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Food e-commerce and the subscription box model: an exploratory survey on a sample of Italian consumers

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To my beloved grandparents, Nerio and Elvira,

and to my family,

who have always believed in me even when I did not believe enough myself

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Without you, none of this would have been possible.

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Introduction

Over the past decade, there has been a continuous and abrupt change in consumers' purchasing behaviors and consumption habits, and even in the channels used for their shopping. As a result, for some time now, the retail landscape has been evolving at a rather fast pace due to the transformations brought about by technological innovations, as well as in business models, which mirror these relevant changes. The unexpected and disruptive advent of the Covid-19 pandemic has certainly been a major contributor. In Italy, the process of approaching and adopting the online channel for shopping in different product categories, including food, has been substantially driven and imposed by the pandemic, especially among those consumers who were still resisting the benefits brought by the Internet. The Covid-19 pandemic has disrupted many paradigms, thereby altering the way people live, buy and consume food and thus the way businesses operate as well. Some sectors have undoubtedly suffered, while others have proved to be undisputed protagonists of unprecedented growth, foremost among them food e-commerce (B2c eCommerce Observatory, 2022). For this reason, companies cannot overlook this and have therefore been called upon to both adapt and act accordingly. Along these lines, in recent years the food subscription box model has also started to take hold in Italy: this trend, which was born and developed in the United States, deals with a subscription to a food box that is delivered on a regular basis to the consumer upon payment of a recurring fee. There are several types depending on one's dietary requirements: ranging from a box of fresh fruits and vegetables coming from local producers to one that allows consumers to have all the right pre-portioned ingredients to help them recreate an elaborate dish at home; or even a box filled with tailor-made healthy ready-to-eat meals in order to meet people's nutritional needs and stay fit. Hence, this service enables one to combine the benefits of online shopping such as convenience and access to a wider variety of goods with a subscription to food products that are typically consumed on a frequent basis. Moreover, at the same time, more and more businesses delivering these boxes have been leveraging issues that have become, most notably in recent times, of deep interest and awareness to many Italian consumers such as health, environmental sustainability, and food waste reduction. In addition to shopping channels, with the pandemic consumers have also changed the drivers of their purchasing decisions: nowadays Italian consumers pay close attention to and base their food choices on values such as quality, well-being, and environmental protection.

While plenty of research has been conducted on e-commerce and more recently also on food e-commerce, to date, there are very few studies in the literature investigating the food subscription box model, and those few existing studies mainly concern the U.S. meal kit market.

The present work aims at examining the development and spread of food subscription boxes at the Italian level and to illustrate their potential as well as the motivations that drive or could drive consumers to opt for this subscription service.

The dissertation begins with an introductory chapter that focuses on the digital transformation process and the level of digitalization of Italian firms in the pre- and post-pandemic scenario. As e-commerce is profoundly interconnected with the Internet, its evolution will increasingly keep pace with new digital technologies. Consequently, only a business that is digitally transformed in all its processes will have an e-commerce that will work effectively over time.

In this regard, the second chapter delves into e-commerce through a theoretical presentation of the different types, its main characteristics, advantages, and disadvantages for both users and firms operating in this sector. The second part of this chapter, instead, describes the state of the art of e-commerce in Italy in order to provide an up-to-date snapshot of the situation in our country.

Next, the third chapter digs into online food shopping, with a specific focus on our country: the various segments that make up food e-commerce are discussed in detail and how they have been leading exponential growth during lockdown periods and after. Research data from Politecnico di Milano's B2C E-commerce Observatory are used to support this. Then, in the fourth chapter, emphasis is placed on the central topic of the thesis, namely subscription boxes, with an in-depth look at those related to food products. Based on the extant literature on the topic, especially by drawing on the research carried out by Bischof & Rudolph (2021), we first analyze subscription boxes as a whole and within the different sectors in which they are employed, to then concentrate on food subscription boxes. Specifically, the four most popular types of food subscription boxes in Italy will be presented as well as some of the best-known providers.

Since few studies have been conducted so far at the international level to assess the level of consumer awareness, perceptions, and motivations for subscribing to food boxes, there is still a gap in the literature that is even bigger when it comes to the Italian territory, given the novelty and recent spread of this business model. To this end, the last chapter deals with empirical research to investigate the degree of awareness of food subscription boxes in Italy, as well as to identify the motivations that might drive consumers' adoption. Also, the aim is to try to understand consumers' perceptions of food subscription boxes and their willingness to buy them. More precisely, this is an exploratory study focused on data collected through a survey that was designed and adapted on the basis of existing literature and submitted to a sample of Italian consumers aged 18 and older.

FIRST CHAPTER

The digital transformation of Italian firms pre- and post- COVID-19 pandemic

The aim of this introductory chapter is to have an overview of the sector that will be analyzed next, that is e-commerce. The Covid-19 pandemic has altered many paradigms, thus penalizing some industries and reinforcing others, including e-commerce. Therefore, the online presence has definitely become a prerequisite given the reality that we are still going through.

Since e-commerce is profoundly intertwined with the Internet, its evolution will always go hand in hand with the new digital technologies. That is why it is desirable to first get an idea of digital transformation and the level of digitalization of Italian companies by analyzing the pre- and post-pandemic scenario.

Indeed, the more an enterprise is digitally transformed in all its processes (the so-called "*digital transformation in toto*"), the more its e-commerce will work over time. On the other hand, if a company thinks of adopting e-commerce without also being transformed upstream and downstream, i.e. in the warehouse as well as in the logistics phase, it will struggle to manage a successful e-commerce, because it will reach a point where it will have to put digital processes alongside manual processes. Hence, either the whole system is digitally controlled or, even if there is demand, it will be very difficult for its e-commerce to explode.

1.1. Defining digital transformation and its implications

When we talk about a firm's digital transformation, it would be too reductive to only refer to the implementation of new technologies, as it is inherently a multifaceted and diffused process which is much more complex and broader, that spans the entire firm, thus involving changes in strategy, organizational structure, information technology, supply chain, marketing and so on (Vial, 2019).

