoiled or wasted products after they were delivered to the buyer, meaning the deterioration or loss occurred on the buyer's premises or as the products were already under the buyer´s ownership. We asked farmers whether this is also the case in the fruit industry.

Table 9-47: Are you responsible (must pay) for spoiled/wasted products after goods are delivered to the buyer?

	N.A.	Yes	No	Partially	Only if the products proved to be defective	Total
Private traders	0.00	27.78	55.56	0.00	16.67	100.00
Coop/PO	0.00	0.00	5.88	11.76	82.35	100.00
Consumers	100.00	0.00	0.00	0.00	0.00	100.00
Retailers	0.00	28.57	0.00	0.00	71.43	100.00
Other	0.00	0.00	100.00	0.00	0.00	100.00
Total	19.70	10.61	33.33	3.03	33.33	100.00

Eleven percent of farmers stated they are responsible for spoiled/wasted products, and 33% said they are responsible only if the products proved to be defective. Although this practice poses severe problem for farmers, 35% consider this practice to be fair.

Table 9-48: How severe is the impact of this practice on your business, and do you consider the practice fair or unfair?

Impact severity of practice	% of farmers		Impact of practice	% of farmers
An inconsequential problem	29.03		Totally unfair	16.13
A mild problem	38.71		Unfair	16.13
An important problem	9.68		Neither fair nor unfair	32.26
A severe problem	19.35		Fair	35.48
An unsustainable problem in the long-run	3.23		Totally fair	0.00

Table 9-49: In your opinion, the practice is in place (multiple answers) because:

	% of farmers
The buyer wants to increase its profits	16.13
The buyer is reacting to somebody else's practices	0.00
It's customary	70.97
The buyer wants to offer a better service/deal to his/her customers	16.13
The buyer knows I cannot do anything about it although this creates problems for me	19.35

Refusal of written confirmation of supply agreement by the buyer

The buyer's refusal to confirm in writing the conditions of a supply agreement in writing—despite request of the supplier—is also listed as a black practice. We asked farmers about this practice, but as results show, this does not seem to be a serious problem for farmers in the Slovak fruit industry.

Table 9-50: Refusal to confirm in writing

	N.A.	Never	Seldom	Sometimes	Often	Very often	Almost always	Always	I never asked	Total
Private traders	0.00	88.89	0.00	0.00	11.11	0.00	0.00	0.00	0.00	100.00
Coop/PO	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Consumers	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Retailers	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Other	0.00	63.64	0.00	0.00	0.00	0.00	9.09	0.00	27.27	100.00
Total	19.70	71.21	0.00	0.00	3.03	0.00	1.52	0.00	4.55	100.00

Table 9-51: How severe is the impact of this practice on your business, and do you consider the practice fair or unfair?

Impact severity of practice	% of farmers		Impact of practice	% of farmers
An inconsequential problem	0.00		Totally unfair	33.33
A mild problem	0.00		Unfair	66.67
An important problem	33.33		Neither fair nor unfair	0.00
A severe problem	66.67		Fair	0.00
An unsustainable problem in the long-run	0.00		Totally fair	0.00

Table 9-52: In your opinion, the practice is in place (multiple answers) because:

	% of farmers
The buyer wants to increase its profits	0.00
The buyer is reacting to somebody else's practices	0.00
It's customary	33.33
The buyer wants to offer a better service/deal to his/her customers	0.00
The buyer knows I cannot do anything about it although this creates problems for me	66.67

Use or disclosure of trade secrets

Misuse of trade secrets by the buyer, which is listed as a black practice, also did not prove to be an issue in the fruit sector. A majority of farmers (75%) reported that their buyer had never required them to reveal trade secrets, and small number (5%) reported they do not have any secrets.

Table 9-53: Did the buyer require you to reveal trade secrets concerning your business?

	N.A.	Yes	No	I do not have secrets	I don't know	Total
Private traders	0.00	0.00	94.44	5.56	0.00	100.00
Coop/PO	0.00	0.00	88.24	11.76	0.00	100.00
Consumers	100.00	0.00	0.00	0.00	0.00	100.00
Retailers	0.00	0.00	100.00	0.00	0.00	100.00
Other	0.00	0.00	100.00	0.00	0.00	100.00
Total	19.70	0.00	75.76	4.55	0.00	100.00

Retaliation

When farmers are met with unfairness in trading relationships, they often choose to do nothing because buyers threaten acts of retaliation.

Table 9-54: Is the buyer free to terminate the trade relationship?

	N.A.	Yes, totally free to do so at any time	No, the buyer must pay penalties / incur costs / cannot replace me	No, the buyer must wait until expiration of the contract	No, the buyer cannot terminate (for example, PO/Coop)	Total
Private traders	0.00	72.22	16.67	11.11	0.00	100.00
Coop/PO	0.00	0.00	0.00	29.41	70.59	100.00
Consumers	100.00	0.00	0.00	0.00	0.00	100.00
Retailers	0.00	100.00	0.00	0.00	0.00	100.00
Other	0.00	90.91	9.09	0.00	0.00	100.00
Total	19.70	45.45	6.06	10.61	18.18	100.00

Table 9-55: Can the buyer slow down orders arbitrarily?

	N.A.	No, the buyer is committed to buy a minimum quantity/the entire production	No, there are explicit rules regulating orders	No, there are tacit rules regulating orders	Yes, but usually orders are steady and predictable	Yes, and orders are unpredictable and fluctuating	Total
Private traders	0.00	22.22	0.00	5.56	5.56	66.67	100.00
Coop/PO	0.00	70.59	0.00	0.00	29.41	0.00	100.00
Consumers	100.00	0.00	0.00	0.00	0.00	0.00	100.00
Retailers	0.00	0.00	0.00	0.00	42.86	57.14	100.00
Other	0.00	18.18	9.09	9.09	27.27	36.36	100.00
Total	19.70	27.27	1.52	3.03	18.18	30.30	100.00

Forty-five percent of farmers reported that their main buyer is free to terminate the trading relationship at any time. When it comes to orders, 30% of farmers reported that buyers can slow down orders arbitrarily. It happens mainly in cases of farmers delivering to private traders and retailers. But when it comes to actual threats from buyers, only 6% of farmers reported that their buyers threaten to terminate the contract.

Table 9-56: Is the buyer threatening to terminate (not renew) the contract or to slow down orders in order to obtain concessions or force you to comply with arbitrary requests?

	N.A.	Yes, explicitly	Yes, implicitly	No, but it is well understood that the buyer is in a position to do so	No	Total
Private traders	0.00	5.56	11.11	50.00	33.33	100.00
Coop/PO	0.00	0.00	0.00	0.00	100.00	100.00
Consumers	100.00	0.00	0.00	0.00	0.00	100.00
Retailers	0.00	42.86	0.00	14.29	42.86	100.00
Other	0.00	0.00	0.00	72.73	27.27	100.00
Total	19.70	6.06	3.03	27.27	43.94	100.00

Table 9-57: How severe is the impact of this practice on your business, and do you consider the practice fair or unfair?

Impact severity of practice	**% of farmers**
An inconsequential problem	0.00%
A mild problem	16.67%
An important problem	70.83%
A severe problem	8.33%
An unsustainable problem in the long-run	4.17%

Impact of practice	**% of farmers**
Totally unfair	25.00%
Unfair	50.00%
Neither fair nor unfair	25.00%
Fair	0.00%
Totally fair	0.00%

Table 9-58: In your opinion, the practice is in place (multiple answers) because:

	% of farmers
The buyer wants to increase its profits	50.00%
The buyer is reacting to somebody else's practices	8.33%
It's customary	50.00%
The buyer wants to offer a better service/deal to his/her customers	0.00%
The buyer knows I cannot do anything about it although this creates problems for me	58.33%

Table 9-59: What is the likely impact on your business of termination of the trade relationship or slowing down orders?

	N.A.	None, I can find another buyer	Moderate profit loss	Severe profit loss	I would go out of business	Total
Private traders	0.00	0.00	38.89	61.11	0.00	100.00
Coop/PO	0.00	0.00	64.71	35.29	0.00	100.00
Consumers	100.00	0.00	0.00	0.00	0.00	100.00
Retailers	0.00	0.00	14.29	85.71	0.00	100.00
Other	0.00	0.00	36.36	36.36	27.27	100.00
Total	19.70	0.00	34.85	40.91	4.55	100.00

Farmers are afraid to exercise their rights because a termination of the trade relationship may cause them significant problems. Our results show that for 41% of surveyed farmers, termination means severe profit loss, a situation which may negatively influence the existence of their business.

Post-sale complaints

We also asked farmers if the buyer requires compensation for the cost of examining customer complaints related to the sale of the farmer's products, even though there is no negligence or fault on the part of the farmer.

Table 9-60: Are you liable for the costs of examining complaints by your buyer's customers?

	N.A.	No	Only if the problem is my fault (or due to my negligence)	Always	Total
Private traders	0.00	61.11	33.33	5.56	100.00
Coop/PO	0.00	29.41	70.59	0.00	100.00
Consumers	100.00	0.00	0.00	0.00	100.00
Retailers	0.00	57.14	42.86	0.00	100.00
Other	0.00	100.00	0.00	0.00	100.00
Total	19.70	46.97	31.82	1.52	100.00

Table 9-61: How often does the buyer ask payment for examining customer complaints, even if you are at fault?

	N.A.	Never	Seldom	Sometimes	Often	Very often	Almost always	Always	Total
Private traders	0.00	66.67	5.56	11.11	11.11	5.56	0.00	0.00	100.00
Coop/PO	0.00	76.47	17.65	5.88	0.00	0.00	0.00	0.00	100.00
Consumers	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Retailers	0.00	57.14	0.00	42.86	0.00	0.00	0.00	0.00	100.00
Other	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	100.00
Total	19.70	60.61	6.06	9.09	3.03	1.52	0.00	0.00	100.00

Thirty-two percent of farmers reported that they are responsible for the costs of examining customer complaints if the problem is their fault. When asked how often buyers ask payment for examining such complaints, only 4.5% of farmers reported that it happens often or very often.

Table 9-62: How severe is the impact of this practice on your business, and do you consider the practice fair or unfair?

Impact severity of practice	% of farmers
An inconsequential problem	0.0%
A mild problem	38.5%
An important problem	53.8%
A severe problem	7.7%
An unsustainable problem in the long-run	0.0%

Impact of practice	% of farmers
Totally unfair	38.46%
Unfair	7.69%
Neither fair nor unfair	53.85%
Fair	0.00%
Totally fair	0.00%

Table 9-63: In your opinion, the practice is in place (multiple answers) because:

	% of farmers
The buyer wants to increase its profits	23.08%
The buyer is reacting to somebody else's practices	0.00%
It's customary	23.08%
The buyer wants to offer a better service/deal to his/her customers	46.15%
The buyer knows I cannot do anything about it although this creates problems for me	30.77%

Ambiguous or implicit contract terms

Apart from above-mentioned practices (which are marked as black practices), the EU Directive includes a list of grey practices, i.e., practices which are only allowed if the buyer and supplier agree on them in a clear and unambiguous way.

We asked farmers whether these practices occur in the relationship with their main buyer and if so, how they are specified in the contract.

Table 9-64: Are the following practices applied and if so, are they included in the contract/agreement with clear and unambiguous terms?

			In place		
	N.A.	Not in place	Tacit	Ambiguous or unclear	Clear and unambiguous
Return/buyback of unsold products	19.70	18.18	4.55	25.76	31.82
Payments for displaying, listing, or stocking products	19.70	59.09	1.52	4.55	15.15
Participation in promotion of products sold by the buyers	19.70	63.64	0.00	0.00	16.67
Payments for the advertising of agricultural and food products by the buyer	19.70	60.61	0.00	1.52	18.18
Payments for the marketing of agri-food product by the buyer	19.70	46.97	0.00	1.52	31.82
Payments for staff for fitting-out premises used for the sale of the supplier's products	19.70	78.79	0.00	0.00	1.52

Of all the grey practices included in the EU Directive, the most problematic is the return/buyback of unsold products, which 26% of farmers reported as an ambiguous or unclear practice included in their contract. Looking into the details of this practice shows that the occurrence was reported mainly by farmers trading with private traders, retailers and other buyers.

Table 9-65: Return/buyback of unsold products

	N.A.	No	Tacit	Ambiguous or unclear	Clear and unambiguous	Total
Private traders	0.00	27.78	16.67	44.44	11.11	100.00
Coop/PO	0.00	17.65	0.00	0.00	82.35	100.00
Consumers	100.00	0.00	0.00	0.00	0.00	100.00
Retailers	0.00	28.57	0.00	71.43	0.00	100.00
Other	0.00	18.18	0.00	36.36	45.45	100.00
Total	19.70	18.18	4.55	25.76	31.82	100.00

Table 9-66: If the practices were stated in clear and unambiguous terms in a contract, would the impact be less problematic?

	% of farmers
It would be more problematic	0.0%
No, it would be the same	76.2%
Yes, it would be slightly better	19.0%
Yes, it would be much better	4.8%
Yes, it would no longer be a problem	0.0%

9.3.6 Information about other trade practices

The following section of the survey focused on the occurrence of another three trade practices: orders on short notice, enforcement of quality standards and specific investments.

Orders on short notice

Orders on short notice are an issue for 17% of farmers, mainly those who trade with private traders and other traders. When it comes to the consequences of missing a short-notice order, 32% of farmers reported that their buyer is less likely to order from them in the future. This is especially true with retailers, private traders and other traders.

Table 9-67: The timing of the orders is far enough in advance to allow for efficient planning of production

	N.A.	Yes, always	In general, yes, but sometimes I receive unexpected orders on short notice	Orders are unpredictable, and I must meet orders on short notice	Total
Private traders	0.00	22.22	33.33	44.44	100
Coop/PO	0.00	35.29	64.71	0.00	100
Consumers	100.00	0.00	0.00	0.00	100
Retailers	0.00	14.29	85.71	0.00	100
Other	0.00	36.36	36.36	27.27	100
Total	19.70	22.73	40.91	16.67	100

Table 9-68: What are the consequences of missing a short-notice order (multiple answers)?

	N.A.	Just the missed business opportunity	The buyer is less likely to order from me in the future	I must pay a fine	The buyer will not renew the contract/ agreement	The buyer terminates the trade relationship
Private traders	0.00	44.44	55.56	0.00	5.56	0.00
Coop/PO	0.00	100.00	0.00	0.00	0.00	0.00
Consumers	100.00	0.00	0.00	0.00	0.00	0.00
Retailers	0.00	14.29	85.71	0.00	0.00	0.00
Other	0.00	72.73	45.45	0.00	0.00	0.00
Total	19.70	51.52	31.82	0.00	1.52	0.00

Enforcement of quality standards

Meeting the required quality standards is not easy; therefore, quality standards should be clear from the very beginning of the trade relationship. Results show less than 2% of farmers reported that quality standards are not clearly defined in advance. However, regarding the question about how quality standards are enforced, 18% reported that enforcement is unpredictable.

Table 9-69: Quality standards are clear and defined in advance

	N.A.	Yes	Partially	No	Total
Private traders	0.00	50.00	44.44	5.56	100.00
Coop/PO	0.00	88.24	11.76	0.00	100.00
Consumers	100.00	0.00	0.00	0.00	100.00
Retailers	0.00	28.57	71.43	0.00	100.00
Other	0.00	81.82	18.18	0.00	100.00
Total	19.70	53.03	25.76	1.52	100.00

Specific investments

We asked farmers whether they invested in on-farm assets in order to comply with the buyer's requirements. Fourteen percent of farmers invested, mainly members of POs, with 88% of these farmers reporting that the investment will be recovered from transactions with the main buyer

or other buyers. All farmers reported that, in the event of termination of the relationship, the investment can be used in relationships with other buyers. When asked to assess fairness, all reported this practice as neither fair nor unfair.

Table 9-70: Did you invest in on-farm assets only for the purpose of complying with your main buyer's requirements?

	N.A.	No	Yes	Total
Private traders	0.00	88.89	11.11	100.00
Coop/PO	0.00	70.59	29.41	100.00
Consumers	100.00	0.00	0.00	100.00
Retailers	0.00	85.71	14.29	100.00
Other	0.00	90.91	9.09	100.00
Total	19.70	66.67	13.64	100.00

9.3.7 Overall evaluation of the trade relationship

The final section of questionnaire focused on overall evaluation of the trade relationship by farmers. Farmers were asked to express their agreement/disagreement with a set of statements using a 5-point Likert scale (1: strongly disagree, to 5: strongly agree).

Based on the results, 23% of farmers believe their buyers act to benefit themselves—to the detriment of farmers (score 4 or 5)—and primarily follow their own interests. This is the case of private traders and other buyers and, to a smaller extent, retailers. However, when it comes to evaluation of the buyer's position in the markets, farmers recognize there is a very competitive business environment, and buyers care about reputation and quality of products.

Table 9-71: Results of overall assessment of the trade relationship (1: strongly disagree, to 5: strongly agree)

	N.A.	1	2	3	4	5	Total
Your buyer often acts to benefit himself/herself at your expense.	19.70	22.73	21.21	13.64	12.12	10.61	100.00
Your buyer feels that it is OK to do anything within his/her means that will help further his/her interests.	19.70	25.76	21.21	12.12	7.58	13.64	100.00
Your buyer has sometimes promised to do things without actually doing them later.	19.70	28.79	27.27	12.12	12.12	0.00	100.00
Your buyer sometimes tries to breach informal agreements to maximize his/her own benefit.	19.70	37.88	12.12	10.61	10.61	9.09	100.00
Your buyer will try to take advantage of "holes" in contracts to further his/her own interests.	19.70	34.85	7.58	16.67	15.15	6.06	100.00
Your buyer sometimes uses unexpected events to extract concessions from you.	19.70	12.12	21.21	21.21	6.06	19.70	100.00
Your buyer is worried about losing business due to missing products or products of quality that do not meet his/her customer expectations.	19.70	7.58	6.06	27.27	25.76	13.64	100.00
Your buyer is worried about repercussions from a bad reputation due to failures or scandals.	19.70	6.06	3.03	25.76	27.27	18.18	100.00
Your buyer tries to survive in a very competitive business environment by providing maximum satisfaction for customers.	19.70	0.00	0.00	15.15	34.85	30.30	100.00

There is a remarkable difference in overall evaluation of fairness in the trade relationship between farmers who are members of POs and other farmers. While PO members consider their relationship with the PO decent or fair, results from other farmers are more heterogeneous. A quarter of farmers feel some level of unfairness. This is especially true in the case of farmers trading with retailers and private traders.

Concerning the overall evaluation of the trade relationship, results here are in line with results about satisfaction with the main buyer (Table 9-7). Those farmers who consider the relationship as decent or fair (52%) reported to be either totally satisfied with their main buyer or satisfied but open to new opportunities (53%).

Table 9-72: Overall evaluation of the trade relationship

	N.A.	Totally unfair	Unfair in some respects	Decent	Fair	Great deal	Total
Private traders	0.00	0.00	55.56	33.33	11.11	0.00	100.00
Coop/PO	0.00	0.00	0.00	5.88	94.12	0.00	100.00
Consumers	100.00	0.00	0.00	0.00	0.00	0.00	100.00
Retailers	0.00	0.00	71.43	14.29	14.29	0.00	100.00
Other	0.00	27.27	9.09	27.27	36.36	0.00	100.00
Total	19.70	4.55	24.24	16.67	34.85	0.00	100.00

Farmers who considered the relationship with their buyer to be unfair were asked to assess the impact of unfairness on several aspects of their business. The majority of farmers feel that there are negative impacts on their incomes and efficiency of the entire chain.

Table 9-73: Evaluation of the impact of unfairness

	Extremely detrimental	Detrimental	Inconsequential	Beneficial	Total
Your income	46.67	40.00	13.33	0.00	100.00
The efficiency of the entire chain	6.67	73.33	20.00	0.00	100.00
Environmental sustainability	0.00	0.00	100.00	0.00	100.00
Innovation	0.00	16.67	80.00	3.33	100.00
Food quality & safety	0.00	0.00	83.33	16.67	100.00
On-farm investments	3.33	36.67	53.33	6.67	100.00
Labour (wages, conditions)	0.00	23.33	76.67	0.00	100.00

9.4 Results from the BSEA supermarket survey

The sample in the supermarket survey is composed of six supermarket chains operating in Slovakia. Data were collected through electronic versions of the questionnaire between July and September 2019.

The questionnaire consisted of three sections: information about the firm, evaluation of general overview of the industry and information about the procurement channel of the surveyed firm. The questionnaires were filled out by the marketing/procurement managers (83%) or by the firm manager/owner (17%).

With respect to the small sample size, it is important to be cautious in the interpretation of the results and generalization of conclusions; nevertheless, these results provide useful insight into the downstream stage of the fruit value chain and enable us to compare the results with findings from the farmer questionnaire.

9.4.1 Information about the firm

The following table provides information about the size of the supermarkets that participated in the survey.

Table 9-74: Distribution of sample by revenue class

Firm's annual turnover (in mil. EUR)	n.	% of supermarkets
0 - 2 mil.	0	0.00
2 -10 mil.	0	0.00
10 - 50 mil.	1	16.67
50 -150 mil.	2	33.33
150 -350 mil.	1	16.67
Exceed. 350 mil.	2	33.33
Total	6	100

An additional two questions in this section were related to the promotion of fruit. Regarding the fruit generally on promotion, all respondents (representatives of supermarkets) answered that there is always some fruit on promotion. Regarding apples, the results are more heterogeneous. Two supermarkets (33%) reported always having some kind of apple on promotion, and another two have promotions once a month. One supermarket has a promotion at least once a week, and one once every other week.

Table 9-75: How often do you have apples on promotion?

	n.	% of supermarkets
We always have some kind of apple on promotion	2	33.33
At least once a week (e.g., on weekends)	1	16.67
Once every other week	1	16.67
Once a month	2	33.33
Less than once a month	0	0.00
Total	6	100.00

9.4.2 A general overview of the industry

Respondents were asked how much they agree with a set of statements concerning the situation in the industry and their suppliers using a 5-point Likert scale (1: completely disagree, to 5: completely agree).

Table 9-76: Please rate how much you agree with the following statements on a 1 (completely disagree) to 5 (completely agree) scale

	1	2	3	4	5	Total
Consumer demand for apples is predictable at harvest season	16.67	16.67	0.00	33.33	33.33	100.00
Changes in the price of other fruits strongly affect the demand for apples	16.67	33.33	16.67	16.67	16.67	100.00
Price promotions strongly affect the demand for apples	0.00	0.00	16.67	33.33	50.00	100.00
I have few selected, trusted suppliers	0.00	0.00	0.00	33.33	66.67	100.00
I have a set of suppliers I call only if there is an unexpected demand peak	16.67	50.00	16.67	0.00	16.67	100.00
A key success factor is being able to select and motivate the most efficient suppliers	0.00	16.67	16.67	0.00	66.67	100.00
My suppliers are difficult to replace (in general)	16.67	16.67	33.33	0.00	33.33	100.00
There are specific suppliers that would be costly to replace	16.67	16.67	33.33	0.00	33.33	100.00

Results show that, when it comes to predictability of demand for apples, opinions of the supermarkets are heterogeneous. The same situation is observable when it comes to the influence of changes in the price of other fruits on the demand for apples. However, 83% of respondents (five supermarkets) agree or strongly agree that price promotions have significant effect on the demand for apples.

When it comes to relationships with suppliers, all respondents agree or strongly agree with the statement about having a few selected suppliers whom they trust. In a situation of unexpected demand peak, some supermarkets may encounter a problem when their suppliers are not able to meet the increased quantity requirements. However, only one respondent reported having a set of suppliers they call only in cases of unexpected increase in demand. Two-thirds of respondents strongly agree that selection and motivation of the most efficient suppliers is a key success factor in fruit sales. Concerning the ability to replace trading partners, 67% of respondents do not think it is difficult to replace their suppliers. The respondents have the same opinion in the case of specific suppliers.

Within this section of the questionnaire, respondents were also asked to rate how likely UTPs (based on EU UTP Directive) were to happen, according to their experience and knowledge of the industry. However, these questions were centred on evaluation of general behaviour in the industry rather than own firm. The 5-point scale was used as follows: 1 = I am not aware of the problem, 2 = It is unusual, 3 = It may happen sometimes, 4 = It happens often, 5 = It is customary. The following table summarizes the results.

Table 9-77: Please rate how much you agree with the following statements on a 1 (I am not aware of the problem) to 5 (It is customary) scale

	1	2	3	4	5	Total
Payments are delayed, late and/or unpredictable	66.67	16.67	16.67	0.00	0.00	100.00
Orders are cancelled on short notice	50.00	33.33	16.67	0.00	0.00	100.00
Buyers impose unilateral changes to existing contracts or agreements (do not keep their word)	33.33	50.00	16.67	0.00	0.00	100.00
Suppliers must pay for expenses that are not related to the sales of their products (for example: opening of new stores)	100.00	0.00	0.00	0.00	0.00	100.00
Suppliers must pay (or are denied payments) for loss or waste of products that were already delivered to the buyer	83.33	0.00	0.00	16.67	0.00	100.00
Buyers refuse to write down contracts or orders	100.00	0.00	0.00	0.00	0.00	100.00
Buyers take advantage of confidential information they obtain from the suppliers	100.00	0.00	0.00	0.00	0.00	100.00
Buyers cut orders if the suppliers try to exercise their contractual rights	100.00	0.00	0.00	0.00	0.00	100.00
Suppliers must pay for the costs of examining complaints by final customers (even if they are not responsible)	100.00	0.00	0.00	0.00	0.00	100.00
Firms must bear unpredictable costs that are not clearly stated in the contract (payments, discounts, etc.)	100.00	0.00	0.00	0.00	0.00	100.00
Firms must comply with unnecessary quality standards	83.33	16.67	0.00	0.00	0.00	100.00
Orders are unpredictable and totally discretionary	50.00	16.67	16.67	16.67	0.00	100.00

Based on the answers of the respondents, the most common unfair practice is unpredictable and totally discretionary orders: One respondent reported that it happens often, and another reported that it may happen sometimes. There is also some evidence of late payments (one supermarket), short-notice order cancellations (one supermarket) and payments for wasted products (one supermarket admitted that it happens often).

Concerning the rest of the practices (misuse of confidential information; refusal of written contracts; cutting orders when suppliers want to exercise their contractual rights; paying unpredictable costs not specified clearly in the contract; and paying expenses unrelated to the sale of farmers' products), all respondents (100%) stated they are not aware of these problems in the fruit industry.

The list of grey practices in the EU UTP Directive includes practices that are banned only if they are not clearly specified in the contract. All supermarket respondents reported to be unaware of the occurrence of these practices in the fruit industry.

9.4.3 Information about the procurement channel

In the last section of the survey, respondents were asked questions about the organization of the procurement channel.

First, we asked respondents to rate the three most important criteria they use to select apple (fruit) suppliers. Half the respondents chose quality as the most important reason. Quality, along with low prices, was also chosen as the second most important reason. The third most important reason was between low prices and assortment.

Table 9-78: Please rank the three most important criteria that you use to select your apple suppliers

	1st main reason	2nd main reason	3rd main reason
Low prices	16.67	**33.33**	**33.33**
Reliability	33.33	0.00	16.67
Reputation	0.00	0.00	0.00
Ability to meet orders on short notice	0.00	16.67	0.00
Quality	**50.00**	**33.33**	16.67
Assortment	0.00	16.67	**33.33**
Other	0.00	0.00	0.00
Total	100.00	100.00	100.00

In order to gain a picture of the termination of trading relationships in the industry, respondents were asked whether they had de-listed a supplier in the last five year and if yes, why and when. Two supermarkets reported de-listing a supplier. As for why, one respondent reported that they rotate suppliers from time to time, and another reported that they received better terms from a competitor. One supermarket de-listed the supplier at the expiration of the contract, but the other one admitted they terminated the contract with supplier.

Table 9-79: Did you de-list (stop doing business with) a supplier in the last five years and if yes, why?

	% of respondents
Yes	33.33
No	66.67
Don't know/No answer	0.00
Total	100.00

If yes, why?	% of respondents
I rotate/change suppliers every now and then when contracts expire	50.00
I found better terms from a competitor	50.00
I was unhappy with the performances	0.00
A serious problem arose	0.00
It was the supplier's decision	0.00
Total	100.00

Respondents were asked about organization of the procurement in their firm. The answers were diverse, but negotiation of "order by order" was chosen by two respondents (33%). One respondent reported "other", stating that they use unwritten agreements.

Table 9-80: How is procurement organized? (multiple answer, if different organization for different suppliers)

	n.	% of respondents
I have long-term contracts (more than one year)	1	16.67
I have yearly contracts with predetermined prices	0	0.00
I have yearly contracts and price is negotiated through the year	1	16.67
I negotiate order by order	2	33.33
A yearly supply agreement at the beginning of the season and then weekly/monthly negotiations	1	16.67
Other	1	16.67
Total	6	100.00

As with the farmers, respondents were also asked about commitment to buy and delivery obligations. As expected, a majority of respondents (83%) are not committed to buying a

minimum quantity from their suppliers. On the other hand, 83% of respondents admitted that their suppliers have a delivery obligation, and in majority of cases it is a contractual obligation.

Table 9-81: Do you have a commitment to buy a minimum quantity from your suppliers, and do your suppliers have delivery obligations?

Commitment to buy:	n.	% of respondents
No	5	83.33
Formal for all suppliers	0	0.00
Formal for some suppliers only	1	16.67
Implicit (e.g., there is an 'usual quantity') for all suppliers	0	0.00
Implicit for some suppliers only	0	0.00
Total	6	100.00

Delivery obligation of suppliers:	n.	% of respondents
Yes, a contractual obligation	3	50.00
They have an informal commitment	2	33.33
No, they are free to decide whether to supply or not	1	16.67
It depends on the supplier	0	0.00
Total	6	100.00

Table 9-82: Did your suppliers refuse orders or cancel delivery?

	n.	% of respondents
Yes, often	5	83.33
Sometimes it happens	0	0.00
It's unusual	1	16.67
It never happens	0	0.00
Total	6	100.00

Respondents were also asked how often their suppliers refuse orders or cancel delivery. Eight-three percent of respondents reported it happens often that suppliers refuse orders or cancel delivery.

Respondents were further asked when they decide about discounts. The majority (67%) answered that they follow the situation in the market and decide on discounts whenever market conditions require them.

Table 9-83: When are discounts decided? (multiple answers)

	n.	% of respondents
At the beginning of the year	1	16.67
At regular intervals (e.g., at the beginning of the quarter)	1	16.67
Whenever market conditions require them	4	66.67
Other	0	0.00
Total	6	100.00

Table 9-84: Do you have special requirements for apples (different from other supermarkets)? (multiple answer)

	n.	% of respondents
No, we ask for the market standard	2	33.33
Yes, we ask for specific varieties/grade	2	33.33
Yes, suppliers must comply with OUR product standards	4	66.67
Yes, suppliers must comply with OUR process standards/instruction	1	16.67
Yes, we ask for specific packaging	2	33.33
Yes, they must allow our inspections at their site	1	16.67
Other	1	16.67

Lastly, we asked respondents whether they have any specific requirements for apples/fruit different from other supermarkets. Results show that 67% of respondents have special requirements. The most common requirements are complying with the product standards of supermarkets, specific varieties/grades and specific packaging.

9.4.4 Pass-through analysis

Conducting the survey at two stages of the fruit value chain provides us a broader picture and enables us to evaluate whether the outcomes of the two sample surveys are consistent.

Regarding the ability to replace trading partners, retailers and farmers were asked to evaluate how easy it is to replace their trading partner and how easily they can be replaced by their trading partner. Sixty-seven percent of respondents in the supermarket survey do not think that it is difficult to replace their fruit suppliers. These results are consistent with the farmers' perception, since 71% of farmers who are actually trading with supermarkets reported that their main buyer can easily replace them. On the other hand, 14% of farmers trading with supermarkets reported that they cannot replace the buyer, and 86% reported that they can although for different reasons it would be too costly. These results imply that the risk of not finding a new or better trading partner is bigger for farmers.

Based on the answers of supermarket respondents about the general situation in the fruit industry (

Table 9-77), we can see that the perception of supermarkets and farmers about UTP occurrence in the fruit industry is quite different. A small number of respondents in the supermarket survey admitted the possible occurrence of certain practices. From the supermarket's point of view, the most common unfair practice is unpredictable and totally discretionary orders. One supermarket respondent reported that it happens often, and another reported that it may happen sometimes. There is also some small evidence of late payments (one respondent), short-notice cancelation of orders (one respondent) and payments for wasted products (one respondent). Farmers' perception of the occurrence of these practices is in the majority of cases much higher. Concerning orders, 71% of farmers trading with retailers reported they receive unpredictable orders through the year. Late payments are an especially serious issue. In total, 32% of farmers reported that they occur at least sometimes. This is a problem in particular for farmers trading with retailers, but it also occurs with other buyers and private traders. Payments demanded for wasted products were reported by 44% of farmers, although 33% said they are responsible only if the products proved defective.

For the remaining practices—misuse of confidential information, refusal of written contracts, cutting orders when suppliers want to exercise their contractual rights, paying unpredictable costs not specified clearly in the contract and paying expenses that are not related to the sales of farmers' products—all supermarket respondents (100%) stated they are not aware of these problems in the fruit industry. These results are partly consistent with results from the farmer questionnaire. Regarding the misuse of confidential information, farmers were asked whether their buyer requires them to reveal trade secrets. The answers were homogeneous, with farmers replying they either have no secrets or it has never happened. Refusal to confirm in writing conditions of an agreement or a contract also did not prove to be a serious issue for farmers. Less than 5% of farmers reported that their main buyer refused to give them a written confirmation, however this was the case with private traders or other buyers, not supermarkets (Table 9-50).

Farmers' perceptions about the demand for payments not directly related to the sales of their products differ from those of the supermarket respondents, with 15% of farmers reporting that buyers ask for such payments often, especially retailers and POs and private traders. Interestingly, the majority of these farmers (76%) consider this practice to be an inconsequential or mild problem, and 60% consider this practice to be fair or totally fair. These results might imply that payments are agreed upon in a fair manner.

Regarding payments demanded for complaints from final customers, none of the respondents in the supermarket survey were aware of this issue in the industry. When farmers were asked, 32% of them reported they are responsible for these costs only if the problem is their fault or due to their negligence (Table 9-60). Less than 2% reported they always have to pay (these were in instances of a relationship with private traders). But when farmers were asked how often buyers require these payments, only 4.5% of farmers reported that it happens often or very often in relationships with private traders. Nine percent of farmers trading with private traders, POs and retailers reported it happens sometimes. However, in an assessment of the fairness of the practice, the majority of farmers (54%) consider the practice neither fair nor unfair, which might imply that most farmers see this as an "ordinary practice" in the industry.

When evaluating grey practices (as defined in the EU UTP Directive), all supermarket respondents reported to be unaware of their occurrence. Although farmers' answers were mostly in line with this opinion, there was an exception in the case of return/buyback of unsold products, for which 26% of farmers reported that such payments are stated in an ambiguous or unclear manner (and as results in Table 9-65 show, this happens mainly in relationships with retailers, private traders and other buyers).

Regarding the commitment to buy and delivery obligation, both respondents from supermarkets and farmers were asked how their trade relationship is organized. As expected, a majority of respondents from supermarkets (83%) do not have a commitment to buy a minimum quantity from their suppliers. Yet, 83% of supermarket respondents admitted that their suppliers have a delivery obligation (in a majority of cases, it is a contractual obligation). These results imply a certain level of imbalance in trading relationships between supermarkets and farmers. Results are in line with the farmer questionnaire, where 14% of farmers reported to have a delivery obligation for a minimum quantity, but their buyers (retailers) do not have a commitment to buy. On the other hand, the contractual obligation of farmers to deliver might be explained as an attempt by supermarkets to ensure stable delivery, since 83% of respondents reported that it happens often that suppliers refuse orders or cancel deliveries.

The supermarkets survey confirms the existence and pass-through of certain UTPs but to a lesser extent and intensity than the farmer survey, which is an expected result.

10 Evaluation

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The use of the B-SEA approach enabled us to focus attention on and gain important insights into the following areas of interest in UTP research: a) the functioning of the fruit value chain in Slovakia, b) evaluation of UTP occurrence and c) evaluation of the methodology used for UTP monitoring. This chapter summarizes the main results obtained from the B-SEA survey.

10.1 Designing a UTP monitoring system: Lessons from B-SEA

The B-SEA survey was based on the idea of running three sequential surveys at the farmer, middleman and retailer levels. In contrast to IDEA, the survey was not based on the expert panel but on general knowledge of the structure of the fruit supply chain. Therefore, the questionnaire followed a fixed selection of practices identified in the literature review of this report and in the EU UTP Directive. Thus, this approach is broader and more general than IDEA.

10.1.1 Reluctance and fear factor

In the implementation of the B-SEA, we encountered several problems. When farmers were told the purpose of the survey, some refused to participate. Some farmers were willing to talk about general problems in the supply chain but not willing to discuss specific issues concerning the relationship with their trading partners. They were concerned about possible consequences and retaliation after publication of the results. Reluctance to participate in the survey was even higher at the middleman level. Some middlemen, who at first agreed to participate, changed their mind after seeing the questionnaire. They considered the questions too intrusive and to probe too deep into the details of their trade relationships. Therefore, the B-SEA survey was eventually conducted only at the farmer and retailer levels. Middlemen did participate in the IDEA version of the survey (chapter 16), which they considered to be more acceptable and less dangerous.

10.1.2 Questionnaire design

Concerning the design of the B-SEA survey, the complexity of the questionnaires caused a reduction in the farmer sample size, and it became smaller than initially planned. The complexity was mentioned as one of the possible drawbacks to the B-SEA methodology at the beginning of the project and did indeed prove to be a serious issue. Because the B-SEA survey followed the broad set of practices identified from the literature review and the EU UTP Directive—without tailoring for the fruit industry—many questions were considered irrelevant by respondents. This has serious implications for further UTP research—too broad design of the questionnaire without running the expert panel, may cause that the real problems in the industry under investigation might be overlooked.

Another issue with the questionnaire was its strong focus on the farmers' main buyers. During the face-to-face interviews regarding different UTPs, many farmers stated they had not encountered these practices in the relationship with their main buyer but had encountered them either in the relationships with other buyers they are currently trading with or buyers they traded with in previous years. Thus, the main buyer focus of the questionnaire may have led to an underestimation of the occurrence of UTPs.

Moreover, many farmers who currently sell their entire production to final consumers admitted they had deliberately chosen to do so to avoid unfair trading practices they had experienced in the past. Another reason for selling direct to final consumers is the low price offered by middlemen and supermarkets. As a result, many fruit growers today choose to process their fruit into products with greater demand (baby food, jams, juice, etc.) rather than sell their fruit fresh.

10.1.3 Measuring the impact of UTPs

The B-SEA survey for farmers was designed to measure the financial impact of UTPs on the farmers. Those farmers who identified a certain UTP as at least an important problem were asked whether they could provide an estimate of the yearly cost of this practice to their business. However, this proved to be a big problem, since the majority of farmers were unable to estimate the costs of these practices. As noticed during the face-to-face interviews, farmers had difficulty providing even a rough financial estimate of the UTPs. Farmers perceive the impact of UTPs more in terms of opportunity costs than in absolute numbers. For example, in the case of delayed payments, farmers see costs of this practice as losing the ability to pay their employees or invest in needed assets.

10.1.4 Organization of the fruit netchain: The pass-through effect

The results of the surveys provide us with insights into the functioning of the Slovak fruit netchain and helped us identify the most serious UTPs. The most concerning UTPs are late payments; product standards and specific instructions farmers must follow; renegotiation of contracts and single orders (especially of prices and quantity); and return/buyback of unsold products.

Significant differences in buying commitments and delivery obligations between supermarkets and farmers reflect the organization of the netchain. Because the supermarkets want to ensure product availability, their suppliers have a delivery obligation (in the majority of cases, it is a contractual obligation). However, supermarkets do not have a commitment to buy products from farmers. In this way, the risk of not selling the products is passed on to the farmers. Beyond that, farmers' responsibility for wasted products and loss after the products are already under ownership of the buyer is another form of risk transfer. In addition, in cases of weak demand, unsold products are returned to farmers, or the price the farmers are eventually paid is lower than agreed. This organization enables sellers to ensure availability of fruit to consumers but transfers significant risks to the farmers and leads to imbalanced trade relationships.

In comparison, the survey showed that farmers have more balanced relationships with POs. For example, 76% of farmers reported that a PO is never late with payments. Generally, relationships with POs are based on more trust between trading partners and long-term cooperation, which is also reflected in clear and unambiguous contract terms agreed on between parties (as reported by a majority of farmers).

Compared to the IDEA approach, B-SEA enables better evaluation of practices by asking farmers to rate the (un)fairness of specific practices. The effect of trading practices can depend on the context, and trading practices cannot be considered unfair or bad *a priori* without considering the context. This was confirmed in the survey. For example, 15% of farmers reported that their buyers require payments not related to the sales of products; however, according to the answers to questions related to the severity and impact of a practice, 60% of farmers consider the practice fair or totally fair, meaning these payments might be agreed on in a fair manner.

10.1.5 Implementation of the 2019/633 Directive

Results of the B-SEA surveys can support implementations of the UTP Directive at a national level. However, the survey suggests that implementation of the Directive should be done with a sectorial approach to take into account and respect the different structures of various industries. As seen in the survey, some practices in the EU UTP Directive might be a serious issue in one sector but not in another. This also supports allowing Member States to add other practices to the list of already-banned UTPs.

PART IV: Investigating UTPs: IDEA

The objective of the In-Depth Empirical Analysis (IDEA) is to identify possible unfair practices in a given netchain, assessing the overall level of protection from UTPs and the possible unintended consequences of regulation. Unlike B-SEA, the approach does not test an *a priori* list of target practices. Instead, it moves from the general definition of fairness by Bowie (1998) reported in section 2.3 and identifies possible practices of interest. The approach is based on extensive use of economic theory and qualitative data (such as semi-structured interviews), providing an assessment of the overall effectiveness of public protection from unfair practices of any kind. The IDEA approach is appropriate when the investigator has no priors regarding the unfair practices or wishes to test the completeness of predetermined lists of practices. In fact, one of the major weakness of the B-SEA approach is that relevant unfair practices might be missed, if the set of *a priori* information is incomplete.

In theory, IDEA is a five-step approach (chapter 6):

1. Description of governance and practices in the netchain
2. Theoretical assessment of the efficiency and fairness of the practices
3. Quantitative assessment of occurrence of UTP, measuring occurrence and impact
4. Assessment of the interdependences among practices and the pass-through effects
5. Evaluation of fairness

Steps 1 and 2 concern the background analysis of the *process-tracing* methodology. The description of the organization of the netchain is based on the analysis of existing data sources and interaction with panels of experts. The economic model provides a systematic illustration of the governance grounded in contract theory. The model is of particular importance to understand the implications of UTPs for the efficiency of the netchain. Steps 3 and 4 refer to descriptive and causal inference. They involve semi-structured interviews with key entrepreneurs and sample surveys. The final evaluation organizes the material into meaningful policy advice.

In this part of the report we illustrate the main findings of the IDEA we ran on the Agro-Pontino Kiwi Netchain (APK) in Italy and the Lake Constance Apple Netchain (LCA) in Germany. The structure of the presentation is the following. In chapter 11 we illustrate the results of discussions with the expert panels and the general characteristics of the governance of the two netchains. In chapter 12 we use economic theory to assess the efficiency and fairness of the practices. Chapters 13 and 14 report the results of the semi-structured interviews and the sample survey. Finally, chapter 15 provides a discussion of the results.

11 Results from Expert Panels

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11.1 Introduction

In this chapter, we report the results of the interviews with expert panels about the trade practices in the fruit industry, with a focus on the target netchains of the empirical analysis: the Agro Pontino kiwi (Italy) and the Lake Constance apple (Germany). The goal of this action is to provide background information for the process-tracing approach in the empirical analysis.

The expert panels support the research team by providing a description of the two netchains, illustrating the key drivers of the kiwi market, identifying the most important trading practices in the netchain, and supporting future research by providing information about key transactions. This report summarizes the discussion regarding each point. For easier reading of the reports, the experts' statements used or quoted in the following chapters are highlighted and marked as ***Finding K#*** for APK and ***A#*** for LCA.

11.2 Expert Panel on the Agro Pontino Kiwi Netchain

The discussion was moderated by researchers from the University of Cassino and Lazio Meridionale and supported by researchers from Tuscia University and CREA. The moderators presented the questions and then let the panellists debate without interference. At the end of the discussion, the moderators summarized conclusions, dividing the issues based on whether a consensus was achieved. The summary was approved by the panellists. This report illustrates the main conclusions of the discussion.

Because of the number of panellists and difficulties in coordinating the agenda, there were two expert meetings. The first meeting was on February 18, 2019, and the second meeting on March 1, 2019. Although the decision to split the panels limited interaction among experts, it favoured participation. The panels included eleven experts: three representatives of POs, five representatives of farmers and farmer associations, and three representatives of local institutions. A private trader and the representative of Legacoop (retailers) accepted the invitation but did not participate in a meeting.

Participants on Panel 1 (February 18, 2019 at Agrocamera)

[1] PO association
[2] Large PO
[3] Farmer association
[4] Public stakeholder
An invited private trader did not participate.

Participants on Panel 2 (March 1, 2019 at ARSIAL)

[5] Public stakeholder
[6] Farmer association

[7] Farmer association
[8] Farmer association
[9] PGI consortium
[10] Multinational trader
[11] Medium-size PO
An invited Cooperative Association representative did not participate.

Research Team:

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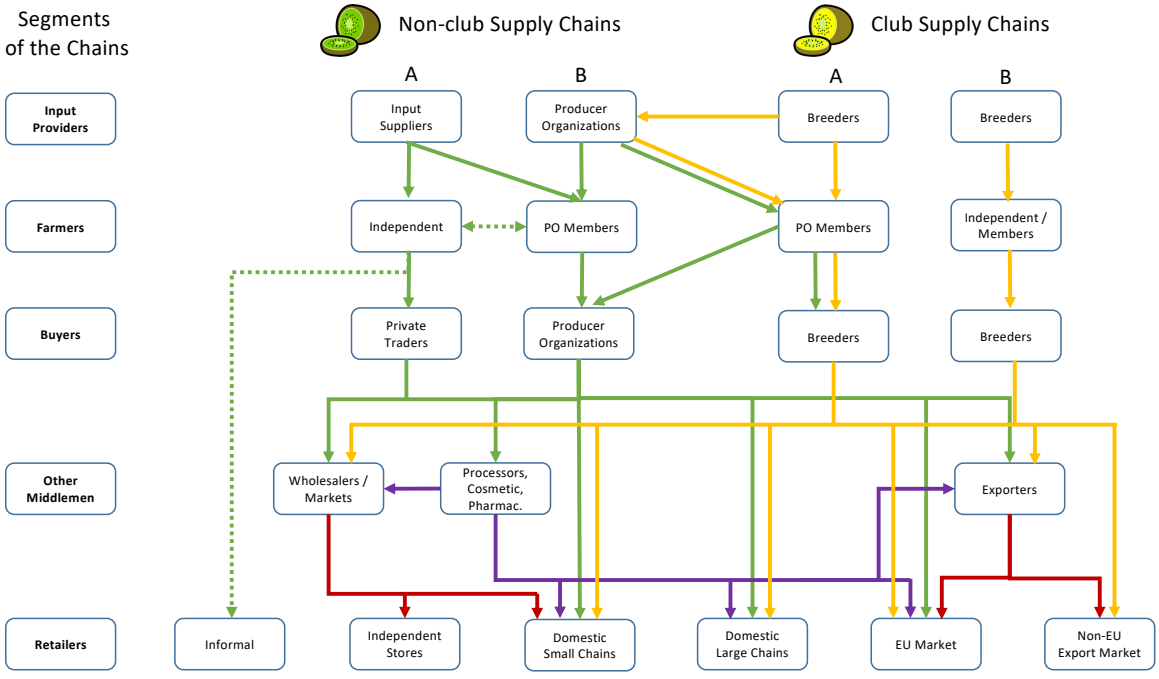
11.3 Description of the kiwi netchain

The experts agreed on the following stylized representation of the kiwi netchain. They identified five main layers: input providers, farmers, first-tier buyers (including POs) who buy from farmers, second-tier buyers who buy from first-tier buyers and retailers.

The netchain can be broken down into several supply chains. The first distinction is between club and non-club supply chains. The former refers to varieties with protected intellectual property rights under UPOV or TRIPs treaties (mainly yellow- or red-flesh kiwis), the latter trades free varieties that can be grown without limitations (mainly Hayward green-flesh kiwis).

Figure 11-1: A stylized representation of the Agro Pontino kiwi netchain



Green arrows refer to trade flows of non-club varieties, yellow arrows to club varieties, purple to processed products and red to trade flows of all types. Dotted lines indicate informal trade flows.

Club supply chains are centred on patented varieties (yellow arrows in Figure 11-1). In these chains the holder of the intellectual property rights (the so-called breeder) allows farmers to grow the variety under an exclusive marketing agreement. The breeder is at the same time the supplier of the genetic input and the buyer of the harvest.

In the stylized representation, there are two types of club supply chains (A and B in Figure 11-1). In type A, the breeder has an agreement with a producer organization for the cultivation of a specific acreage. The PO allocates these rights to members. The breeder provides farmers with technical assistance and takes the entire harvest of the club variety. Farmers are allowed to grow other non-club varieties and may or may not deliver the unprotected harvest to the breeder. The breeder sells the club variety through several marketing channels, including wholesalers, supermarket chains worldwide and exporters. Zespri (Sungold club variety) and Naturitalia (Jingold club variety) adopt this governance form.

Type B supply chain of club varieties does not use the support of local POs. The farmers may be members of the breeders directly (in the case that the IPR are held by a PO) or independent farmers. In any case, the breeder maintains the exclusive marketing rights of production. For example, this governance form is used by the Consorzio Europeo Dorì.

The two types of supply chains of conventional (non-club) varieties are identified by the nature of the buyers. In type A, farmers' products are bought by private traders, while in type B a PO is the buyer.

The four types of supply chains are separated up to the buyer segment, even if interdependence exists. Overall, the experts estimated that approximately 70% of the products is traded by POs (most of them with their headquarters in Northern Italy), 20% is managed by private traders (both local and from Northern Italy) and 10% is sold through other channels that have been defined "informal".

In the downstream markets the supply chains merge, and it is possible to find kiwis from different types of chains in the same outlet. The panels identified several kinds of middlemen and retailers, and all experts agreed that each one may have different trade practices. According to some experts ([2], [3], [10]) large retailers are tougher negotiators, but fairer and more interested in developing long-term relationships than intermediaries and small traders. Other experts disagreed ([6], [8], [11]).

> ***Finding K1****: Experts have heterogeneous perceptions of large retailers' fairness. While some ([2], [3], [10]) consider them tough-but-fair buyers (or, at least, better than small traders), others ([6], [8], [11]) perceive the relationship as imbalanced and unfair.*
>
> ***Speculation on finding K1***: *The different perception might be associated with the size of the firm.*

A key distinction among the marketing channels downstream is between those with strict quality control (such as large supermarkets) and those that do not enforce high quality standards (such as informal trade or certain export markets, e.g., Ukraine or Belarus). Such lack of quality control is considered a major issue by several experts ([1], [2], [3], [5], [6], [7], [8], [9], [11]). It harms the consumer's overall perception of the quality of the Agro-Pontino kiwis, while other competitors such as Zespri (which is marketing products from the same areas, as well as under a New Zealand brand) are gaining a strong reputation for quality.

Experts ([2], [7], [9], [11]) suggested that UTPs are more likely to occur at the segment where storage happens, usually the buyer layer in Figure 11-1. Most of POs take care of product storage, and if they do not have facilities of their own they usually rent them.

11.4 Key drivers in the kiwi industry

The experts were asked to illustrate the main issues and key drivers of competitive advantage in the Agro Pontino kiwi netchain. They concluded that there are great opportunities for the kiwi business in general, but they also agreed that specific factors might hinder the economic development of the Agro Pontino netchain.

11.4.1 Opportunities and threats

Experts expect an increase in global demand for kiwi, due to consumers' increasing awareness of its health attributes and growing interest in new varieties (especially yellow- and red-flesh fruits). Since kiwis are easy to store and transport, firms can target a global demand. Nevertheless, limited resources (especially water), historical lack of investments in genetic development and diversification might limit production and market access in the future. Furthermore, experts (except [10]) note that the lack of coordination in the chain prevents production planning and effective quality-enhancing strategies. The problem is particularly important in the non-club supply chains, where a large number of small farmers lack the skills and resources for joining advanced quality schemes. The experts contrasted the poor organization of non-club supply chains with the efficient governance of the Zespri supply chain. The list of opportunities and threat is reported in Table 11-1.

The experts debated on the role Zespri, a world leader in kiwi trading, has in the Agro Pontino netchain. The firm is based in New Zealand but has in recent years invested worldwide in order to have a year-round supply of kiwi. Zespri owns the IPR on *Sungold*, one of the most popular yellow-flesh kiwi club varieties. They have a branch in the Agro Pontino area that contracts POs and farmers (club supply chain type A). Some experts ([2], [10], [11]) consider Zespri investments as a great opportunity to learn new skills and replicate the approach of production planning. Others ([1], [3], [5]) are concerned about the consequence of possible quick disinvestment once demand shifts or other production areas, such as Calabria (Italy) or Greece, become more appealing.

Table 11-1: Opportunities and threats for the Agro Pontino kiwi netchain

Opportunities	Threats
Great potential for new export markets. Kiwi fruits are easy to store, move and transport.	**Water salinization and water management** might become issues, even though in the last two decades water consumption has been reduced, thanks to the use of new techniques and equipment.
High demand growth potential. Kiwi can be considered a functional food, with good nutritional values and effects, which people are not aware of yet.	**Lack of genetic research and diversity in variety (non-club chains only).** There is substantially only one non-club variety (Hayward) in the area. It finds good agronomic conditions, and farmers do not see any need to change or improve it. However, the lack of biodiversity lends problems in terms of plant protection and competition from emerging countries (Greece). Budget cuts to research at the national level in the past decades contributed to worsen the situation.
Great natural habitat. Fruits grown in Italy, and Agro Pontino, are of good quality and have good organoleptic parameters.	**Inefficient coordination and low concentration.** Property fragmentation, which increases the number of actors, makes it difficult to properly organize the chain.
Increased production and demand for the yellow kiwi. This might be seen as an opportunity, but could also at the same time be seen as a threat for the green kiwi, whose market shares are stolen by the yellow one.	**Quality issues**. Several producers prefer to increase yield at the expenses of quality.
	Knowledge and expertise of farmers. Farmers have heterogeneous knowledge and capacities. There is a number of highly skilled farmers, many of them related to the club chains, and many part-time or "hobbyist" farmers who do not have the skills to follow quality standards or the resources to invest.
	Competitors (mainly China and Greece). In the past years, Chinese production has increased and experts expect that, once the internal demand is covered, China will start exporting. Considering the potential production, this could create serious threat to Italian producers. Greece is a threat, too, because kiwi fruits there have the ideal agronomic conditions, the orchards are younger than those in Italy and of a different variety.

11.4.2 Drivers of competitive advantage: Quality, flexibility and reputation

The experts agreed that quality is a main driver of competitive advantage. Quality is a prerequisite to entering the largest and most profitable markets, such as large retailers or exports to high-income countries (such as Germany, Japan or the USA). Quality-based strategies require coordination, because farmers must be able to produce according to customers' specifications. This is costly for farmers for two main reasons. Firstly, quality production requires the adoption of costly practices and non-negligible investments. Secondly, these practices imply lower yield. Therefore, the price premium for quality must be high enough to compensate

farmers for the costs (experts [6], [9], [10], [11]). Farmers are heterogeneous with respect to the cost of providing quality (expert [4]). Usually, private traders buy products only if they comply with a minimum quality standard. POs are committed to accept all member production, regardless of quality (experts [6], [11]). As a consequence, private traders usually are able to reward quality more, in the form of higher price premiums or larger and earlier down payments than POs (expert [6], [8]). This is considered a major issue in PO management and a source of possible opportunistic behaviour. Farmers might decide to sell high-quality products to private traders and low-quality products to POs, using informal trade to go around the delivery commitment ([anonymous expert]).

According to the experts, quality is observable, and buyers can discriminate low-quality products. However, there is still a large production of low-quality kiwis due to the yield incentives (experts [3], [6], [7], [8], [9], [11]). Farmers with high costs for providing quality (because of lack of skills, lack of capital investments or high discount rate) have an incentive to produce a large volume of low-quality fruit and deliver to informal marketing channels or POs.

The ability to meet consumer demand and comply with downstream firms' requirements is the second main driver of competitive advantage in the kiwi industry, according to all the experts. In practice, firms must be able to meet orders on a very short notice, delivering high quality fruit at the lowest possible price (experts [2], [3], [11]). The buyer segment of the netchain (Figure 11-1) must comply with heterogeneous quality and safety standards, and it is called to contribute to retailers' promotions and marketing activities (such as sales or the opening of new stores) typically through granting price discounts. Some experts ([3], [6], [8], [11]) stressed the unpredictable nature of such requests, while others ([2]) suggest that historical data can be used to predict future requests with sufficient accuracy.

Some experts ([2], [3]) consider meeting downstream firms' requests as part of a "customer care" strategy, where building a reputation for reliability and a problem-solving attitude is the key to building trust and successful long-term relationships. Because firms operate in relatively small markets with repeated transactions (experts [3], [10], [11]), reputation is considered a key asset and competitive advantage. Having a reputation for reliably delivering high-quality products is of paramount importance for firms in the kiwi industry. Partial exceptions to the reputation strategy are small traders and intermediaries who seem to have a shorter time horizon in their strategies and therefore less use for reputation (experts [3] and [6]).

Other experts ([6], [8], [11]) consider pressure to meet demand as the result of downstream firms' bargaining power and stress the unilateral nature of the requests. All experts agreed that failing to comply with downstream firms' requests is likely to result in a reduction of future trade or even termination of the contract relationship. While some experts ([2], [3]) consider this a normal, tough-but-fair business relationship (e.g., why do business with unreliable suppliers?), others feel like they are doing business under continuous threat ([6]).

Finding K2: *Quality, flexibility and reputation are key competitive advantages in the kiwi supply chain. In order to compete, firms must have a reputation for reliable delivery of high-quality products for unpredictable, short-notice orders.*

11.5 Analysis of trading practices

The experts were asked to illustrate the key elements of transactions in the kiwi netchain. In particular, they discussed contractual organization and primary trading practices.

11.5.1 Organization of the netchain

The netchain is structured according to a demand-push principle, and all firms act in order to ensure that the final demand is satisfied. Demand is unpredictable and affected by several random factors, including non-systematic shocks such as news about health and safety, food fashion or temperature. Also, consumption is sensitive to the prices of kiwi and other fruits. A promotion on other fruits can depress the demand for kiwi significantly. Fluctuations in final demand generates shocks in the derived demand at the intermediate segments of the supply chains. Being able to adjust to such random fluctuations of demand is considered a key competitive advantage (section 11.4.2). In order to be a reliable trade partner, firms must grant product availability even in the presence of demand spikes ("They must show they have the product", experts [2], [3], [6]) and—at the same time—be able to take the risk of falls in demand ("They must deliver on demand only", experts [2], [3], [6], [11])

The netchain is organized as a sequence of interdependent transactions. Each firm, when bargaining with an upstream supplier, considers the terms and conditions of the contract with the downstream. This circumstance originates the pass-through effect.

Finding K3: *Contracts between various segments of netchains are interdependent.*

The bargaining begins at flowering/blooming period, when firms have a reliable estimate of the production. Product availability influences negotiations between farmers and their buyers. If supply is scarce compared to expected demand, buyers must compete in order to obtain enough product to maintain their reputation as reliable suppliers. If supply is abundant, buyers can be more selective about quality and offer lower prices. There are two fundamental differences between private traders and POs at this stage. POs are committed to trade the entire production of all their members, and they pay a down payment at delivery and a settlement at the end of the season. Private traders place delivery obligations onto farmers but do not necessarily commit to buy a minimum quantity (expert [6]). They offer prices close to those offered by POs, but they pay larger down payments before the harvesting season so that farmers can use the money to cover expenses. In general, POs are more effective in taking the risk of overproduction away from farmers (as they take the entire production), while private traders are more effective in taking on the price risk (as they pay earlier and make larger down payments).

Finding K4: *POs are more effective in taking the risk of overproduction away from farmers (as they take the entire production), while private traders are more effective in taking on the price risk (as they pay earlier and make larger down payments).*

Club variety supply chains have unique features. The breeder can plan production by limiting access to the genetic resource and providing technical assistance to help farmers achieve quality and quantity targets. Experts ([10]) said that the breeders usually plan to supply a quantity slightly lower than expected demand in order to gain bargaining power with downstream firms. Breeders buy farmers' entire production, based on an exclusive marketing agreement. Quality enforcement is strict, and fruits that do not comply with the standard are destroyed. This gives farmers strong economic incentive to provide high-quality fruits (experts [10], [11]). Experts agree that coordination in club variety supply chains is much more effective than in non-club chains. Zespri is referred to as the leading example.

Once a year buyers and other middlemen negotiate a supply agreement with supermarket chains (or buying desks). The agreements set the conditions for "shelf access", that is, for being considered a possible supplier of the retailer over the year. There are several access costs to

entering into such a transaction with a retailer. Direct entry fees are payments linked explicitly and directly to the listing procedure (registration fees, etc.). Some experts estimate such costs to be, on average, approximately 2,000 euros (experts [6] and [8], but others did not confirm the estimate). Indirect costs may be even more sizable and include specific investments or contributions to the retailers' expenses. For example, some retailers require suppliers to use a specific packaging system that can only be rented for a price (and a bank guarantee is required). Suppliers may be asked to contribute to the restyling of shelves (approximately every three years). During the negotiation of the supply agreements, suppliers have the opportunity to join voluntary programs (quality programs, promotion campaigns, etc.). An expert ([6]) stated that voluntary participation in promotions/discount programs is expected, and suppliers perceive that a sustained flow of orders depends on their willingness to join the voluntary programs. In this way, formal discounts and promotions are free actions of the suppliers, but in practice they are perceived as a condition for entry into the business. Other experts agreed. The most sizable costs are promotions and discounts, considered by the panellists as pay-for-entry and pay-for-stay costs (experts [2], [3], [6], [8], [11]).

Supply agreements put a delivery obligation on the suppliers but not a minimum quantity commitment on the large retailers. This means that if the retailer orders what is contractually agreed, the producer must make it available on demand, with no excuses. Orders, on the other hand, are based on market trends and not guaranteed. Having no obligation, a large retailer can deny orders without legal reason (just claiming low demand). The suppliers have no grounds (or bargaining power) to contest such claims. Renegotiations of the supply agreement are possible. Under the guarantee of anonymity, one expert complained that renegotiation often takes the form of voluntary "offers" by the producers, while in fact these are elicited by the buyer informally. The anonymous expert reported that large retailers will mail suppliers pre-filled forms with a "voluntary proposal for a discount or a promotion". The supplier is expected to sign it, under the tacit threat of reduction in future trade. Other experts ([2], [10]), however, stated that changes in trade agreements usually happen during the yearly negotiation, while renegotiations during the year are rare. All experts agreed that, typically, supply agreements are offered by retailers in a "take-it or leave-it" form, and suppliers have little chance of negotiating terms.

Once the supply agreement is signed, orders are negotiated periodically. Some experts referred to monthly ([11]) and others to weekly ([2]) negotiations. Weekly prices are relatively predictable, but in the case of excess supply due to poor production planning (or unexpected fluctuations in markets for substitute fruits), sudden price falls may happen. This circumstance might be particularly severe for suppliers if it happens during promotional campaigns. In this case, the discount makes prices even lower (experts [6], [11]). During negotiations of orders, retailers may ask for "additional discounts" because of special circumstances (such as the opening of a new store or unexpected market conditions). Such discounts are additional with respect to the ones in the supply agreement. Experts agree that suppliers usually agree to the additional discounts because they expect trade reduction in the future if they do not ([3], [6]). Suppliers may offer discounts or other benefits in order to elicit orders, if they need to sell-out stocks. In fact, especially when production is abundant, suppliers compete for orders with other traders, and auction-like mechanisms are possible (experts [2], [6]). The additional discounts come on top the planned promotion campaigns in the supply agreements.

Finding K5: *In the netchain, downstream firms usually have more bargaining power than upstream firms (with the exception of breeders in club-variety supply chains, who have bargaining power over farmers even when acting as input providers)*.

11.5.2 Main trading practices

The main focus of the experts was price determination. Other practices were considered ancillary. They expressed concerns about low prices and referred to unexpected discounts as the most critical practice. In this regard, the Directive 2019/633 states:

> *For contributions by a supplier to the costs of product promotion, marketing or advertising, including promotional displays in stores and sales campaigns to be considered fair, they should be agreed in clear and unambiguous terms at the conclusion of the supply agreement or in any subsequent agreement between the buyer and the supplier, otherwise they should be prohibited under this Directive. Where such a contribution is agreed, it should be based on objective and reasonable estimates.*

Based on the experts' statements, we concluded that protection offered by the Directive might be limited by two factors. Firstly, discounts may be offered by suppliers as a competitive tool for obtaining more orders from downstream firms. In practice, it might be very difficult to tell these cases apart from discounts that are elicited by retailers under the threat of commercial retaliation. Secondly, if we assume that additional discounts (i.e., discounts not considered in the supply agreement in clear and unambiguous terms) are banned, then the outcome is a possible increase in price volatility if the discount cannot be adjusted to the price. For example, suppliers might be required to give discounts when prices are already close to average production costs.

Finding K6: *Unpredictable discounts and promotions are the most detrimental practices in the kiwi industry*. Ex ante *specification of promotions may lead to a mismatch between price realizations and the pre-planned discount.*

Unilateral renegotiations are considered customary by several experts ([6], [8], [9], [11]). Sometimes buyers renegotiate directly, sometimes they press suppliers to offer terms that are more favourable than the ones in the original contracts. In any case, it is well understood that contract renewal and future orders depend on the ability of suppliers to comply with, and even anticipate, buyers' requests (experts [2], [3], [6]). In this case, too, it might be difficult to tell unilateral renegotiations (especially in the absence of explicit requests) from actual competition among suppliers.

All experts agree that threats of commercial retaliation are pervasive. They are never explicit, but there is a tacit understanding that they are likely to happen if, for whatever reason, the downstream firms are not satisfied with the trade relationships. Experts ([2], [3, [6], [8], [11]) stated that sometimes firms do not contest downstream firms' actions (such as quality enforcement or renegotiations) in order to preserve "a good trade relationship". Although the threats are quite common, it is difficult to find evidence of them because they are not communicated by email or in any other written form.

Finding K7: *Threats of commercial retaliation are common*. *Firms might not challenge unfair decisions for fear of retaliation.*

Delayed payments are not considered an important problem in the kiwi industry. The timing of payment is already regulated by Italian law, and usually large retailers respect the terms of payment within 30 days of the invoice. According to an expert ([3]), payments may be less timely and regular when small traders or informal channels are involved. Several firms pay settlements well after 30 days from delivery, following the PO practices.

Finding K8: *Settlements at the end of the season and prices to be determined are common among POs and private traders alike.*

Orders come with very short notice and only when the buyer is certain there is a demand for the product. Consequently, order cancelations are rare. Experts agree that the Directive provision in this regard makes little sense for the kiwi industry.

Some experts ([6], [11]) remarked that retailers do not pay for unsold products. This includes cases of deterioration at the retailers' premises, even if the supplier is not responsible for it (for example, waste of kiwis at sale-point due to manipulation by the consumers). Large firms, such as Zespri (expert [10]), use plastic packaging in order to prevent the problem. Other experts ([8], [9], [11]) said that this strategy is possible only because of Zespri's reputation for quality (consumers trust the brand and do not need to choose the individual fruits).

Experts agreed that contracts with large retailers are all in written form. This is considered a guarantee for the retailers for two reasons: i) contracts are typically written by retailers to their advantage, and ii) suppliers hesitate to use the contract against the buyer because of the possible consequences on future trade.

Experts agreed that the unclear specification of payments and costs (such as product display, marketing cost, etc.) is not a major problem in the kiwi industry. Discounts and promotions are an exception, as mentioned above.

11.6 Key transactions

The experts agreed that large retail chains and large traders have a dominant role in the netchain because they are the gatekeepers of consumer access. Given the high concentration in the downstream industry, these firms have remarkable bargaining power and are often able to impose their terms. Upstream firms, such as farmers and buyers, are not well organized (POs are relatively small) and often compete with each other for market access.

The key transactions are those between buyers and the buying desks of retailer chains. However, the experts expect that there will be a low degree of cooperation from downstream firms regarding this research.

11.7 Expert panel on the Lake Constance apple netchain

This report summarizes the discussion of an expert panel, which was employed to investigate the organization of the Lake Constance apple netchain. Dr. Sebastian Rahbauer of the Technical University of Munich moderated the discussion. Specifically, the experts were consulted to identify

- lead firms and their most important trade partners,
- typical contracts and arrangements in the netchain,
- drivers of competitive advantage in the netchain, and
- the most important trade practices and focus transactions.

The selection of individual experts was made carefully. We aimed to select experts from each of the different stages of the netchain. Unfortunately, no representative of a retailer was willing to

participate. The following netchain segments were represented in the expert panel. We agreed not to divulge the names and companies of the panel participants.

a. Producer organization

The first expert (expert A) was the head of one of the largest German producer organizations for dessert fruits. More than 450 apple producers around Lake Constance are members of this PO. The expert himself had been working in various positions at this PO for about 20 years.

b. Trader

The second expert (expert B) was a former manager of a fruit trader, who retired about five years prior. Fresh apples represented the largest revenue share for this fruit trader. Until his retirement, the expert was active in the fruit trading business for over 40 years.

c. Marketer

The third expert (expert C) was the marketing director of a contractual marketer of a producer organization for dessert fruits produced in the Lake Constance area. This expert had about 15 years of experience in the marketing of apples.

d. Producer

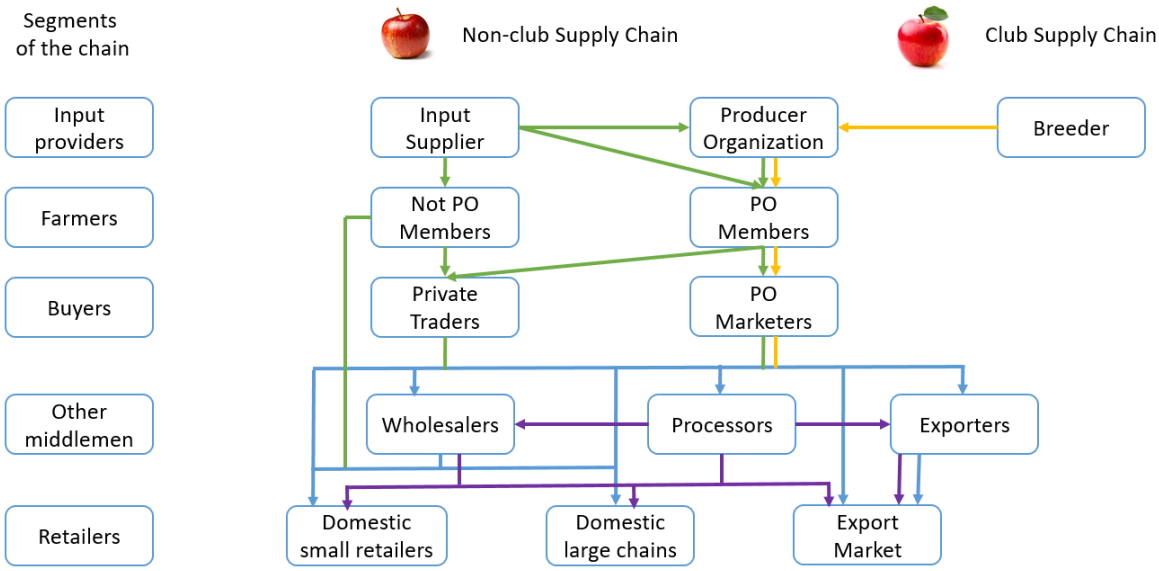
The fourth expert (expert D) was an apple grower from the Lake Constance area. This participant was also a member of the producer organization represented by the first expert and cultivated apples for over 30 years.

11.7.1 Description of the apple netchain

The experts identified input providers, farmers, producer organizations (POs), buyers (who buy from farmers), other middlemen (who buy from buyers) and retailers as making up the main layers of the netchain. The experts approved the representation of the Lake Constance apple netchain illustrated in Figure 11-2.

The Lake Constance apple netchain can be subdivided into two supply chains which are highly interconnected: club and non-club. Both club and non-club varieties of apples are produced in the Lake Constance area. Non-club varieties make up a large majority (over 90 percent according to experts A, C and D) of the apple production in this area, and all farmers are free to grow them without limitations. Club varieties are patented, and farmers have to acquire seedlings from the patent holder or contractual nurseries. Typically, patent holders do not sell these seedlings to single farmers but only to POs. Therefore, POs buy large quantities of seedlings of a club variety and pass them on to their members. The members commit to distributing the harvested club apples through the cooperative. The vast majority of the apple producers around Lake Constance are members of POs and have access to club varieties [expert A].

Figure 11-2: Stylized representation of the Lake Constance apple netchain



Green arrows refer to trade flows of non-club varieties, yellow arrows to club varieties, and blue arrows to both club and non-club varieties. Purple arrows indicate processed products.

In addition to providing seedlings of club and non-club varieties, POs function as consultants, supporting growers throughout the apple-growing process (e.g., pest monitoring, plant protection, harvest control, certification). POs also perform many tasks that single producers cannot complete, such as the bundling of supply at a uniform and high-quality level. Unlike POs in some other sectors, the POs of apple producers around Lake Constance do not run warehouses themselves.

The handling of the apple harvest is completely outsourced to contractual marketers of POs [expert C]. These marketers run warehouses in which they collect, store, sort and package the apples that the POs' members deliver (club and non-club varieties). These marketers sell the products through various marketing channels, including wholesalers, processors, exporters and retailers. Few contractual marketers combine significant market shares. In the past years, many traders have left the market, and a few large contractual marketers of POs adopted their market shares [expert B]. The expert estimated that contractual marketers of POs trade around 95 percent of apple production in the Lake Constance area. Thus, private traders are of minor and decreasing relevance in the supply chain.

Few non-PO members deliver their harvest directly to domestic retailers. According to expert D, many farmers try hard to bypass middlemen and cooperate directly with retailers. However, retailers rarely put in the effort to cooperate directly with farmers because several farmers are usually needed to cover the capacity of one marketer or trader [expert B]. An exception is the trade of regional apples, which are sourced directly from smaller producers by some retailers with decentralized procurement. However, this is not possible for club varieties, which are exclusively marketed by contractual marketers of POs.

According to all the experts, retailers represent the lead firms in the netchain. The experts said retailers are fair on most points but use their dominant position to push down prices for apples [experts B, C]. Trade practices are heterogeneous for different retailers but have not been labelled as unfair or immoral. They are perceived as a characteristic of the industry.

> ***Finding A1****: The experts assess retailers as tough negotiators with heterogeneous trade practices. For the most part, these trading practices are not perceived as unfair but rather accepted as conditions of the industry.*

Apples that exceed the retail demand, have flaws or do not meet the quality requirements of retailers go to the processing industry. Expert B estimated that under five percent of the apples produced in the Lake Constance region are exported.