The concept of digital transformation (DT) currently lacks a univocal definition. As a result, there are multiple frameworks and sets of definitions that have been proposed (Vial, 2019), converging towards a common opinion that considers digital transformation as a significant change in the basic pattern of how organizations create value. Nonetheless, researchers usually depict digital transformation as "*a major organizational change driven by, built on, or enabled by digital technology, altering how business is conducted*" (Osmundsen et al., 2018). According to Osmundsen et al. (2018), because of the links it has with digitization and digital innovation, we could also say that digital transformation occurs *"when digitalization or digital innovation over time is applied to enable major changes to how business is conducted, leading to a significant transformation of an organization or an entire industry"*. Moreover, it is worth mentioning the definition of DT proposed by Vial (2019): DT is *"a process that aims at improving an entity by triggering significant changes to its properties through combinations of information, computing, communication, and connectivity technologies"*. Starting from this, we can see how digital technologies play a central role in creating and contributing to the disruption that occurs at the society and industry level. Therefore, we are dealing with a process of transforming communications, business functions, and business models into digital through the use of digital technologies and data. Going digital for companies means moving away from traditional business models, often referred to as "analog", in order to simplify and streamline all workflows through the automation of activities and procedures of any business unit, from production to distribution, from accounting to marketing and sales, etc. (Vial, 2019). In an interview, Stefan Stroh, CDO of Deutsche Bahn, emphasized how digital transformation demand upgrading core products and current processes, thus developing new business models, while at the same time enriching new digital capabilities, including data used to improve products and processes, IT infrastructure and how people work inside the company and with partners (Hinterhuber et al., 2021). Conversely, Gianfranco Chimirri, HR Communication Director of Unilever Italy, claims that even though the technology is an integral part of the company's digital revolution, other significant factors must be taken into account, namely a new business model, a new set of capabilities, and a new cultural mindset in order to succeed in the digital transformation (Hinterhuber et al., 2021). Since digital technologies are revolutionizing the world, meaning the way we live, work, and communicate with each other, they were and still are the protagonists of this novel

context and so the organization's business model and its culture must change accordingly.
Digital transformation and the resulting development of an innovative business model that is coherent and appropriate to the transformations taking place at a corporate level has deeply changed customers' expectations and behaviors, thereby also putting strong pressure on those companies operating in industries that are known for being traditional, such as Food & Beverage and Fashion. Today customers increasingly have access to several media channels and actively interact with enterprises and other consumers through a rapidly growing number of touchpoints, most of which are now digital (Lemon & Verhoef, 2016). Meanwhile, at the enterprise level, many traditional businesses have found themselves in great difficulty and pressured by fast-growing and innovative new entrants. As a consequence, digital transformation turns out to be decisive for incumbents. In pursuit of digital transformation, incumbent firms will face challenges and obstacles when looking for and implementing new business models, as they are often forced to deal with conflicts and trade-offs between current and new ways of doing business (Verhoef et al., 2021). However, even these companies are not starting their digital transformation journey from scratch, as the majority of them have been forced to somehow keep up with this rapidly evolving digital world by providing interactive and user-friendly websites to improve customer experience. Similarly, they are also creating basic operating capabilities such as online channels or digital supply chain tracking (Berman, 2012).
In today's business landscape, managers are finding themselves more and more confronted with the rise of new digital technologies. According to Vial (2019), technologies are considered sources of disruption that have a strong impact on modifying consumer behavior and expectations**.** Additionally, they also allow firms to generate huge amounts of data which can be exploited to their own advantage or, in some cases, even be sold to third parties (Loebbecke & Picot, 2015) as a way to perform processes more efficiently and better answer their customers' needs and preferences.
With this in mind, the introduction and the use of new digital technologies are both requirements for digital transformation but are not enough for business success. It is necessary to combine the use of digital technologies with data, thus creating a new way of working for the firm. Consequently, managers in traditional businesses should not perceive the shift to digital as a guarantee of the company's satisfactory outcomes. As

already said, digital transformation is a multifaceted phenomenon that does not involve only technology (Hinterhuber et al., 2021).

1.2. Why digital transformation is necessary for firms

As firms' environments are becoming unstable to an increasing extent, an organizational transformation turns out to be required to take advantage of the opportunities provided by digital technologies (Hartl & Hess, 2017). As a consequence, many businesses seem to have grasped the urgency to remodel their organization in order to stay competitive and keep up with the digital development in their industry (Osmundsen et al., 2018). This transformation is driven by the people who adopt these technologies, but there is no "one size fits all" way of transforming, since this depends on the company (its size, its organization, and relationships with customers and partners), on the industry in which it operates and the specific point in time in which it decides to start the transformation process (Hinterhuber et al., 2021). In this regard, in spite of differences in industry and company size, Berghaus & Back (2017) have identified three common drivers of digital transformation, that is external or internal triggers for why firms undertake digital transformation.

- The importance of the World Wide Web and the implications its global adoption has brought about such as the emergence of several technologies to support it e.g., broadband internet, Web 2.0, SEO, and online payment systems, which have substantially contributed to the growth of e-commerce.

- The ubiquity of big data and the introduction of new digital technologies, namely Artificial Intelligence (AI), Internet of Things (IoT), blockchain, and robotics have resulted in a far-reaching and strong impact on companies (Chen et al., 2012). While probably not all of these technologies will have such a disruptive and powerful impact as one would expect, their widespread adoption implies that organizations have no alternative but to digitally transform themselves. In addition, due to these new technologies, competition is undergoing a dramatic change (Osmundsen et al., 2018).

- Changing customer behaviors often trigger digital transformation too. There is clear evidence that consumers are changing their shopping behaviors by shifting towards shopping in online stores, and therefore, digital touchpoints play a pivotal role in the customer journey (Verhoef et al., 2021). Lamberton & Stephen (2016) and Verhoef et al. (2017) remark that thanks to new research tools and the help of social media, consumers today have become more connected, empowered, knowledgeable, and digitally active. Indeed, digital technologies enable consumers to contribute to value creation by designing and asking for product customization and by helping other consumers by sharing product reviews (Verhoef et al., 2021).

In summary, digital transformation is a phenomenon that encompasses the whole company with broad organizational implications in which the employment of digital technologies disruptively alters the current business model of the firm (Iansiti & Lakhani, 2014). So, firms need to examine and implement business model innovation in order to pursue digital transformation (Verhoef et al., 2021).

1.3. The success factors to achieve digital transformation

Recent research has helped to increase our understanding of DT and has shown how technology itself is just a critical part of a much more intricate puzzle that must be solved in some way by organizations to remain competitive in an increasingly digital world (Vial, 2019). Along these lines, Osmundsen et al. (2018) have outlined a number of elements that companies need to pay attention to in order to achieve a successful digital transformation. Here we have decided to examine the most significant ones:

- Supportive organizational culture
- Well-managed transformation activities
- Engaging managers and employees
- Identifying a digital business strategy

Digital transformation works very well in those organizations in which leaders focus on changing the mindset of their members as well as the organizational culture and processes before deciding what digital technologies to use and how to use them. The company's organizational culture is relevant because it can have an impact on the process and result of a DT (Mueller & Renken, 2017). Hence, supportive culture is key to a successful digital transformation in which the major organizational values are openness to change and customer centrality (Osmundsen et al., 2018). In this regard, a groundbreaking example is provided by the Unilever case study: Stefano Chimirri from Unilever acknowledged that technology is just an enabler of digital transformation since the latter without a strategy does not perform well, but is required in order to support the firm's strategy. Both technology and people are at the heart of a company's digital transformation, but without a shift in people's attitudes and organizational culture, digital technologies would continue to be just a tool (Hinterhuber et al., 2021).