11.8 Key drivers of the apple industry

The experts were asked to illustrate opportunities, threats and key drivers of competitive advantage in the Lake Constance apple netchain. This section presents a summary of the issues raised by the experts.

11.8.1 Opportunities and threats

The natural conditions around Lake Constance were assessed as favourable for the production of high-quality apples. However, some experts [A, B, C] assessed the presence of a large number of small farmers in this area as a difficulty concerning the proper bundling of sales. Retailers increasingly demand large quantities of apples of uniform quality. In addition to a number of highly-skilled, full-time farmers, many part-time farmers produce apples of inconsistent quality that are not desired by retailers and have to be marketed otherwise.

Expert B predicted a consistent domestic demand for apples in the future. Due to the relatively low self-sufficiency rate and present chain structure, the experts did not assume an increase in the rate of exported apples in the near future, as German buyers demand most of the domestic harvest. However, a main threat was perceived from the import of club varieties such as "Pink Lady" and "Jazz", which are almost exclusively produced at large farms in Southern European countries. These varieties are increasingly displacing domestic apple varieties because consumers value their appearance and taste.

An additional threat was perceived from international competitors, which are able to offer low-price apples of good quality due to their comparatively low production costs. These international competitors lower market prices of domestic apples and challenge the profitability of apple production in Germany.

11.8.2 Drivers of competitive advantage: Quality, flexibility and liquidity

The experts agreed that quality is a main driver of competitive advantage and determines firms' success in the value chain. It is the prerequisite to enter the largest and most profitable markets, such as large retailers. For farmers, this implies being able to produce according to the customers' requirements. This can incur additional costs, e.g., for certification and technology adoption. Contractual marketers of POs are committed to accept all member production, regardless of quality. Farmers delivering higher quality apples receive a price premium for their

products. Therefore, the price premium for quality must be high enough to compensate farmers for their additional costs.

For middlemen, being successful requires being able to consistently provide unpredictable quantities of apples of high quality and uniformity throughout the whole year. In addition, it is advantageous to trade a broad product spectrum of different fruits and vegetables. Retailers rarely cooperate with pure apple suppliers [expert C]. Expert B agreed and added that retailers further expect their suppliers to manage tasks they would otherwise have to deal with themselves. As an example, he stated that retailers increasingly limit their storage activities, relying more on just-in-time delivery. Suppliers are thus selected based on their storage capacities and efficient logistics. They have to be capable of processing orders and delivering apples on short notice, which constitutes high requirements in terms of their flexibility.

Another important aspect is suppliers' liquidity, as retailers use suppliers for bridging finance [expert B, C]. Suppliers pay their producers for the purchased goods but receive payment from the retailer only after delivery. The supplier carries the financing costs for the period in between.

> **Finding A2**: *Quality, flexibility and liquidity are key competitive advantages in the apple supply chain. Firms must be able to cope with unpredictable and short-notice orders from retailers.*

11.9 Analysis of trading practices

The experts described the key elements of the transactions in the Lake Constance apple netchain and discussed the main trading practices. The results are presented in the subsequent sections.

11.9.1 Organization of the netchain

Consumer demand for apples is influenced by several predictable (e.g., seasonal fluctuations) and unpredictable factors (e.g., food scares, food fashion). Being able to adjust to fluctuations in demand requires flexibility, which was previously described as a key competitive advantage in the chain.

The apple netchain can be divided into a sequence of interdependent transactions that ensure final demand is satisfied. Each firm, when bargaining with the upstream supplier, considers the terms and conditions in the contract with the downstream firm.

> ***Finding A3****: Contracts between segments of the apple netchain are interdependent.*

The transactions between farmers and their buyers (PO marketers and private traders) are governed by delivery contracts. PO marketers are committed to trading their members' entire apple harvests. The prices the farmers receive from the PO marketers are dependent on several quality attributes of the delivered apples. Private traders, instead, only conclude contracts for specified quantities and qualities. According to expert D, most delivery contracts are concluded before the apples are harvested. In this way, producers try to minimize their storage needs as they deliver the apples immediately after harvesting. Independent of when or with whom delivery contracts are concluded, farmers receive the entire payment for their apples within 30 days post-delivery, if not explicitly agreed otherwise.

> ***Finding A4:*** *POs are committed to accepting their members' entire harvests, while private traders only accept high quality and specified quantities. The timing of the payments does not differ between POs and traders.*

The relationships between middlemen and retailers can be considered more complex. Transactions are governed by supply agreements and delivery contracts. According to expert C, confidentiality agreements prohibit middlemen from disclosing any information about the contractual features.

Supply agreements are negotiated once a year between the middlemen and the retailers' buying desks. These agreements set the conditions for a middleman to be "listed" by a retailer, i.e., to obtain shelf access for one year. Usually, supply agreements define three dimensions: (1) quality, (2) promotions and, for some retailers, (3) services.

(1) The quality dimension defines the exact quality of the product, the procedure to test it and the consequences for failing to deliver the required quality. Retailers have their own residue specifications, which regulate the quantities and maximum accepted residues of pesticides and contaminants in apples. There are a lot of further quality requirements, e.g., specifications for how pallets should be packed or apples must be labelled. Exemplary, expert B referred to one specific retailer that requests to label all apples as Class II, although the apples have to comply with Class I.

(2) The agreement about promotion covers all actions needed to ensure steady turnover. These include advertising, sales, special offers and in-store promotions. According to expert B, almost all retailers also claim reimbursement from their middlemen, e.g., depending on sales volumes.

(3) The supply agreement of some retailers requires several services that middlemen must buy from the retailers. The services are bundled, meaning that shelf access is conditional on the purchase of such services.

The supply agreement can be terminated freely anytime from both sides, but this rarely happens, according to experts B and C. According to expert C, retailers are interested in a strong and steady supplier base. Retailers only consider listing new suppliers if their current suppliers make mistakes. Therefore, the cooperation between middlemen and retailers is often long-term.

For a middleman, signing a supply agreement is not a guarantee for future orders. According to expert B, retailers never commit to a minimum quantity in the supply agreement. Prices are also not specified in the supply agreement. Specific orders are based on offers, which retailers request from their listed middlemen on a weekly basis. A listed middleman may (or may not) receive a request for an offer. If a middleman submits an offer, it may or may not be accepted. If the retailer accepts an offer, a delivery contract is concluded. Delivery contracts set quantity, time, place and conditions of delivery and can include derogations to the supply agreement. Within an agreed-upon period after delivery (usually 14 days), the retailer pays the order.

> ***Finding A5:*** *In the apple netchain, downstream firms usually have more bargaining power than upstream firms (with the exception of breeders in club-variety supply chains).*

11.9.2 Main trading practices

Expert C was reluctant to discuss trading practices because it violated ongoing confidentiality agreements that he had signed with several retailers. Thus, most of the following information is based on statements from experts A and B.

The experts stated that supply agreements and delivery contracts with retailers are all in written form. They are very detailed and contain all necessary information about trade practices in clear and unambiguous terms. Changes to the initial contract during an ongoing contract period are very uncommon, according to the experts.

> ***Finding A6:*** *Contracts are in written form and include all trade practices. Confidentiality agreements prohibit middlemen from communicating any information about the contractual features to third parties.*

Late payments were not stated to be a problem. Typically, middlemen receive payments within 14 days after delivery. Disclosure of trade secrets by retailers was not perceived as a present practice. Short-notice cancelation of orders is the absolute exception, according to the statements of the experts. Orders come with very short notice, only when the buyer perceives that the demand for the product is guaranteed. Experts noted that—usually—buyers do not ask suppliers for compensation for the cost of examining customer complaints.

Retailer requirements that suppliers pay for the deterioration of apples that occurs on the retailer's premises are unusual. The long potential shelf life of apples prevents this problem. However, this practice is common for more perishable fruits and vegetables, as expert B indicated. The expert added that suppliers do not defy these payments out of fear of possible negative consequences for the trade relationship. Therefore, implicit threats of commercial retaliation are perceived as present. There is a fear that retailers will terminate a business relationship if the suppliers do not comply with their claims.

> ***Finding A7:*** *Implicit threats of commercial retaliation are present. Firms comply with retailers' claims out of fear of possible negative consequences for the trade relationship.*

This also applies to a further trade practice, which was perceived as the most detrimental by expert B. The expert stated that retailers demand payments from suppliers that are not related to the sale of suppliers' apples. These payments are compulsory, differ between retailers and are specified in the supply agreements. They include listing fees, shelf-cleaning fees, registration fees and supplier participation in retailers' quality programs. The expert stated that these payments are substantial.

> ***Finding A8:*** *Demand for payments unrelated to the sale of a supplier's apples is the most detrimental practice in the apple industry.*

11.9.3 Key transactions

The combined market share of the four largest German retailers tops 85 percent of the food retail market. Due to their great bargaining power, they have the ability to impose their terms on upstream actors, as the experts agreed.

The key transactions are those between buyers and the buying desks of retail chains. However, the experts expect that retailers will not be overly cooperative for this research.

12 Economic Modelling

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12.1 Introduction

The objective of this model is to illustrate the pass-through effect of UTPs along the apple and kiwi value chains that we consider in our empirical work. We based our analysis on the literature review (chapter 2) and our interviews with the expert panels (chapter 11), and we develop an illustration of the key economic issues related to UTPs. In particular, the main focus of the analysis is to illustrate the consequences of the UTP Directive on efficiency and value distribution in the chain.

We use the information from the panel of experts to define the institutional context of the value chain and identify the key practices to be included in the model. Then, we interpret the results based on the economic theory we illustrated in the review.

In order to provide the simplest illustration possible, we model the fruit supply chain as two interdependent industries. In the upstream market, farmers sell their fruit to middlemen. In the downstream market, middlemen sell to retailers. In our stylized model, retailers are supermarket chains. The middlemen represent the segments "buyers" and "other middlemen" defined by the expert panel for the kiwi and apple industries (Figure 11-1 and Figure 11-2).[10] They can be POs, private traders, processors, exporters, other firms or a combination of these. For convenience we assume just one intermediary between farmers and retailers. The model can be easily generalized for more complex structures if necessary.[11]

Transactions are organized with contracts. In section 12.2 we provide a stylized representation of the contracts in the two markets. For simplicity, we use basic principal-agent models, where the middleman is the principal in the upstream market and the retailer is the principal in the downstream market.[12] Our point is that the contracts are interdependent and simultaneously determined. Therefore, the practices that are adopted in one contract affect the organization of the other transaction. This determines the pass-through effect.

[10] Note that in chapter 11 the term "buyer" was used by the expert panels to indicate POs and private traders who buy kiwis from farmers. In this chapter the term is used for a generic firm buying fruits from a supplier. This includes retailers, who buy from middlemen.

[11] The expert panels suggested that PO and cooperatives may play different roles in the netchain. Some act as a middleman, taking the product from members, storing it and selling it to retailers, in a typical joint selling scheme. Others are just associations of producers that share knowhow and provide technical assistance. These POs have trading partners that function as the "middlemen" in our context.

[12] This assumption is supported by the panels of experts (findings K5 and A5 from chapter 11).

12.2 Characteristics of the fruit industry

The expert panels stressed the importance of three key competitive advantages in the kiwi and apple supply chains: flexibility, quality and reputation (findings K2 and A2 in chapter 11). Firms must be able to consistently and on short notice supply high-quality fruits at the lowest possible price in order to compete. Contracts are designed to ensure these fundamental competitive advantages (efficiency goal) and grant the principal the highest profits possible (value distribution goal).

The importance of flexibility derives from the volatility of supply and demand. Consumer demand is affected by price promotions and by several unpredictable factors, such as weather conditions, food scares, health news, food trends, etc. Supply is determined by nature (such as weather or pests) and agronomic variables. Due to the fast and unpredictable fluctuations of demand and supply, firms must be able to adjust their strategies as soon as information about trade opportunities are revealed.

Noticeably, the trade of each fruit is affected by shocks in the demand and supply of the entire category. In fact, due to high cross-price elasticity in fruit demand, retailers use category management techniques (Richards 2000; O'Keeffe and Fearne 2002). Retailers are multi-product firms serving basket shoppers. They maximize joint profits over the entire basket, regardless of the results from the individual products (e.g., Zenor 1994). This creates interdependence among the items in the category, and it might increase volatility and risk in the procurement market (Russo and Goodhue 2018). For example, an excess of production of a product in the category (for example, pears) may induce retailers to offer consumers a large discount in order to prompt consumption. This may result in a demand drop for other fruits (for example, apples or kiwis). As a result, firms must be able to react quickly to multiple and unpredictable shocks within the entire category.

An important consequence of category management is that a failure in the supply of one product may affect the entire category, and therefore the costs of miscoordination are potentially large. For example, failing to support a promotion with the supply of large volumes of fruit might result in an overall drop in store traffic, with the consequent loss of profits from the entire consumer basket (Russo and Goodhue 2018).

The limited shelf-life of the products and high inventory costs limit the ability of retailers to use stocks to deal with demand shocks. As a consequence, procurement is organized according a just-in-time principle, and retailers order fruits only when demand is revealed, for example, with weekly orders (sections 11.5.1 and 11.9.1).

Middlemen must meet these orders, providing high-quality products on short notice for an extended period (possibly all year round), even if the harvest season is quite short. They aggregate the supply of a relatively large number of farmers and then sell the fruit to the retailers whenever they receive the order. They incur the inventory costs, they cover the time difference between production and sales to the final consumers and bear part of the risk of a mismatch between supply and demand.

Farmers grow the fruit according to the quality specifications of retailers and middlemen. They bear the production risk and may share demand risk with the middlemen.

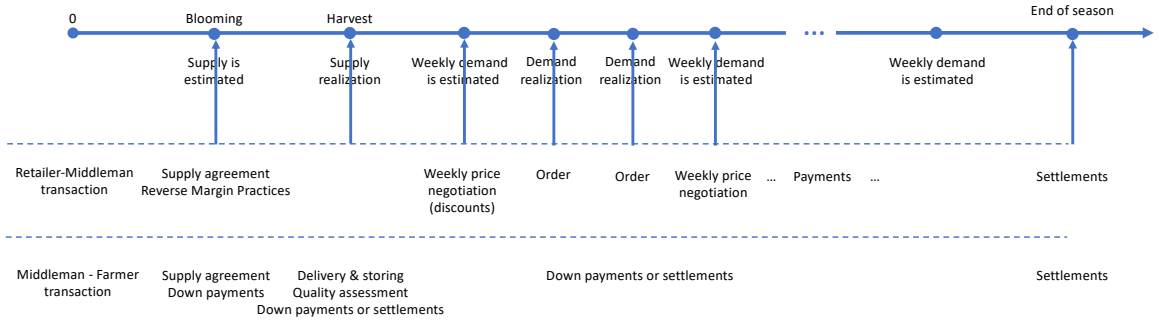
12.3 Organization of the supply chain

Running a just-in-time procurement system under unpredictable demand and supply shocks requires efficient coordination of the supply chain. The organization of the fruit supply chains is a problem with *design attributes* (Milgrom and Roberts 1992, p. 91): i) retailers have *a priori* information about the optimal solution, and ii) failing to achieve efficient coordination is costly. In fact, retailers are able to determine the optimal timing and volume of trade based on category management (have *a priori* information) and suffer profit losses in the entire category if the transaction with suppliers fails (i.e., delivery is not timely or products do not comply with quality requirements). As a consequence, retailers prefer a coordinated supply chain to spot market transactions.

The just-in-time organization of the fruit supply chain minimizes costs, but it increases the risk of transaction failure, because if one supplier fails to deliver there is limited time to find alternative solutions. As a consequence, reliability of suppliers is a key competitive advantage. An efficient organization of the supply chain requires *selecting and motivating the most efficient suppliers able to ensure reliable and flexible supply*.

Figure 12-1 illustrates the organization of the transactions along the supply chain. All agents are engaged in long-run business relationships. The long-run time horizon is beneficial for all parties. Farmers and middlemen have sizable capital investments (orchards, storage facilities, etc.) that require time to be recovered. Retailers can observe a supplier's reputation for reliable provision of high-quality products.

Figure 12-1: Timing of the transactions



The long-run relationship is broken down into a series of yearly supply agreements in order to ensure flexibility. The supply agreement is signed when firms have a reliable estimate for future production and uncertainty about supply is resolved (for example, at blooming season). At this stage, firms compare estimated production with historical data concerning demand and are able to anticipate whether there is an excess or shortage of supply. This knowledge is of paramount importance to define the relative bargaining power of the parties and, consequently, the terms of the agreement.

In the downstream industry, supply agreements regulate "shelf access" (sections 11.5.1 and 11.9.1). They state the conditions that the middleman must meet in order to be considered a possible supplier by the retailer. Terms include (but are not limited to) lump sum payments such as slotting allowances or negotiation fees; adoption of specific quality standards; promotions;

general terms of delivery (such as location, notice, packaging); take-back agreements; and quality enforcement. Usually at this stage retailers do not commit to minimum quantity purchases, and the entire demand risk is on the middlemen. Such agreements can be considered option contracts. The retailers gain the option to order from the middlemen, and they can decide whether to exercise it or not.

Supply agreements in the upstream market are production contracts, specifying quality standards, quality enforcement and quantity. Prices are determined at the end of the season when all production is sold to the consumers (finding K8 in chapter 11) according to agreed-upon pricing rules (e.g., pay-per-quality schemes, timing of payments). Supply agreements in upstream markets are discretionary, and firms may decide to trade at harvest time directly.[13] However, in our model, we assume that both parties have interest in signing a supply agreement. In the absence of the agreement, middlemen cannot prove to retailers that they are a reliable supplier, and farmers must trade at harvest time when their bargaining power is the lowest (see section 12.4).

At the time of the supply agreement, middlemen may (or may not) give a down payment to farmers to help them to cover harvesting costs.[14] The down payment is considered a sort of minimum guaranteed price. Further anticipations may be paid during the year, and settlement is paid once the product is sold to retailers or at the end of season. This practice allows middlemen to share the demand risk with producers.

Production is delivered to each middleman at the harvest season. Farmers who did not sign supply agreements sell their goods at this stage. Middlemen buy the agreed-upon quantities and store the product for future sales. A key difference between private traders and POs is that the former can select production based on quality (and therefore reject delivery of non-compliant fruits), while the latter are committed to accept the entire production. Both types of middlemen can use pay-per-quality schemes, where the price paid to farmers depends on quality. Middlemen store the product and wait for the realization of demand.

Before harvest, retailers may offer middlemen a one-year supply agreement. Only middlemen who sign the agreement are allowed to supply the retailer with fruits throughout the year. Middlemen are offered a supply agreement only if they can prove they have product available (i.e., if they have agreements with farmers) and if they have a reputation for consistently supplying high-quality products on short notice (i.e., if they never failed to comply with the retailer's request).

On a regular basis, retailers obtain short-run estimates of future demand. At this point, they negotiate prices with the middlemen they signed the supply agreement with. In the kiwi supply chain this happens weekly (usually on Friday). In this stage, retailers and middlemen negotiate prices based on market conditions, promotions and discounts (i.e., price reductions with respect to the negotiated price). The supply agreements regulate promotions. However, the timing of the sale is decided at this stage in order to match marketing actions to demand (and the needs of category management). Parties may agree on additional promotions and discounts (section 11.5.2). These further discounts may be elicited by retailers or offered by middlemen in order

[13] The actual supply agreements in upstream markets may vary depending on the nature of the middlemen (for example, private trader vs PO) and their functions (for example, POs that may or may not exercise joint selling on behalf of farmers). For simplicity, in our model we assume a stylized agreement covering a generic arrangement.

[14] This practice is mainly used by private traders in the Italian kiwi industry, while POs usually provide down payments at the delivery (finding K4, chapter 4). In the Lake Constance apple netchain, payments happen at delivery or later (section 4.8).

to boost sales. In fact, these weekly negotiations can be modelled as informal auctions, where middlemen use discounts and other practices to beat the competition.

Based on the weekly negotiations, retailers place orders to middlemen with very short notice.[15] Changes in prices are still possible. In this way, retailers are able to commit to purchase only when demand is revealed. Furthermore, take-back practices are possible.

As we pointed out above, if the retailer fails to receive the order, there is very little time to organize a new delivery to satisfy the demand. Therefore, the retailer has a strong interest in a reliable supply chain.

Orders are paid at regular intervals, based on the supplier's invoice. Once middlemen sell the fruits to the final buyers, they can settle the payments to the farmers based on the agreed timing in the supply agreement. POs usually define the price at the end of the season.

12.4 Bargaining in the netchain

In essence, possible imbalances in the distribution of bargaining power may be explained by the Rubinstein (1982) bargaining model. Players take turns making offers to each other until an agreement is reached. Each turn, the value of the trade decreases for both parties, but the magnitude of the loss is different for the two players (for example, it might depend on the individual discount rate). Rubinstein shows that a player's negotiation power is inversely proportional to the relative magnitude of loss. The player who is able to wait the longest gains more from the trade.

If suppliers need to sell the product fast, their discount rate is high and negotiation power low. If buyers have no urgent need for the goods, their discount rate is low and negotiation power high. Three structural factors in the fruit supply chain contribute to this imbalance: price dynamics, category management and retail consolidation.

Firstly, consumer prices for fruit decline fast over the season. Firstlings are highly priced, but then price goes down sharply and steadily. As a consequence, every supplier has a strong incentive to be among the first to sell. The buyer is indifferent about who the first supplier is, as long as quality and reliability are granted.

Secondly, category management supports the buyer's power in the downstream market. In the case of possibly unfavourable deals with suppliers, retailers can drive demand toward other items in the category using promotions or other marketing tools. Although this is a costly strategy that is effective in the short run only, it gives a retailer the opportunity to wait before closing the deal with the middleman, increasing their negotiation power.

Thirdly, downstream sectors are more consolidated than the upstream segments. This implies that middlemen's bargaining positions are relatively weak compared to retailers, and farmers' bargaining positions are relatively weak compared to middlemen (Sorrentino et al. 2016, 2018). Suppliers (both middlemen and farmers) have limited trade alternatives and may have incentive to close deals with retailers before competitors do.

[15] In the Agro Pontino kiwi netchain, usual delivery is required within 24 hours for the domestic market and within two or three days within the EU. In the Lake Constance apple netchain, the notice is up to a week.

12.4.1 Bargaining between middlemen and retailers

These three factors allow retailers to organize negotiations with middlemen according to an auction principle. Middlemen must offer retailers economic incentives in order to be selected as suppliers as soon as possible. As mentioned in section 12.3 , there are two main negotiations between a middleman and retailer: the supply agreement and the periodic (weekly) price and quantity negotiations. The reason for this two-step procedure is twofold: i) at the beginning of the season there is incomplete information about demand, and ii) at harvest time middlemen make an irreversible decision about the volume of products they buy. The two facts meet the Dewatripont and Maskin (1990) conditions for contractual renegotiation.[16] As a consequence, any price that was negotiated in the supply agreement would be subject to renegotiation at a later stage. Noticeably, the efficiency of renegotiation-proof contracts might be questionable given the complexity of the environment (Segal 1998).

Given the two-step negotiation, we have two auction processes. A middleman must first persuade retailers through economic incentives to be selected as the possible supplier (i.e., to sign the supply agreement). This explains why price and quantity range are usually not formalized in the supply agreement. Then, the middleman must give the most profitable offer so as to be awarded with the order. According to the expert panels (finding K2, section 11.4.2), the key element in the first negotiation is a reputation for the reliable delivery of sizable quantities of high-quality products on short notice. The key element in the order auction is the ability to provide low prices and discounts.

12.4.2 Bargaining between middlemen and farmers

Negotiations between middlemen and farmers happen before harvest, usually during the blossoming season (sections 11.5.1 and 11.9.1). In fact, both parties have incentive to negotiate early.

Most farmers do not have refrigerated facilities, so they must sell their products right at harvest and not wait. This circumstance might shift relative bargaining power in favour of the more consolidated middlemen sectors, if negotiation happened at harvest time. Farmers can negotiate with less pressure when not simultaneously dealing with harvesting and marketing activities. Middlemen are willing to enter early negotiations in order to ensure a reliable supply before signing the supply agreements with retailers. Because product availability is a requisite for being offered a supply agreement, early negotiations with farmers allow middlemen to be credible trade partners.

Negotiations between middlemen and farmers happen before uncertainty about demand is revealed. As a consequence, one of the main issues is how the demand risk is shared between the parties. The key element is the share of the final price that is paid (as a down payment) before demand is revealed. Clearly, if the full price is paid at delivery (or earlier), the risk from an unexpected drop in demand is entirely on the middleman. If price is entirely determined and paid after demand is revealed, the risk is on the farmer.

[16] According Dewatripont and Maskin (1990, p. 311-312), the conditions for renegotiations are: 1) parties acquire new information and 2) objectives may change because of the irreversibility of decisions.

In the supply agreement or during the harvest sale, the parties agree on quality. This is an important contractual dimension because quality is inversely associated with quantity. Therefore, the premium must be high enough to compensate the yield loss. The problem is particularly important for POs that are committed to take a farmer's entire production.

The relative negotiation power is driven by two main factors: product availability and irreversible production decisions. If the parties estimate that production will be abundant compared to the historical time series of demand, farmers must accept the middlemen's terms. Instead, if production is scarce, competition among middlemen may give farmers greater negotiation power.

Private traders have a negotiation advantage because, at the time of negotiation, farmers are already committed to production. Traders' behaviour is constrained only by the urge to recover possible specific investments (which are limited in the case of multi-product traders).

12.5 Incomplete contracts and efficiency

The contracts are designed to guarantee the flexible and reliable supply of high-quality fruit. The organization shifts the demand risk onto the upstream firms, while supply risk is shared among farmers (volume reduction), middlemen and retailers (volume reduction and procurement price increase).

The key tools for sharing demand risk are weekly (or periodic) price negotiations and short-notice orders. The retailer buys the goods only when needed and when demand is revealed. Middlemen, on the other hand, must buy the product under demand uncertainty.

From an economic perspective, the retailer-middleman supply agreement is an incomplete contract, leaving the parties free to negotiate when demand is revealed. A typical conclusion of economic theory is that these contracts may be inefficient because middlemen may prefer to reduce trade (i.e., buy less from farmers) because they are worried about future renegotiations (the so-called hold-up problem, see literature review section 2.4 , Schmitz 2001). From this perspective, a complete (or non-renegotiable) contract would be preferable. In our model this concern is partially offset by the middleman's need to comply with the retailer's request.

Furthermore, it must be noted that a complete contract might induce retailers to reduce trade, unless all possible states of nature are considered and addressed. In fact, a complete contract should include

- a pricing rule for every possible demand realization of the entire category assortment (given the interdependencies due to category management),
- monitoring of retailer pricing strategies in the entire category (in order to avoid strategic pricing aimed at manipulating procurement prices), and
- penalties for defection and refusing to trade.

Yet, the complexity of such a contract might reduce the efficiency of the complete contract (Segal 1998). Thus, the efficiency of the incomplete supply agreement is an empirical question.

12.6 An efficiency perspective: Solving information asymmetries

In order to illustrate the coordination issues in the fruit supply chain, we use contract theory. We consider the problem of a principal (the buyer) who must select and motivate the most efficient agents (the suppliers) in order ensure timely delivery of high-quality fruits. The principal's problem in both markets is to organize the transaction under the constraints that i) the possible opportunistic behaviour of the supplier is revealed too late to avoid a sizable profit loss and ii) the cost structure of the suppliers is unknown. We assume asymmetric information in the form of adverse selection (to illustrate the problem of selecting suppliers) and moral hazard (to illustrate the motivation issues) in a setting of stochastic demand and supply.

The adverse selection originates from the unobservable and heterogeneous costs that a supplier must bear in order to meet the buyer's demand. In the upstream market, these costs concern quality provision. Farmers must use proper agronomic practices to provide quality, with a cost that depends on the individual characteristics of the farm. The timeliness of delivery depends on the harvest timing, which also affects quality. In the downstream market, the heterogeneous unobservable costs concern the logistic organization and overall efficiency in delivering the products.

The adverse selection is modelled as a typical problem of "hidden type" (Salanié 2005). The supplier type is defined by the magnitude of the unobservable costs. In order to minimize costs, the principal must be able to separate the types with an appropriate contract design.

We model moral hazard in the downstream market as an enforcement problem, where the principal cannot enforce quality and timing of the delivery perfectly. We assume that, given the just-in-time organization, retailers may be forced to accept late deliveries or low quality because they lack the time to find alternatives. Although quality and timing are observable, the supplier knows there is a non-zero probability that the opportunistic behaviour (late deliveries and/or low quality) is tolerated.

The enforcement problem in the upstream market concerns quality only. In the fruit industry, quality is achieved at the expense of yield. Farmers decide agronomic practices by comparing the costs of lower yield with the benefits of higher quality. We assume that middlemen can observe quality when it is too late to change agronomic practices. Quality enforcement at delivery depends on whether the middleman is a private trader or a PO. Both types of firms can identify low quality perfectly, so it is possible to implement quality-based price schemes. We assume that private traders can reject low-quality products, while producer organizations cannot.

12.6.1 Solving moral hazard: Motivating suppliers with reputation and implicit threat

The just-in-time delivery system requires the full cooperation of suppliers, who must be able to meet short-notice orders. A "problem-solving" attitude is often cited by middleman representatives as one of the main criteria that retailers use to select suppliers. Middlemen know that problematic suppliers will not receive many orders, and, as a consequence, they have a strong incentive to adopt a problem-solving behaviour. They also know that cooperative suppliers may benefit from retailers' support in trading peaks of production (although at the price of sizable discounts).

Suppliers have multiple incentives fully support retailers and meet all orders:

- *Price trends*. Prices are declining over time, making early sales more profitable. Middlemen have large stocks of products that depreciate fast. Facing an unpredictable demand, they have incentive to fulfil orders as soon as they arrive (especially right after harvest) and before prices fall.
- *Reputation for reliable supply*. Future orders depend on reputation for reliability. Failing to meet an order implies less trade in the future. Retailer behaviour is driven by efficiency considerations: covering for a rejected order is costly, so reliable suppliers are preferred. The importance of reputation is such that middlemen have incentive to deliver, even at a loss. In fact, they compare the benefits from rejecting the order with the present value of future orders. If the middlemen are expecting large trade volumes in the future, the incentive to fulfil the order is high.

The system of incentives is a typical implicit threat scheme. Middleman incentives are driven by the retailer's threat of restricting trade if reputation is lost. Middlemen are aware they will have fewer and less predictable orders in the future—or even termination of the trade relationship—if they create any problem for buyers. In principle, losing one's reputation may mean going from being a core supplier to a fringe supplier or being excluded from the list of suppliers altogether. The threat is credible because of the many alternative suppliers available in the market.

This setting explains why the long-run business relationship is segmented into a series of yearly supply agreements and the agreements—in turn—include independent orders. The implicit threat mechanism requires that the retailer can deliver the threat freely and without cost. In the case of long-run complete contracts, termination of trade requires rescinding the contract. Such action might be challenged by the middleman in court and lead to contractual liability, if the measure is considered disproportionate to the violation. Renewing a yearly contract at the expiration date is a free decision of the parties involved and cannot be challenged in court.[17] Similarly, retailers are free to reduce the number of orders because they do not commit to a minimum quantity in the supply agreement.

Contract flexibility has two important roles in the fruit supply chain. It ensures that retailers can adjust supply to an unpredictable demand, and it is a prerequisite for managing procurement using the implicit threat mechanism.

12.6.2 Solving adverse selection: Choosing the most efficient suppliers with self-selection and screening

Retailers have a clear interest in contracting the most efficient suppliers. An efficient procurement requires middlemen who offer flexibility, high quality and low prices. Although reputation is a clear indicator of these characteristics, retailers use a self-selection mechanism as well.

When signing a supply agreement, middlemen agree to sizable specific investments. These may include upfront payment for access (listing fees, etc.), adoption of specific standards or even tacit trade restrictions (such as an exclusive agreement in an area). The value of this investment is lost if for any reason the retailer decides to terminate the relationship or reduce the number of orders.

[17] For a discussion see section 12.7.1

As a consequence, middlemen are willing to sign the supply agreement only if they expect to receive orders in the future. This implies that middlemen self-assess their ability to meet retailers' expectations before entering the transaction in order to avoid possible losses.

The system of incentives is a typical screening model (e.g., Ruben et al. 2007) where the retailer designs the contract to learn information about the suppliers (in this case, reliability of supply). The self-selection of suppliers minimizes the probability of miscoordination when orders are placed, increasing the cost-efficiency of the supply chain.

12.6.3 Dealing with stochastic demand

Retailers deal with demand uncertainty by adjusting orders once consumer purchasing intentions are revealed. They place additional orders during demand peaks and refrain from ordering when demand is low. Expert panels suggested that this system is implemented by dividing suppliers into two groups: core and fringe. Core suppliers are highly efficient (and usually quite large) and have a reputation for reliability. They receive predictable orders, although they may pay higher entrance fees. Fringe suppliers are smaller, easily replaceable and subject to intense fluctuation in orders. The screening mechanism can be designed to reveal the cost of production (their type) and allocate middlemen to the core or fringe, based on their efficiency (e.g., Russo et al. 2014).

Fringe suppliers bear a higher share of risk and are more exposed to short-notice, unpredictable orders. Their smaller size and ease of replacement suggests that the risk transfer is associated with their lower relative bargaining power. The two-tier supply system implies that the welfare consequences of trade practices for middlemen may differ depending on the group. This also explains why representatives of large (core) suppliers in the expert panels were less concerned about UTPs than smaller middlemen.

12.6.4 Motivating and selecting farmers: Incentive compensation and separating equilibrium

The issue of asymmetric information in the upstream market is less important than in the downstream market. Quality can be tested accurately, and middlemen have time to reject non-compliant deliveries and find alternatives. Motivation and selection are based on reputation, monitoring and incentive payments.

Middlemen pay prices that are a function of quality in order to elicit supply of high-quality fruits. This result may be obtained by conditioning the price to the adoption of specific practices and technical assistance. Monitoring of the production process and final output ensure compliance.

However, low-quality products are still marketed, because the cost of providing quality for inefficient farmers is so high that pursuing the price premium for high-quality fruits is not profitable. Given the POs' commitment to buy members' entire production, these farmers prefer to supply large volumes of low-quality fruits.

This behaviour creates a separating equilibrium where inefficient farmers are still in the market and sell to POs or to buyers with low requisites. Efficient farmers produce and sell high-quality

fruits. The management of these two tiers of production may be difficult for those middlemen (especially POs) who must market a range of fruits of heterogeneous quality.[18]

12.7 Analysis of unfair trading practices

The model allows us to illustrate the effect of UTPs on the supply chain. The theoretical analysis identified several business practices that might be considered UTPs under the current Directive. However, in many cases, the fairness of the practice depends on the legal interpretation of the contract between buyers and suppliers. Section 12.7.1 illustrates this issue, while sections 12.7.2 and 12.7.3 debate the interaction between unfairness and efficiency.

12.7.1 Extensive vs. strict interpretation of UTPs

The structure of the business relationship in the fruit industry raises the question of UTP interpretation. The underlying economic relationships between agents have a long-term horizon. Firms take their investments and business decisions based on long-run expectations. Such expectations often are based on historical data and accepted custom rules. Yet, the formal organization of the trade is a sequence of yearly contracts. The terms of the long-run trade relationship can change every year during the negotiation of new supply agreements. Such organization questions the notion of "renegotiation", that is, a revision of the contract terms after the contract has been signed.

Under a formal interpretation, the only contract is the supply agreement. It is an incomplete contract such that parties agree to negotiate quantities, prices and discounts only after demand uncertainty is revealed. The contract is incomplete because the parties cannot forecast all possible realizations of demand for all items in the fruit category, and therefore they agree on a revision mechanism (Hart and Moore 1988). In this case, weekly price negotiations and discretional orders can hardly be considered unilateral renegotiations because there were not pre-existing agreements and the revision mechanism is agreed upon in the supply agreement.

Under a more extensive interpretation, the long-run business relationship is disciplined by a tacit and informal contract regulating the terms of trade and the specific investments. Based on this informal contract, the parties build legitimate expectations about future trade and benefits. The investment strategy and decision to enter the long-run transaction are based on such expectations. In this context, the supply agreements (or unexpected and unmotivated drops in orders) are periodical revisions of the long-run contract. This approach has two consequences.

Firstly, a refusal to renew a supply agreement can be considered a breach of the long-run tacit contract. In the absence of supplier's misconduct, the termination of the implicit contract might be considered unfair. Noticeably, the extensive interpretation was accepted by the Italian

[18] The expert panel of the Agro Pontino kiwi provide anecdotal evidence of possible consequences of this organization. A farmer representative said that farmers sometimes use POs as an outlet for low-quality products while selling the high-quality fruits to private traders. The delivery obligation of the PO members is allegedly bypassed through informal trade among local farmers, so that PO members exchange high-quality fruits to be sold to private traders with a price and low-quality fruits to be delivered to the PO. Although the example is not substantiated with any proof, it is an illustration of possible unfair B2B trade practices with farmers as perpetrators.

Competition Authority (AGCOM) in the case Celox trade vs. Coop Italia – Centrale Adriatica (provvedimento 25797). According to AGCOM, the length of the business relationship (1998-2014), and the relatively constant volume of annual trade determined legitimate expectations and led the suppliers to accept a condition of dependence and make sizable investments in specific assets (logistics, adoption of quality standards, etc.). AGCOM found the buyers guilty of UTPs because i) the unbalance in bargaining power allowed them to impose unpredictable discounts and terms without negotiation, and ii) the "short notice" before of the refusal to renew the supply agreement did not give the supplier enough time to find alternative buyers.

The example of the Celox trade vs. Coop-Italia – Centrale Adriatica case suggests that extensive interpretation of the regulation is possible, encompassing several current practices in the fruit business that would be legal under a strict interpretation of the law. This is of particular interest from an enforcement point of view. As enforcement of the Directive is a competence of Member States, a heterogeneous interpretation of the underlying contract might result in different rulings and competition bias across the European Single Market.