On the other hand, Berghaus and Back (2017) give evidence that there is no "one size fits all" approach to digital transformation and that the situational context of the organization should be considered for adopting the most appropriate approach (Osmundsen et al., 2018). Since the process of digital transformation is by nature uncertain, an agile organization is a must as well as the adoption of a flat organizational structure: changes need to be made provisionally and then adjusted, decisions need to be made quickly, and all the employees need to get involved. In recent years, companies have learned that when employees perceive that the digital transformation could threaten their jobs, they may resist the changes, thus provoking fatal mistakes in the digital economy. So, firms need to adapt and make timely changes to remain competitive (Paul et al., 2020) as people within the organization influence the process and the outcome of the transformation. For employees to embrace the change and adopt new technologies, managers have to make them an active part of it (Osmundsen et al., 2018). The vision for DT needs to be expressed throughout the entire organization. In fact, based on Kotter's (1996) eight-step change management process, once a vision for change is developed, leaders need to constantly and powerfully convey the message which must be embedded in everything they do (Paul et al., 2020)**.** This means that a company's digital transformation should be first guided by the broader business strategy before investing in anything else. The firm must align the changes with its strategies, and it is also extremely important to develop a digital business strategy, which is an organizational strategy that is developed and executed by leveraging digital resources to create differential value (Osmundsen et al., 2018).

1.4. The digital transformation of Italian firms and the Covid-19 crisis

The digital transition has been an ongoing phenomenon for several years. There are many examples of businesses that have undertaken a digitalization path, and the Covid-19 pandemic has certainly been a booster for companies in their digital transformation.

With regard to the Italian context, firms have found themselves dealing with digitalization as a necessary condition to be able to survive in a situation that, at least at the beginning, took everyone by surprise and made no exceptions. Many companies, following the provisions issued by the government, were forced to shut down their physical offices with the only possibility of continuing the work activities of their employees through the option of remote working. It is precisely in this instance that technology and innovation have proved to be valuable and essential resources for managing the crisis, thus attempting to limit its devastating consequences. In fact, the use of digital tools has been fundamental as it has made it possible to guarantee business continuity despite the new constraints and regulations imposed. So, companies had to take into account the great opportunity offered by digitalization, adapting to the new scenario in which they suddenly ended up. In this last period, we have heard so much about business digitalization, like never before, and the consciousness of the importance of digital transformation has also been growing. The value and key to the success of technology is the fact that it can eliminate distances and make everything easier and more immediate. But unfortunately the level of digitalization of companies, in some countries more than others, is still quite low and there are still many barriers.

From the Istat 2021 Annual Report (2021) it can be noted that, since March 2020 which marked the advent of Covid-19 in Italy, the Italian productive system has heavily suffered the economic impact of the health crisis. The ability of firms to react to the severe economic crisis depended on structural factors, strategic orientations, and the degree of competitiveness of companies achieved in the pre-crisis period. The crisis has highlighted widespread structural weaknesses, which need to be taken into consideration as they can influence companies' resilience and ability to recover. What also stands out is the predominant part played by the investment strategies implemented before the crisis, notably in human capital and digitalization. The health emergency has definitely led to a rapid evolution in the digital transformation of businesses. Thanks to their fast uptake and development, the digital technologies adopted in the last year have become a strategic and valuable asset for businesses' activities.

The level of digitalization of Italian companies with at least 10 employees is not homogeneous compared to the EU27 and the other main European competitors, with some weaknesses and areas in which the adoption of technologies is now relatively more extensive thanks to the policies as well. For instance, the use of cloud services, boosted in all countries by the health crisis, has made them an essential tool for sharing data and using applications from places other than work. In Italy, the growth of business users has been remarkable, going from 23 to 59 percent for all cloud services and from 11 to 32 percent for advanced services (Istat, 2021). Italian firms are also advanced in the use of IoT, at the heart of the incentives in the Industry 4.0 plan, i.e. remotely controlled interconnected systems and devices, and maintain a position in line with the European average in the use of certain artificial intelligence tools and robotics. Instead, they are lagging behind in terms of e-commerce activity, with 12% of firms having made online sales equal to at least 1% of their turnover in 2019 (a third less than the average level for the EU27). The use of Big Data for the analysis of large volumes of data in order to extract useful information for business activities is not very widespread either. However, it is underlined that the gap in our country in the spread (and the volume of turnover) of e-commerce more recently has been reducing, mainly as a result of the great acceleration determined by the pandemic.

In the pre-Covid-19 era (between 2018 and 2019), the Italian Institute of Statistics (Istat) reported on how firms were addressing the digitalization challenge (Istat, 2020). More specifically, with regards to those companies with at least 10 employees, the level of pre-covid digitalization looked quite differentiated: 22.5% of companies were defined as "not digitized" as they said they had not made any kind of investment in digital technologies; 22.2% were defined as "asystematic" because they had equipped themselves with basic infrastructure (PC, Internet connection, etc.) and at least one management software. Instead, 35.2% were "constructive" firms that also made use of some advanced applications, such as mobile Internet connection, and had planned

investments in IT security. Then, 17.1% fell into the "experimenters", with advanced applications of digital in several business processes and the use of big data. Yet it should be noted that only a very small percentage of 3.0% were "digitally mature" firms, characterized by digital technologies applied to all business processes.
Considering the different strategies put in place to cope with the crisis, at the end of 2020, greater responsiveness of the most structured companies was confirmed. In fact, only 4.1% of digitally mature enterprises had to face a downsizing of activities, compared to more than double the shares of enterprises in the other categories (Istat, 2021). Among the latter, "asystematic" and "constructive" firms, i.e. those that had already embarked on a process of digital transformation, have to some extent been negatively affected more by the crisis than "not digitized" companies (11.4% and 11.9% respectively engaged in downsizing, compared to 10.9% of "not digitized" companies)(Istat, 2021).

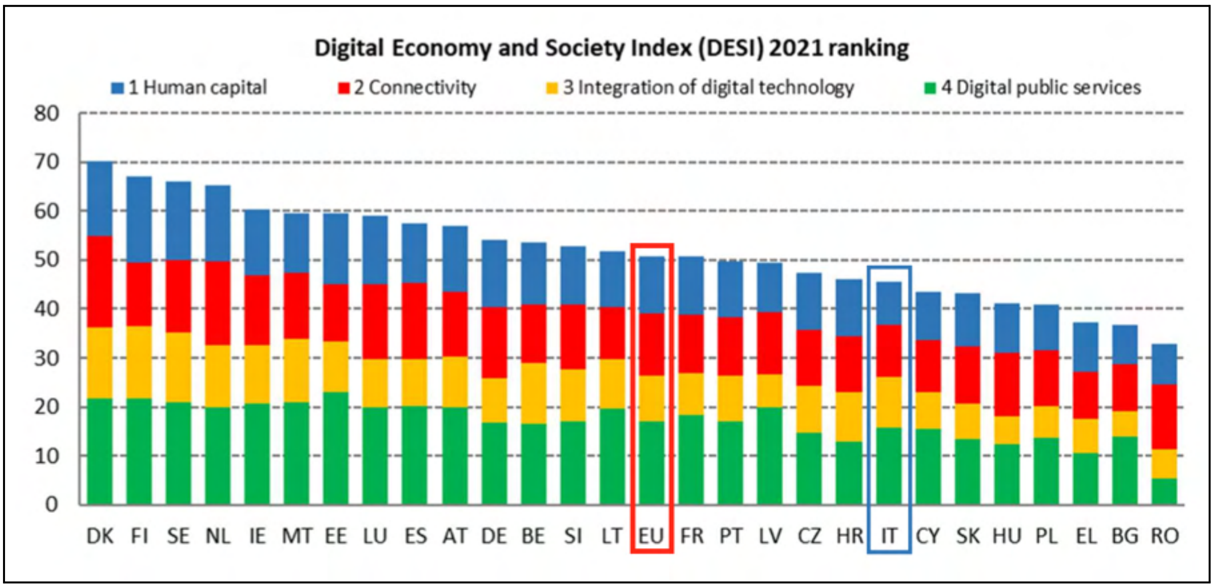

Figure 1.1: Digital Economy and Society Index (DESI) 2021 ranking (European Commission, 2021)

In this regard, the backward state of Italian enterprises at the digital level is also mirrored in the synthetic index called DESI. The Digital Economy and Society Index (DESI) is a tool used by the European Commission every year since 2014 to measure digital progress and monitor the digital performance of EU member states in digital connectivity, digital skills, online activity, and digital public services (European Commission, 2021) and the impact of national policies.

At the European level, all EU member states advanced in digitalization in 2020, but the overall picture of member states is heterogeneous and the gap between countries remains large. The top positions of the ranking are Denmark, Finland, and Sweden, whereas the last positions are held by Greece, Bulgaria, and Romania. In contrast, Italy moved up a few positions from 25th to 20th place (European Commission, 2021), as it has made some progress in the digital sphere, especially in terms of connectivity and network coverage and uptake, but still remains well below the European average in terms of human capital, which is an area in which our country ranks third to last in Europe. So, there is still a serious delay in digital skills (both basic and advanced) that could exclude part of the population from having access to digital services and limit companies' innovative capacity. In addition, the percentage of ICT specialists is very low, at 3.6% of total employment, still lower than the EU average of 4.3%. However, the data do not take into account the effect of the pandemic on the use and supply of digital services, nor the results of policies that have been put in place in the meantime, such as the National Recovery and Resilience Plan (RRP)[1], which will be more noticeable in the DESI 2022 edition. However, the situation is quite different with regard to the integration of digital technologies, where Italy ranks tenth, a figure that derives from a good level of digitalization of our firms, even among SMEs, especially in the face of the pandemic. Large companies continue to play a leading role in the use of digital technologies compared to SMEs, particularly in terms of electronic invoicing used by 95% of enterprises and cloud services used by 38% of them. In general, 80% of businesses with at least 10 employees still encounter difficulties in digitalization in some specific areas, so they are still at a low or very low level of ICT uptake (Istat, 2022). Nevertheless, 60.8% of businesses with at least 10 employees have a "basic" level of digitalization. Moreover, it is important to stress how the size of companies influences the introduction of these technologies: in the case of large firms, there is a combination of technologies adopted such as Internet connection, cloud, management software such as ERP and CRM, use of social media and IoT use (Istat, 2022). In fact, it is mainly those companies with at least 250 employees that take advantage of these smart technologies to help improve production and management efficiency (59.0% compared to only 30.5%

[1] The Italian Recovery and Resilience Plan (RRP) is the largest in the EU, accounting for a total value of approximately 191.5 billion euros. 25.1 % of this amount (about 48 billion euros) is devoted to digital transition (European Commission, 2021).

of those with less than 50 employees)(Istat, 2022). Anyways, Italy remains weak in the uptake of the most advanced digital technologies such as Big Data (used by 9% of Italian companies compared to an EU average of 14%), as well as the use of AI-based technologies (18% of Italian companies compared to an EU average of 25%)(European Commission, 2021). In 2020, enterprises with at least 10 employees that sold online continued to be limited, accounting for only 18.4%, which means that the diffusion of electronic commerce is also below the EU average (23%). Instead, companies with at least 250 employees are also more active in the e-commerce market (44.5%) than those with 10-49 employees (17.2%), albeit their propensity to sell online varies considerably depending on the industry (Istat, 2022). These data point to the fact that the current state of adoption of digital technologies is still far from the objectives of the digital decade.

Hence, it is clear to see how the use of technological solutions turned out to be the most immediate way to respond to an unexpected state of emergency, in a context in which e-commerce exploded in all countries during 2020. This has also happened in Italy, a country that had been lagging behind its European partners in this sector.

SECOND CHAPTER

Foundations of e-commerce

The following chapter is divided into two parts and deals with the basics of e-commerce in order to have a better understanding of this phenomenon and how it has evolved throughout the years. In the first part, we will explain what e-commerce is, also providing a classification of the different typologies, and its main advantages and disadvantages. Since e-commerce is an enabler of the omnichannel strategy, the different retail strategies that companies can adopt will also be covered, with an emphasis on the omnichannel approach and its benefits. Then, based on the extant literature, we will explore a number of variables that must be taken into account in order to have a successful e-commerce. Conversely, the second part of the chapter will be dedicated to the state of e-commerce by presenting the most recent data and figures available, with a specific focus on the Italian context as well as the latest e-commerce trends.

The scenario in which electronic commerce has been developing turns out to be highly complex and dynamic, and companies not only have to necessarily confront this but also all those elements that affect it. E-commerce can no longer be regarded by firms as an option, but rather it has become a requirement for them to survive in an increasingly competitive environment (Costa & Castro, 2021). Moreover, it needs to be underlined that e-commerce is not a mere transposition or extension of traditional business, but it is a different way of doing business, which therefore requires a completely different way of thinking and doing business (Foglio, 2010).

2.1. The birth of e-commerce: how it has evolved over time

E-commerce and the Internet are closely related, as the latter has strongly fueled its spread. But in reality, the electronic commerce was born before the development of the

World Wide Web: already in the early 1970s the EDI system, acronym for Electronic Data Interchange, made it possible for businesses to transfer information and commercial documents in electronic format (Foglio, 2010; Ghislandi, 2012). However, despite recognizing its great value, SMEs were often unable to sustain the high costs required for its implementation, in addition to the fact that the various configurations of the company's databases made data transmission neither simple nor direct. Starting from the late 80s more and more enterprises began to adopt the new technological innovations which, together with the emergence in the early 1990s of the World Wide Web, led to an increase in the number of users on these platforms (Foglio, 2010; Costa & Castro, 2021). Indeed, the years 1994 and 1995 marked the emergence of two e-commerce giants, Amazon and eBay, which over the years have driven e-commerce by seizing the opportunities and the potential of this sales channel before all other players. Next to Amazon and eBay, the Chinese Alibaba was founded in 1999.