12.7.2 UTPs in the downstream market

Table 12-1 summarizes the results of the expert panels and theoretical model. Our analysis identified five possible UTPs of importance: payment delays, payments for deterioration at the buyer's premises, unilateral renegotiations, threat of retaliation and ambiguous specification of cost of promotions. As mentioned in section 12.7.1 , some practices can be considered UTPs only if the extensive interpretation of the contract is accepted.

Payment delays, unilateral renegotiations, and ambiguous specification of promotion costs play a role in allocating the demand-side risk along the supply chain.[19] We define "demand risk" as the possibility that consumers do not buy the supplied fruit. In the fruit market, sales, promotions and discounts are used to clear the market if demand is low or optimize the profits from the entire category (such as loss-leader pricing). Consumers are price sensitive, and a price reduction is an effective measure to increase turnover. In the absence of vertical coordination, the retailers bear the entire cost of the promotion. The adoption of trade practices in the supply agreements allows the retailer to share the risk with the middlemen. Noticeably, the negotiation happens at the beginning of the campaign when supply estimates become available. At this moment, the retailers' bargaining power is high. Middlemen and farmers already have a stock of production and must find a buyer. For this reason, they accept sharing the risk with the retailers.

[19] Take-back of unsold products is used in the industry, but those terms are usually well-specified in advance, according to the panel of experts.

Table 12-1: Existence and possible efficiency role of UTPs

Practices	Existence, based on expert panels		Efficiency role, based on theoretical model
	Upstream	Downstream	
Practices art. 3.1			
Payment delays w. supply agreement	***Late settlements (no coop)***	Marginal with large retailers	Alloc. of demand-side risk
Payment delays w/o supply agreement	Not mentioned	Not mentioned	
Short-notice cancelation	Unusual	Unusual	
Unilateral renegotiation (extensive contract interpretation, section 12.7.1)	***Price to be determined*** ***Possible strategic quality enforcement***	***Weekly pricing*** ***Discretionary orders*** ***Possible strategic quality enforcement***	Alloc. of demand-side risk Implicit threat
Payments not related to sale of product	Registration fees (marginal)	Negotiation fees (marginal)	
Payments for loss at buyer's premises	Not mentioned	***Usual for kiwi,*** rare for apples	
Refusal to confirm in writing	Not mentioned	Not mentioned	
Acquisition and use of trade secrets	Irrelevant	Irrelevant	
Threat of retaliation	***Common***	***Common***	Implicit threat
Comp. examining consumer complaints	Irrelevant	Irrelevant	
Practices art. 3.2 (only if not clearly specified in the contract)			
Take-back of unsold products	Unusual	Clearly specified	Alloc. of demand-side risk
Pay-for-access	Not mentioned	Clearly specified	Screening
Bearing cost of promotions/discounts	Not mentioned	***Common, sizable***	Alloc. of demand-side risk
Pay-for-advertising	Not mentioned	Clearly specified	Screening
Pay-for-marketing	Not mentioned	Clearly specified	Screening
Pay-for- fitting out	Not mentioned	Clearly specified	Screening

Unpredictable discounts and promotions are the most detrimental practices in the supply chain, according to the expert panel (finding K6, chapter 11). These practices facilitate retailers' category management strategies and transfer the demand risk to the middlemen. Imposing clear and unambiguous specification of the discounts in the supply agreement might determine unintended consequences. Experts said that *ex ante* complete specification of discounts is difficult because of the unpredictable demand. The parties cannot estimate the most efficient timing of the discount, therefore a degree of flexibility in the contract must be preserved. Furthermore, the parties cannot estimate the optimal discount in advance because the realization of consumer price is uncertain. For example, a predetermined percent discount established at the time the supply agreement is made may turn out to be excessive if prices (and middlemen's margins) turn out to be low. As a result, a clear determination of the discounts in the supply agreement may not be sufficient to ensure that middlemen have a reliable estimate of the costs and benefits of the contract, if orders and prices are unpredictable.

If a ban on unpredictable discounts results in more risk for retailers, the possible outcome might be a reduction in trade (e.g., Sandmo 1971) or lower prices. If retailers are unable to counter unexpected drops in demand with discounts, they reduce orders when demand is low. In this case, middlemen willing to sell their products must use an auction-like approach in order to gain market access, with similar results. The net effect of a ban on farmers' incomes is an empirical question.

The panel of experts considered "threat of retaliation" a common practice in the supply chain (finding K7, chapter 11). Retaliation might include refusal to renew supply agreements or a reduction in future orders. The theoretical model suggests that credible retaliation is a key

coordination tool in the fruit industry, given the importance of implicit threats. UTP regulation might reduce efficiency if the discrimination between fair (i.e., due to failure to comply) and unfair (i.e., when the middleman wants to exercise a right) termination is difficult. In this case, a non-compliant middleman might appeal against retaliation and claim unfairness, and the credibility of the retailer's threat might be undermined. As a consequence, we might expect more incentives for middlemen to engage in opportunistic behaviour (less reliable delivery), as the fear of punishment decreases.

12.7.3 UTPs in the upstream market

The expert panel identified three common practices in the fruit industry that could be considered UTPs: delayed settlements for private traders, unilateral renegotiations, and threat of retaliation. POs and private traders give farmers down payments during the growing season or at time of delivery. Settlements are determined and paid when the middleman sells the product or according to the supply agreement. The UTP Directive explicitly exempts "supplementary payments from a cooperative to its member" and, consequently, this practice might be considered a UTP only when private traders are involved. Under a strict interpretation of the regulation, if the final settlement does not meet the long-term expectations of the farmers, the practice might be considered a renegotiation.

Threat of retaliation is common in the industry, according to the panel of experts. There is a common understanding that failing to meet a buyer's demand (including possible renegotiations) has negative implications for future trade. The expert panel confirmed that suppliers often do not challenge (allegedly unfair) buyers' decisions (e.g., questionable enforcement of quality standards) on "small-value" transactions in order to preserve the trade relationship.

12.8 Pass-through analysis

The pass-through effect is the result of the interdependence between upstream and downstream contracts. Our main findings from the literature and expert panels in this regard are that UTPs in one segment of the netchain may trigger several types of strategic adaptations in other segments.

For convenience we identify three degrees of pass-through. We have first-degree pass-through (or direct pass-through) when a UTP in a market is associated with the same UTP in another market. An example in the fruit industry is unfair refusal to renew the supply agreement. In the extensive interpretation of the contract (section 12.7.1), this practice might be considered unfair. In the organization of the supply chain, these changes may affect the supply agreement between the farmer and the middleman, if the latter is forced to break a long-term trade relationship with the former. Thus, a unilateral change downstream determines a unilateral change upstream. Similarly, unfair threats of termination might determine a first-degree pass-through.

We define second-degree pass-through (or indirect pass-though) as the presence of a UTP in one segment of the supply chain that is associated with a different type of UTP in another segment. In our model the unilateral renegotiations downstream (weekly price negotiations, discretionary orders, unpredictable discounts) determine the payment delays and post-delivery

price determination. Because retailers transfer demand risk to middlemen, the value of the product is not known at the time farmers deliver the product. As a consequence, there are two possibilities: either the parties agree on a price to be determined (the down payment—settlement system), or the middlemen offer farmers a certainty equivalent of the price. The expert panel suggested that the former case is more frequent than the latter.

In a third-degree pass-though (or monetary pass-though) a UTP in one segment of the supply chain is associated with a fair practice or a price variation in another segment. For example, a middleman who is charged for deterioration of the product on the buyer's premises may lower the settlement price to all suppliers.

The degree of pass-through depends on actual market conditions and nature of the trade at various segments of the supply chain. For example, a first-degree pass-through of an arbitrary reduction in orders would be impossible, given that farmers deliver production at harvest time.

Furthermore, UTPs in one transaction may affect the organization of other transactions. The expert panel indicated that the upstream contracts offered by private traders and the agreements between POs and members are interdependent. As a consequence, a UTP in one may imply more trade for the other.

13 Results from Semi-Structured Interviews

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13.1 Introduction

In this chapter, along with the IDEA methodology, the main findings from the semi-structured interviews targeting primary producers and middlemen of the APK and LCA netchains are reported. Three farmers and four middlemen from the APK netchain and one farmer and three middlemen from the LCA netchain were interviewed.[20] All farmers are PO members; four middlemen are PO or cooperatives and three middlemen are private firms. The number of interviews carried out is overall limited; the main reason for this was potential respondents' reluctance, due to the obligation of confidentiality envisaged in their contracts with retailers or marketers, and the possibility of retaliation for disclosing sensitive information. We reckon that these factors affected significantly respondents' answers and opinions expressed during the interviews. The extensive fear factor prevented us from implementing the dyadic approach that is described in chapter 6. Respondents were extremely reluctant to disclose the identity of their trade partners. They refused to provide the information, or they revealed it only on the terms of full confidentiality and after obtaining our commitment to not contact the firm. We acknowledge that this circumstance greatly hampers the pass-through analysis and that the effect of the fear factor on the dyadic approach is the most important issue that future applications of IDEA must address.

The semi-structured interviews were designed to validate the outcomes of the expert panels (chapter 11) and gather information based on respondents' specific transactions. The interviews aimed at collecting respondents' opinions on the occurrence of potential UTPs, the reasons behind these UTPs, the perceived fairness of these UTPs and their impact on a firm's organization and viability. As reported in the following paragraphs, amongst the UTPs specifically codified in Directive (EU) 2019/633, those effectively in use by traders are rather few. Nevertheless, a remarkable number of practices (not mentioned in the Directive and possibly codifiable as unfair according to Bowie's criterion, section 2.3 seem to heavily affect the fairness of trade relationships, the distribution among stakeholders and the efficiency of the value chain.

This chapter is organised as follows: i) paragraph 13.2 reports the results of the farmer interviews; ii) paragraph 13.3 reports the results of the middleman interviews; and iii) paragraph 13.4 illustrates the perceptions of both farmers and middlemen regarding UTP occurrence and compares these perceptions in order to draw conclusions about the pass-through of UTPs along value chains.

[20] One retailer was interviewed for the kiwi industry. The interview did not add any specific information to the chapter, given the respondent's reticence, and for this reason details about it were not included. A short summary of this is included as an annex.

13.2 Analysis of the farmer interviews

The farmer interviews addressed three main topics: general information (including information about the main procurement channels); analysis of the business relationship with the main buyer (including details about contracts); and perception of UTPs in the industry. Four in-depth interviews were conducted; three farmers belonged to the APK netchain and one to the LCA netchain.

As Table 13-1 shows, respondents were homogenous in terms of specialisation, varieties grown, procurement channels and sales channels. All respondents deliver their entire production to POs/marketers, though further information on other sales channels (e.g., private traders) emerged during the interviews.

13.2.1 Description of input providers and sales channels

Farmers' sources for inputs are different. In the case of non-club varieties, planting materials, plant protection products and fertilizers are bought both from private nurseries/shops and POs. Since club varieties are patented, farmers may grow them only after signing an exclusive agreement with breeders. Breeders provide, often through POs and marketers, seedlings and technical assistance to achieve quality and quantity targets.

Sales channels

All interviewed farmers are members of POs, and, as such, they sell their production to POs/marketers. The farmer [F4] belonging to the LCA netchain sells a residual share of his/her production directly (around 5%) in the farm shop, while farmers in the APK netchain sell their production exclusively through POs.

Transactions between farmers and their middlemen (POs/marketers and private traders) are regulated by cooperation agreements. Farmers involved in schemes funded by operational programmes of the Common Market Organisation (CMO) commit their entire production to POs. Detailed contracts discipline the relationship between farmers and POs/breeders when club varieties are traded.

Production planning and quality control

In the case of club products, POs/marketers and breeders support the dissemination of information useful to reach effective quality schemes and plan the available amount of fruit to be traded per period. However, with club varieties, if products do not meet the quality requirements set by the middlemen, farmers might be charged an additional cost for waste disposal [F2]. In case of non-club varieties, one farmer [F4] mentioned the possibility that middlemen require heterogeneous and increasingly costly quality standards (e.g., concerning residue levels of plant protection products). Another farmer [F1] raised doubts about the transparency of the quality control applied by middlemen on purchased products. Farmers' perception is that strict quality standard requirements are used by middlemen and retailers as a tool for controlling prices and quantities, particularly when supply exceeds market demand [F4]. The interviews confirm the finding (K2) emerged from the expert panels (chapter 11) that quality is a main driver of competitive advantage in selected netchains. As a consequence, quality-based strategies require coordination, because farmers must be able to produce according to customer specifications and bear the high cost of providing quality.

Finding F1: *Relational agreements usually govern transactions between farmers and their middlemen. In the case of club variety products, the relationship between farmers and POs/breeders is regulated by detailed contracts, which are useful for reaching effective quality schemes and planning the available amount of fruit to be traded per period.*

Prices

The prices paid to farmers by POs and marketers depend on quality of the delivered fruits and actual availability of products on the market. When domestic supply is abundant, middlemen can be more selective about quality and offer lower prices if quality standards are not fully met. This feeds the farmers' perception that quality assessment is often used as a means to organise and plan production in the market [F4].

Table 13-1. Overview of farmer respondents

Farmers	Netchain	Specialisation	Grown varieties	Inputs providers	Sales channels
F1	APK	Kiwi	Club and non-club	PO, breeder and local shops	PO
F2	APK	Kiwi	Club and non-club	PO, breeder and local shops	PO
F3	APK	Kiwi	Club	PO, breeder and local shops	PO
F4	LCA	Fruit production (apples, pears and berries)	Club and non-club	PO, breeder and local shops	95% PO through commercial marketer; 5% farm shop

Prices are not known at the beginning of the campaign, and they are not specified in the contracts or agreements; rather, they depend on market conditions and demand trends. There are differences between POs and private traders. POs are usually obliged to trade a member's entire production, and they provide a down payment at delivery. In the case of the APK netchain, an additional down payment is provided (typically in February), along with a settlement at the end of the season (usually July of the next year) [F1, F2, F3]. Private traders offer prices similar to POs, but they give larger down payments before the harvesting season, even though they do not necessarily buy the entire production [F2]. The interviews confirm the perceptions of the experts (finding K4, section 11.4) who consider POs more effective in taking the risk of overproduction from farmers (as they take the entire production) and private traders more effective in taking the price risk (as they make earlier and larger down payments).

Alternative channels

Although some of the farmers interviewed [F2, F4] are not completely satisfied with the marketing skills of the POs/marketers, they prefer remaining with the same middleman for lack of more profitable alternatives to their current trade partners. This might have relevant implications in terms of imbalances in bargaining power along the value chain (Bowie 1988). In order to investigate this issue, in the farmer sample survey (section 14.3) we asked farmers if they could replace their main buyer as trading partner and whether their main buyer could replace them.

Finding F2: *Prices are not known at the time of delivery. POs, usually obliged to trade their members' entire production, pay a down payment at delivery, in some cases another down*

payment in February, and a settlement at the end of the season (usually in July of the next year). Similar features of payment modes arise in agreements with private traders.

13.2.2 Occurrence of UTPs

Payment delays

As mentioned in section 13.2.1 , farmers receive one or two down payments, respectively, at delivery and after four months, along with a settlement at the end of the season, which is almost ten months after the delivery of products to POs/marketers or private traders. This practice is customary in trade relationships with middlemen (both POs and private traders) and mostly accepted in the fruit trade sector. However, as explained in section 12.7.3 , this practice might be considered a UTP only when private traders are involved.

Respondents [F1, F3, F4] complained about the uncertainty and lack of transparency in price definitions (which only become known at the end of the season), which is considered an extremely relevant issue in the sector. It is worth recalling that, under a strict interpretation of the regulation, if the final settlement does not meet the long-term implicit commitment, the practice might be considered a renegotiation.

Short-notice cancellation of orders

Since all the farmers interviewed sell through POs and delivery is not based on orders, short-notice cancellation of orders is not a present trade practice in the relationship between the interviewees and their middlemen.

Unilateral renegotiations

While interviewees from the LCA netchain say they are not aware of this practice, APK netchain farmers declare that renegotiation can happen [F2, F3]. In the case of written supply agreements or other contracts, it can happen that middlemen (mainly breeders in the case of club varieties) impose unilateral renegotiations [F2]. The interviews only partially confirm the presence of unilateral renegotiation identified by the expert panels (chapter 11).

Payments that are not related to sales of the supplier's agri-food product

This practice is not considered an issue at this value chain stage.

Payments for waste

Since apples that do not meet quality requirements can be more easily sent for processing, this practise seems to be more relevant in the kiwi industry. It is strictly related to something that might occur during transport.

The costs related to waste are usually charged to suppliers, even though the products' deterioration was not caused by the supplier [F1, F2, F3]. For club products, in cases where middlemen return products and claim insufficient quality, a further cost per kilo is charged to the supplier [F2]. The presence of this practice in the upstream market did not emerge as relevant during the expert panels (section 12.7.3).

Refusal to confirm in writing the terms of a supply agreement

This practice is not reported as an issue.

Retaliation

Since direct retaliation is a rather rare event, respondents declared that retaliation is not an issue. However, one interviewee [F1] pointed out that when middlemen want to interrupt the trade relationship, they might use other practices—such as unjustifiably claiming low quality or imposing high extra costs for waste—to force farmers to quit the trade relationship voluntarily. Nevertheless, a lack of alternatives to replace trade partners usually forces suppliers to accept not-so-favourable trading conditions. This result is in line with what the experts said (section 11.5.2), which is that threats of commercial retaliation are pervasive and upstream firms do not contest buyers' actions (such as quality enforcement or renegotiations) in order to preserve "a good trade relationship".

Post-sale complaints

The interviewees have not experienced this practice. However, one farmer declared that in the case of post-sale complaints, the costs would be distributed among all PO members [F3].

Misuse of confidential information

This practice is not reported as an issue.

Costs and payments that are not clearly and unambiguously specified in the contract (grey practices)

These practices are not reported as issues. However, in the event that middlemen did face costs not clearly specified in the contract between the middlemen and retailers, the costs would be passed on to producers in the form of a reduction in price paid at the end of the season.

Interviewees were also asked to indicate **other virtually unfair practices** not included in Directive 633/2019. Two issues emerged during the interviews. The first issue concerns uncertainty and lack of transparency in price definition [F1, F3, F4]. The low fluctuation of retail prices compared to the high volatility of prices supplied to farmers increases farmers' perception of being the weaker actors in the value chain [F4]. The second one, already mentioned above, concerns the increasing quality requirements from retailers, perceived by farmers as a strategic tool used by middlemen for transferring to suppliers the risk of short-term slumps in demand [F4]. Since both issues emerged in the expert panels (chapter 11) and the semi-structured interviews (chapter 13), they were investigated as the most important areas where UTPs can emerge in the farmer sample survey (section 14.3).

> **Finding F3**: *The most common practice appears to be payments, implemented in terms of price reduction, for waste strictly related to deterioration of the product that occurred after delivery. It seems even more relevant in the case of club varieties, where middlemen might refuse products, claiming insufficient quality and charging further costs to supplier.*
>
> **Finding F4**: *Among virtually unfair practices not included in Directive 633/2019, two issues emerged: i) uncertainty and lack of transparency in price definition and ii) more binding quality requirements from retailers, perceived by farmers as a strategic tool used by middlemen to transfer to their suppliers the risk of short-term slumps in demand.*

13.2.3 Incidence and causes of UTPs

The in-depth interviewees enabled us to draw some conclusions on the incidence of certain practices, their importance for farmers and their causes.

The most common practice appears to be payments for waste. This practice seems even more relevant in the case of club varieties, where middlemen might refuse products claiming (sometimes without justification) insufficient quality and charge, as a consequence, further costs to supplier. These practices are considered more detrimental for suppliers, since they have few possibilities to enforce their rights without risk of losing their supply agreements. The detriment of these practices is higher in netchains in which products that do not meet quality requirements cannot be easily sent for processing or channelled to low-quality segments. The payments for waste are usually charged to suppliers through price reductions.

Unilateral renegotiation of agreements, as well as direct retaliation, are showed to be rare. While the former is mainly used in club variety chains, the latter occurs indirectly via use of other practices to persuade farmers to interrupt trade relationships.

Short-notice cancellation of orders, refusal to confirm in writing the terms of supply agreements, payments not related to sales of suppliers' products, misuse of confidential information and "grey practices" are not considered important issues.

Payment delays seem to be strictly related to the structure of the selected netchains, where deferred payments to farmers is customary in the trade relationship, including when products are sold to private traders. However, the definition of prices, in terms of uncertainty and transparency, as well as the increasing quality requirements used as a means to control production, induces farmers to perceive these practices as unfair.

13.3 Analysis of the middleman interviews

The middleman interviews addressed four main topics: general information (including information about the main procurement channels); analysis of the business relationship with the main customer (including details about contracts); analysis of the main suppliers; and perception of UTPs in the industry. Seven in-depth interviews were conducted; four middlemen belonged to the APK and three to the LCA netchains.

As Table 13-2 shows, respondents were selected to represent different legal forms, economic dimensions and presence in the market as POs, cooperatives or private companies.

13.3.1 Description of procurement and sales channels

Procurement channels can be farmers or other middlemen. There are not substantial differences between the two industries. In the case of cooperatives, members are the main suppliers, but it is not unlikely to have non-member suppliers, who are contracted if the cooperatives face supply shortages or demand spikes. The non-member suppliers typically do not change over the years; the relationship is long-term and built on trust. When middlemen are private companies, suppliers are farmers with whom they have a long-term relationship. In all cases analysed, it can be assumed that transactions between the middleman and suppliers are based on a relational type of governance. It should be noted that this type of governance might be jeopardized, in certain cases, by the fact that suppliers are easily replaceable. However, all respondents, even though aware of the risk of being replaced, did not consider this a concrete

possibility. When club varieties are traded, the relationship is governed by detailed contracts that, due to confidentiality rules, we could not analyse. Therewith, respondents were generally reticent to give details about contracts, both out of respect for confidentiality and to avoid potential negative effects on their relationships with middlemen.

Quality and production control

Cooperatives are obliged to accept all members' production, regardless of its quality. In order to coordinate the quality of products delivered by members, middlemen try to influence members' individual production decisions (M1, M2, M3, M4, M5). Usually middlemen can estimate with a certain degree of precision the more convenient varieties to be planted, based on market conditions and information communicated by the main buyers. However, it is not easy to influence producers' decisions, because farmers prefer planting varieties that have been well paid in the past over the recommended ones. Hence, cooperatives' capacity to influence producers' decisions is limited, particularly for non-club varieties. For club varieties, being that they are covered by patents, the ability to control farmers' decisions is concrete; the patent's owner selects farmers, provides them with seedlings and specific advice to grow the variety according to the required quality standards. Detailed contracts usually regulate these relationships and imply important investments to be realised by farmers; however, no specific information was disclosed about the contracts by the respondents. In the kiwi industry, measures planned within the operational programmes funded by the CMO are often used as a tool to exert an influence over producers. This result led us to use sample surveys (chapter 14) to investigate quality practices and the costs necessary to gain market access.

Middlemen usually provide their suppliers with advice in terms of agricultural practices. This happens regularly when club varieties are planted, and it happens frequently within cooperatives for both club and non-club varieties. Providing technical advice enables them to control and possibly improve quality, which becomes a key element for cooperatives, being that they are obliged to accept the entire production of their members.

Finding M1*: Low power to influence farmers' production choices, together with the cooperatives' commitment to trade members' entire production, can become a critical factor in downstream relationships.*

Sales planning

The long-term relationships, which occur in all the cases examined, between middlemen and their buyers allow middlemen to have rather detailed information about the quantities of fruits that are usually traded in different periods. This helps them to better plan sales accordingly by predicting possible surpluses or shortages and determine whether they will need additional storage facilities. Middlemen usually share this information also with their suppliers (farmers and/or other middlemen). The interviews are in line with the experts' statement (findings A3 and K3, chapter 11) concerning the selected netchains organised as a sequence of interdependent transactions.

So that we could make an in-depth analysis of trading relationships, the interviewees were asked to briefly describe their **main sales channels** and base their answers on their own relationship with their main buyer.

Table 13-2: Respondent middlemen overview.

Middleman	Country	Legal form	PO	Location	Turnover	Specialisation	Storage facilities	Traded varieties	Procurement channels	Sales channels
M1	IT	Cooperative	Yes	Outside the studied area	50-150 MEUR	Fruit and vegetables trade	No	Club and non-club	Members and non-members	Large national and EU retailers; other middlemen for the extra-EU market
M2	IT	Cooperative	Yes	Within the studied area	10 to 50 MEUR	Fruit production and trade	Yes	Club and non-club	Members and non-members (only for non-club varieties)	Large retailers (national market); middlemen for EU export
M3	IT	Private	No	Outside the studied area	…	Fruit production and trade	No	Club and non-club	Selected farmers for club varieties; other farmers for non-club; other middlemen	Large retailers
M4	IT	Cooperative	No	Within the studied area	4 MEUR	Fruit production and trade	Yes	Club and non-club	Members	Middlemen and a few retailers
M5	DE	Cooperative	Yes	Within the studied area	50 to 80 MEUR	Fruit trade	No	Club and non-club	Members	Middlemen
M6	DE	Private	No	Within the studied area	10 to 15 MEUR	Fruit trade	Yes	Non-club	Large farmers and other middlemen	Large retailers and middlemen
M7	DE	Private	No	Within the studied area	20 MEUR	Fruit trade	Yes	Club and non-club	Farmers and other middlemen	Large and small retailers; processors and middlemen

Most of the respondents (M1, M2, M3, M6, M7) have large retailers as their main buyer for the national market and other middlemen for the EU and extra-EU markets. Only a few interviewees (M1, M5) mentioned the name of a specific buyer (although under full confidentiality), while the others preferred to describe their trading relationships in general terms, claiming the obligation to respect the confidentiality rules included in their agreements. However, most respondents agreed (M1, M4, M5, M6, M7) that often trade relationships between middlemen and buyers are not balanced. As also mentioned in the expert panels (findings A5 and K5, chapter 11), buyers usually have high bargaining power (efficient marketing and legal departments). As such, they can impose requirements that might be considered unreasonable (e.g., setting pesticides residue levels much lower than those prescribed by law without scientific justification) by middlemen, but the middlemen do not have the capacity to refuse them. This was reported to be a particularly serious issue in the apple sector (M1). Setting such requirements is perceived, by respondents, as unfair, and this perception increases when these requirements are very strict when supply surpluses occur and interpreted more flexibly when there are supply shortages. This confirms the heterogeneous perceptions of the fairness of large retailers that emerged in the expert panels (finding K1, section 11.2).

Information provided by respondents was not detailed but rather general since, as evidenced in the expert panels (finding A6, section 11.9), confidentiality agreements prohibit middlemen from communicating any information about the contractual features to third parties. However, the analysis of the interviews allows us to assume that a relational type of governance features the transaction between middlemen and retailers and/or other traders. Usually, all items of trading relations are legally recorded. Transactions might be governed by supply agreements and/or delivery contracts (as modelled in chapter 12). Characteristics of contracts (regardless of how they are called, whether framework contracts, framework or supply agreements or simply contracts) appear to be similar in both industries and are summarised as follows:

- Duration of these contracts/agreements varies. They might be yearly or multiannual contracts (from two to four years). In the apple industry, one interviewee (M1) reported the existence of collaboration agreements with no specific duration that become effective when orders are placed by buyers.
- In case of yearly agreements, renegotiation happens every year if both parties are willing to renew, while for multiannual contracts, renegotiation might happen irregularly. In both cases, changes made during renegotiation are limited. In the kiwi industry, retailers send standard pre-filled templates that do not leave room for negotiation. In the apple industry, conditions included in the agreements are not negotiable and when refused, the middleman might not be listed as a supplier.
- Agreements include detailed rights and obligations, mainly related to quality requirements, for the middleman and the buyer. They also include specific costs. These costs are clearly defined in the agreements and are not considered unfair, as long as no further additional unexpected payments are required by buyers along the way. All respondents pointed out that usually they do not have the possibility to negotiate these costs; rather, they must accept them if they want to be listed as suppliers.
- Contracts do not include any guaranteed quantities, not even minimum ones, and also do not include prices. Quantities and prices are defined during the year by the orders transmitted on a weekly basis.
- In principle these contracts can be terminated freely anytime by either party, but this happens rarely because the trading relationships are long-term and based on trust and reputation.

A few interviewees (M1, M2) stated that contracts including details about quantities and prices would allow for better trade planning for the year. However, it was pointed out that this might be possible for those products that can be stored, as is the case of the two considered industries, but it would be highly complicated for more perishable products. Overall, it was recognised that fruit and vegetable demand is difficult to predict and even more so when single products are considered. It must be noted that, for storable products, including details about quantities in the contracts would shift the storage costs amongst the counterparts. Hence, it was highlighted that introducing strict rules on quantities in contracts should be evaluated carefully, given the concrete risk that retailers could try to overcome this barrier by lowering prices.

Prices, as already mentioned, are not indicated in the agreements and are not known at the beginning of the campaign; rather, they are negotiated weekly based on market conditions and demand trends. Once buyers ask for an order, suppliers propose a price and the negotiation between the two parties starts. When the negotiation is concluded, the buyer issues a contract (it might be as simple as a request sent by email) which includes quantity and price. Accuracy in price determination depends on the knowledge middlemen and buyers have about production costs. The negotiation is considered the most complicated phase because retailers tend to lower the price, and their success rate depends on their professional capacity to negotiate and relative bargaining power. The definition of prices is perceived as not entirely transparent by interviewees, particularly when the sales channels are other middlemen (M4, M5, M6, M7). Usually, middlemen have knowledge about costs related to packaging and transport that might influence the price. However, when dealing with other middlemen (instead of directly with retailers), they are not aware of the price paid to them by retailers, and this make prices not entirely transparent. Being that prices are defined throughout the entire season and can change weekly, the average price of the campaign will become known and communicated by middlemen to their suppliers only at the end of it. This is when the full production is sold and, in some cases, when payments are received from retailers. This procedure for the price definition is considered a customary setting in the industry. Suppliers (farmers/other middlemen) know these rules and put up with them. In the apple industry, two interviewees (M5, M7) out of three stated that suppliers (farmers/other middlemen) are paid only after the whole production is sold in the market and payments are received from retailers. This practice affects middleman payments to suppliers and transfers uncertainty about price definition to the primary producers (or other middlemen). This can occur despite the obligation, when middlemen are cooperatives, to accept and trade members' entire production. The same procedure applies usually to the kiwi industry, even though in all cases analysed instalments are paid to suppliers before the product is effectively sold to retailers (more frequently when club varieties are traded).

Finding M2: *Contracts/agreements between middlemen and retailers do not include information about quantities and prices, which are communicated on a weekly basis when orders are issued. This implies that, while quantities can be roughly predicted by middlemen when a long-term trading relationship exists, final prices (and therefore final return to producers) become known only at the end of the season, transmitting price uncertainty along the chain.*

13.3.2 Occurrence of UTPs

Payment delays

This practice was not reported as an issue by most respondents (M1, M3, M4, M5, M6, M7). The matter is already legally regulated, and buyers pay usually within a month from the order shipment. Only one interviewee (M2) reported delayed payments as an issue and claimed to have more problems with buyers operating in the national market. This delay might be transferred from middlemen to their own suppliers (farmers/other middlemen). Furthermore, it was pointed out that delays can occur in relation to payments to middlemen's suppliers. Usually, as it emerged in the analysis of the farmer interviews (finding F2 section 13.2), producers (or other middlemen) are paid when the entire production is sold and payments received. This means that farmers might receive full payment up to one year from harvesting and selling their production. Farmers might receive intermediate instalments to partially cover their costs related to harvesting, sorting, storing and packing products for selling. However, middlemen/respondents consider this practice of delayed payments customary, and it is mostly accepted in the fruit trade sector.

Short-notice cancellation of orders

This practice occurs rarely, and it is not considered an issue for different reasons. As a general consideration, it was pointed out that just-in-time orders might be considered customary in the sector, being that demand is difficult to predict. Orders are placed weekly, and because of the short time period between orders and delivery, the possibility of cancellation is reduced. One interviewee pointed out (M1) that this is more common when trading abroad and when other middlemen are involved. In the latter case, cancellation due to competitors' outbidding might happen.

Unilateral renegotiations

Renegotiation might happen, but different arrangements are reported. In the usual case of written supply agreements or other contracts, it can happen that retailers impose unilateral renegotiations. Yet, this practice is considered rare and, as such, rather irrelevant. Given that contracts or agreements do not include the most important items, such as prices and quantities, the significance of possible renegotiations is in any case rather limited.

Payments that are not related to sales of the supplier's agri-food product

Experts (finding A8, section 11.8.2) stated that demands for payments unrelated to the sale of the products is the most detrimental practice in the industry. However, all interviewees did not consider this practice to be an issue. It might happen that such costs are asked as one-off payments, but it is rare.

Payments for waste

Most respondents do not consider this practice an issue (M1, M2, M3, M4, M6). However, during the interviews numerous elements and examples were mentioned that might suggest this practice is more frequent than initially reported. In the apple industry, it seems less important, since apples that do not meet quality requirements can be sent for processing. In the kiwi industry the practice seems more relevant, and it is usually related to something occurring during transport. Retailers may claim the products delivered do not meet the quality requirements and refuse to pay, whether suppliers agree or not with the retailer's evaluation. It might be possible that the buyer claims low quality in order to correct for an overestimation of demand. This was reported also in the apple industry, where some respondents (M5, M7) stated that buyers set

quality standards unrealistically high to give themselves the option to return products for reasons of insufficient quality. Hence, retailers transfer to their suppliers the risk of short-term slumps in demand. Claiming low quality or product deterioration during transport is considered by some respondents as a retaliation measure (M4, M5), particularly when products are sent overseas and it becomes complicated for the supplier to verify the buyer's claim. In some cases, the buyer might decide to charge the supplier for waste disposal, even though the product deterioration was not caused by the supplier. Respondents stated that often this practice is accepted to avoid jeopardizing the trade relationship with the buyer. The presence of this practice emerged during the expert panels (section 11.4.2), in which some experts remarked that retailers do not pay suppliers for products deteriorated on the retailer's premises, even if the supplier is not responsible (for example, waste of products at sale-point due to manipulation by the consumers).

Refusal to confirm in writing the terms of a supply agreement

This practice is not reported as an issue. One respondent (M6) considers contracts unnecessarily too detailed.

Retaliation

All respondents agreed that direct retaliation is rather rare. More common is the possible use of other UTPs to threaten suppliers (e.g., low-quality product claim, charging extra for waste disposal). In principle, suppliers refrain from enforcing their rights to avoid retaliation measures. Reduction in orders or tough price negotiations are sometimes interpreted as retaliation. In addition, the buyers' high bargaining power combined with suppliers' replaceability makes retaliation a concrete possibility and forces suppliers to accept unfavourable trading conditions. However, long-term trading relationships based on mutual trust and reputation help overcome the threat of retaliation actions. Therefore, the interviews confirm statements from the expert panels (findings A7 and K7, chapter 11) regarding the presence of implicit threats of commercial retaliation and situations in which firms comply with retailers' demands out of fear for possible negative consequences for the trade relationship.

Misuse of confidential information

One middleman reported under strict confidentiality that the buyer has direct access to his/her quality control system in order to ensure that the delivered product meets the desired quality requirements. By doing so, the buyer acquires detailed information regarding the middleman's production costs. In principle, this information might be used by the buyer during price negotiations. Having full knowledge of the middleman's costs, the buyer might impose prices that are barely enough to grant acceptable margins. This interview adds a relevant piece of information on the coordination of quality-based strategies in the selected netchains.

Cost and payments that are not clearly and unambiguously specified in the contract (grey practices)

None of the respondents reported this practice as an issue. Although according to the expert panel (findings K6, chapter 11) unpredictable discounts and promotions are the most detrimental practice in the supply chain, from interviews it emerges that all costs are clearly specified in the agreements and do not change over the course of the year.

Interviewees were asked to indicate other possibly unfair practices under Bowie's definition that are not included in the Directive 2019/633. In addition to the above-mentioned practices, such as unnecessary quality standards and unpredictable orders, all respondents indicated that price determination is a critical practice that could contain elements of unfairness. In the apple industry, respondents believe that the definition of prices is not always clear, since often

producers do not understand the imputation of certain costs. Hence, they blame lack of knowledge about the costs that arise from activities undertaken along the chain. In the kiwi industry, on the contrary, the unclear definition of prices is ascribed to a conscious lack of retailer transparency. These issues are further investigated in the sample surveys (chapter 14).

13.3.3 Incidence and causes of UTPs

The in-depth interviews enabled us to draw some conclusions about the incidence of certain practices, their importance for suppliers and their causes.

The most common practices appear to be requiring payments for waste and claiming low-quality products, together with the possibility of exerting some form of retaliation. These practices are considered the most detrimental for suppliers, since suppliers have few possibilities to enforce their rights without risking the loss of their supply agreements or orders. This becomes even more relevant when middlemen have trading relationships with a few buyers and when their own suppliers (primary producers) already undertook specific investments to be listed as suppliers (M4, M5). Consequences of these practices might be magnified by the high bargaining power retailers have compared to suppliers. However, all interviewees stated that these issues should be regulated very carefully, because establishing strict rules to avoid them might result in lower prices, which could have even worse welfare consequences for the industry.

Unilateral renegotiation of agreements is reported to be rare but possible. Even if the agreements do not envisage provisions about price and quantity, there may still be consequences, since agreements can include obligations related to quality requirements and costs to be borne by the suppliers. Quality standards required by retailers might become a way to a) exert pressure on middlemen, which might be passed to farmers, and b) put in place potentially unfair practices (setting standards unnecessarily high to give themselves the possibility later to claim products "low-quality" and therefore refuse/reduce payments). Most respondents (M1, M2, M4, M5), also for this case, are unsure whether strict rules would be beneficial for the industry, fearing it could lead to lower prices.