Besides ensuring what EDI already allowed to do in B2B, the e-commerce offered by the Internet has made it possible for transactions to take place also between business and consumer (B2C), from public administration to business/single citizen (G2B or G2C) or from single individual to single individual (C2C). For this reason, the beginning of e-commerce as we know it today must be attributed to the advent of the Internet (Foglio, 2010; Ghislandi, 2012; Officine Sviluppo e Ricerca S.r.l, 2012). Nowadays, the world of e-commerce is also influenced by the growing use of smartphones and tablets that tend to shift the focus of e-commerce from websites to apps and social networks, thus encouraging the creation of new innovative business models in order to attract customers and sell their products. In fact, some of the latest trends dominating the market are mobile commerce[2] and social commerce[3] (Foglio, 2010; Ghislandi, 2012; Officine Sviluppo e Ricerca S.r.l, 2012). In addition, it is necessary to point out how e-commerce today plays a central role for businesses of all types and sizes, whose widespread popularity has been accelerated by the COVID-19 pandemic, not only at the Italian and European level, but also at the global level. This will be discussed in more detail in the second part of the chapter.

[2] Mobile commerce (m-commerce) refers to the sale of goods and services via mobile devices, such as smartphones and tablets. It is thus considered to be a part of e-commerce.

[3] Social commerce is a subset of electronic commerce that involves social media and online media. It deals with the user's ability to buy products and services through social media, while also sharing his/her shopping experience with other users.

2.2. Introduction to e-commerce

2.2.1. Towards a definition of e-commerce

It is not immediate to provide a univocal definition of the term e-commerce (or electronic commerce), since it is a phenomenon that has undergone a number of transformations over time and has evolved hand in hand with the spread of digital technologies and information systems. In general, e-commerce can be described as "*the set of electronic business transactions of products or services that are carried out online*" (Mirescu, 2010; Nemat, 2011; Shahjee, 2016). In the literature, there is still not a widely accepted definition but rather a number of different standpoints. Hence, we now report some interesting definitions taken from reliable sources:

- the Italian Ministry of Industry, Commerce and Handicraft
- the Organization for Economic Cooperation and Development (OECD)
- the European Commission

The definition provided by the Italian Ministry of Industry, Commerce and Handicraft is one of the most widely accepted. With Circular No. 3487/C issued on June 1, 2000, the Italian Ministry of Industry, Commerce and Handicrafts defines electronic commerce as *"the carrying out of commercial activities and transactions by electronic means which includes activities such as the marketing of goods and services by electronic means, the online distribution of digital content, the carrying out of financial and stock exchange transactions by electronic means, public contracts by electronic means and other public administration settlement procedures"* (Ministero dello Sviluppo Economico, 2000). According to the OECD, however, e-commerce encompasses *"all categories of transactions relating to commercial activities, including organizations and individuals, that rely on the processing and transmission of digitized data, including text, sound, and visual images. It also relates to commerce that takes place over open, non-proprietary networks such as the Internet, including related infrastructure"* (Coppel, 2000). At the regulatory level, the first definition of electronic commerce can be found in the Communication of the European Commission (1997) which defined it as "*the electronic* *processing and transmission of information, including text, sound, and images. Electronic commerce includes many different activities, such as buying and selling goods and services electronically, online delivery of digital content, electronic funds transfer, electronic stock trading, electronic bills of lading, commercial auctions, online supplier selection, direct consumer marketing, and after-sales support"* (Commission Of The European Communities, 1997; Coppel, 2000). Later on, the European Directive (2000) known as the "Electronic Commerce Directive" refined legal matters regarding electronic commerce in the internal market, such as commercial communications, contracts by electronic means, and the responsibilities of intermediaries (Official Journal of the European Communities, 2000).

These above-said definitions make us understand that describing the e-commerce phenomenon as mere buying and selling of goods through Internet-based channels appears limited and reductive. Although when we usually think of e-commerce in our minds this is almost always linked to online shopping via credit card, it is actually correct to expand this concept to include all electronic transactions that occur between an organization and a third party (Foglio, 2010).

2.2.2. Types of e-commerce

There are several types of electronic commerce that we can classify primarily based on two criteria:

- the parties involved in the commercial transaction
- the sales modality and the type of goods traded

On the basis of the parties involved in the commercial transaction

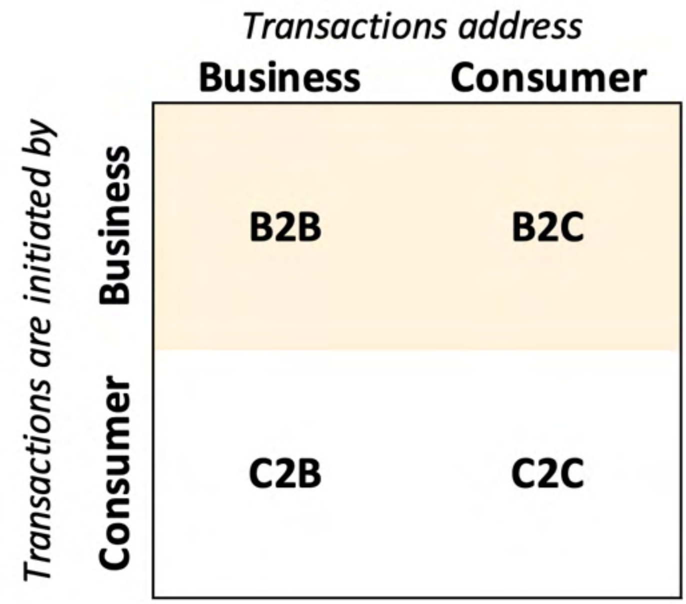

Figure 2.1: The most popular types of e-commerce based on the parties involved in the transaction (Author's own elaboration)

As Rania Nemat (2011) lists in her academic article, we can distinguish among several typologies of e-commerce (Foglio, 2010; Nemat, 2011; Officine Sviluppo e Ricerca S.r.l, 2012; Ghislandi, 2012; Nanehkaran, 2013; Shahjee, 2016):

Business to Business (B2B). It comprises the electronic transactions of goods and services that take place between a company and other companies. The term "*business-to-business*" was originally coined to describe the electronic commerce that takes place between businesses as opposed to business-to-consumer (B2C) which, in contrast, represents direct sales to end consumers. We should certainly recognize that EDI was the forerunner of B2B. But then, it was only with the Internet that e-commerce became an innovative and practical way of making network exchanges for businesses. The B2B allows firms to make direct transactions at lower costs, in real time without any intermediation, trying to customize the offer by meeting a specific need of the purchasing firm and improving the logistic aspects as well. Overall, the amount of transactions is much larger than the volume of B2C transactions, mainly because in a supply chain there are usually many B2B transactions involving raw materials or subcomponents and only one will be the B2C transaction of the finished product to the final consumer.