Short-notice cancellation of orders and, to a certain extent, payment delays are considered customary in the sector due the characteristics of the products traded. Namely, demand for fruits and vegetables is difficult to predict, especially when products are perishable. The definition of prices and the transfer of price uncertainty to primary producers seem to be practices able to create more relevant and negative effects in the two industries, particularly in relation to primary producers.

Refusal to confirm in writing the terms of supply agreements and payments not related to sales of suppliers' products are not considered important issues. All provisions included in the agreements are considered customary in the sector and, as such, they are not considered unfair.

In some cases (e.g., payments for waste and threat of retaliation) interviewees confirmed the presence of these practices that were mentioned by the expert panels (chapter 11). In other cases (e.g., payments that are not related to the sale of the products and unpredictable discounts and promotions), the middlemen interviewed did not consider practices to be problematic that were assessed by the expert panels as very detrimental. A quantitative assessment of UTP occurrence to generalise the findings of the expert panels and the results of the semi-structured interviews is presented in sample survey (chapter 14).

***Finding M3**. Payment for waste is considered one of the most relevant practices, since it can be used as a retaliation measure to reduce payments due to middlemen. When combined with low-quality product claims it might become, for retailers, a means for adjusting to unexpected fluctuations of demand.*

***Finding M4**: Unilateral renegotiation of agreements is reported to be rare. However, a change in rules about quality standards during renegotiation may produce relevant effects. Unilateral imposition of higher quality standards in the agreements might open the door to other UTPs, particularly payment for waste and retaliation.*

13.4 Pass-through effects

The interviewees at different stages of the value chain confirmed the existence of a pass-through effect. The economic model (section 12.7) has identified three degrees of pass-through. In a first-degree pass-through (direct pass-through) a UTP in a market is associated with the same UTP in another market. Second-degree pass-through (indirect pass-though) exists when the presence of a UTP in a segment of the supply chain is associated with the presence of a different type of UTP in another segment. In a third-degree pass-though (or monetary pass-though) a UTP in a segment of the supply chain is associated with a fair practice or a price variation in another segment.

Semi-structured interviews with farmers and middlemen have evidenced pass-through effects. In most cases, middlemen subjected to various UTPs (e.g., payment for waste, post-sale complaints, misuse of confidential information) transfer the costs to farmers as a final price reduction (third-degree pass-through). However, in other cases middlemen suffering specific UTPs (e.g., unnecessary quality standards unilaterally imposed by retailers) impose the same practices on suppliers (first-degree pass-through), affecting production costs and productivity levels. Finally, a case of second-degree pass-through emerges when high quality standards unilaterally imposed by retailers increase the share of products which does not meet quality standards (increasing payments for waste). Overall, the most common practices that suppliers are exposed to and that are passed to farmers are summarised as follows:

- Costs related to marketing and management faced by middlemen are passed on to producers as price reductions. Marketing costs might also include costs not necessarily envisaged in relational agreements.
- Final prices paid to producers might decrease because of UTPs faced by middlemen, such as costs for waste, product deterioration, extra costs imposed and not envisaged in the contracts or extra costs resulting from unilateral renegotiation.
- Demands for higher quality not justified by law or netchain coordination efficiency must be met by primary producers through specific adjustments of production techniques. These techniques might increase production costs and/or losses for primary producers.
- Since yearly agreements between middlemen and retailers do not include any commitments concerning prices and quantities, the prices received by producers become known only at the end of the campaign. This practice is transferred as price/return uncertainty to primary producers.

In order to investigate the pass-through effects in the selected netchains, the sample middleman survey (section 14.4.5) asked firms to quantify how unfair practices affect business with their suppliers.

13.5 Summary

Table 13-3 summarises the occurrence of UTPs according to interviewees. Interviewees were also asked to indicate other possibly **unfair practices** under Bowie's definition that are not included in the directive, in particular higher and not justified quality requirements. Further restrictions on quality standards are often imposed to middlemen (often through unilateral renegotiations of the agreements) and passed on farmers. They are used as strategic tool to reduce orders and payments in face of demand fluctuations.

Table 13-3. UTPs experienced by farmers and middlemen in the trade

UTP	Farmer experience	Middlemen experience
Delayed payments	Possibly (final price is paid at the end of the marketing season by private traders)	No
Orders cancelled with short notice	No	No
Unilateral change of the supply agreement terms	Possibly (price is determined at end of the year; strategic use of quality assessment)	Yes
Payment of indirect expenses (not related to sales)	No	No
Payment for waste	Yes (usually through a reduction in final price)	Yes
Refusal to confirm in writing the terms of a supply agreement	No	No
Retaliation	Possibly (indirect pressure to leave the transaction)	Yes
Post-sale complaints	No	Yes
Misuse of confidential information	No	Yes
Costs and payments that are not clearly and unambiguously specified in the contract (grey practices)	No	No
Returns not payed/reimbursed	Possibly (usually a reduction in final price)	No
Payments to display or list products in the retail outlets	No	No
Discounts to cover buyer's promotions	No	No
Reimbursements to cover buyer's expenses for promotions	No	No
Payments for buyer's marketing expenses	No	No
Payments for setting up retail outlets	No	No

13.5.1 Summary of interviewees' perceptions

Farmers' perceptions:

- The first issue concerns uncertainty and lack of transparency in price definition, which farmers become aware of only at the end of the season.

- The second issue concerns the increasing quality requirements of retailers, perceived by farmers as a strategic tool used by middlemen to transfer to their suppliers the risk of short-term slumps in demand.

Middlemen's perceptions:

- Required payments for waste and possible retaliation are considered the most relevant issues in both industries. They result in additional costs and/or prices reductions.
- Post-sales complaints are also considered relevant when complaints are related to low-quality product claims.
- Short-notice cancellation of orders and unilateral renegotiations occur, but they are considered rare and not particularly relevant for both stakeholders. Unilateral renegotiation might affect transaction fairness when involving strict quality requirements, which may be used as strategical tool for reducing prices and/or order quantities.

Pass-through:

First degree pass-through

- Unnecessary quality standards unilaterally imposed by retailers are then required by middlemen of the farmers.

Second degree pass-through

- High quality standards unilaterally imposed by retailers increase the share of products which does not meet quality standards (increasing payments for waste).

Third degree pass-through

- Middlemen subjected to various UTPs (e.g., payments for waste, post-sale complaints, misuse of confidential information) transfer the costs to farmers in the form of a final price reduction.

14 Results of the Sample Survey

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In order to generalise the results of the semi-structured interviews and provide a quantitative assessment of UTP occurrence, we ran a sample survey in the APK and LCA netchains. The main objective was to estimate the frequency with which firms are subjected to UTPs and validate the results of the interviews.

We surveyed 85 farmers and 15 middlemen in the APK netchain and 71 farmers and 10 middlemen in the LCA netchain. This chapter reports the results of the investigation.

14.1 Questionnaire design

Following the IDEA approach, the questionnaires did not test an *a priori* list of practices. Instead, we focused on the main issues we identified through the expert panels and semi-structured interviews. The questionnaires are included in the appendix to this chapter.

14.1.1 Farmer questionnaire

The farmer questionnaire focused on four issues: price determination, quality determination, access costs and renegotiation/retaliation. Such issues were identified by the expert panels (chapter 11) and the semi-structured interviews (chapter 13). These were considered the most important areas where UTPs can emerge. The issues were investigated by asking respondents to agree or disagree on a set of questions using a 5-point Likert scale.

We centred the questionnaire on the transaction between the respondent farmer and the "main buyer", where the latter is defined as follows:

> *The "main buyer" is the one buying the largest share (in value) of apples/kiwifruits in the current year. In the case that two or more buyers buy the same share, the main buyer is the one the grower has been trading with for the longest time. In the case of two or more buyers buying the same share for the same number of years, we ask the grower to select one as the main buyer. COOPs and POs are considered buyers.*

The rationale of this approach is that UTPs are transaction-specific. Therefore, the measurement must refer to a specific trade relationship. We chose to investigate the most important one for the farmer.

The analysis of price determination focused on three key aspects: i) discretional/arbitrary price determination, ii) transparency and predictability and iii) timeliness of payments. The statements investigated were the following:

- P1: The rules for determining prices are clear.
- P2: Buyers set prices at their discretion.

- P3: At delivery, I have a reasonably reliable expectation about price.
- P4: Payments are timely, I do not need to urge my buyer to be paid.
- P5: Prices are determined in a fair and transparent way.
- P6: I believe that my buyer will cheat on prices if they could.

Items P1, P3 and P5 relate to transparency and predictability. Item P2 measures the perception of discretional behaviour, and item P4 investigates late payments. Item P6 is a direct question regarding the main buyer's trustworthiness.

We used two items to investigate quality determination.

- Q1: Quality is determined in a fair and transparent way.
- Q2: I believe that my buyer would cheat on quality if they could.

The items measure the overall perception of the farmer regarding the fairness and transparency of the quality assessment problem. Low values on the Likert scale support the complaints of a few farmers during the semi-structured interviews. A question investigating trust in the good faith of the buyer was added as a general assessment.

During the expert panels and semi-structured interviews, we received several complaints about the high (and increasing) investments required to gain market access. In the questionnaire, we investigated farmers' perceptions in this regard. We added items measuring the predictability of future investments and assessing whether such investments are really necessary, in the farmers' opinion.

- Z1: I paid for significant investments in order to sell to the most important buyer.
- Z2: Costs of selling to the most important buyer increase excessively (includes payments, investments, certifications, etc.).
- Z3: I have a reliable estimate of the future investments that will be required by my buyer.
- Z4: I believe that my buyer asks for investments that are not really necessary.

Question Z4 is of particular importance, given the results of the theoretical model. In fact, unnecessary investments may be used to trigger the self-selection and implicit threat mechanisms, as described in chapter 12.

Finally, we used the following five items to address the issues of renegotiation and retaliation.

- N1: My business with the most important buyer is predictable.
- N2: When there is an unexpected event, the buyer changes the contract terms.
- N3: The buyer changes the terms of trade if it is profitable for them, even in the absence of unexpected events.
- N4: Your buyer always keeps his/her/their word, without using "holes" in the agreement to further their own interests.
- N5: In the past, I have given up my contractual rights to preserve the trade relationship (accepted late payments, price reductions, etc.).

Item N1 is motivated by a few complaints we received about unpredictable buyer behaviour. High values on the Likert scale support the conclusion that such concerns are shared by a large number of farmers. Items N2, N3 and N4 provide an assessment of renegotiation practices. We were interested in assessing whether renegotiation is associated with unpredictable random shocks (a sort of risk transfer) or perceived as a general practice.

Item N5 refers to a blacklist UTP often mentioned during the interviews and by the expert panels. Farmers reported that they could not complain about renegotiations due to fear of trade retaliation. The high Likert scale values in item N5 support this claim.

The farmer questionnaire collected additional auxiliary information about the farm business. In particular, the nature of the main buyer (coop/PO, private trader, supermarket representative, other) is used as a discriminatory variable for the analysis. Also, we collected information about the farmer's ability to replace their main buyer as compared to the farmer's perception of the buyer's ability to terminate the trade agreement. These variables can be considered as proxies for measuring bargaining imbalances and to assess possible coercion, as defined in Bowie (1988).

14.1.2 The middleman questionnaire

The middleman questionnaire is composed of three main sections: general information (including characteristics of suppliers and customers), perception of UTPs in the industry and analysis of the business relationship with the main buyer. The structure is motivated by the reluctance showed by several middlemen to talk about their business. By collecting their opinions about general trends in the industry, we obtain three results: 1) we collect a generic assessment of UTP occurrence by an expert, 2) we can observe the divergence between the general perception and the information regarding the business and 3) we can use the outcome to assess the possible bias from our focus on transactions with main buyers. In fact, such focus implies that our analysis may overlook UTPs occurring in transactions with other buyers (including UTPs that occurred with previous main buyers). Because firms might select main buyers who limit the use of UTPs, our analysis might underestimate the actual occurrence rate. In order to control for this bias, we asked middlemen to provide their subjective assessment of UTP occurrence in the industry, in addition to analysis of the transactions they are involved in.

The perception of UTPs in the industry is investigated using a set of 5-point Likert scales measuring middleman's perceptions on the likelihood of occurrence of a set of practices (namely, the 16 UTPs from Directive 2019/633). Respondents were asked to rate "how likely are those practices to happen" both in the upstream and downstream links of the netchain.

Investigation of the middlemen's transactions with their main buyers is the core of the pass-through analysis. Respondents were asked to rate the impact of each UTP in the list on their business and, for the relevant UTPs, explain how they act to mitigate the effects on their business. Following the theoretical model in section 12.8 , respondents are offered options from four groups: i) do nothing (take the hit), ii) rebate the same practice on the suppliers (first degree pass-through), iii) adopt other UTPs (second degree pass-through), or iv) use other practices such as price reductions or mandatory investments (third degree pass-through). The analysis of the results gives us information about how the adoption of UTPs at one stage can affect the organisation of transactions at different levels of the netchain.

Auxiliary information includes the share of export products; structure of the sales channels; nature of the main buyer; possibility to replace the buyer; and possibility of being replaced by the buyer. Also, we investigated whether middlemen had experienced a trade disruption in the past and if so, how he/she was informed by the buyer.

14.2 Sampling strategy

We collected 156 farmer questionnaires and 30 middleman questionnaires in total. Eighty-five farmers and 15 middlemen belonged to the APK netchain, 70 farmers and 15 middlemen to the LCA netchain.

Table 14-1: Sampling for the APK farmer survey

Size of kiwi orchard (ha)	N. of farms		Weight
	2010 Census	Sample	
Small (<2)	762	8	95.25
Medium (2|-5)	691	44	15.70
Large (5+)	855	33	25.91
Total	2.308	85	

The 85 returned APK farmer questionnaires are representative of 2,308 kiwi growers in the Latina province (2010 Census data). The sample was stratified by orchard size, and the weights were computed according to Table 14-1. Within each stratum, observations were randomly selected. First, we drew a municipality randomly (with replacement) and then selected a farm. In the frequent case that the farmer refused to participate, another farmer in the municipality was chosen.

The 71 returned farmer questionnaires from the LCA netchain are representative of 701 apple growers with at least one ha of apple orchard in the Baden-Württemberg federal state of Germany, where most of the Lake Constance producers are located (State Statistical Office of Baden-Württemberg). We excluded from the universe 529 farms with apple orchards smaller than one ha because such small production is almost always used for self-consumption, gifts or direct sale to consumers. Consequently, these farms were outside the scope of this research.[21] The weights are reported in Table 14-2. We selected farmers from every district of the Lake Constance area. Within each district, the farms were randomly selected from a classified directory.

Table 14-2: Sampling for the LCA farmer survey

Size of apple orchard (ha)	N. of farms		Weight
	Baden-Württ.	Sample	
1-3ha	234	4	58.50
3-5ha	123	13	9.46
5-20ha	184	32	5.75
20ha	160	22	7.27
Total	701	71	

[21] We did not exclude small kiwi producers in the APK survey because they are often engaged in commercial activities.

The 30 middlemen were selected from lists obtained from merging the results of an analysis of local phone directories with information obtained from the expert panels and farmers. Given the low rate of response, the actual selection was mainly driven by a middleman's willingness to participate to the survey.

14.3 Results of the farmer sample survey

Table 14-3 illustrates the main characteristics of the APK and LCA samples, both sample-means and population estimates. Data show structural differences between the two areas.

In the APK netchain, orchards are on average smaller, and farmers are older and more likely to be full-time than in the LCA netchain. The majority of APK farms are specialised in kiwi production, while in LCA the mode is specialisation in fruit production. In both cases, there is a non-negligible share of farms producing club varieties. Almost 50% of LCA farms have on-site storage facilities, while the share in APK is smaller (18%).

Table 14-3: Selected characteristics of farm operations in APK and LCA netchains

Farmers' characteristics		APK		LCA	
		Estimate	Sample	Estimate	Sample
Full-time farmers	%	63.34	60.00	33.58	49.30
Female farmers	%	32.21	29.41	7.02	9.86
Average age	years	56.62	54.41	45.38	45.76

Farms' characteristics		APK		LCA	
		Estimate	Sample	Estimate	Sample
Average kiwi/apple orchard	ha	4.78	5.29	10.33	14.14
Club varieties	%	18.68	22.35	24.68	25.35
Free varieties	%	89.62	85.88	100.00	100.00
Specialised kiwi/apple	%	56.37	63.53	28.89	29.58
Specialised fruit	%	28.01	20.00	60.38	54.93
Not specialised	%	10.90	10.59	9.38	14.08
Other specialisations	%	4.73	5.88	1.35	1.41
On-farm storage facilities	%	18.07	17.65	49.55	61.97

14.3.1 Farmers' sales channels

We characterise the structure of farmers' sales channels using two key variables: membership in a PO or cooperative (a binary variable) and buyer concentration (a categorical variable).

PO and cooperatives play a key role in both netchains. In LCA, 70% of farmers are members of a PO or cooperative. Those farmers account for 82% of apple farmland. In APK, 53% of farmers are coop/PO members and hold 62% of kiwi farmland.

Table 14-4: Structure of farmers' sales channels

PO/ Coop membership	APK		LCA	
	Estimate	Sample	Estimate	sample
% of farmers	52.89	49.41	70.41	78.87
% of kiwi/apple farmland	62.38	61.09	81.82	84.22

Buyer concentration	APK		LCA	
	% farmers	avg. orchard size (ha)	% farmers	avg. orchard size (ha)
Only one buyer	76.88	5.09	63.17	11.61
One main buyer	11.26	5.56	14.47	14.11
Few large buyers	0.00		1.64	10.50
Many small buyers	5.49	0.87	20.72	3.79
No resp.	6.37	3.15	0.00	
Total	100.00	4.78	100.00	10.33

The majority of farmers sell their entire production to one buyer (77% in the APK netchain and 63% in LCA). A small number of farmers has one main buyer and other smaller customers (11% in APK and 14% in LCA). The share of farmers who have a few large buyers is negligible. In the LCA netchain there is a sizable share (21%) of small farmers who sell to many local buyers. The incidence of this group in APK is smaller but still relevant (5%).

14.3.2 Main buyer

The investigation of UTPs focuses on the transaction between the farmer and the main buyer. In this section we describe the distribution of farmers by type of main buyer (Table 14-5).

The data indicate a remarkable difference between the two netchains. In LCA, the majority of farmers patronizes cooperatives or POs (70%). Small farmers selling to consumers are 19% of the total. The remaining 11% sells to private traders (non-coop/PO) and only a negligible share to supermarket chains (1%).

Table 14-5: Type of main buyer

Main buyer (type)	APK		LCA	
	% farmers	avg. orchard size (ha)	% farmers	avg. orchard size (ha)
Supermarket	1.80	5.74	0.82	14.00
Private middleman	55.01	2.89	9.41	9.76
Coop/PO	37.26	7.88	70.41	12.17
Consumers			19.37	3.78
Missing	5.93	2.66		
Total	100.00	4.78	100.00	10.33

In APK, private traders are the most common buyers, taking the production of 55% of farmers. Cooperatives and POs are the main buyers for 37% of farmers. Noticeably, the share of coop/POs as main buyer is much smaller than the figure in Table 14-4 reporting the percent of farmers who are coop/PO members (53%). Almost 30% of coop/PO members report that their main buyers are other types of firms. In order to explain the difference, Table 14-6 reports the type of services that members obtain from their cooperative/PO. Nine percent of coop/PO members use input providing and technical assistance services only (and sell their products without the help of the association). In the remaining 21% of cases, cooperatives and POs are mere intermediaries and the farmers deliver to other types of buyers.

Table 14-6: Services used by PO/coop members[22]

Services used by members	APK
	% members
Joint selling	91.06
Input supply	34.18
Production planning	33.79
Technical assistance	51.22
Other services	6.82

In order to test the association of UTP occurrence with type of buyer, this difference must be considered. As a consequence, when investigating UTPs in a cooperative/PO supply chain, we consider only the members for whom the cooperative/PO is their main buyer.

14.3.3 Trade replaceability

According to theory, UTPs are associated with imbalances in bargaining power and coercion (Bowie 1988). Because bargaining power can hardly be measured with a short questionnaire (e.g., Draganska 2008), we used 'replaceability' as a gross proxy. We asked farmers if they could replace their main buyer as trading partner and whether the main buyer could replace them. The coded answers were "yes, easily", "not easily/it would be costly" and "not at all".

By comparing the answers, we can identify possible imbalances in bargaining power. In fact, "replaceability" is associated with the value of the disagreement payoff. If a firm can replace the trade partner easily, we can infer that the value of the disagreement payoff is close to the payoff from the trade. This implies that the firm can walk away from the transaction easily. In this setting, coercion is more unlikely to happen, because the firm has feasible alternatives.[23] If replacing the trade partner is feasible but costly (not easy), the disagreement payoff is lower than the payoff from trade but still greater than production cost. In this case, the threat of walking away from trade is credible only if coercion results in erosion of profit margins. Finally, if replacing the trade partner is not possible, the firm has no alternative and is exposed to coercion.

[22] Data available for the APK netchain only.

[23] In principle, it is possible that the ease of switching trade partners is associated with a set of available alternatives that are all equally coercive. Therefore, replaceability can be considered only a gross proxy and not an exact measurement.

Table 14-7: Replaceability of trade partners

Can the main buyer replace your firm?		APK				LCA				
		Superm.	Private middl.	Coop/PO	Total	Superm.	Private middl.	Coop/PO	Consum.	Total
Easily	%	37.74	38.16	25.38	31.13	0.00	8.72	0.00	100.00	20.19
Not easily	%	0.00	28.26	12.14	20.07	100.00	80.25	0.00	0.00	8.37
Not at all	%	62.26	33.58	62.48	42.87	0.00	11.03	100.00	0.00	71.44
Total	%	100.00	100.00	100.00	94.07	100.00	100.00	100.00	100.00	100.00

Can you replace the main buyer?		APK				LCA				
		Superm.	Private middl.	Coop/PO	Total	Superm.	Private middl.	Coop/PO	Consum.	Total
Easily	%	37.74	27.23	13.88	20.83	0.00	48.45	2.64	100.00	25.78
Not easily	%	62.26	14.06	27.21	18.99	100.00	40.51	29.29	0.00	25.25
Not at all	%	0.00	58.71	52.89	52.00	0.00	11.03	68.07	0.00	48.96
Total	%	100.00	100.00	93.97	91.82	100.00	100.00	100.00	100.00	100.00

Table 14-7 reports farmers' perceptions about replaceability by netchain and type of main buyer. As expected, farmers selling to private middlemen perceived themselves as more replaceable than those selling to cooperatives and PO. Approximately 50% of farmers in the two netchains stated they cannot replace the main buyer.

Table 14-8 compares farmers' perceptions about their own replaceability and that of their main buyer. The figures in bold font highlight the combinations of possible imbalance in bargaining power in favour of the buyer.

Table 14-8: Asymmetries in perceived replaceability by type of main buyer

Main buyer is private middleman/ supermarket chain		Farmer can be replaced							
		APK				LCA			
		Easily	Not easily	No	Tot	Easily	Not easily	No	Tot
Farmer can replace	Missing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Easily	22.42	5.15	0.00	27.57	0.00	44.57	0.00	44.57
	Not easily	**8.46**	5.15	1.98	15.59	**8.02**	37.26	0.00	45.29
	No	**7.26**	**17.07**	32.51	56.85	**0.00**	**0.00**	10.15	10.15
	Total	38.14	27.37	34.49	100.00	8.02	81.83	10.15	100.00

Main buyer is cooperative / PO		Farmer can be replaced							
		APK				LCA			
		Easily	Not easily	No	Tot	Easily	Not easily	No	Tot
Farmer can replace	Missing	0.00	0.00	6.03	6.03	0.00	0.00	0.00	0.00
	Easily	13.88	0.00	0.00	13.88	0.00	0.00	2.64	2.64
	Not easily	**1.83**	1.83	23.55	27.21	**0.00**	0.00	29.29	29.29
	No	**9.68**	**10.32**	32.90	52.89	**0.00**	**0.00**	68.07	68.07
	Total	25.38	12.14	62.48	100.00	0.00	0.00	100.00	100.00

14.3.4 Price practices

Based on the results from the expert panels and semi-structured interviews, we identified four areas of possible UTPs: price determination, quality, access costs and renegotiation. We report the results in Table 14-9.

Table 14-9: Results of price practices assessment

Pricing rules are transparent and clear (1: strongly disagree, to 5: strongly agree)

	APK							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing	0.00	0.00	0.00	88.53	0.00	11.47	100.00							
Superm.	0.00	0.00	0.00	0.00	62.26	37.74	100.00	0.00	0.00	0.00	0.00	100.00	0.00	100.00
Priv. Mid.	0.00	0.00	0.00	38.96	49.02	12.02	100.00	0.00	0.00	0.00	14.35	37.42	48.23	100.00
Coop /PO	0.00	0.00	0.00	19.36	26.78	53.87	100.00	6.89	11.10	38.71	17.16	15.55	10.58	100.00
Consum.								0.00	0.00	0.00	0.00	52.68	47.32	100.00
Total	0.00	0.00	0.00	33.89	38.07	28.04	100.00	4.848	7.82	27.26	13.43	25.49	21.15	100.00

Buyers set prices at their discretion (1: strongly disagree, to 5: strongly agree)

	APK							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	NR
Missing	0.00	11.47	0.00	88.53	0.00	0.00	100.00							
Superm.	0.00	37.74	0.00	0.00	62.26	0.00	100.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
Priv. Mid.	0.00	7.50	19.67	24.33	18.20	30.30	100.00	0.00	76.93	23.07	0.00	0.00	0.00	100.00
Coop /PO	0.00	27.85	31.07	17.53	3.01	20.54	100.00	0.00	66.05	29.29	2.33	2.33	0.00	100.00
Consum.								0.00	100.00	0.00	0.00	0.00	0.00	100.00
Total	0.00	15.86	22.40	25.16	12.26	24.32	100.00	0.00	73.1	22.79	2.461	1.641	0.00	100.00

At delivery, I have a reasonably reliable expectation about price (1: strongly disagree, to 5: strongly agree)

	APK							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	NR
Missing	0.00	0.00	0.00	0.00	81.07	18.93	100.00							
Superm.	0.00	0.00	0.00	0.00	100.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
Priv. Mid.	0.00	27.60	1.24	31.97	33.87	5.32	100.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
Coop /PO	0.00	57.09	5.48	15.70	18.72	3.01	100.00	0.00	29.43	44.57	19.66	6.34	0.00	100.00
Consum.								0.00	0.00	0.00	0.00	0.00	100.00	100.00
Total	0.00	36.46	2.72	23.44	32.21	5.17	100.00	0.00	20.72	31.38	13.84	4.462	29.59	100.00

Payments are timely (1: strongly disagree, to 5: strongly agree)

	APK							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	NR
Missing	0.00	0.00	0.00	0.00	0.00	100.00	100.00							
Superm.	0.00	0.00	0.00	0.00	62.26	37.74	100.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
Priv. Mid.	0.00	5.75	0.00	13.69	1.24	79.32	100.00	8.72	0.00	0.00	0.00	23.07	68.21	100.00
Coop /PO	0.00	0.00	0.00	23.55	8.49	67.95	100.00	1.17	13.77	24.46	40.73	10.01	9.86	100.00
Consum.								0.00	0.00	0.00	0.00	5.36	94.64	100.00
Total	0.00	3.16	0.00	16.31	4.97	75.56	100.00	1.64	9.70	17.22	29.5	10.25	31.69	100.00

Overall, prices are determined in a fair and transparent way (1: strongly disagree, to 5: strongly agree)

	APK							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	NR
Missing	0.00	88.53	0.00	0.00	0.00	11.47	100.00							
Superm.	0.00	0.00	0.00	0.00	62.26	37.74	100.00	0.00	0.00	0.00	0.00	100.00	0.00	100.00
Priv. Midd	0.00	7.36	0.00	8.66	31.40	52.59	100.00	0.00	0.00	0.00	0.00	54.87	45.13	100.00
Coop /PO	3.65	13.88	17.53	1.83	3.65	59.46	100.00	4.11	49.12	31.76	6.34	5.59	3.08	100.00
Consum.								0.00	0.00	0.00	0.00	0.00	100.00	100.00
Total	1.36	14.47	6.53	5.44	19.75	52.44	100.00	2.90	34.59	22.36	4.462	9.913	25.78	100.00

I believe that the main buyer would cheat on prices if they could (1: strongly disagree, to 5: strongly agree)

	APK							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	NR
Missing	0.00	100.00	0.00	0.00	0.00	0.00	100.00							
Superm.	0.00	100.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00
Priv. Midd	1.24	56.52	18.72	3.71	19.81	0.00	100.00	8.72	45.13	46.14	0.00	0.00	0.00	100.00
Coop /PO	0.00	89.68	3.01	5.48	1.83	0.00	100.00	27.41	40.22	18.50	4.97	6.58	2.33	100.00
Consum.								47.32	52.68	0.00	0.00	0.00	0.00	100.00
Total	0.68	72.24	11.42	4.08	11.58	0.00	100.00	29.28	42.76	18.19	3.498	4.631	1.64	100.00

Our survey concludes that price transparency is an issue in the LCA netchain, especially in cooperatives and PO. APK farmers are more concerned about arbitrary price determination, especially when private traders are involved. Noticeably, farmers state they do not know the final price for their fruit at the time of delivery. This can be a typical consequence of the cooperative management that pays members at the end of the year. In APK, this is an issue with private traders as well. In fact, in the APK netchain, prices "to-be-determined" are a common practice or non-cooperative enterprises. In general, farmers (with a partial exception for 38% of LCA cooperatives and a minority of APK private traders) responded that payments are reasonably on time.

There is a remarkable difference in the overall perception of price fairness and transparency in the two netchains: 72% of farmers in APK agrees with the statement (scores 4 or 5) versus 36% in LCA. In particular, only 9% of coop/PO members gives a positive evaluation in this regard.

Farmers trust their buyers to a large extent. Only 8% of respondents in LCA believes the buyer would cheat on prices. The figure rises to 12% in APK, with a clear concern regarding private traders.

14.3.5 Quality practices

Our investigation of quality practices shows that the large majority of farmers agrees with the statement: "Overall, quality assessment is fair". The share is 96% in the APK netchain and 94% in LCA. Similarly, very few farmers agree with the idea that buyers would cheat on quality. Partial exceptions are the 26% APK farmers who sell to private traders who worry about the trustworthiness of their buyers.

Table 14-10: Results of quality practices assessment

Overall, quality assessment is fair (1: strongly disagree, to 5: strongly agree)

	APK							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing	0.00	0.00	0.00	18.93	0.00	81.07	100.00							
Superm.	0.00	0.00	0.00	0.00	0.00	100.00	100.00	0.00	0.00	0.00	0.00	100.00	0.00	100.00
Priv. Midd	0.00	0.00	0.00	3.28	21.05	75.67	100.00	14.35	0.00	0.00	8.72	14.35	62.58	100.00
Coop /PO	0.00	0.00	3.01	0.00	10.86	86.12	100.00	1.17	5.72	7.19	5.72	47.38	32.82	100.00
Consum.								0.00	0.00	0.00	0.00	0.00	100.00	100.00
Total	0.00	0.00	1.12	2.93	15.63	80.33	100.00	2.17	4.03	5.07	4.85	35.53	48.36	100.00

I believe that my buyer would cheat on quality if they could (1: strongly disagree, to 5: strongly agree)

	APK							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing	0.00	100.00	0.00	0.00	0.00	0.00	100.00							
Superm.	0.00	100.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00
Priv. Midd	0.00	56.96	16.53	0.00	8.23	18.28	100.00	14.35	76.93	8.72	0.00	0.00	0.00	100.00
Coop /PO	0.00	88.50	8.49	0.00	0.00	3.01	100.00	14.11	44.71	25.08	7.74	1.17	7.19	100.00
Consum.								90.41	9.59	0.00	0.00	0.00	0.00	100.00
Total	0.00	72.04	12.26	0.00	4.52	11.18	100.00	28.80	40.57	19.30	5.45	0.82	5.07	100.00

Unlike what we found in a few semi-structured interviews, quality seems to be a minor concern for farmers. However, the relatively high share of missing answers in the LCA might indicate reticence or a fear factor.

14.3.6 Access costs

During the expert panels and the interviews, concerns were raised about the large and increasing investments necessary to gain market access. We tested these claims in a section of the questionnaire. Table 14-11 reports the results.

Table 14-11: Results of the investigation of access costs

I paid for large investments in order to sell to the most import buyer (1: strongly disagree, to 5: strongly agree)

	APK							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing	0.00	0.00	0.00	11.47	0.00	88.53	100.00							
Supermarket	0.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
Private Middl.	0.00	25.79	14.86	21.34	18.20	19.81	100.00	0.00	14.35	28.47	8.72	37.42	11.03	100.00
Coop /PO	0.00	14.61	18.72	47.96	0.00	18.72	100.00	6.44	32.50	39.23	8.50	4.94	8.40	100.00
Consumers								0.00	0.00	0.00	0.00	90.41	9.59	100.00
Total	0.00	19.63	15.15	32.09	10.01	23.12	100.00	4.62	24.61	30.71	6.88	23.60	9.57	100.00

Selling to the main buyer is increasingly costly (1: strongly disagree, to 5: strongly agree)

	APK							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing	0.00	0.00	0.00	81.07	18.93	0.00	100.00							
Supermarket	0.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	100.00	0.00	100.00
Private Middl.	0.00	13.25	17.34	35.91	33.50	0.00	100.00	0.00	23.07	57.18	19.75	0.00	0.00	100.00
Coop /PO	0.00	48.39	5.48	26.78	4.84	14.52	100.00	0.00	28.50	56.29	7.30	3.80	4.11	100.00
Consumers								0.00	0.00	47.32	47.32	5.36	0.00	100.00
Total	0.00	25.32	11.58	36.34	21.35	5.41	100.00	0.00	22.23	54.17	16.16	4.54	2.90	100.00

I have a clear estimate of future investments (1: strongly disagree, to 5: strongly agree)

	APK							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing	0.00	0.00	0.00	88.53	0.00	11.47	100.00							
Supermarket	0.00	0.00	0.00	0.00	62.26	37.74	100.00	0.00	0.00	0.00	0.00	100.00	0.00	100.00
Private Middl.	0.00	0.00	0.00	40.28	38.67	21.05	100.00	0.00	8.72	23.07	0.00	23.07	45.13	100.00
Coop /PO	0.00	3.65	0.00	3.01	47.96	45.38	100.00	28.88	10.38	7.50	4.66	44.77	3.80	100.00
Consumers								43.09	0.00	0.00	0.00	47.32	9.59	100.00
Total	0.00	1.36	0.00	28.53	40.27	29.85	100.00	28.68	8.13	7.45	3.28	43.68	8.78	100.00

I believe that my buyer is asking for unnecessary investments (1: strongly disagree - 5: strongly agree)

	APK							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing	0.00	100.00	0.00	0.00	0.00	0.00	100.00							
Supermarket	0.00	100.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
Private Middl.	0.00	98.76	1.24	0.00	0.00	0.00	100.00	11.03	80.25	8.72	0.00	0.00	0.00	100.00
Coop /PO	0.00	92.15	1.83	0.00	0.00	6.03	100.00	6.89	59.71	29.60	0.00	0.00	3.80	100.00
Consumers								6.89	59.71	29.60	0.00	0.00	3.80	100.00
Total	0.00	96.39	1.36	0.00	0.00	2.25	100.00	11.03	80.25	8.72	0.00	0.00	0.00	100.00

Farmer perception in this regard is heterogeneous. In the APK netchain, 35% of farmers disagrees with the statement "I paid for large investments in order to sell to the most important buyer" and 33% agrees with it. In the LCA netchain, the figures are 55% and 33%, respectively. Similarly, there is no consensus about whether access costs are increasing over time.

Almost all farmers have a clear estimate of the future investments that will be necessary to keep market access. Also, with a few exceptions, they do not consider the investments to be unnecessary costs. However, in both cases, the high share of missing answers in the LCA netchain might be the result of reticence or a fear factor.

14.3.7 Renegotiation

Renegotiation was considered a main issue in the netchains. We investigated the problem with a set of five items regarding the predictability of the business (in general), trustworthiness and past experiences of giving up contractual rights. The results are summarised in Table 14-12.

Table 14-12: Results of the assessment of renegotiation practices

My business with the most important buyer is predictable (1: strongly disagree, to 5: strongly agree)

	APK							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing	0.00	69.59	0.00	11.47	18.93	0.00	100.00							
Supermarket	0.00	0.00	62.26	37.74	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00
Private Middl.	0.00	20.32	14.06	29.06	33.27	3.28	100.00	0.00	17.44	0.00	23.07	48.45	11.03	100.00
Coop /PO	0.00	22.37	8.49	13.88	43.76	11.50	100.00	1.17	30.36	39.57	21.41	6.03	1.47	100.00
Consumers								0.00	100.00	0.00	0.00	0.00	0.00	100.00
Total	0.00	23.64	12.02	22.52	35.73	6.09	100.00	0.82	42.38	28.68	17.24	8.80	2.07	100.00

My main buyer uses unexpected events to obtain concessions (1: strongly disagree, to 5: strongly agree)

	APK							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing	0.00	0.00	18.93	69.59	11.47	0.00	100.00							
Supermarket	0.00	100.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	100.00	0.00	100.00
Private Middl.	0.00	63.29	15.73	12.82	4.08	4.08	100.00	0.00	62.58	23.07	0.00	14.35	0.00	100.00
Coop /PO	0.00	48.60	26.02	13.88	3.65	7.85	100.00	0.00	47.93	41.38	2.64	3.80	4.25	100.00
Consumers								0.00	100.00	0.00	0.00	0.00	0.00	100.00
Total	0.00	54.72	19.47	16.35	4.29	5.17	100.00	0.00	59.00	31.31	1.86	4.85	2.99	100.00

My main buyer changes contract terms even in the absence of unexpected events (1: strongly disagree, to 5: strongly agree)

	APK							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing	0.00	18.93	11.47	0.00	0.00	69.59	100.00							
Supermarket	0.00	37.74	0.00	62.26	0.00	0.00	100.00	0.00	0.00	0.00	0.00	100.00	0.00	100.00
Private Middl.	0.00	40.78	15.30	17.34	24.55	2.04	100.00	0.00	71.30	14.35	14.35	0.00	0.00	100.00
Coop /PO	0.00	63.12	14.52	9.68	4.84	7.85	100.00	2.64	53.03	34.80	0.00	4.11	5.41	100.00
Consumers							100.00	0.00	100.00	0.00	0.00	0.00	0.00	100.00
Total	0.00	47.75	14.50	14.26	15.31	8.18		1.86	63.41	25.85	1.35	3.72	3.81	100.00

My main buyer always keeps their word (1: strongly disagree, to 5: strongly agree)

	APK							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing	0.00	0.00	0.00	18.93	81.07	0.00	100.00							
Supermarket	0.00	0.00	0.00	62.26	37.74	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00
Private Middl.	0.00	14.86	2.04	10.78	23.15	49.16	100.00	0.00	0.00	0.00	14.35	23.07	62.58	100.00
Coop /PO	0.00	19.36	9.68	7.85	29.03	34.08	100.00	2.95	8.36	3.80	7.06	50.60	27.23	100.00
Consumers								0.00	0.00	0.00	0.00	0.00	100.00	100.00
Total	0.00	15.39	4.73	11.10	29.04	39.74	100.00	2.07	5.89	3.50	6.32	37.79	44.43	100.00

I had to give up contractual rights in order to keep the business relationship (1: strongly disagree, to 5: strongly agree)

	APK							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing	0.00	11.47	0.00	18.93	69.59	0.00	100.00							
Supermarket	0.00	0.00	37.74	0.00	62.26	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
Private Middl.	0.00	47.49	3.71	16.97	11.58	20.24	100.00	11.03	60.27	14.35	0.00	14.35	0.00	100.00
Coop /PO	0.00	31.07	22.37	32.05	6.66	7.85	100.00	33.44	52.93	12.47	0.00	0.00	1.17	100.00
Consumers								43.09	56.91	0.00	0.00	0.00	0.00	100.00
	0.00	38.38	11.06	22.40	14.11	14.06	100.00	32.92	53.96	10.13	0.00	1.35	1.64	100.00

A sizable share of farmers perceives their business as unpredictable (overall, 36% in APK and 71% in LCA). The difference in perceptions between the two netchains is consistent with the

different sentiments about price transparency (section 14.3.4). LCA farmers have more trouble understanding price trends and, consequently, perceive a riskier business environment than APK farmers.

The share of farmers complaining that the buyer renegotiates contracts when unexpected events occur is 9% in APK and 8% in LCA. Interestingly, the figures are lower than the share of farmers claiming that the buyer renegotiates in the absence of unexpected events (23% and 8%, respectively). This might imply that farmers perceive renegotiation as an "ordinary practice" that does not require justification.

The majority of farmers considers their buyer a trustworthy partner. The share of farmers disagreeing with the statement "My buyer always keeps his/her word" is similar to that of farmers complaining about changes in contract terms. The two results are consistent and suggest that renegotiation can be an issue for a non-negligible number of farmers.

Finally, 28% of APK farmers and 3% of LCA farmers complained about having to give up contractual rights to preserve their trade relationships. The issue is associated primarily with private traders and supermarkets, but 14% of farmers selling to cooperatives experienced the problem as well.

14.4 Results from the middleman survey

The middleman sample is composed of 15 firms from the APK netchain and 15 firms from LCA. Data were collected with computer-aided telephone interviews (CATI) between July and September 2019.

14.4.1 Firm characteristics

Table 14-13 and Table 14-14 report descriptive statistics of the sample. On average, firms in the LCA sample are larger and have a longer business history than those in the APK sample. The share of firms with own or rented storage facilities is 87% in LCA and 73% in APK. All firms in LCA trade free apple varieties, and 40% of them trade club varieties also. In the APK netchain, 60% of firms trades free kiwi varieties only, 27% specialises in club varieties and 13% trades both types.

All firms in LCA use multiple sales channels. The most common trade partners are independent retailers (93% of the sample), supermarket chains (73%) and processors (73%). Twenty-seven percent of the sample sells to consumers directly. The majority of APK firms uses only one sales channel (53% of the sample). The most common sales channels in APK are other middlemen (80%) and supermarkets (20%). Table 14-15 reports the statistics.

Table 14-13: Characteristics of the middleman sample

		APK	LCA
Observations	n.	15	15
Avg. time in business	years	6.13	25.06
Share of coop/PO	%	33.33	13.33
Share of firms specialised in kiwi/apple trade	%	26.67	6.67
Share of firms specialised in fruit trade	%	66.67	73.33
Share of firms trading club varieties	%	40.00	40.00
Share of firms trading free varieties	%	73.33	100.00
Share of firms with own storage facilities	%	33.33	86.67
Share of firms with rented storage facilities	%	40.00	13.33
Share of firms with no storage facilities	%	26.67	13.33

Table 14-14: Distribution of sample by revenue class

		APK	LCA
N.R	%	6.67	6.67
0-| 2 mil	%	53.33	20.00
2 -| 10 mil	%	20.00	46.67
10 -| 50 mil	%	13.33	26.67
50 -| 150 mil	%	6.67	0.00
150 -|350 mil	%	0.00	0.00
Exceed. 350	%	0.00	0.00
Total	%	100.00	100.00

Table 14-15: Sales channels

		APK	LCA
Share of firms selling to other middlemen	%	80.00	53.33
Share of firms selling to independent retailers	%	0.00	93.33
Share of firms selling to supermarkets	%	20.00	73.33
Share of firms selling to processors	%	13.33	73.33
Share of firms selling to consumers	%	6.67	26.67

14.4.2 Perception of UTPs in the industry

Respondents were asked to state how likely a listed UTP was to happen, based on their knowledge of the industry. This general question did not refer to their firm specifically; only a general assessment of the industry was required. The five-point scale was 1: I am not aware of the problem, 2: It is unusual, 3: It may happen sometimes, 4: It happens often and 5: It is customary. Respondents were asked to rate the likelihood of the UTP occurring in the upstream market (i.e., transactions between firms such as their own and their suppliers) and downstream market (i.e., between firms such as their own and their buyers). The list of UTPs is based on the Directive 2019/633 (grey practices are considered as one), with two additional list items gleaned from the results of the expert panels and interviews: unnecessary quality standards and arbitrary orders. Table 14-16 summarises the results.

Table 14-16: Perception of UTPs in the APK and LCA netchains

Likelihood of selected UTPs in upstream and downstream industries on 1-to-5 scale (1 = not aware, 5 = it is customary)	APK				LCA			
	Average score		% of scores > 2		Average score		% of scores > 2	
	Upst.	Down.	Upst.	Down.	Upst.	Down.	Upst.	Down.
Payments are delayed, late and/or unpredictable.	2.60	2.27	40.00	33.33	1.60	1.53	13.33	6.67
Orders are cancelled on short notice.	1.67	1.67	13.33	6.67	1.07	1.47	0.00	6.67
Buyers impose unilateral changes to existing contracts or agreements (do not keep their word).	2.13	1.87	33.33	33.33	1.13	1.53	6.67	6.67
Suppliers must pay for expenses that are not related to the sales of their products (for example: opening of new stores).	1.86	1.93	20.00	26.67	1.00	2.07	0.00	40.00
Suppliers must pay (or are denied payments) for loss or waste of products that were already delivered to the buyer.	2.13	2.13	26.67	26.67	1.40	2.27	20.00	46.67
Buyers refuse to write down contracts or orders.	1.60	1.57	13.33	0.00	1.00	1.60	0.00	13.33
Buyers take advantage of confidential information they obtain from the suppliers.	2.53	2.57	53.33	46.67	1.00	1.40	0.00	6.67
Buyers cut orders if the suppliers try to exercise their contractual rights.	1.64	1.62	6.67	6.67	1.00	2.13	0.00	40.00
Suppliers must pay for the costs of examining complaints by final customers (even if they are not responsible).	2.60	2.14	60.00	40.00	1.40	1.20	20.00	0.00
Firms must bear unpredictable costs that are not clearly stated in the contract.	2.43	2.43	33.33	33.33	1.00	2.20	0.00	33.33
Firms must comply with unnecessary quality standards.	2.20	2.07	33.33	20.00	2.47	3.53	53.33	80.00
Orders are unpredictable and totally discretionary.	1.79	1.79	20.00	20.00	2.67	4.60	46.67	100.00

According to the respondents, the five most common unfair practices in the APK netchain are misuse of confidential information; late payments; bearing unpredictable costs that are not clearly stated in the contract; paying for examination of complaints by final customers; and complying with unnecessary quality standards. In the downstream industry, the issue of paying for after-delivery loss or waste is among the most common practices as well.

This result is consistent with the common arrangement in the APK netchain of paying suppliers after the kiwifruits are sold to the consumers. This might result in delayed payments. Furthermore, the supplier's price is a function of the buyer's net margin and unexpected costs (such as waste, loss or even promotions) can be transferred to the suppliers.

Middlemen's perceptions about unnecessary quality standards are different from farmers' one. The farmer survey (14.3.6) showed that 96% of farmers strongly disagrees with the statement "I believe that my buyer asks for investments that are not really necessary". Thirty-three percent of middlemen consider unnecessary quality standards to at least "happen sometimes". The difference is explained by the consideration that such investments and standards are imposed by the retail industry. Farmers know that such investments are necessary in order to sell the kiwifruits to retailers, but middlemen doubt that such requirements are important for consumers.

In the LCA netchain, the main concerns are unnecessary standards and discretionary orders. Almost all respondents gave a score higher than 2 for the likelihood of such practices occurring in the downstream market. The share of respondents stating that these practices are not infrequent (i.e., score greater than 2) in the upstream market is approximately 50%. The result suggests that middlemen's main concerns regard practices not directly related to those on the list in Directive 2019/633.

Middlemen consider other practices unlikely to occur in the upstream market. Payments for examining consumer complaints and post-delivery waste or loss are considered not infrequent only by 20% of respondents. Other items have average scores close to 1, meaning that middlemen consider them unusual or non-existent.

In the LCA downstream market, there are concerns regarding payments for post-delivery loss or waste (47% of respondents), unpredictable costs (40%) and retaliation (40%). Thirty-three percent of respondents stated that expenses not related to product sales may be incurred.

The perception of the likelihood of UTPs occurring in the industry differs across netchains. This result suggests that running general, cross-netchain surveys might underestimate the local impact of UTPs.

14.4.3 The trade relationship with the main buyer

Respondents were asked to assess the occurrence and impact of UTPs in their trade relationship with their main buyer. Unlike the general assessment in section 14.4.2 , the question is specific to their firm. This made respondents wary (especially in the APK netchain), despite the strict confidentiality agreement. As a consequence, results must be interpreted with caution.

Table 14-17: Types of main buyer

	APK	LCA
Trader/middleman	80.00	13.33
Retailer	13.33	80.00
Other	6.67	6.67

Table 14-18: Distribution (% of firms) by revenue class of the firm and main buyer (millions of euro)

APK									
		Revenues of main buyer							
		NR	0-2	2-10	10-50	50-150	150-350	Exc. 350	Total
Revenues of the firm	NR		6.67						6.67
	0-2		33.33	13.33	6.67				53.33
	2-10			6.67	6.67	6.67			20.00
	10-50	6.67			6.67				13.33
	50-150					6.67			6.67
	150-350								0.00
	Exc. 350								0.00
	Total	6.67	40.00	20.00	20.00	13.33	0.00	0.00	100.00

LCA									
		Revenues of main buyer							
		NR	0-2	2-10	10-50	50-150	150-350	Exc. 350	Total
Revenues of the firm	NR							6.67	6.67
	0-2	20.00							20.00
	2-10	26.67						20.00	46.67
	10-50							26.67	26.67
	50-150								0.00
	150-350								0.00
	Exc. 350								0.00
	Total	46.67	0.00	0.00	0.00	0.00	0.00	53.33	100.00

Firms in APK primarily sold to other traders and middlemen (including cooperatives). Only 13% of respondents had a retailer as their main buyer. In the LCA netchain, retailers are the most common main buyers (Table 14-17).

Table 14-18 compares the size (revenue class) of the firms and their main buyers. In the LCA netchain, buyers are remarkably larger than the firms. In the APK netchain, buyers are smaller, and the size of the two parties is comparable in the majority of cases.

Table 14-19: Asymmetries in replaceability

		APK				LCA			
		Buyer can replace				Buyer can replace			
		Easily	Not easily	No	Total	Easily	Not easily	No	Total
Firm can replace	Easily	6.67	0.00	0.00	6.67	6.67	6.67	6.67	20.00
	Not easily	**0.00**	40.00	6.67	46.67	**6.67**	40.00	0.00	46.67
	No	**6.67**	**20.00**	20.00	53.33	**6.67**	**26.67**	0.00	66.67
	Total	13.33	60.00	26.67	100.00	20.00	73.33	6.67	100.00

The analysis of asymmetries in mutual replaceability suggests that asymmetric distribution of bargaining power is possible in both netchains. The firms exhibiting a higher degree of replaceability than that of their buyers are 27% in APK and 40% in LCA (bold figure in Table 14-19).

14.4.4 UTPs in transactions with main buyers

Respondents were asked to assess the rate of occurrence of UTPs in transactions with their main buyer using a 5-point Likert scale. In order to ensure comparability, the list of UTPs and assessment scale were the same as in Table 14-16.

Table 14-20: Distribution (% of firms) by rate of occurrence of the most frequent UTP

	APK			LCA		
	Total	Practices Dir. 19/633	Other Practices	Total	Practices Dir. 19/633	Other Practices
Never	0.00	0.00	6.67	0.00	0.00	0.00
Rarely	53.33	53.33	80.00	0.00	0.00	0.00
Sometimes	33.33	33.33	0.00	13.33	73.33	13.33
Frequently	6.67	6.67	6.67	20.00	6.67	20.00
Customarily	6.67	6.67	6.67	66.67	20.00	66.67
Total	100.00	100.00	100.00	100.00	100.00	100.00

Table 14-20 reports the percent distribution of firms by the rate of occurrence of the most frequent listed practice they experienced. In the APK netchain, 47% of firms experienced at least one UTP at least "sometimes". In the LCA netchain, all firms were exposed to one (or more) UTP(s) at least "sometimes". In 87% of cases, the UTP occurrence was "frequent" at the very least.

Because the UTP list included two practices not listed in Directive 2019/633, we computed the occurrence of the additional ones separately in order to assess the impact of incomplete lists. If we consider the practices in Directive 2019/633 only, the occurrence estimation in the LCA netchain is biased downward (columns 5 and 6 in Table 14-20).

Figure 14-1: Sample distribution (% of firms) by number of UTPs occurring at least "sometimes"

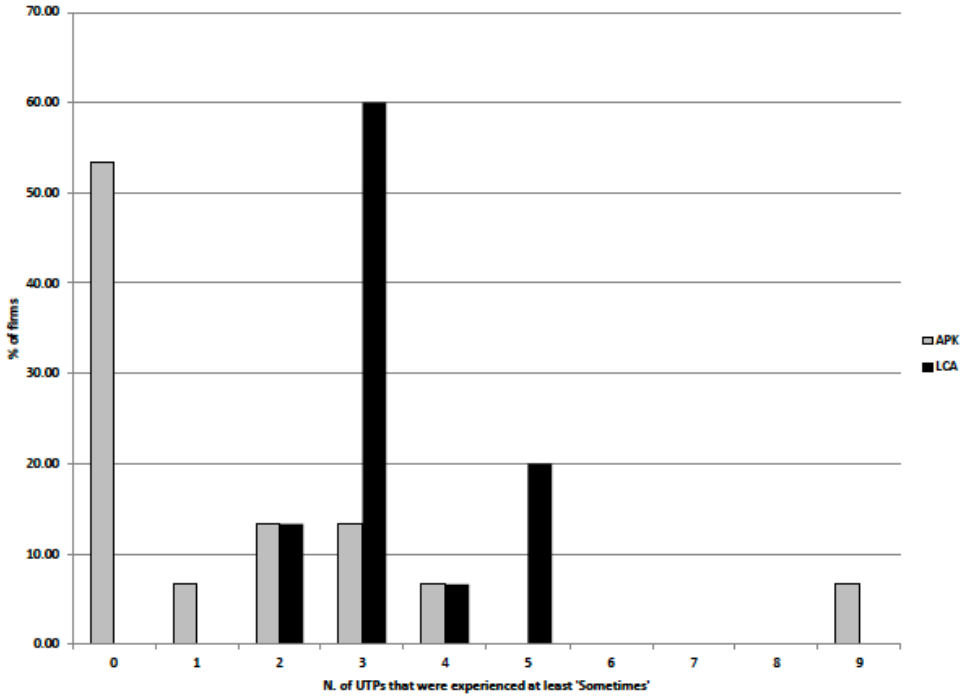
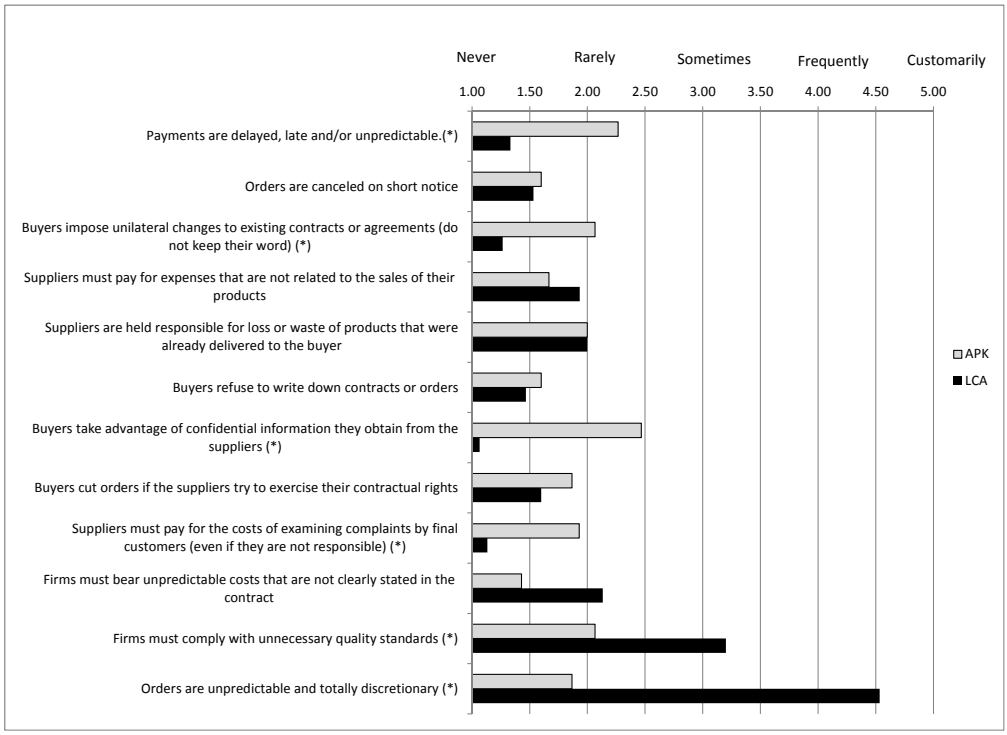


Figure 14-1 illustrates the distribution of firms by number of UTPs occurring at least "sometimes". In the APK netchain, 53% of firms stated that the practices in the list occurred "never" or "rarely". The mode of the number of UTPs for the firms who experienced them is 2.5. In the LCA netchain, 60% of firms stated they experienced three practices in the list at least "sometimes". The data suggest that UTP occurrence is higher in LCA than in APK. However, it must be considered that we are reporting subjective assessment and that different degrees of reticence between the two netchains might affect results.

Figure 14-2: Perception of UTP occurrence in transactions with main buyers



(*) the average occurrence of the practice in APK and LCA is statistically different at 95% confidence level

Figure 14-2 summarises the results of the investigation. The two netchains present with different results, suggesting that occurrence may be netchain specific. The overall average occurrence scores in APK (1.92) and LCA (1.93) are not statistically different. However, the score standard deviation is higher in LCA (1.33) than in APK (0.96). In LCA, the only practices having an average score greater than 2 ("rarely") on a 5-point scale concern arbitrary orders, unnecessary standards, unpredictable costs and being held responsible for post-delivery loss or waste. In APK, the average scores exceeding 2 refer to late payments, unilateral contract changes, misuse of confidential information and unnecessary standards. Table 14-21 reports the distribution of the sample percent frequency by occurrence rating.

Table 14-21: Perceptions of UTP occurrence in transactions with main buyers (percent frequency of sample distribution on a 1-to-5 scale)

Practices	% of firms by rate of occurrence											
	APK						LCA					
	1	2	3	4	5	NR	1	2	3	4	5	NR
Payments are delayed, late and/or unpredictable.	6.67	66.67	20.00	6.67	0.00	0.00	73.33	20.00	6.67	0.00	0.00	0.00
Orders are cancelled on short notice.	60.00	33.33	0.00	0.00	6.67	0.00	53.33	40.00	6.67	0.00	0.00	0.00
Buyers impose unilateral changes to existing contracts or agreements.	26.67	53.33	13.33	0.00	6.67	0.00	80.00	13.33	6.67	0.00	0.00	0.00
Suppliers must pay for expenses that are not related to the sales of their products.	33.33	66.67	0.00	0.00	0.00	0.00	40.00	26.67	33.33	0.00	0.00	0.00
Suppliers are held responsible for loss or waste of already delivered products.	40.00	33.33	20.00	0.00	6.67	0.00	40.00	20.00	40.00	0.00	0.00	0.00
Buyers refuse to write down contracts or orders.	60.00	33.33	0.00	0.00	6.67	0.00	80.00	6.67	6.67	0.00	6.67	0.00
Buyers take advantage of confidential information they obtain from the suppliers.	0.00	66.67	26.67	0.00	6.67	0.00	93.33	6.67	0.00	0.00	0.00	0.00
Buyers cut orders if suppliers try to exercise their contractual rights.	33.33	60.00	0.00	0.00	6.67	0.00	66.67	6.67	26.67	0.00	0.00	0.00
Suppliers must pay for the costs of examining complaints by final customers.	33.33	46.67	6.67	0.00	6.67	6.67	86.67	13.33	0.00	0.00	0.00	0.00
Firms must bear unpredictable costs that are not clearly stated in the contract.	26.67	20.00	0.00	0.00	0.00	53.33	53.33	13.33	13.33	6.67	13.33	0.00
Firms must comply with unnecessary quality standards.	13.33	80.00	0.00	0.00	6.67	0.00	26.67	6.67	20.00	13.33	33.33	0.00
Orders are unpredictable and totally discretionary.	46.67	40.00	0.00	6.67	6.67	0.00	0.00	0.00	13.33	20.00	66.67	0.00

The Likert scales are defined as: 1: Never, 2: Rarely, 3: Sometimes, 4: Frequently, 5: Customarily

14.4.5 Pass-through analysis

Firms stating that a listed practice happened at least "sometimes" were asked to explain how this affected their business with suppliers. APK firms were extremely reticent in this regard and unwilling to admit possible UTPs toward their suppliers. Only six firms answered the pass-through section of the questionnaire, while the others refused to consider the questions stating that there was no pass-through effect. All firms in LCA were willing to answer the questionnaire section. However, we found that for eight out of ten practices, the most common answer was that the firm took on the cost of the practice and did not pass it through. The implications of possible reticence are discussed in the conclusion to this report.

Table 14-22 reports the results of the investigation. The low rate of response and small sample of respondents suggest caution in interpreting the results and drawing general conclusions. However, the data provide useful insights and support the findings of the interviews.

In the APK netchain, a middleman exposed to delayed payment is likely to do the same to the suppliers or use vague and informal contracts to adjust the terms of transaction with suppliers. In the LCA netchain, the only respondent stated that trade with suppliers is not affected by the practice. The result is consistent with the information provided by the expert panels and the interviews. In APK, it is customary that farmers receive the price after the middleman (including private traders) has sold the product. This is a clear example of first-degree pass-through. In the LCA, middlemen usually pay at delivery and are therefore subject to the full consequences of buyers' delayed payments.

The data are consistent with the outcome of the farmer sample survey (Table 14-9). In APK, farmers perceive price determination as arbitrary (37% of total respondents) and unpredictable (37%), but also timely (81%) and transparent (66%). In LCA, only 2% of farmers perceive prices as arbitrary. Concerns regard lack of transparency (35%), unpredictability (52%) and payment delay (27%). Noticeably, the results are driven by a bad assessment of LCA cooperatives. The comparison with private middlemen (who pay at delivery) changes LCA farmers' perceptions of transparency in cooperatives and PO businesses. In APK, payments after delivery are customary and acceptable.

The effects of unilateral changes in middlemen's contracts are different in the two netchains. In the APK netchain, they may trigger the use of informal contracts (that can be easily modified) or—if changes concern quantities—cutting orders from suppliers. This can be considered an example of first-degree pass-through. In the LCA netchain, the middlemen affirm that there is no pass-through. Again, this is consistent with the different arrangements at the time of delivery. If prices are determined at the end of the season (or in any case, after delivery), there is the opportunity to renegotiate. If the deal is closed at harvest time, there is no room for retroactive changes.

The results are consistent with the outcome of the farmer sample survey (Table 14-12). Farmers in APK rate middlemen's trustworthiness lower than farmers in LCA. This may be connected with the APK middleman strategy of passing-through renegotiation. Again, in LCA, middlemen are considered more reliable than cooperatives and POs.

The pass-through of practices related to the middlemen's responsibility for post-sale loss and deterioration is similar to the one for renegotiation. In APK, middlemen use informal, flexible contracts to transfer loss to suppliers or cut orders with problematic suppliers. LCA middlemen state there is no pass-through. The result is consistent with expectation, because the practice can be considered a form of *ex post* renegotiation.

A set of practices in LCA have a mixed effect on pass-through. Firms state they take (part of the cost) while at the same time passing the practice onto suppliers. The result is consistent with cost pass-through theory. According to standard theory, the share of cost that is passed upstream depends on supply/demand elasticity and the degree of market power. As a consequence, full pass-through is rational only under restrictive circumstances. These practices include "paying expenses that are not related to the sale of the product", "buyer cuts trade relationship as retaliation" and "bearing costs that are not clearly stated in the contract". The partial pass-through may include cutting prices, contract renegotiation, payment delay or using prices that are to be determined.

Buyers insisting on unnecessary production standards is a clear concern of LCA middlemen. Such a practice can trigger a variety of pass-through effects. In 50% of cases, it results in suppliers making on-farm investments. Noticeably, such investments are not considered "unnecessary" by farmers (Table 14-11), because they know they are necessary to gain market access. Other pass-through effects may include holding suppliers responsible for any failure in meeting the unnecessary standards and cutting trade with uncompliant suppliers.

Unpredictable and discretionary orders are considered a customary practice by LCA middlemen with strong (although partial) pass-through effects. The consequences for suppliers include payment delays, prices that are to be determined and first degree pass-through. The only middlemen admitting a pass-through effect in the APK netchain use informal and flexible contracts to adjust supply to sudden fluctuations in demand.

The middleman survey confirms the existence of UTP pass-through from upstream to downstream. The measurement of the intensity is difficult because of middlemen's reticence to admit enforcing UTPs

Table 14-22: Pass-through analysis

APK Netchain		How does the practice affect the trade relationship with the firm's suppliers?								
Practices suffered by the firm	N. of respond.	No effect	Use the same practice	Payment delay	Hold supplier respons.	Use informal contracts	Cut orders	Cut suppl. prices	Ask for on-firm investm.	Price to be determ.
Payments are delayed, late and/or unpredictable.	4		75.00			50.00				
Orders are cancelled on short notice.	1					100.00				
Buyers impose unilateral changes to existing contracts/agreements.	3					66.67	33.33			
Suppliers pay for expenses that are unrelated to product sale.										
Suppliers are responsible for loss/waste of product after delivery.	3					66.67	33.33			
Buyers refuse to write down contracts/orders.										
Buyers take advantage of confidential information.	3	100.00								
Buyers cut orders if suppliers try to exercise contractual rights.										
Suppliers must pay for cost of examining final consumer complaints.	1		100.00				100.00			
Firms must bear costs that are not clearly stated in the contract.										
Firms must comply with unnecessary quality standards.										
Orders are unpredictable and totally discretionary.	1					100.00				

LCA Netchain		How does the practice affect the trade relationship with the firm's suppliers?								
Practices suffered by the firm	N. of respon.	No effect	Use the same practice	Payment delay	Hold supplier respons.	Use informal contr.	Cut orders	Cut suppl. prices	Ask for on-firm investm.	Price to be determ.
Payments are delayed, late and/or unpredictable.	1	100.00								
Orders are cancelled on short notice.	1	100.00								
Buyers impose unilateral changes to existing contracts /agreements.	3	100.00								
Suppliers pay for expenses that are unrelated to product sale.	5	60.00						80.00		80.00
Suppliers are responsible for loss/waste of product after delivery.	5	100.00								
Buyers refuse to write down contracts/orders.	2	100.00								
Buyers take advantage of confidential information.										
Buyers cut orders if suppliers try to exercise contractual rights.	4	100.00				25.00	25.00			
Suppliers must pay for cost of examining final consumer complaints.										
Firms must bear costs that are not clearly stated in the contract.	6	83.33					16.67	66.67		33.33
Firms must comply with unnecessary quality standards.	10	30.00			10.00		10.00		50.00	20.00
Orders are unpredictable and totally discretionary.	15	60.00	20.00	33.33						20.00

15 Evaluation

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The application of the IDEA approach allowed us to draw conclusions in three main areas of interest: i) design of a UTP monitoring system, ii) functioning of the fruit value chain and iii) implementation of Directive 2019/633 by Member States. In this chapter we summarise the main results. A general evaluation can be found in this report's conclusion.

15.1 Designing a UTP monitoring system: Lessons from IDEA

The IDEA approach is based on subsequent implementation of an expert panel, in-depth interviews and a sample survey. The core of IDEA is the joint use of economic theory, background information and direct data collection to provide a complete representation of the organisation of the value chain. The UTPs are identified and assessed ad-hoc using general economic principles instead of a predetermined list of practices. Compared with previous surveys (chapter 4) and B-SEA (chapter 7), this gives two important benefits: It allowed us to identify additional unfair practices not considered under current regulation and understand the possible efficiency implications of banning specific practices. As a consequence, IDEA is suited to support the design of new regulation and understand how netchains react to policy. However, IDEA proved to be costly and difficult to implement. Also, it is best suited to relatively homogenous netchains.

15.1.1 From theory to practice: Reticence and fear factor

The practical implementation of IDEA was more complicated than running a B-SEA survey. Reticence and fear factor are key obstacles. Stakeholders may be willing to discuss the general problems of the netchain, but they are extremely wary of talking about specific issues with their trading counterparts. We found strong reluctance in sharing details regarding financial information (such as the monetary impact of a practice). A similar behaviour was found during the B-SEA survey. Middlemen refused to answer the "too detailed and invasive" B-SEA questionnaire, although they were willing to take the less detailed IDEA questionnaire (section 10.1.1).

This attitude had two major impacts on our IDEA implementation. Firstly, we found that the results of the expert panels and outcomes of the interviews are not fully consistent. While the expert panelists described critical situations, individual interviews provided a more nuanced representation. Panelists were immediately made aware of the possible use of the research for supporting public intervention, so it is possible there was some strategic behaviour. It was easy to involve farmer and PO representatives in the panel. Private middlemen and large retailers simply refused to participate. As a consequence, the panelists might have overstated the occurrence or impact of UTPs.

When asked about their specific business, entrepreneurs were unwilling to speak ill of their trade partners, even if full confidentiality was assured. Especially in relatively small netchains, such as

APK and LCA, there was major concern about possible consequences once the report would be published. Even when there was no fear of direct retaliation (such as in the case of coop members), the respondents were worried to lose reputation or social capital. In addition to the classical fear factor, we suspect a possible self-representation bias. During in-depth interviews, the interviewers reported that respondents tried to avoid representing themselves as "victims" or "unsuccessful businessmen". A possible example of the bias is the farmers' assessment of the possibility of being replaced by the buyer (Table 14-7). Data collectors reported that farmers were reluctant to admit they were easily replaceable (and therefore "just another farmer") while the buyer was unreplaceable. Another example is self-assessment of the pass-through effect. Middlemen were extremely reluctant to admit engaging in UTPs on their side, even if determined by the misbehaviour of other. Such self-representation bias reinforces the fear factor effect and must be carefully considered in all types of surveys.

A second effect of reluctance was the extreme difficulty of pursuing a dyadic approach to interviewing. According to the IDEA theory (chapter 6), interviews should focus on buyer-seller pairs. By collecting information separately from both parties, it is possible to obtain a complete characterisation of the transaction. The practical implementation confirmed the approach: When we were able to interview the pair, our understanding of the trade relationship increased dramatically. Unfortunately, we were able to interview only one pair in the entire IDEA and only under strict confidentiality (meaning we cannot compare the two interviews directly). The reason is that firms are extremely reluctant to disclose the identity of their trade partners. Farmers are worried of possible impact on future trade with the buyer. Middlemen were unwilling to facilitate an obvious double-checking on their behaviour.

Implementing the dyadic approach requires the active cooperation of expert panels. Experts' support was of paramount importance to facilitation of the interviews and overcoming respondents' reticence. For this reason, the choice of panelists is one of the most critical issues in IDEA.

15.1.2 Questionnaire design and interaction with entrepreneurs

Entrepreneurs in the netchain may have different perspectives and use very different language from the one in Directive 2019/633. When we first confronted APK panelists with the list of UTP from the Directive, their immediate reaction was to dismiss it as 'irrelevant'. Their only focus was on price determination (price, discounts and promotions) and quality. Yet, after explaining the UTPs into details, the panelists agreed on the importance of the Directive (at least for a set of practices).

Such difficulty is reflected in the questionnaires. Unlike in-depth interviews, questions in the sample survey must be as self-explanatory as possible. As a consequence, the wording of each item must keep in mind that farmers, middlemen and retailers may use specific jargon or have unique points of view. We realised that the same questions were received differently in different netchains. For example, the same issue—price being determined after delivery—was perceived as a transparency problem by LCA farmers and a discretionary practice by APK farmers.

Communication and perception have two main consequences for IDEA. Firstly, researchers must draft a questionnaire that is immediately understandable by the respondents while minimizing the time of response. Respondents tire rapidly when confronted with a long and complex questionnaire (such as B-SEA), and response rates and information quality drop as well. Therefore, we had to design an easy and fast questionnaire, using—when possible—the netchain

jargon. The support of the expert panels was of paramount importance in this regard. The downside of this approach is a compromise in the precision of the information. We had to use subjective assessments, which open up the possibility of biased information. Also, quantifying occurrence or impact was difficult because we had to use generic evaluations of frequency and severity. We concluded that detailed and precise information can be obtained from the in-depth interviews, while a sample survey can be used to obtain general evaluations.

A second issue concerns comparability of the results. Being that UTP are contextual, the same practice can be received very differently across netchains. This makes cross-netchain comparison quite difficult.

15.1.3 Measuring impact: Reticence, knowledge and counterfactual

Obtaining a correct measure of the financial impact of UTPs was difficult. We encountered three main issues. The well-known reticence of entrepreneurs to share financial information made them unwilling to discuss the topic. This resulted in a strong preference for qualitative statements over the provision of precise figures. Furthermore, several managers stated that their accounting system did not support that kind of information, so they could only give us personal estimates. Although this might be an excuse to cover reticence, the expert panels confirmed that many firms do not run a specific assessment of the cost of UTPs. Instead, they have an overall appraisal of the profitability of the trade.