Business to Consumer (B2C). It works in exactly the same way as a traditional retail store and directly addresses the final consumer. It indicates those online business transactions concerning the sale of consumer goods (e.g. digital products, food, furniture, household appliances, etc.) and the provision of services by a company directly to end customers. Direct to Consumer sales is a possibility offered to all those manufacturing companies, both large and SMEs, as long as they have a website with their virtual store. Behind the B2C e-commerce there is first a good knowledge of consumers' needs in order to offer products that meet their preferences and requests. The e-commerce B2C favors more fast and convenient purchases in which prices can be adapted to the offer and to the moment. The product is mostly standardized, often already known by the consumer and therefore the focus is on the aspects that characterize the transaction itself. So, it is key to build an interactive and personalized relationship with the consumer by also making use of an intuitive website with clear information, which ought to be easy to use and equipped with pre- and post-sales services.

Consumer to Business (C2B). It is a particular form of e-commerce in which consumers (individuals) offer products and services to companies and choose and propose the price they are willing to pay for a certain good or service. It is then up to the companies to decide whether or not to accept the offer. This business model is the opposite of the traditional business model in which companies provide goods and services to consumers (B2C). This type of business transaction can be seen for instance in blogs or internet forums where the author links to an online business, thereby promoting the purchase of some products, and at the same time might receive affiliate revenue from a successful sale (Nemat, 2011; Ghislandi, 2012).

Consumer to Consumer (C2C). This type of e-commerce features online transactions of information, goods, and services between end consumers through the participation of a third party. In this case, many of these transactions take place through online auction websites that enable you to get in touch with a very large number of people. It is, in fact, the parties that determine how the transaction will be settled. Generally, the seller posts on the website the description of the item to be sold with the opening price of the auction. The product is sold to the user who has placed the highest bid at the close of the auction. The third party usually charges a flat fee or commission. It should be noted that the sites are only intermediaries and therefore are not involved in the actual transaction. A key example of C2C is eBay.

Furthermore, it is important to highlight that there are also other forms of electronic commerce involving public administration at different government levels, including federal, state, and local, namely Business to Government (B2G), Consumer to Government (C2G), Government to Business (G2B), Government to Consumer (G2C) and Government to Government (G2G). Nonetheless, here we prefer to only cite them and focus on those that primarily concern consumers and businesses instead.

On the basis of the sales modality and the type of the goods sold in the transaction

It is possible to identify two different types of electronic commerce (Foglio, 2010; Officine Sviluppo e Ricerca S.r.l, 2012; Cappellotto & Vietri, 2015):

- indirect e-commerce
- direct e-commerce

Indirect e-commerce (offline). The user navigates the website, examines and selects the tangible goods within an online catalog in which the product characteristics, price, delivery and payment methods are explained for each product. We call this a *"storefront model"* as it outlines a virtual store where customers can directly purchase a product or service by visiting the aisles of a physical store, but without going to a physical location, and then place an order. The product is ordered, shipped and delivered to the buyer. So, indirect e-commerce is all about those commercial transactions in which the ordering and payment phases take place online, while the shipping phase is handled physically. The material goods (such as electronics, furniture, clothes, food products, etc.) are delivered to the consumer at home or picked up exclusively by traditional means. Since the physical delivery of the purchased goods is expected, this type of e-commerce has many more considerations than the direct one, such as the need to have a warehouse where to store the goods and the need to meet supply and delivery times.

Direct e-commerce (online). In this case, the whole process happens online, i.e. every step of the transaction takes place through the Internet, so both the order, the payment and the delivery of intangible goods and services are managed entirely online. Hence, this type of e-commerce provides for complete dematerialization of the commercial transaction, being the purchased good virtual, intangible and immaterial or computer services provided via the Internet (e.g. software, music, images and e-books). Since these are not physical goods, they do not require shipment and not even a physical space where they can be stored, thus resulting in less operating costs. An example of direct e-commerce is the sale of e-books by Amazon or the Spotify music platform.

2.2.3. Advantages and disadvantages of e-commerce

Compared to the traditional sales channels, e-commerce offers both the enterprises and the customers a number of benefits (Anckar, 2003; Foglio, 2010; Shahjee, 2016; Cappellotto & Vietri, 2015). The most relevant ones are reported below.

Benefits for companies

Limited costs and investments

The advantages of e-commerce, even for those businesses that were born as brick-and-mortar stores, extend beyond the possibility of increasing turnover and expanding their customer base by reaching a global audience and not only a local one. Selling online also allows to reduce considerably the costs related to logistics and distribution as well as the costs of inventory management and warehouse that instead should be incurred in offline channels. This happens because it activates a process of disintermediation in which the end-user is quickly reached by establishing a direct channel and contact, thus reducing distribution costs. E-commerce profoundly changes the buying process: from a one-way, linear process, it becomes a multichannel process, made up of a set of interdependent and intertwined activities. In fact, the supply chain is shortened, thereby reducing the price of goods and affecting the price paid by the final consumer. In particular, the use of the Internet for e-commerce has been crucial for many small and new companies that have been able to undertake a business with limited investments and reduce the most significant costs. Other costs that are much lower with e-commerce than with traditional stores are personnel costs which are definitely reduced as well as building rental costs.

Global presence and elimination of barriers

Any company that undertakes e-commerce (large firm or SME) is projected into a global market, thus reaching even those places where it had not been able to export with the traditional business. The e-commerce website enables firms to sell to customers located anywhere in the world as long as they have an Internet connection, thereby eliminating any geographical barriers. Even the smallest and most remote areas can be easily reached through the Internet. In addition, even time barriers are removed because everything happens online in real time, quickly and efficiently, resulting in remarkable time savings.

Generating an enormous amount of useful data

With all the information provided by consumers and thanks to the technologies used to keep an eye on what users do when they are planning to buy online or how they move through the pages of the websites, e-commerce turns out to be very helpful for firms to know more about their target audience in terms of preferences, tastes and purchase choices. Underlying this is a large amount of data that users disseminate on the web every day. If data is used properly, it is an incredible resource for tracking and supporting consumers throughout their customer journey. This makes it easier to build customized data-driven marketing campaigns, whose message will be spread on a large scale in real time and will be appreciated by users as they see themselves addressed with ad hoc offers, messages and services.

Benefits for customers

Nonstop sales 24/7

E-commerce gives consumers immediate access to the website at all times 7 days a week with 24-hour availability, and no limits or time constraints. The ability to place an order anytime and from anywhere is the most valuable benefit of online shopping perceived by consumers in the research conducted by Anckar (2003).

Wide product range and time savings

Consumers can choose from a large selection of sellers and products, including those products that are harder to find. Moreover, another relevant aspect of online shopping is the speed of the search process and of the business transaction (Anckar, 2003).

More information and price comparison

Since consumers have access to a much wider and more diverse range of products with related information, reviews and prices, buying online also enables them to compare different products with each other in terms of features, functionality and price without necessarily having to go to one or more physical stores (Anckar, 2003).

We now move on to list some of the disadvantages of e-commerce for both consumers and businesses (Boateng, 2014; Franco & Regi, 2016; Išoraitė & Miniotienė, 2018).

Drawbacks for customers

There are some issues that may prevent consumers from completing the online transaction. The main reasons are outlined below.