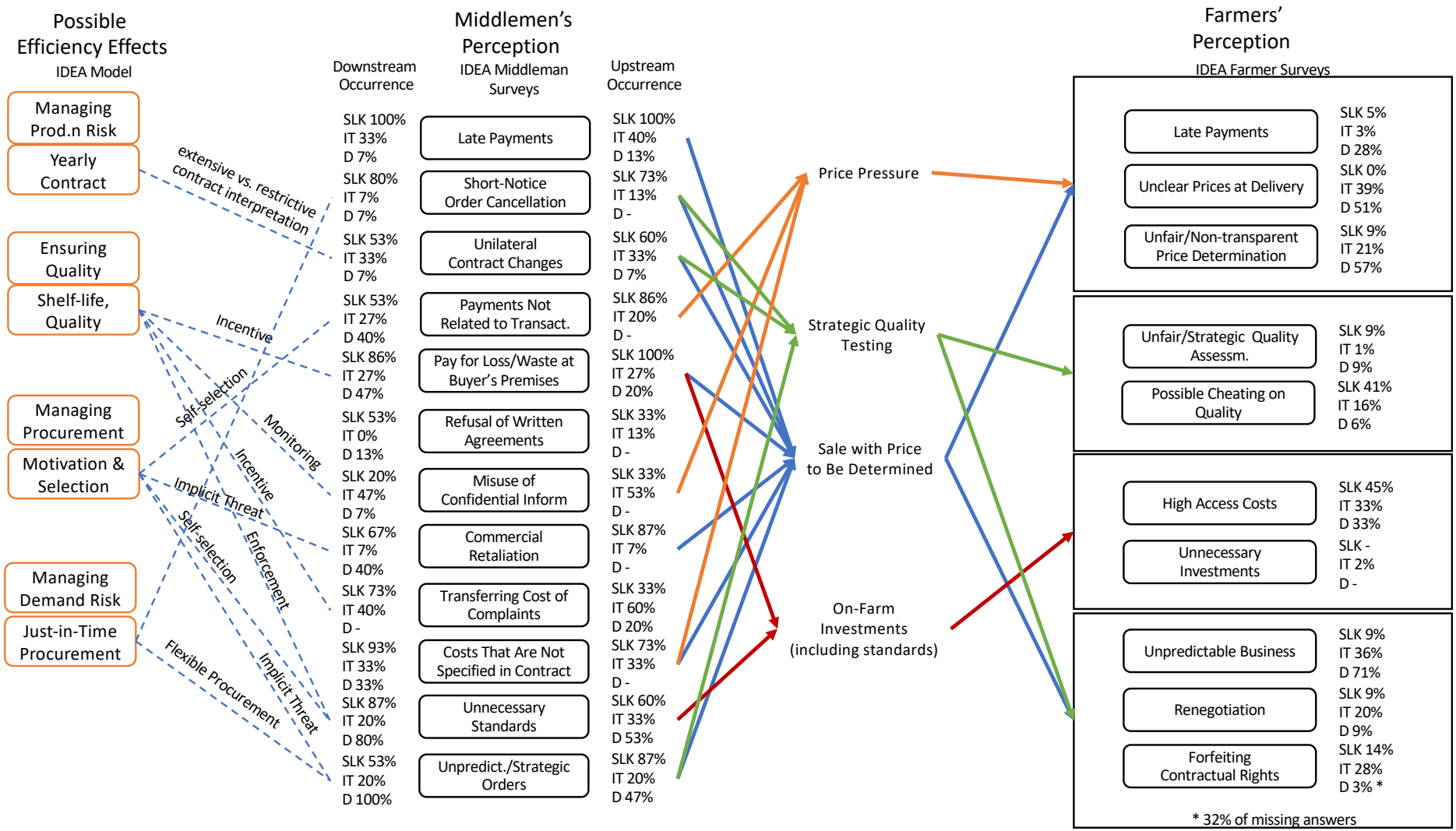
A third issue concerns the reliability of respondents' evaluations. When answering about the cost of UTPs, respondents usually referred to the financial impact of the current practice, without considering the possible counterfactual. Banning a given practice results in a change in the trade relationship. New—and possibly worse—practices can emerge. In principle, the correct evaluation of the UTP cost is given by the difference between the financial impact of the UTP under consideration and the impact of the alternative. If the counterfactual is ignored, respondents' evaluations might be biased upward. For example, when asked to provide a financial evaluation of a blacklist UTP (paying for post-delivery waste), an APK middleman stated that it was a "few percent points of the total revenue". However, when the interviewer asked about using the new regulation to prevent such important loss, the middleman said no, because that would result in a possibly greater price reduction. Therefore, the stated cost of the UTP was biased upward, as the alternative would be even costlier.

A precise measure of the financial impact of UTPs can be obtained from in-depth interviews so that the possible counterfactual can be estimated. A sample survey might overestimate the issue.

15.2 The organisation of the fruit netchain: The pass-through effect

Figure 15-1 summarises our findings about the organisation of the EU fresh fruit supply chain. Our research confirmed the double nature of UTPs: They can improve efficiency of the supply chain and extract profits from weak firms at the same time.

Figure 15-1: Summary of IDEA findings



The efficiency effect is represented on the left-hand side of Figure 15-1. The current governance is shaped by the need of leading firms (usually large buyers) to ensure a timely, consistent and reliable supply of high-quality fruits at the lowest price possible (we refer to this objective as the core goal of the leading firm). This objective is motivated by the intense competition in the downstream industry. A highly-efficient supply chain is an important competitive advantage, and leading firms pursue it. Asymmetries in the distribution of bargaining power allow these firms to impose such arrangements on the entire netchain. The occurrence of several UTPs is explained in this perspective.

A leading firm faces four major sources of risk: production risk (i.e., harvest losses and bad production years); demand risk (i.e., unpredictable demand fluctuations); risk of failing to provide consumers with high-quality fruits (i.e., short shelf-life, deterioration or quality inconsistency); and procurement risk (i.e., suppliers failing to deliver the product). A key principle guiding the organisation of the fruit netchains is that risk must be borne by the firm in the best position to prevent the possible damage. It is a classical moral hazard argument. If such a firm bears the cost of failure, it takes all the necessary actions to prevent the loss. If other firms bear the cost, opportunistic behaviour may emerge. In order to cover such risks, leading firms create an extremely flexible supply chain where suppliers are responsible for successful delivery and ensuring quality and safety.

The supply risk is managed with yearly contracts that are stipulated when a reliable estimate of production is available. As discussed in section 12.7.1 , this practice may motivate UTPs if an extensive interpretation of the contract is considered. Demand risk is managed with a just-in-time procurement system. Retailers order fruits only when they are reasonably sure they can sell them to consumers without keeping stocks. Because of rapidly fluctuating demand, orders can be placed only with limited notice. As a consequence, the just-in-time procurement system may be associated with UTPs such as unpredictable, short-notice orders and short-notice cancellations.

The just-in-time procurement system requires a high degree of cooperation from suppliers. The buyer must be sure that every short-notice order is met rapidly and that suppliers do not behave opportunistically. Leading firms use relational contracts to manage the procurement risk. It is in the clear interest of all parties to build long-term trade relationships so that a firm can cover the cost of the sizable investments. In a relational setting, leading firms must give suppliers the incentive to accept the contract and must prevent possible opportunism. In particular, leading firms use two key tools: implicit threat and self-selection.

Suppliers operate under the implicit (but clear) threat that trade relationships can be disrupted if they fail to contribute to the core goal of the leading firm. Standard contract theory finds that the threat must be credible in order to be an effective coordination tool. Credibility requires that disrupting trade must be (relatively) costless for the leading firm. This means that contracts must be such that disrupting trade does not result in litigation and that the supplier must be replaceable.

Self-selection of suppliers minimises the risk of failure in the netchain. Suppliers must pay high access costs (investments, adoption of quality standards, reverse margin practices) in order to trade with the leading firm. Because they know that a failure in ensuring the core goal of the leading firms will result in trade disruption, they are willing to pay the access costs only if they are reasonably sure to be successful.

The organisation of trade between retailers and middlemen affects the transactions upstream between middlemen and farmers. The expert panels and the semi-structured interviews identified four vectors of impact.

- Sales with price to be determined. Because of the unpredictable demand and UTPs such as renegotiations, unclear and ambiguously specified costs, payments for loss/deterioration and retaliation, middlemen discover their net revenues only after the product is sold to the final consumer. To manage this risk, they pay farmers partial instalments only at harvest time. The final price determination happens later, possibly even at the end of the year. As a consequence, farmers suffer from unpredictable business, the farmgate price is unknown at the time of delivery, and its final determination is perceived as arbitrary and non-transparent because it depends on several unobservable factors that are beyond the farmers' control. This impact vector includes unilateral renegotiations of price and delivery conditions.
- Strategic quality determination. During the semi-structured interviews, respondents complained about middlemen using strict standards as an excuse to adjust to decreases in orders or in response to buyers' renegotiations (chapter 13). However, the IDEA farmer survey did not support these findings.
- On-farm investments. Retailers' unnecessary production requirements, the incentive to minimise loss and increase shelf-life (due to UTPs) require sizable on-farm investments. As a consequence, farmers face high access costs.
- Price pressures. Several UTPs may results in lower price for farmers. Buyers and middlemen acquire production information in order to ensure quality. Yet, this knowledge reveals production costs at any segment of the netchain. Leading firms can use this information to reduce suppliers' margins. Similarly, grey practices and payments not related to the transaction can be used to reduce suppliers' net margins.

In chapter 14, we reported the analysis of occurrence, impact and pass-through of UTPs in the Agro-Pontino Kiwifruit (APK) and in the Lake Constance Apple (LCA) netchains. Our results are consistent with the overall theoretical model and the outcome of the expert panel, validating the IDEA approach. Also, we found that the use of an economic model for the interpretation of UTPs provides important insights. The economic analysis showed that leading firms can use the same set of practices to ensure that risk is allocated to the firms that can prevent it and—at the same time—extract profits.

We found remarkable differences between the netchains, supporting the conclusion that UTPs are context-dependent (section 0). Differences concern UTP occurrence and pass-through. Just like UTPs, the pass-through effect is transaction-contingent and the use of economic perspective allowed us to understand the causal effect.

In the APK netchain, late payments and unilateral contract changes are used to transfer the risk of demand fluctuations to middlemen and, ultimately, farmers. In order to ensure product availability, middlemen must have large stocks. In this way, kiwifruits are immediately available on request, and the contingency of having unsatisfied demand is prevented. However, in the case of drops in demand, renegotiations ensure supply matching (transferring risk upward). Holding the supplier responsible for post-delivery waste and loss is another blacklist UTP that plays a similar role. In the case of slow sales, deteriorated (or unsold) products are returned. In this way, buyers can order the products while transferring the risk of demand drops to suppliers. In both cases, the UTP ensures the constant and full availability of kiwifruits to consumers. The pass-through effect on farmers results in a mix of first-, second- and third-degree practices such as payment delays, delivery with price to be determined, contract/price renegotiations and arbitrary orders/pricing.

The expected effects of a ban on such practices are a reduction in orders and/or prices proportional to the leading firm's degree of risk aversion. Furthermore, consumers might see price increases (due to reduced availability) or empty shelves.

In the LCA netchain, the most concerning practices are the imposition of unnecessary standards and arbitrary/unpredictable orders. In this case as well, leading firms ensure availability by adjusting orders to unpredictable market conditions. Furthermore, they enforce self-selection and implicit threats by increasing middlemen's access costs. The pass-through effects include on-farm investments by farmers and—in the case of a cooperative—post-delivery price adjustments.

If a ban on such practices were imposed by national authorities when implementing the 2019/633 Directive, unintended effects are possible. Such consequences may include trade reduction and the emergence of opportunistic behaviour by upstream firms.

15.2.1 Implementation of the 2019/633 Directive at the national level

IDEA results can be used to support national implementations of the UTP Directive. The difference between LCA and APK corroborates the decision to give Member States the opportunity to add UTPs to the list of banned practices. For example, German regulators might consider mitigating unmotivated order fluctuations, while this same issue is not a priority in the kiwi netchain. However, imposing unnecessary standards could be considered an additional UTP in both countries.

Also, the economic model suggests the possibility that banning practices might affect the efficiency of the netchain. IDEA provided several examples in this regard. The consequences of regulation should be considered carefully, possibly based on counterfactual scenarios. A trade-off between efficiency and fairness might be necessary.

Finally, comparing the results of IDEA with the JRC investigation of the dairy industry, we found for these case studies that the fruit and dairy industries have extremely different structures, and emerging UTPs are different across countries. A cross-section implementation might fail to cover sector-specific or country-specific practices. At the same time, care should be taken to avoid overregulation and possible unintended consequences of banning efficiency-enhancing practices.

15.3 Appendix to Chapter 14: Survey Questionnaires

Farmer Survey Questionnaire

Questionnaire n. ____ Code:_____
The respondent is the farm manager: Yes ☐ No ☐

1. General information about the farm and the farm manager

1.1 Farm manager

1.1.1.Age: _____ (years)
1.1.2.Gender: Male ☐ Female ☐
1.1.3. The farm manager is: Part-Time ☐ Full-Time ☐

1.2. Farm

1.2.1 Size of farm _____ Ha
1.2.2. Is the farm an independent business? Yes ☐ No ☐
1.2.3. Size of Apple orchard _____ Ha
1.2.4. Specialization:
Specialized in Apple/Kiwi Production ☐
Specialized in fruit ☐
Not Specialized ☐
Specialized in other productions ☐
1.2.5. Apple/kiwi varieties are (multiple answer):
Club Yes ☐ No ☐
Free Yes ☐ No ☐
1.2.6. There is on-farm apple/kiwi storage:
Yes, for the entire production ☐ Yes, for part of the production ☐ No ☐

2. Marketing & governance

2.1 Marketing channels

2.1.1. Is the farmer a member of a producer organization or cooperative?
Yes ☐ No ☐
2.1.2. Last year, did the farmer sell/deliver the entire production to one buyer?
Yes, only one buyer ☐
I have a main buyer (at least 50% of production) ☐
I have one of few important buyers (between 33% and 50% of prod.) ☐
No, I sell/deliver my production to many buyers ☐

2.2 Governance

The following questions in this section refer to the 'most important buyer'

2.2.1. Is your most important buyer:
Coop/Po ☐
Private (non coop) traders/middlemen ☐
Supermarket representatives ☐
Consumers, farmer markets, neighbors, etc. ☐
Self-consumption, gifts, etc. ☐
2.2.2. Can the most important buyer find other farmers to replace you as trade partner?

Yes easily ☐	Yes, with some effort ☐	Not easily ☐	Cannot be replaced ☐	I am a member of the buyer (coop/PO) ☐

2.2.3. Can you replace the most important buyer easily?
Yes, easily ☐ Yes, but it would be costly ☐ No, I cannot ☐
2.2.4. Was there a pre-harvest agreement (e.g. contract, verbal agreement) with the buyer?
Yes, for one year only ☐
Yes, for more than one year (past of future, including PO membership) ☐
No, the deal was closed at harvest. ☐

IF THE ANSWER TO 2.2.4 IS 1 OR 2

2.2.5. Did the buyer give specific direction on how to produce the fruits? (including: adoption of standards, instructions about harvesting, etc.)
Yes, complying with directions is costly ☐
Yes, complying with direction is not costly ☐

No ☐

3. Practices

The questions in this section refer to the 'most important buyer'

3.1 Prices

3.1.1. State how much you agree with the following statements from 1 (strongly disagree) to 5 (strongly agree), 6 = don't know / no reply

	1	2	3	4	5	6
P1 The rules for determining prices are clear						
P2 Buyers set prices at their discretion						
P3 At delivery, I have a reasonably reliable expectation about price						
P4 Payments are timely, I do not need to urge my buyer to be paid						
P5 Prices are determined in a fair and transparent way						
P6 I believe that my buyer will cheat on prices if they could						

3.2 Quality

3.2.1. Quality is tested (multiple answers)

	By the buyer	By a third party	It is not tested	I do not know
On the field	☐	☐		☐
At delivery	☐	☐		☐
After delivery	☐	☐		☐
It is not tested			☐	
I do not know	☐	☐		☐

3.2.1. State how much you agree with the following statements from 1 (strongly disagree) to 5 (strongly agree), 6 = don't know / no reply

	1	2	3	4	5	6
Q1 Quality is determined in a fair and transparent way						
Q2 I believe that my buyer would cheat on quality if they could						

3.3 Access costs

3.3.1. State how much you agree with the following statements from 1 (strongly disagree) to 5 (strongly agree), 6 = don't know / no reply

	1	2	3	4	5	6
Z1 I paid for significant investments in order to sell to the most important buyer						
Z2 Costs of selling to the most important buyer increase excessively (includes payments, investments, certifications, etc.)						
Z3 I have a reliable estimate of the future investments that will be required by my buyer						
Z4 I believe that my buyer asks for investments that are not really necessary						

3.4 Renegotiation and retaliation

3.4.1. State how much you agree with the following statements from 1 (strongly disagree) to 5 (strongly agree), 6 = don't know / no reply

	1	2	3	4	5	6
N1 My business with the most important buyer is predictable						
N2 When there is an unexpected event, the buyer changes the contract terms						
N3 The buyer changes the terms of trade if it is profitable for them, even in the absence of unexpected events						
N4 Your buyer always keeps his/her/their word, without using "holes" in the agreement to further their own interests						
N5 In the past, I have given up my contractual rights to preserve the trade relationship (accepted late payments, price reductions, etc.)						

Questionnaire on Unfair Trade Practices
MIDDLEMEN

Questionnaire n. _____ Code:_____
The respondent is:
1. the firm manager/owner ☐ 2. the marketing/procurement manager ☐ 3. Other ☐

1. Information about the firm

1.1. How long has your firm been into apple/kiwi trading? _____ (years)

1.2 Type of firm:

1. Personal business ☐ 2. Incorporated business☐ 3. Public enterprise ☐
4. PO and cooperative ☐ 5. Cooperative no PO ☐ 6. PO no cooperative ☐
7. Other ☐ (specify)

1.3 Firm's annual turnover (in million of euros)

0-| 2 mil ☐ 2 -| 10 mil ☐ 10 -| 50 mil ☐ 50 -| 150 mil ☐ 150 -|350 mil ☐ Exceed. 350 ☐

1.4 Specialization:

Specialized in apple trading ☐ Specialized in fruit trading ☐
Specialized in other products ☐ Not Specialized ☐

1.5 The traded Apple varieties are (multiple answer):

1. club ☐ 2. royalty ☐ 3. free ☐

1.6 The firm is an independent business:

Yes ☐ No, it is part of a group ☐ other ☐ (specify) _____

1.7 There is on-firm apple/kiwi storage (multiple answers):

1. Own Storage ☐ 2. Rented Storage ☐
3. No storage (suppliers deliver to customers directly) ☐

1.8 The firm is member of associations (APO, consortia etc.) Yes ☐ No ☐

1.9 Marketing Channels (Multiple answers)

Other Traders / Middlemen	☐
Small retailers	☐
Large retailer	☐
Processors	☐
Consumers	☐
Other (specify) _____	☐

1.10 What percentage of your product is exported (approximately)? _____%

2. Perception of UTP in the industry

A recent analysis by the European Commission pointed out several problematic practices in the agri-food supply chain. In your experience how likely are these problems to happen in the apple industry?
NOTE: the question does not refer to the interviewed firm, it is an evaluation on *the general behaviour in the industry*.

2.1 Please rate the how likely are the following problem to happen in the industry using the following 1-5 scale

1. I am not aware of the problem	2. It is unusual	3. It may happen sometimes	4. It happens often	5. It is customary

	Between Middlemen (such as your firm) and their Suppliers	Between Middlemen (such as your firm) and their Buyers
Payments are delayed, late and/or unpredictable.	1☐ 2☐ 3☐ 4☐ 5☐	1☐ 2☐ 3☐ 4☐ 5☐
Orders are canceled on short notice	1☐ 2☐ 3☐ 4☐ 5☐	1☐ 2☐ 3☐ 4☐ 5☐
Buyers impose unilateral changes to existing contracts or agreements (do not keep their word)	1☐ 2☐ 3☐ 4☐ 5☐	1☐ 2☐ 3☐ 4☐ 5☐
Suppliers must pay for expenses that are not related to the sales of their products (for example: opening of new stores)	1☐ 2☐ 3☐ 4☐ 5☐	1☐ 2☐ 3☐ 4☐ 5☐
Suppliers must pay (or are denied payments) for loss or waste of products that were already delivered to the buyer	1☐ 2☐ 3☐ 4☐ 5☐	1☐ 2☐ 3☐ 4☐ 5☐
Buyers refuse to write down contracts or orders	1☐ 2☐ 3☐ 4☐ 5☐	1☐ 2☐ 3☐ 4☐ 5☐
Buyers take advantage of confidential information they obtain from the suppliers	1☐ 2☐ 3☐ 4☐ 5☐	1☐ 2☐ 3☐ 4☐ 5☐

Buyers cut orders if the suppliers try to exercise their contractual rights	1☐ 2☐ 3☐ 4☐ 5☐	1☐ 2☐ 3☐ 4☐ 5☐
Suppliers must pay for the costs of examining complaints by final customers (even if they are not responsible)	1☐ 2☐ 3☐ 4☐ 5☐	1☐ 2☐ 3☐ 4☐ 5☐
Firms must bear unpredictable costs that are not clearly stated in the contract	1☐ 2☐ 3☐ 4☐ 5☐	1☐ 2☐ 3☐ 4☐ 5☐
If yes (values 4 & 5), please specify whether they concern:		
Returns of unsold products	1☐ 2☐ 3☐ 4☐ 5☐	1☐ 2☐ 3☐ 4☐ 5☐
Payment for stocking, display and listing	1☐ 2☐ 3☐ 4☐ 5☐	1☐ 2☐ 3☐ 4☐ 5☐
Payment for promotion	1☐ 2☐ 3☐ 4☐ 5☐	1☐ 2☐ 3☐ 4☐ 5☐
Payment for marketing and advertising	1☐ 2☐ 3☐ 4☐ 5☐	1☐ 2☐ 3☐ 4☐ 5☐
Payment for staff of the buyer, fitting out premises	1☐ 2☐ 3☐ 4☐ 5☐	1☐ 2☐ 3☐ 4☐ 5☐
Others, specify_____	1☐ 2☐ 3☐ 4☐ 5☐	1☐ 2☐ 3☐ 4☐ 5☐
Firms must comply with unnecessary quality standards	1☐ 2☐ 3☐ 4☐ 5☐	1☐ 2☐ 3☐ 4☐ 5☐
Orders are unpredictable and totally discretionary	1☐ 2☐ 3☐ 4☐ 5☐	1☐ 2☐ 3☐ 4☐ 5☐

3. Business relationship with your suppliers

3.1. When is suppliers' final price determined? (even if it is not paid)

Before harvest ☐ At delivery ☐
When the prod. is sold to the middl.'s customers ☐ At the end of the year ☐

3.2 When is quality tested? (multiple answers)

On field by a third party ☐ by my firm☐
At delivery by a third party ☐ by my firm☐
After delivery by a third party ☐ by my firm☐
It is not tested ☐
Other specify _____

3.3 can you replace *your suppliers* easily?

Yes, easily ☐ Yes, but it would be costly ☐ No, I cannot ☐

4. Business relationship with the main buyer

4.1 Your main buyer for Apple/Kiwi is:

	Domestic	Export
Other Traders / Middlemen	☐	☐
Small retailers	☐	☐
Large retailer	☐	☐
Processors	☐	☐
Consumers	☐	☐
Other (specify) _____	☐	☐

4.2 What variety of apple/kiwi do you supply to the main buyer (multiple answer):

Patented (club, royality) ☐ free☐ I don't know☐

4.3 Share of total turnover from apple/kiwi with the main buyer

_____ (% of total apple value that is bought by the main buyer)

4.4 Size of the main buyer (turnover in millions of euros)

0-| 2 mil ☐ 2 -| 10 mil ☐ 10 -| 50 mil ☐ 50 -| 150 mil ☐ 150 -|350 mil ☐ Exceed. 350 ☐ Don't know ☐

4.5 How long have you been trading with this buyer? _____ (years)

4.6 Can the buyer find other supplier to replace you as trade partner?

Yes, easily ☐ Yes, with some effort ☐ Not easily / it would be costly for the buyer ☐ No ☐

4.7 Can you replace the buyer easily?

Yes, easily ☐ Yes, but it would be costly ☐ No, I cannot ☐

4.8 Do the buyer have special requirements (different from any other buyer, such as packaging, quality standards, etc.):

1. No ☐ 2. Yes, but they are not costly ☐ 3. Yes and they are costly ☐

For each of the following practices, states how severe are they for your business and how your firm reacts to mitigate the effects.
Rate severity as follows 1. Never happens 2. It is unusual 3. It may happen sometimes 4. It happens often 5. It is customary

Existence		Pass-Through Analysis **(only if severity is at least 3)**											
		No PT	I degree	II degree						III degree			
	How severe is this practice? (on a 1-5 scale)	Nothing / I take the hit	I rebate the practice onto my suppliers	I delay payments to suppliers	I hold my suppliers responsible for any problem with the products at any stage	I use informal agreements that can be adjusted to unexpected circum-stances	I ask for pay-ments	I reduce future trade if problems arise	Other II degree PT practices (n.)	I offer lower prices to suppliers	I ask my suppliers for on-firm invest-ments	Suppliers' price is determi-ned after I know my net revenues	Other III degree PT practices
Payments are delayed, late and/or unpredictable.	___	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Orders are canceled on short notice	___	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Buyers impose unilateral changes to existing contracts or agreements (do not keep their word)	___	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Suppliers must pay for expenses that are not related to the sales of their products (for example: opening of new stores)	___	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Suppliers must pay (or are denied payments) for loss or waste of products that were already delivered to the buyer	___	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Buyers refuse to write down contracts or orders	___	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Buyers take advantage of confidential information they obtain from the suppliers	___	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Buyers cut orders if the suppliers try to exercise their contractual rights	___	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Suppliers must pay for the costs of examining complaints by final customers (even if they are not responsible)	___	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Firms must bear unpredictable costs that are not clearly stated in the contract	___	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
If yes (values 4 & 5), please specify whether they concern:													
Returns of unsold products	___	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Payment for stocking, display and listing	___	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Payment for promotion	___	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Payment for marketing and advertising	___	☐	☐	☐									
Payment for staff of the buyer, fitting out	___				☐	☐	☐	☐	☐	☐	☐	☐	☐
premises		☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Others, specify___________	___	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Firms must comply with unnecessary quality standards	___	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Orders are unpredictable and totally discretionary	___	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

5. Past experience

5.1 Has a buyer of your company ever terminated the business relationship with your company?

yes ☐ no ☐ don't know / n.a. ☐

5.2. If yes, how were you informed about the termination of the business relationship?

Not at all, I simply did not receive any more orders ☐
In written stating a reason ☐
In written without justification ☐
Informally (by telephone, verbally) ☐
I was not offered a new contract at expiration ☐

PART V: Conclusions

16 Comparing IDEA and B-SEA

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As discussed in chapter 6, IDEA is tailored to a specific netchain. The expert panels provided specific information about the netchain used to guide the semi-structured interviews and design the surveys. This approach allowed researchers to run precise investigations and greatly reduced the size of the survey questionnaires because relevant information was identified *ex ante*. The downside of using specific information in the investigation design is the loss of generality. Because interviews and surveys are tailored to a given netchain, IDEA results may not be used to infer about other netchains.

In this chapter, we investigate three questions:

1. To what extent can we extend the IDEA results to other, similar netchains?
2. Can we use information from a netchain to design surveys on other, similar netchains?
3. What is the loss of information we may incur if we use B-SEA instead of IDEA?

The three questions are important when assessing a trade-off between generality and completeness of the UTP monitoring system. IDEA provides a more complete representation of the UTP in a netchain than B-SEA, but the results are not general. B-SEA has a more limited scope than IDEA, but the same survey can be applied to several netchains at once and results are more general and comparable.

In order to evaluate the trade-off, we conducted an additional survey (IDEA 2). This survey used the IDEA questionnaires designed for the LCA netchain to investigate the Slovak fresh fruit sector. By doing so, we could test if the application of IDEA surveys to a different netchain provides meaningful results. For this purpose, we compare the results of the IDEA 2 survey with the results from the LCA netchain survey. The comparison of the IDEA 2 results with the B-SEA output allows us to assess possible information loss.

16.1 Testing the application of the LCA-tailored IDEA design to other netchains and industries

The LCA netchain analysis was based on three main statements supported by the expert panels (Section 11.7) and verified with the semi-structured interviews (chapter 0):

i) Downstream firms usually have more bargaining power than upstream firms in the LCA netchain.

ii) The UTPs described in Directive 2019/633 happen more frequently at the middleman level, while farmers (especially coop members, as the majority of LCA producers) suffer from other practices such as low prices, arbitrary quality determination, high access costs, renegotiations (including *ex post* price renegotiation) and retaliation.

iii) Two additional practices are identified as possible UTPs: imposition of unnecessary production standards and arbitrary and strategic orders.

The IDEA farmer and middleman questionnaires were drafted based on these statements. An application of IDEA questionnaires to the Slovak fruit industry (SLF) requires that the three statements were applicable. Our analysis concludes that only statements i) and iii) apply to Slovakia, while statement ii) does not. As a consequence, the LCA design cannot be used to run an investigation in Slovakia. In the following section 16.1.1 we address the issues related to statement i). Sections 16.1.2 and 16.1.2 address statements ii) and iii).

16.1.1 Comparing possible imbalances in bargaining power

The LCA design of IDEA assumes a possible imbalance in bargaining power in favour of downstream industries. As explained in section 14.3.3 , we used ”replaceability” as a gross proxy for bargaining power in the IDEA farmer survey.

Table 16-1 reports farmers’ perceptions concerning replaceability by netchain and type of main buyer. In both netchains, the outcomes concerning the perceived replaceability of farmers by the type of main buyer are relatively similar. Farmers selling to private middlemen or supermarkets perceived themselves as more replaceable than those selling to cooperatives and POs.

The perceptions of farmers’ abilities to replace their main buyer also show similar tendencies in both netchains for farmers selling to supermarkets, cooperatives, POs and final consumers. However, farmers selling to private middlemen in the LCA netchain felt they could replace their buyers more easily than farmers in the SLF netchain thought. Specifically, 50% of the surveyed farmers in the SLF netchain selling to private middlemen felt they could not replace their main buyer, while only about 11% of the farmers in the LCA netchain was of the same impression.

Table 16-1: Replaceability of trade partners

Can the main buyer replace your firm?		SLF					LCA				
		Superm.	Private middl.	Coop/PO	Consum.	Total	Superm.	Private middl.	Coop/PO	Consum.	Total
Easily	%	0.00	12.50	0.00	100.00	40.91	0.00	8.72	0.00	100.00	20.19
Not easily	%	100.00	62.50	0.00	0.00	31.82	100.00	80.25	0.00	0.00	8.37
Not at all	%	0.00	25.00	100.00	0.00	27.27	0.00	11.03	100.00	0.00	71.44
Total	%	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Can you replace the main buyer?		SLF					LCA				
		Superm.	Private middl.	Coop/PO	Consum.	Total	Superm.	Private middl.	Coop/PO	Consum.	Total
Easily	%	0.00	25.00	0.00	100.00	45.45	0.00	48.45	2.64	100.00	25.78
Not easily	%	100.00	25.00	75.00	0.00	31.82	100.00	40.51	29.29	0.00	25.25
Not at all	%	0.00	50.00	25.00	0.00	22.73	0.00	11.03	68.07	0.00	48.96
Total	%	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Table 16-2 compares farmers’ perceptions concerning their own replaceability and their ability to replace their main buyer. The figures in bold font highlight the combinations of possible imbalances in bargaining power in favour of the buyer. The results show for both netchains that farmers selling to cooperatives or POs perceive that they cannot be replaced. Thus, there is no indication of crucial imbalances in bargaining power in favour of the buyer in these constellations.

In both netchains, the vast majority of farmers selling to private middlemen or supermarkets perceive that they can be replaced. Furthermore, combinations indicating possible imbalances in bargaining power in favour of the buyer exist in both netchains, which is consistent with the predictions of the IDEA expert panels. Since imbalances in bargaining power are considered an important precondition for the occurrence of UTPs, we expect meaningful results from survey 2 in the SLF netchain.

Table 16-2: Asymmetries in perceived replaceability by type of main buyer

Main buyer is private middleman/ supermarket chain		Farmer can be replaced							
		SLF				LCA			
		Easily	Not easily	No	Tot	Easily	Not easily	No	Tot
Farmer can replace	Missing	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Easily	0.00	20.00	0.00	20.00	0.00	44.57	0.00	44.57
	Not easy	**0.00**	30.00	10.00	40.00	**8.02**	37.26	0.00	45.29
	No	**10.00**	**20.00**	10.00	40.00	**0.00**	**0.00**	10.15	10.15
	Total	10.00	70.00	20.00	100.00	8.02	81.83	10.15	100.00

Main buyer is cooperative / PO		Farmer can be replaced							
		SLF				LCA			
		Easily	Not easily	No	Tot	Easily	Not easily	No	Tot
Farmer can replace	Missing	0.00	0.00	0.00	6.03	0.00	0.00	0.00	0.00
	Easily	0.00	0.00	0.00	13.88	0.00	0.00	2.64	2.64
	Not easy	**0.00**	0.00	75.00	27.21	**0.00**	0.00	29.29	29.29
	No	**0.00**	**0.00**	25.00	52.89	**0.00**	**0.00**	68.07	68.07
	Total	0.00	0.00	100.00	100.00	0.00	0.00	100.00	100.00

16.1.2 The four areas of concern for farmers

The expert panels and the semi-structured interviews in the LCA netchain identified four areas of possible UTPs that concern farmers: price determination, quality, access costs and renegotiation/retaliation. Consequently, the scope of the farmer survey was limited to these areas, which were investigated by asking respondents to agree or disagree to a set of statements using a 5-point Likert scale. The statements and average scores of respondents in both netchains are summarised in Table 16-3.

Notably, the perceptions of the farmers often coincide in both netchains, as average scores frequently show similar tendencies towards agreeing or disagreeing with the statements. However, greater deviations in farmers' perceptions are found in the area of price practices and business predictability. The statements with the highest deviations in average scores between SLF and LCA netchains are marked in bold font. SLF farmers perceive their business with the main buyer to be more predictable (also with regard to their expectations about prices at delivery) than LCA farmers do. However, SLF farmers more frequently believe that buyers set prices at their discretion.

Table 16-5 to Table 16-8 in the appendix compare farmers' perceptions in each UTP area, distinguishing between the different types of main buyer. This more elaborate comparison illustrates further discrepancies between both netchains, for example, concerning the perceptions of pricing fairness. While almost 50% of the LCA farmers selling to cooperatives and POs strongly disagreed that prices are determined in a fair way, all surveyed SLF farmers agreed on the respective statement.

Overall, the four areas of concerns proved to be relevant for farmers in the SLF sector, too. Quality practices are an exception, but the area was not considered an issue by LCA farmers. Differences in the average scores of specific items reflect the dissimilarities in the two industries. The application of the LCA design is able to capture such differences.

Table 16-3: Average scores of practice assessment (1: strongly disagree, to 5: strongly agree)

Area	Statements	SLF	LCA
		Average score	Average score
Price practices	Pricing rules are transparent and clear.	4.13	3.32
	Buyers set prices at their discretion.	**3.20**	**1.39**
	At delivery, I have a reasonably reliable expectation about price.	**4.20**	**2.52**
	Payments are timely.	3.80	3.14
	Prices are determined in a fair and transparent way.	3.33	2.59
	I believe that my buyer would cheat on prices if they could.	2.00	2.75
Quality practices	Overall, quality assessment is fair.	3.47	4.06
	I believe that my buyer would cheat on quality if they could.	1.87	2.69
Access costs	I paid for large inv. in order to sell to the most important buyer.	2.13	2.56
	Selling to the main buyer is increasingly costly.	2.53	2.11
	I have a clear estimate of future investments.	3.60	3.89
	I believe that my buyer is asking for unnecessary investments.	1.40	2.08
Renegotiation	**My business with the most important buyer is predictable.**	**3.80**	**2.08**
	My main buyer uses unexpected events to obtain concessions.	2.47	1.76
	Main buyer changes contract terms in the absence of unexpected events.	2.06	1.80
	My main buyer always keeps their word.	3.40	4.04
	I had to give up contr. rights in order to keep the business rel.	2.73	2.56

16.1.3 Occurrence of UTPs listed in Directive 2019/633 and additional UTPs

Middlemen were asked to look at a list of UTPs and use a 5-point Likert scale to state how likely each UTP was to happen, according to their knowledge of industry. This general

question did not refer to their firms specifically; only a general assessment of the industry was required. Respondents were asked to rate the likelihood in the upstream market (i.e., the transaction between firms such as their one and their suppliers) and downstream market (i.e., between firms such as their own and their buyer). The list of practices is based on the Directive 2019/633 (grey practices are considered as one), with two additional items from the results of the IDEA expert panels and interviews: unnecessary quality standards and arbitrary orders. Table 16-4 summarises the results.

Table 16-4: Perception of UTPs in the SLF and LCA netchains

Likelihood of listed practices occurring in upstream and downstream industries on a 1-to-5 scale (1 = not aware, 5 = it is customary)	SLF				LCA			
	Average score		% of scores > 2		Average score		% of scores > 2	
	Upst.	Down.	Upst.	Down.	Upst.	Down.	Upst.	Down.
Payments are delayed, late and/or unpredictable.	3.53	4.20	100.00	100.00	1.60	1.53	13.33	6.67
Orders are cancelled on short notice.	2.73	2.73	73.33	80.00	1.07	1.47	0.00	6.67
Buyers impose unilateral changes to existing contracts or agreements (do not keep their word).	2.60	2.47	60.00	53.33	1.13	1.53	6.67	6.67
Suppliers must pay for expenses that are not related to the sales of their products (for example: opening of new stores).	2.87	2.47	86.67	53.33	1.00	2.07	0.00	40.00
Suppliers must pay (or are denied payments) for loss or waste of products that were already delivered to the buyer.	3.20	3.00	100.00	86.67	1.40	2.27	20.00	46.67
Buyers refuse to write down contracts or orders.	2.27	2.47	33.33	53.33	1.00	1.60	0.00	13.33
Buyers take advantage of confidential information they obtain from the suppliers.	2.33	2.13	33.33	20.00	1.00	1.40	0.00	6.67
Buyers cut orders if suppliers try to exercise their contractual rights.	2.00	2.60	86.67	66.67	1.00	2.13	0.00	40.00
Suppliers must pay for the costs of examining complaints by final customers (even if they are not responsible).	2.60	2.20	33.33	73.33	1.40	1.20	20.00	0.00
Firms must bear unpredictable costs that are not clearly stated in the contract.	3.73	3.80	73.33	93.33	1.00	2.20	0.00	33.33
Firms must comply with unnecessary quality standards.	2.80	3.26	60.00	86.67	2.47	3.53	53.33	80.00
Orders are unpredictable and totally discretionary.	2.87	2.53	86.67	53.33	2.67	4.60	46.67	100.00

In the relationships between middlemen and their buyers (downstream), all of the investigated trade practices of the Directive 2019/633 show higher average scores in the SLF netchain compared to the LCA netchain. Exemplary, all survey participants in the SLF netchain indicated that late payments from buyers happen at least sometimes, while less than 7% of the LCA middlemen indicated this happens. Major discrepancies between the perceptions of LCA and SLF middlemen are further found for the practices "unpredictable costs" and "short-notice order cancellations". Thus, legislation designed to tackle UTPs in downstream business relationships in the LCA netchain would potentially be insufficient in the SLF netchain.

This problem becomes even more obvious when comparing the results concerning the relationships between middlemen and their suppliers (upstream). While most of the LCA middlemen were unaware of the presence of almost all practices listed in Directive 2019/633, many SLF middlemen indicated that these practices are indeed relevant upstream. Thus, these practices should have been investigated in the SLF farmer questionnaire as well, which was not the case. Examples are "unpredictable costs" and "payments for loss or waste", both of which show average scores of 3.73 and 3.20, respectively.

This point is particularly severe because the LCA design of the IDEA farmer questionnaire is unable to capture several relevant practices at farm level. The assessment that we obtained from the analysis in section 16.1.2 is biased and misleading because we failed to detect the occurrence of common UTPs.

Notably, all survey participants in the SLF netchain indicated that late payments happen at least sometimes upstream, while most SLF farmers stated that payments are timely (see Table 16-5). This apparent inconsistency might be interpreted as farmers who accept late payments consider them "timely".

We further find that the additional two monitored practices ("firms must comply with unnecessary quality standards" and "orders are unpredictable and totally discretionary") are relevant in the SLF netchain. There is a possibility that other relevant practices in the LCA chain were disregarded due to missing prior analysis in this netchain.

We conclude that the farmer questionnaire, which was designed based on the results of IDEA expert panels and semi-structured interviews, is insufficient for the SLF netchain. Therefore, we conclude that using information from one netchain to design surveys for other similar netchains can involve crucial information losses. As expected, omitting prior analyses might result in ignoring relevant netchain-specific practices.

16.2 Comparing B-SEA (SLF) and survey 2 (SLF)

IDEA survey 2 gives an estimate of the occurrence, impact and pass-through of UTPs in the B-SEA netchain using a design based on information about the LCA netchain. B-SEA has the same objective but does not use *a priori* information. The comparison between the results of B-SEA and survey 2 provide an estimate of the bias in the two cases.

16.2.1 Bias in IDEA 2 surveys

As previously outlined, the results of the IDEA expert panels and semi-structured interviews were used to limit the scope of the IDEA questionnaire to four areas of potential UTPs that were found relevant. As explained in section 16.1.2 , this approach has potentially caused us to overlook several practices of relevance for farmers in the SLF netchain that are irrelevant for farmers in the other investigated netchains. SLF middlemen that participated in the IDEA survey stated that farmers are affected by "unpredictable costs" and "payments that are unrelated to the sale of their products", in addition to other practices not considered by the IDEA farmer questionnaire. Indeed, 33% of farmers willing to answer the respective question of the B-SEA questionnaire stated that unpredictable costs are a problem. Furthermore, 38% indicated that their buyers sometimes or more frequently demand payments that are unrelated to the sale of their products. Thus, the comparison with the B-SEA questionnaire confirmed that IDEA overlooks UTPs with a high rate of occurrence. We conclude that the IDEA questionnaire based on expert panels and semi-structured interviews in the APK and LCA netchains is insufficient for the SLF netchain.

16.2.2 Bias in B-SEA analysis

The farmer questionnaire for the B-SEA approach was not based on *a priori* information and thus not limited to the practices that were deemed relevant. However, the B-SEA questionnaire did not include any questions regarding the importance of the two additional practices that were found relevant in the IDEA expert panels and semi-structured interviews: unpredictable orders and unnecessary quality standards. The IDEA survey showed that these practices are indeed evaluated as relevant by middlemen, both upstream and downstream. Thus, using B-SEA instead of IDEA incurs an information loss with regard to the relevance of these practices that were failed to be considered *a priori*.

Our comparison of B-SEA and IDEA shows that a trade-off between generality of results and completeness of information exists. The issue is discussed in section 17.1.2 of this report.

16.3 Appendix

Table 16-5: Results of price practices assessments

Pricing rules are transparent and clear (1: strongly disagree, to 5: strongly agree)

	SLF							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing														
Super.	0.00	0.00	0.00	0.00	50.00	50.00	100.00	0.00	0.00	0.00	0.00	100.00	0.00	100.00
Pr. Mid.	0.00	0.00	0.00	25.00	62.50	12.50	100.00	0.00	0.00	0.00	14.35	37.42	48.23	100.00
CoopPO	0.00	0.00	0.00	0.00	50.00	50.00	100.00	6.89	11.10	38.71	17.16	15.55	10.58	100.00
Cons.	87.50	0.00	0.00	0.00	12.50	0.00	100.00	0.00	0.00	0.00	0.00	52.68	47.32	100.00
Total	31.82	0.00	0.00	9.09	40.91	18.18	100.00	4.848	7.82	27.26	13.43	25.49	21.15	100.00

Buyers set prices at their discretion (1: strongly disagree, to 5: strongly agree)

	SLF							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing														
Super.	0.00	0.00	0.00	50.00	0.00	50.00	100.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
Pr. Mid.	0.00	12.50	0.00	37.50	50.00	0.00	100.00	0.00	76.93	23.07	0.00	0.00	0.00	100.00
CoopPO	0.00	0.00	75.00	25.00	0.00	0.00	100.00	0.00	66.05	29.29	2.33	2.33	0.00	100.00
Cons.	87.50	0.00	0.00	0.00	0.00	12.50	100.00	0.00	100.00	0.00	0.00	0.00	0.00	100.00
Total	31.82	4.55	13.64	22.73	18.18	9.09	100.00	0.00	73.1	22.79	2.461	1.641	0.00	100.00

At delivery, I have a reasonably reliable expectation about price (1: strongly disagree, to 5: strongly agree)

	SLF							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing														
Super.	0.00	0.00	0.00	50.00	00.00	50.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
Pr. Mid.	0.00	0.00	0.00	25.00	37.50	37.50	100.00	100.00	0.00	0.00	0.00	0.00	100.00	100.00
CoopPO	0.00	0.00	0.00	25.00	0.00	75.00	100.00	0.00	29.43	44.57	19.66	6.34	0.00	100.00
Cons.	87.50	0.00	0.00	12.50	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
Total	31.82	0.00	0.00	18.18	18.18	31.82	100.00	0.00	20.72	31.38	13.84	4.462	29.59	100.00

Payments are timely (1: strongly disagree, to 5: strongly agree)

	SLF							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing														
Super.	0.00	0.00	0.00	50.00	50.00	0.00	100.00	0.00	0.00	0.00	100.00	0.00	0.00	100.00
Pr. Mid.	0.00	12.50	0.00	25.00	25.00	62.50	100.00	8.72	0.00	0.00	0.00	23.07	68.21	100.00
CoopPO	0.00	0.00	0.00	50.00	0.00	50.00	100.00	1.17	13.77	24.46	40.73	10.01	9.86	100.00
Cons.	87.50	0.00	0.00	0.00	12.50	0.00	100.00	0.00	0.00	0.00	0.00	5.36	94.64	100.00
Total	31.82	4.55	0.00	22.73	18.18	22.73	100.00	1.64	9.696	17.22	29.5	10.25	31.69	100.00

Overall, prices are determined in a fair and transparent way (1: strongly disagree, to 5: strongly agree)

	SLF							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing														
Super.	0.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	100.00	0.00	100.00
Pr. Mid.	0.00	12.50	12.50	37.50	37.50	0.00	100.00	0.00	0.00	0.00	0.00	54.87	45.13	100.00
CoopPO	0.00	0.00	0.00	0.00	75.00	25.00	100.00	4.11	49.12	31.76	6.34	5.59	3.08	100.00
Cons.	87.50	0.00	0.00	12.50	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
Total	31.82	4.55	4.55	27.27	27.27	4.55	100.00	2.90	34.59	22.36	4.462	9.913	25.78	100.00

I believe that the main buyer would cheat on prices, if they could (1: strongly disagree, to 5: strongly agree)

	SLF							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing														
Super.	0.00	50.00	0.00	50.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00
Pr. Mid.	0.00	0.00	62.50	37.50	0.00	0.00	100.00	8.72	45.13	46.14	0.00	0.00	0.00	100.00
CoopPO	0.00	100.00	0.00	0.00	0.00	0.00	100.00	27.41	40.22	18.50	4.97	6.58	2.33	100.00
Cons.	87.50	0.00	0.00	12.50	0.00	0.00	100.00	47.32	52.68	0.00	0.00	0.00	0.00	100.00
Total	31.82	22.73	22.73	22.73	0.00	0.00	100.00	29.28	42.76	18.19	3.498	4.631	1.64	100.00

Table 16-5 illustrates the results of the assessment of practices related to price determination. The results show that price transparency is more an issue in the LCA netchain, while SLF farmers are more concerned about arbitrary price determination. Farmers in both netchains state they do not know the final price for their fruits at the time of delivery. While this seems to be typical for POs and cooperatives, the issue is raised in

the SLF netchain for private middlemen and supermarket chains as well. In general, the majority of farmers responded that payments are reasonably on time.

There are clear discrepancies between both netchains concerning the perceptions of pricing fairness. While almost 50% of the LCA farmers selling to cooperatives and POs strongly disagreed that prices are determined in a fair way, all surveyed SLF farmers agreed with the respective statement. Some farmers in the SLF netchain criticised private middlemen for price unfairness, while none of the LCA farmers did. Most farmers in both netchains do not believe their buyers cheat on prices.

Table 16-6 illustrates the results of the assessment of practices related to quality determination. The results show for both netchains that most of the surveyed farmers perceive quality assessment as fair. No SLF farmers and very few farmers in the LCA netchain believe that their main buyer would cheat on quality if they could. As described in section 10, this outcome is inconsistent with the semi-structured interviews.

Table 16-6: Results of quality practices assessment

Overall, quality assessment is fair (1: strongly disagree, to 5: strongly agree)

	SLF							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing														
Superm.	0.00	0.00	0.00	0.00	100.00	00.00	100.00	0.00	0.00	0.00	0.00	100.00	0.00	100.00
Priv. Mid	0.00	12.50	12.50	37.50	37.50	0.00	100.00	14.35	0.00	0.00	8.72	14.35	62.58	100.00
Coop /PO	0.00	0.00	0.00	0.00	75.00	25.00	100.00	1.17	5.72	7.19	5.72	47.38	32.82	100.00
Consum.	87.50	0.00	0.00	12.50	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
Total	31.82	4.55	4.55	18.18	31.82	4.55	100.00	2.17	4.03	5.07	4.85	35.53	48.36	100.00

I believe that my buyer would cheat on quality if they could (1: strongly disagree, to 5: strongly agree)

	SLF							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing														
Superm.	0.00	50.00	0.00	50.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00
Priv. Mid	0.00	50.00	25.00	25.00	0.00	0.00	100.00	14.35	76.93	8.72	0.00	0.00	0.00	100.00
Coop /PO	0.00	100.00	0.00	0.00	0.00	0.00	100.00	14.11	44.71	25.08	7.74	1.17	7.19	100.00
Consum.	87.50	0.00	0.00	12.50	0.00	0.00	100.00	90.41	9.59	0.00	0.00	0.00	0.00	100.00
Total	31.82	27.27	13.64	22.73	0.00	0.00	100.00	28.80	40.57	19.30	5.45	0.82	5.07	100.00

Table 16-7 illustrates the results of the assessment of practices related to access costs. We find heterogeneous perceptions across both netchains in this regard. Most of the SLF farmers that were able or willing to answer the question disagreed or strongly disagreed on the statement implying that large entry investments are necessary. In the LCA netchain, there is also a slight majority who disagree with the corresponding statement. The assessment of whether access costs are increasing over time shows a similar tendency.

Most farmers in both netchains indicate a clear estimate of the future investment necessary to keep market access. None of the respondents considers the required investment an unnecessary cost.

Table 16-7: Results of the investigation of access costs

I paid for large investments in order to sell to the most important buyer (1: strongly disagree, to 5: strongly agree)

	SLF							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing														
Supermarket	0.00	50.00	0.00	0.00	0.00	50.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
Private Middl.	0.00	50.00	25.00	25.00	0.00	0.00	100.00	0.00	14.35	28.47	8.72	37.42	11.03	100.00
Coop /PO	0.00	0.00	50.00	25.00	25.00	0.00	100.00	6.44	32.50	39.23	8.50	4.94	8.40	100.00
Consumers	87.50	12.50	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	90.41	9.59	100.00
Total	31.82	27.27	18.18	13.64	4.55	0.00	100.00	4.62	24.61	30.71	6.88	23.60	9.57	100.00

Selling to the main buyer is increasingly costly (1: strongly disagree, to 5: strongly agree)

	SLF							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing														
Supermarket	0.00	50.00	0.00	0.00	50.00	0.00	100.00	0.00	0.00	0.00	0.00	100.00	0.00	100.00
Private Middl.	0.00	12.50	25.00	50.00	12.50	0.00	100.00	0.00	23.07	57.18	19.75	0.00	0.00	100.00
Coop /PO	0.00	0.00	100.00	0.00	0.00	0.00	100.00	0.00	28.50	56.29	7.30	3.80	4.11	100.00
Consumers	87.50	0.00	0.00	0.00	12.50	0.00	100.00	0.00	0.00	47.32	47.32	5.36	0.00	100.00
Total	31.82	9.09	27.27	18.18	13.64	0.00	100.00	0.00	22.23	54.17	16.16	4.54	2.90	100.00

I have a clear estimate of future investments (1: strongly disagree, to 5: strongly agree)

	SLF							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing														
Supermarket	0.00	100.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	100.00	0.00	100.00
Private Middl.	0.00	12.50	12.50	25.00	12.50	37.50	100.00	0.00	8.72	23.07	0.00	23.07	45.13	100.00
Coop /PO	0.00	0.00	0.00	0.00	0.00	100.00	100.00	28.88	10.38	7.50	4.66	44.77	3.80	100.00
Consumers	87.50	0.00	0.00	0.00	12.50	0.00	100.00	43.09	0.00	0.00	0.00	47.32	9.59	100.00
Total	31.82	13.64	4.55	9.09	9.09	31.82	100.00	28.68	8.13	7.45	3.28	43.68	8.78	100.00

I believe that my buyer is asking for unnecessary investments (1: strongly disagree, to 5: strongly agree)

	SLF							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing														
Supermarket	0.00	100.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
Private Middl.	0.00	50.00	25.00	25.00	0.00	0.00	100.00	11.03	80.25	8.72	0.00	0.00	0.00	100.00
Coop /PO	0.00	100.00	0.00	0.00	0.00	0.00	100.00	6.89	59.71	29.60	0.00	0.00	3.80	100.00
Consumers	87.50	12.50	0.00	0.00	0.00	0.00	100.00	6.89	59.71	29.60	0.00	0.00	3.80	100.00
Total	31.82	50.00	9.09	9.09	0.00	0.00	100.00	11.03	80.25	8.72	0.00	0.00	0.00	100.00

Renegotiation was considered by a set of five items. The items and results for both netchains are illustrated in Table 16-8. Most SLF farmers perceive business with their main buyer as predictable, while 71% of the LCA farmers perceives their business as unpredictable. The vast majority of farmers in both netchains do not feel their main buyers use unexpected events to obtain concessions or, in the absence of unexpected events, change contract terms. Consequently, most farmers in both netchains agreed that their main buyer always keeps his/her word.

Finally, 13% of the SLF farmers indicated to have given up their contractual rights in order to keep the business relationship with their main buyer. In the LCA netchain, 3% of the farmers responded correspondingly.

Table 16-8: Results of the assessment of renegotiation practices

My business with the most important buyer is predictable (1: strongly disagree, to 5: strongly agree)

	SLF							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing														
Superm.	0.00	0.00	0.00	50.00	50.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00
Priv. Mid	0.00	12.50	0.00	25.00	50.00	12.50	100.00	0.00	17.44	0.00	23.07	48.45	11.03	100.00
Coop /PO	0.00	0.00	0.00	0.00	0.00	100.00	100.00	1.17	30.36	39.57	21.41	6.03	1.47	100.00
Consum.	87.50	0.00	12.50	0.00	0.00	0.00	100.00	0.00	100.00	0.00	0.00	0.00	0.00	100.00
Total	31.82	4.55	4.55	13.64	22.73	22.73	100.00	0.82	42.38	28.68	17.24	8.80	2.07	100.00

My main buyer uses unexpected events to obtain concessions (1: strongly disagree, to 5: strongly agree)

	SLF							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing														
Superm.	0.00	100.00	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	100.00	0.00	100.00
Priv. Mid	0.00	25.00	12.50	25.00	25.00	12.50	100.00	0.00	62.58	23.07	0.00	14.35	0.00	100.00
Coop /PO	0.00	50.00	0.00	50.00	0.00	0.00	100.00	0.00	47.93	41.38	2.64	3.80	4.25	100.00
Consum.	87.50	0.00	0.00	12.50	0.00	0.00	100.00	0.00	100.00	0.00	0.00	0.00	0.00	100.00
Total	31.82	22.73	9.09	22.73	9.09	4.55	100.00	0.00	59.00	31.31	1.86	4.85	2.99	100.00

My main buyer changes contract terms even in the absence of unexpected events (1: strongly disagree, to 5: strongly agree)

	SLF							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing														
Superm.	0.00	50.00	50.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	100.00	0.00	100.00
Priv. Mid	0.00	12.50	12.50	62.50	12.50	0.00	100.00	0.00	71.30	14.35	14.35	0.00	0.00	100.00
Coop /PO	0.00	100.00	0.00	0.00	0.00	0.00	100.00	2.64	53.03	34.80	0.00	4.11	5.41	100.00
Consum.	87.50	0.00	12.50	0.00	0.00	0.00	100.00	0.00	100.00	0.00	0.00	0.00	0.00	100.00
Total	31.82	27.27	13.64	22.73	4.55	0.00	100.00	1.86	63.41	25.85	1.35	3.72	3.81	100.00

My main buyer always keeps their word (1: strongly disagree, to 5: strongly agree)

	SLF							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing														
Superm.	0.00	0.00	0.00	0.00	50.00	50.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	100.00
Priv. Mid	0.00	0.00	0.00	62.50	37.50	0.00	100.00	0.00	0.00	0.00	14.35	23.07	62.58	100.00
Coop /PO	0.00	25.00	0.00	0.00	50.00	25.00	100.00	2.95	8.36	3.80	7.06	50.60	27.23	100.00
Consum.	87.50	12.50	0.00	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
Total	31.82	9.09	0.00	22.73	27.27	9.09	100.00	2.07	5.89	3.50	6.32	37.79	44.43	100.00

I had to give up contractual rights in order to keep the business relationship (1: strongly disagree, to 5: strongly agree)

	SLF							LCA						
	NR	1	2	3	4	5	Total	NR	1	2	3	4	5	Total
Missing														
Superm.	0.00	0.00	0.00	100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	100.00	100.00
Priv. Mid	0.00	12.50	12.50	50.00	12.50	12.50	100.00	11.03	60.27	14.35	0.00	14.35	0.00	100.00
Coop /PO	0.00	50.00	50.00	0.00	0.00	0.00	100.00	33.44	52.93	12.47	0.00	0.00	1.17	100.00
Consum.	87.50	0.00	0.00	0.00	0.00	12.50	100.00	43.09	56.91	0.00	0.00	0.00	0.00	100.00
	31.82	13.64	13.64	27.27	4.55	9.09	100.00	32.92	53.96	10.13	0.00	1.35	1.64	100.00

17 Conclusions

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In this chapter we illustrate the implications of our research for two important policy issues: the monitoring of UTPs in EU food supply chains and the implementation of Directive 2019/633 by Member States.

17.1 Monitoring UTPs in EU food supply chains

Directive 2019/633 emphasises the importance of monitoring UTPs over time. Article 12 requires an evaluation by 2025 assessing—in the very least—the effectiveness of the measures implemented at the national level and cooperation among enforcement authorities. Member States must publish an annual report and inform the commission about their activities (Article 10). In this perspective, monitoring of the occurrence, impact and pass-through of UTPs is necessary.

In this report we described the design and test implementation of a monitoring system. In the following sections, we illustrate our findings and advice for future assessment of the effectiveness of regulation.

17.1.1 Objective of the investigation

The first issue we met in planning the system was definition of the objective. The effectiveness of regulation can be interpreted in two ways: Objective A is a reduction in the occurrence and impact of the target practices (the 16 UTPs in Directive 2019/633, plus those that will be identified by each Member State) and objective B is an increase in overall fairness and protection from any form of UTP. The choice between these two objectives informs the design of the monitoring system.

Objective A is straightforward and consistent with previous investigations of UTPs. A time trend of UTP occurrence and impact is a clear and simple measure of the effectiveness of regulation. If recurring investigations show that occurrence is declining over time, it is possible to conclude that public intervention was successful. The main advantage of this approach is that effectiveness can be measured with a limited number of parameters and results are easy to interpret. The B-SEA approach (chapter 7 and Part III) was designed to achieve this objective.

Objective B is more complex than objective A, and it is an innovative contribution of this research. According to theory, any constraint imposed on trading practices causes a reorganisation of the business relationship, being that such practices are interdependent and jointly determined (chapters 2 and 12). Consequently, a ban on UTPs is expected to determine changes in the organisation of EU food supply chains. Expert panels and semi-structured interviews confirmed this finding. Measuring the effects of regulation on the rate of occurrence of UTPs chosen from a list results in an incomplete assessment because the

consequences for the business relationships are ignored. In this perspective, appraisal of possible unintended consequences—including the emergence of new types of unfair trading practices—is necessary for effective assessment. *Ex ante* policy evaluation (e.g., before including new UTPs in the regulation) needs a detailed counterfactual assessment in order to consider all consequences. *Ex post* evaluations (such as the 2025 analysis) require an extensive analysis of the change in business relationships determined by the regulation. The IDEA approach (chapter 6 and Part IV) is designed to meet objective B. The strategy uses a mix of surveys, panels, interviews and economic analyses to provide a complete analysis of UTPs, including possible counterfactual scenarios. Nevertheless, the complexity of this approach results in an equally complex output that cannot be summarised in simple, scalar indicators. The outcome of the investigation may be a set of qualitative assessments.

17.1.2 Comparing B-SEA and IDEA

IDEA and B-SEA are different approaches aiming at different objectives (section 17.1.1). Consequently, the primary criterion for the choice between the two strategies is the motivation underlying the investigation. Nevertheless, in comparing the two strategies, a trade-off between generality and completeness of information emerges.

The design of IDEA is based on information about specific netchains. In particular, expert panels are a major driver for the planning of surveys and interviews and the development of the economic model (Part IV). The entire investigation is conditional on such specific knowledge. As a consequence, IDEA results and design cannot be applied directly in different contexts. In chapter 16, we showed that applying the IDEA design developed for the LCA netchain to the Slovak fruit industry leads to incorrect conclusions. Similarly, we showed that B-SEA overlooked important practices.

In this section we summarise the comparison between the two empirical strategies using four criteria: completeness, generality, feasibility and cost.

- **Completeness**. IDEA provided a more exhaustive representation of UTPs than B-SEA. In our application, B-SEA did not detect issues concerning unnecessary standards or strategic orders. Furthermore, the IDEA economic model supported an understanding of the economic role of UTPs and their impact on efficiency. Investigating these issues with B-SEA required a complex questionnaire that proved to be tiring for respondents and elicited fear factors because of the detailed information required. Even so, it was not able to give a complete representation of the netchain.
- **Generality.** A B-SEA aiming at measuring the occurrence and impact of a predetermined set of practices provides general and comparable results. Our application concluded that IDEA results are specific to the netchain.
- **Feasibility.** Both approaches presented important feasibility issues. The dyadic approach of IDEA was almost impossible to implement, at least with the limited resources of the project. Firms were extremely reluctant to provide the contact information of their trading partners. In many cases, we obtained an explicit refusal because a respondent did not want their trading partner aware of their involvement. As a consequence, in many cases it was impossible to cross-check and compare the interviews of respondents. The B-SEA questionnaire was extremely long and difficult to administrate. The problem emerged because we tried to investigate multiple

issues of UTPs at once (including occurrence, determinants, impacts in several dimensions, pass-through). The problem had already been detected during the design activities. Nevertheless, we decided not to trim down questions in order to test the approach in the field. We found that the questionnaire was feasible for farmers but unacceptable for middlemen. We conclude that a feasible B-SEA requires a careful selection of the target issues to be investigated.

- **Cost.** The use of expert panels and interviews allowed to design light questionnaires for the IDEA approach. This results in reduced survey costs (especially when professional agencies are used). The cost of B-SEA increases rapidly with the number of target issues. Investigating multiple dimensions requires a high number of questions resulting in costly surveys. The costs of B-SEA can be comparable (or even smaller) than IDEA only if the focus of the approach is limited to a few items.

17.1.3 Measurement issues: Objective vs. subjective measurement

Both IDEA and B-SEA face measurement issues. The first choice when measuring UTPs is whether to use objective or subjective assessments of occurrence, impact and pass-through. With objective measurement, the investigator collects observable data regarding the practices and their costs (for example, the bills for loss/waste of products at the buyer's premises or the notifications of changes in contract terms). Objective measurement is accurate but requires a high degree of cooperation from the respondents and is extremely costly. Subjective measurement is based on the respondent's personal assessment of UTPs. It requires concise and general evaluation. Although subjective evaluation is less costly and easier to obtain than objective data, its reliability is questionable, and it can be considered only a crude approximation of the respondent's perception.

In our applications we used subjective evaluation. The choice is consistent with existing studies on UTPs, fairness and business practices. The complexity of the study topic required a large amount of objective data in order to achieve meaningful results. Furthermore, the semi-structured interviews confirmed respondents' extreme reluctance in sharing accounting data. Upon request, they answered that the data are "not collected/available" or private information. Objective measurement was unfeasible in B-SEA as well, because it would result in excessively long surveys.

The subjective evaluation in IDEA and B-SEA surveys was based on 5-point Likert scales asking respondents to agree or disagree with a set of statements regarding issues of interest. Similarly, respondents were asked to rank impact on a 5-point scale. This approach greatly improved the feasibility of the survey, compared to objective measurements. However, the result was a set of personal and heterogeneous assessments. As a consequence, the aggregation in descriptive statistics must be considered with caution.

In particular, we identified three main biases in the subjective assessment of UTPs: fear factor, self-representation and strategic response.

- The fear-factor is a well-known issue in UTP investigation. It results in an unwillingness to participate in surveys and interviews, reticence and an understating of the severity of practices. As a consequence of the fear factor, surveys can be biased because of non-random participation/missing answers and respondents who might downplay UTPs in their subjective assessments. The

support of local stakeholders was important in attenuating the fear factor. Also, almost all respondents required strict anonymity, asking that their statements be reported with no reference to their firms and that they not be included in the list of participants.

- Strategic response is the propensity of respondents to provide information supporting their point of view and objectives, instead of truthful answers. We found two types of strategic responses. On the one hand, leading firms that might impose UTPs might downplay the issues. On the other hand, weak firms (when willing to participate) might have interest in overstating the problems in order to make a stronger case for public intervention. The strategic response bias was evident in the semi-structured interviews. We found that the use of closed-answer questions in the sample surveys was useful to balance the bias.
- The issue of self-representation arises when a respondent provides answers that are consistent with an image of themselves that they want to project. Farmers may be unwilling to admit they are "easily replaceable" by their buyers. A middleman representative may suggest that he/she is less exposed than others to UTPs because of his/her advanced managerial skills. Experienced interviewers with a solid background are required to deal with this issue.

The fear factor and self-representation bias can be attenuated if respondents are asked to provide their general evaluation of UTP occurrence in the industry (as in Table 14-16). By focusing on the entire industry, instead of on the firm, the respondent does not represent his/her own condition and does not disclose sensitive information regarding the trade relationship with their main buyer. At the same time, we expect that the respondent's estimate of UTP occurrence at the industry level is affected by the actual UTP occurrence at the firm level. Then, the former can be used as a proxy for the latter.

Table 17-1: Comparison between the average perception of UTP occurrence at the industry level and firm levels

	APK			LCA		
	Ind.	Firm	Diff.	Ind.	Firm	Diff.
Payments are delayed, late and/or unpredictable	2.27	2.27	0.00	1.53	1.33	0.20
Orders are cancelled on short notice	1.67	1.60	0.07	1.47	1.53	-0.06
Unilateral changes to existing contracts or agreements	1.87	2.07	-0.20	1.53	1.27	0.26
Payments for expenses that are not related to product sale	1.93	1.67	0.26	2.07	1.93	0.14
Payments for loss or waste of already-delivered products	2.13	2.00	0.13	2.27	2.00	0.27
Buyers refuse to write down contracts or orders	1.57	1.60	-0.03	1.60	1.47	0.13
Misuse of confidential information	2.57	2.47	0.10	1.40	1.07	0.33
Buyers cut orders if suppliers try to exercise their rights	1.62	1.87	-0.25	2.13	1.60	0.53
Payments for examining complaints by final customers	2.14	1.93	0.21	1.20	1.13	0.07
Unpredictable costs that are not clearly stated in the contract	2.43	1.43	(*)1.00	2.20	2.13	0.07
Firms must comply with unnecessary quality standards	2.07	2.07	0.00	3.53	3.20	0.33
Orders are unpredictable and totally discretionary	1.79	1.87	-0.08	4.60	4.53	0.07

(*) the difference is statistically significant at 90% confidence level.

Table 17-1 compares the mean value of middlemen's estimates of UTP occurrence at the industry level (from Table 14-16) and firm level (Figure 14-2). The figures in the table report the average score on a 5-point Likert scale. The average scores at the industry and firm levels are significantly different at the 90% confidence level in only one case (grey practices in the APK netchain). All other differences are not statistically significant. The

results support the conclusion that middlemen's estimates of UTP occurrence at the industry level are a possible proxy for actual occurrence at the firm level.[24]

17.1.4 Implementing a UTP monitoring system

The trial investigation of the EU fresh fruit industry provided a clear analysis of the strengths and weakness of IDEA and B-SEA. We conclude that although each approach has limitations, there are important complementarities that can be exploited for the design of an efficient monitoring system. Figure 17-1 illustrates the organisation.

The system is based on the integration of the two approaches. B-SEA provides a general assessment of occurrence, impact and pass-through over time.

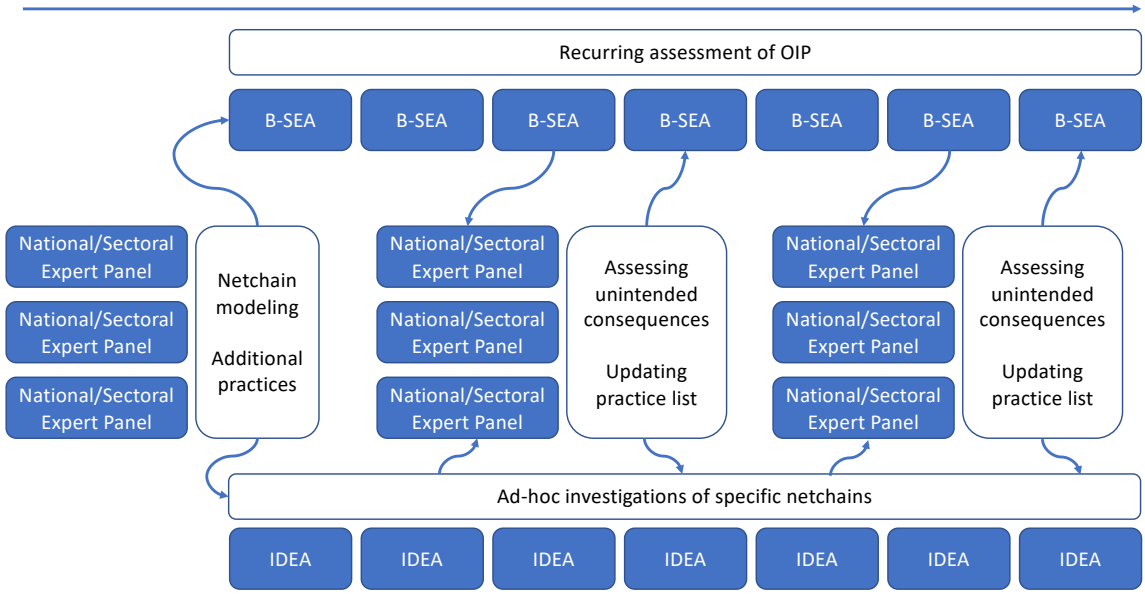
In this setting, B-SEA consists in a large sample survey of farmers, middlemen, processors and retailers across sectors and Member States. A key characteristic of B-SEA is consistency over time, so that time trends can be identified. IDEA is structured as a set of ad-hoc investigations of specific netchains. It is used to define a complete list of UTPs and assess the consequences of regulation. The results of IDEA can be used to update B-SEA questionnaires.

Expert panels are in charge of the calibration of B-SEA and IDEA. In addition to the typical IDEA tasks (chapter 6), expert panels can be used to validate the B-SEA questionnaires. Recurring expert panels can identify the emergence of new UTPs, assess possible unintended consequences and propose updating of survey questionnaires.

The combined monitoring system is designed to provide intelligible, flexible and complete information to stakeholders and policymakers. The assessment of policy effectiveness is based on the analysis of B-SEA time trends, ad-hoc IDEA studies and the evaluation of unintended consequences by expert panels.

[24] We acknowledge that the robustness of the conclusion is limited given the small sample size. It must be noted that the sign of the difference between the two indicators is positive in 80% of cases. This result suggests that – although the differences regarding individual practices are not statistically significant – industry level estimates might overestimate occurrence compared to firm level estimates. A systematic upward bias might be consistent with a partial correction for fear factor and self-representation bias in industry level estimates. However, the issue needs further investigation because the available data are not sufficient for drawing general conclusions.

Figure 17-1: Complementarities of IDEA and B-SEA



17.2 Implementation of Directive 2019/633 by Member States

An EU Directive is a legislative act setting forth a goal that all EU Member States must achieve. It is left to the individual Member States to devise their own regulation on how to reach these goals. The goal of Directive 2019/633 is "[…] laying down of a minimum Union standard of protection by harmonising Member States' diverging measures relating to unfair trading practices, […]" and supporting Member States in tasks that are better achieved at the Union level (Consideration 44 of the Directive). Member States must adopt all necessary changes to their existing national regulation by May 1, 2021 (Article 13). The national implementation can be complicated because the Directive interacts with heterogeneous regulations and different degrees of protection. The EU regulator recommend strong cooperation among enforcement authorities in order to overcome such difficulties (Article 8).

Our investigation provides insights that can support the implementation of the Directive by Member States. In particular, we focused our attention on two main issues: the definition of UTPs in addition to the list provided by the Directive and the design of the enforcement system.

17.2.1 Additional UTPs in Member State regulations

The ban of the 16 practices in Directive 2019/633 is a minimum degree of protection for all firms in the food supply chains. Member States can include restrictions on additional practices in their national regulations, if it will support fairer organisation of the food system. Our research supports a flexible system allowing differences across Member States. Our comparison of the German, Italian and Slovak netchains found non-negligible

differences in organisation and governance between countries and across products. Imposing one Member State's additional UTPs on another Member State might result in sub-optimal regulation. There is a consensus among scholars and policymakers (e.g., Falkowski et al. 2017) that the inclusion of a practice in the UTP national list requires careful consideration. Banning trading practices might result in unintended effects, including efficiency loss and trade distortion. The economic model in chapter 12 and the semi-structured interviews in chapter 13 confirm this conclusion. Implementation of the Directive by Member States requires a detailed analysis. The IDEA approach is suited to this task, providing the necessary economic background for informed design.

Our implementation of IDEA found that UTPs can be netchain-specific. Because of differences in product characteristics and governance, there might be remarkable heterogeneity in the trading practices adopted by different sectors. Furthermore, because of UTP interdependence, similar practices might have different impacts or different degrees of fairness, depending on the sector.

Our results suggest that a sectoral approach be considered in Member States' implementations. In fact, the EU Directive proposes a minimum degree of protection. Such an approach minimises the risk of overregulation because it focuses on the minimum set of UTPs. If Member States want to expand protections by increasing the number of regulated practices, the risk of efficiency-reducing overregulation increases. Because UTPs are heterogeneous with respect to sectors, it is possible that extensive protection of all farmers in all sectors may result in a ban of a large number of practices. As a consequence, firms might face regulatory constraints for practices that operators in other sectors consider unfair.[25] Sector-specific additional regulation might be considered by Member States to attenuate possible overregulation if additional UTPs are added.

17.2.2 Coordination of enforcement

Directive 2019/633 explicitly considers the risk that differences among Member States in how they implement UTP regulation might undermine the Single Market. A strong protection in a Member State might distort trade, favouring leading firms operating under a different and more tolerant regulation in another Member State. For this reason, the Directive asks for cooperation among national enforcement authorities regarding cross-border cases, sharing of best practices and implementing measures they have adopted (Article 8). The enforcement authorities may adopt recommendations in order to encourage consistent application of the Directive and improve enforcement. Our research supports this approach. We conclude that differences in implementation and enforcement may lead to very different degrees of protection.

[25] IDEA results in Part IV offer a clear example of this risk. Expert panels, interviews and sample surveys confirm that imposing unnecessary production standards is a possible specific UTP in the fruit industry. However, this might not be the same in other sectors such as cereals. Banning the practice in all sectors might result in unnecessary regulation of netchains that do not suffer from the problem. Retailers and middlemen in these netchains might be required to prove that standards are necessary, even if there was no evidence of unfair behaviour.

These differences are not limited to the number and type of banned UTPs or to the power of initiative of the enforcing authority (*ex-officio* vs. on a complaint). Instead, they can concern the general principles of the national law. In section 12.7.1 we found that the adoption of a strict vs extensive interpretation of a contract may lead to remarkable differences in the degree of protection for weak firms. If the legal system considers only the formal yearly contract, several practices are admissible. If the overall, long-term economic trade relationship is considered, the same practices are banned as UTPs. Differences among Members States regarding these general principles are difficult to address, because they have an impact that goes beyond the UTP problem. Coordination of enforcement authorities may not be sufficient in these cases.

Effective enforcement requires harmonisation of the legal frameworks of Member States. In this perspective, coordination during the adoption period would be highly advisable.

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