Difficulty in assessing the quality level

On the Internet, it is almost impossible to be sure of the actual quality level of a tangible product and make sure that the product reflects the characteristics in terms of design, color, size, etc., unless the goods are from brands that are already known or have been purchased previously in traditional channels. Since users do not have the opportunity to physically see and touch the product live before purchasing it, they might give up buying at the very last moment. For this reason, before making a purchase it is necessary to make sure that the vendor has a return policy so that it is possible to return or exchange the item if it does not meet the customer's expectations and/or what is stated on the website.

Lack of personal interaction

While on the one hand e-commerce offers a wide range of products to choose from and detailed information, on the other hand, it significantly reduces or even completely eliminates the personal service, i.e. any type of face-to-face interaction with physical people, especially if you have doubts, questions or concerns to clarify. This aspect, instead, is the basis of the service of traditional commerce.

Privacy and the risk of lack of security

The biggest obstacle to the development of e-commerce, which is also the main barrier that has limited - at least in the beginning - its use in some countries, is the lack of trust of the public in the possibility of making secure transactions. Entering the credit card number on the Internet raises doubts and insecurities for many people, particularly because of the risk that it could get into the hands of third-party hackers (Anckar, 2003). In fact, consumers are often reluctant to provide their personal information online, as they want to be sure first about the protection of this data, the confidentiality of communications and the security of digital payments.

Delay in receiving the goods

Tangible products purchased online require a certain amount of shipping time in order to receive the product. Delivery may be delayed or even there is a probability that the order will be lost or delivered to the wrong address.

Drawbacks for companies

Investing in the extra knowledge and skills needed for e-commerce infrastructure

The company must ensure that it possesses or otherwise acquires (either directly or through outsourcing) a set of specific commercial, technological and logistical knowledge and skills, whose exploitation will enable it to achieve success through its ability to attract a large number of customers.

Need for an efficient logistics system

The infrastructure of an online business must be functional. Hence, it is essential to pay special attention to the implementation of an efficient logistics system for managing shipments, returns and the IT platform. This is an additional cost for the business, but it is necessary to ensure that all aspects of the transaction are managed correctly.

2.3. Evolution of retail strategies: towards a more omnichannel world

E-commerce firms must keep in mind a number of imperatives and trends that are dominating the e-commerce arena, among which is the adoption of an omnichannel retail strategy that needs to be embedded within an innovative business strategy. It is thus necessary to have an in-depth knowledge of the consumers and their behavior across the different channels. Customers are now mature and increasingly attentive and expect a more complete and personalized experience regardless of the channel used for the purchase. Following is an outline of how the retail landscape has evolved over the years.

The spread of the Internet and mobile technologies along with the radical digital transformation that has occurred over the past twenty years has dramatically altered the retail landscape. The online channel has become extremely attractive for consumers to both search for product information and purchase products (Pentina & Hasty, 2009). Also, it is clear that the rise of the Internet tends to increase the frequency at which consumers interact with retailers. In fact, the integration of physical sales channels with e-commerce allows to exploit the synergies that are created to offer a variety of services in both channels (Neslin et al., 2006; Aiolfi & Sabbadin, 2018). That is why many retailers have started developing multichannel and omnichannel strategies in order to have multiple touchpoints to continuously interact with customers (Verhoef et al., 2007). Retailers must take into account that new technologies influence consumers, especially the way they switch through different channels during the research and purchasing process. Today the omnichannel approach represents the new retail paradigm, which companies should aspire to in order to achieve a long-lasting competitive advantage (Aiolfi & Sabbadin, 2018; Rigby, 2011).

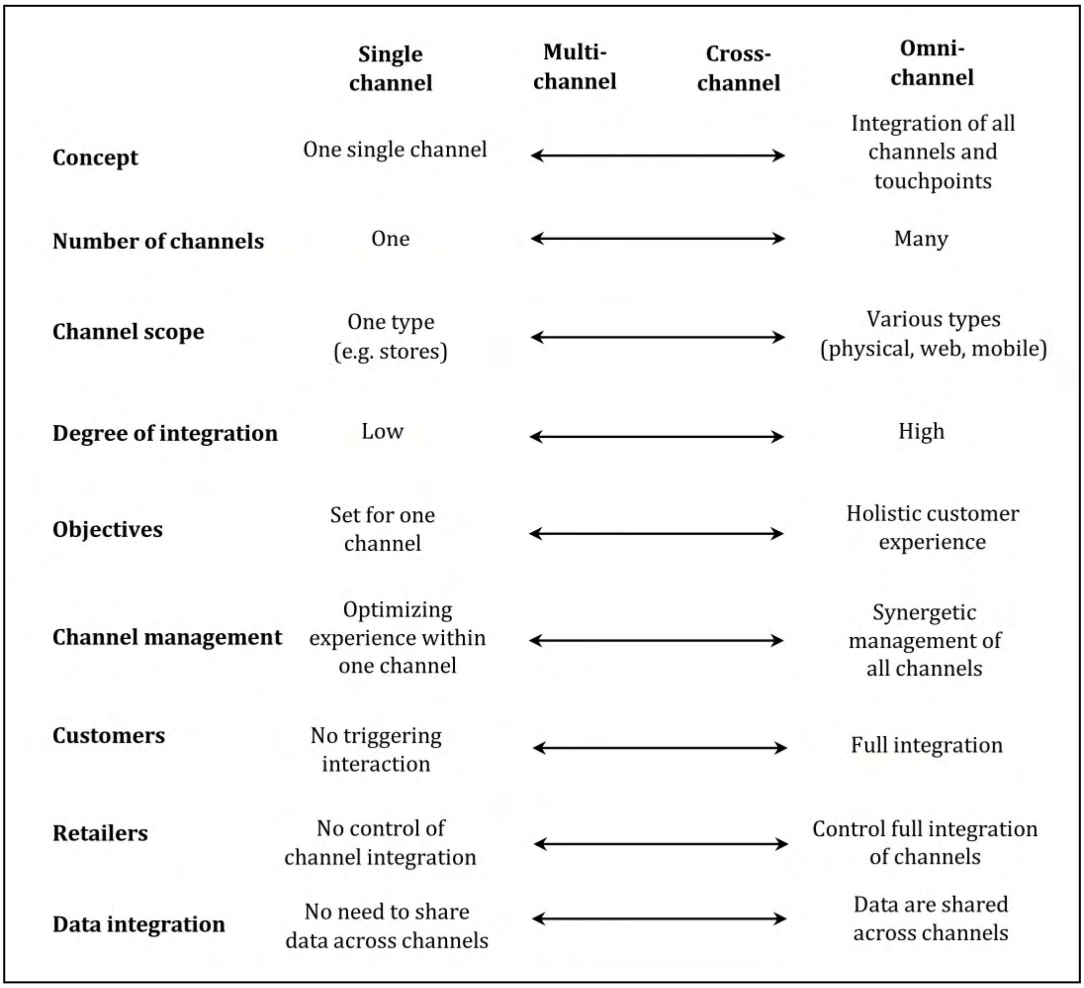

Figure 2.2: Main characteristics of single-channel, multichannel, crosschannel and omnichannel strategies (Hajdas et al., 2020)

In this regard we highlight what Brynjolfsson et al. stated in 2013: "*in the past, traditional physical stores were unmatched in allowing consumers to touch products and providing instant gratification. Online retailers are trying to make up for this by providing users with a broader variety of products at lower costs, as well as more insights into other people's experiences, such as product reviews and ratings. But as the retail environment moves toward an omnichannel approach, the distinctions between physical and online will increasingly blur and disappear*" (Aiolfi & Sabbadin, 2018).

The channel is a customer touchpoint, i.e. a physical or virtual interface by which the firm can connect with consumers. Previous research separately analyzed the brick-and-mortar channel and the online channel (Verhoef et al., 2007). However, in recent years the shopping experience has become increasingly multichannel, as individuals not only shop in physical stores, but more and more consumers have migrated to digital channels (McCormick et al., 2014). The literature asserted that while in the early stages of its development the online channel was managed separately and was only partially integrated with other business strategies, then with the disruption occurring in the retailing industry it has proven to be critical to retail (Rigby, 2011; Aiolfi & Sabbadin, 2018). As a result, over time companies that used to primarily rely on the brick-and-mortar model have realized the benefits that online sales could bring to their business, and have thus proposed e-commerce as an alternative or a complementary channel to their point of sale. This business model whereby companies take advantage of both the physical store and online channels to sell their products and services (the so-called "*click and mortar*" model) has become so well established that it has pushed companies to adopt strategies that promote greater integration between the online and physical channels. This is why today we no longer just talk about multichannel and cross channel strategies, but rather about omnichannel strategies (Brynjolfsson et al., 2013; Aiolfi & Sabbadin, 2018).

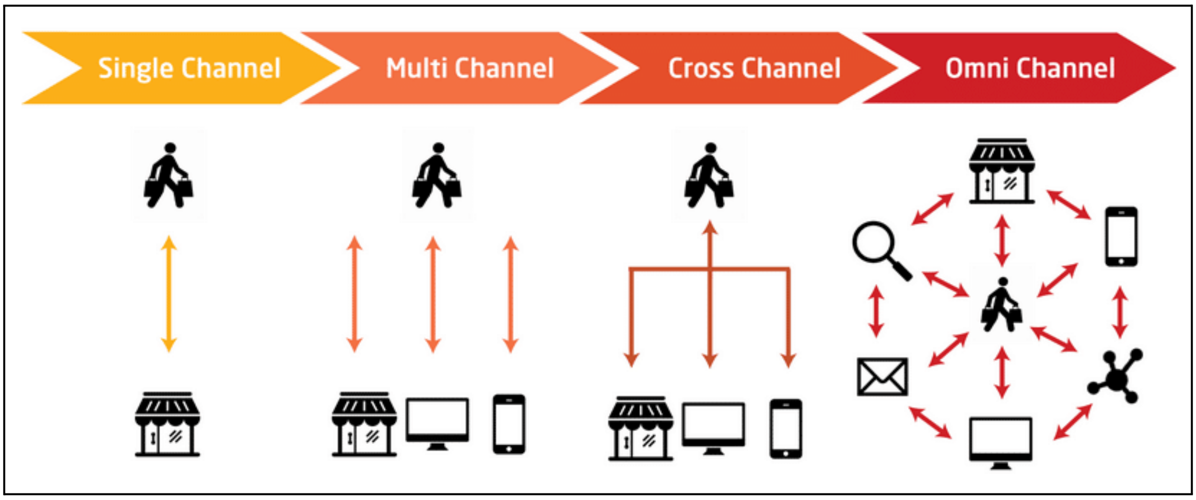

Figure 2.3: Illustration of the differences between single channel, multichannel, cross-channel and omnichannel approaches (Identic, 2017)

Before defining omnichannel as a retailing strategy to which many enterprises strive, there have been other phases whose developments and adaptations to the marketplace have led to the omnichannel approach. These approaches will be briefly described below in order to understand what has driven their evolution to omnichannel.

2.3.1. Single channel retailing

Not so long ago, companies were operating through a single channel to reach their customers: most often a brick-and-mortar store or alternatively the e-commerce website. This *"single channel"* approach implies that the consumer shopping experience is based on a single touchpoint. So, firms that decided to adopt this retailing strategy could only be either brick-and-mortar or pure-click (Hajdas et al., 2020).

2.3.2. Multichannel retailing

The multiplication of channels made it necessary for firms to focus on a multichannel strategy in order to manage this new environment effectively and efficiently (Rigby, 2011). We can conceptualize multichannel strategy as "*a set of activities associated with selling products or services to consumers through more than one channel"* (Trenz, 2015). Two possible multichannel growth strategies have been identified in the literature:

- clicks to bricks (Pauwels & Neslin, 2015; Rose et al., 2012): it means adding physical stores to the online channel. This has been the action undertaken by many firms called "*pure players*" who were initially present only online but then decided to open brick-and-mortar stores such as Amazon and Apple.
- bricks to clicks (Kumar et al., 2012): it has been adopted by traditional retailers that, upon realizing the revolution caused by the digital technologies and the benefits they have brought with them, have chosen to have an online presence, thus opening an e-commerce website too.

As a result, many retailers have found themselves opting for a multichannel solution to this new scenario. Then, the presence of many different touchpoints allows them to better meet the wants and needs of their various customers as well. However, it is paramount that there is consistency across the channels (Aiolfi & Sabbadin, 2018).

2.3.3. Cross-channel retailing

Retailing can also be classified as cross-channel when the retailer sells its products in different channels, but complementarily uses different touchpoints (online and offline) to interface with customers (Hajdas et al., 2020). Unlike the multichannel strategy, in cross-channel retailing the channels are not "competing" with each other, but instead are complementary, thereby guiding the shopper within the customer journey through multiple channels before making the purchase. Though the basic difference with omnichannel retailing is that cross-channel retailing does not necessarily require consumers to use different channels simultaneously, because the emphasis is on enabling them to begin the buying process in one channel and complete it in another one (Beck & Rygl, 2015; Aiolfi & Sabbadin, 2018). A classic example of cross-channel strategy is the *click-and-collect* method offered by many companies.

2.3.4. Omnichannel Retailing

The omnichannel strategy deals with the synergistic management of all touchpoints between the company and the customers through several online and offline channels which must be interconnected and fully integrated with each other (Rigby, 2011; Frazer & Stiehler, 2014). Indeed, the goal is to create an optimal experience with the brand that is seamless and totally consumer-centric. For instance, this allows customers to see the product in the store and then purchase it online, getting it directly to their doorstep, or to purchase it online and pick it up at the store. So, omnichannel retailing requires that there is an interconnection among the multiple touchpoints. On the contrary, in the multichannel approach data about a customer's online purchases, for example, are often not taken into account when the customer goes to a physical store (Beck & Rygl, 2015; Hajdas et al., 2020). This is because the company's channels are often managed and optimized independently, without a common information base. Thus, it is evident that the most straightforward distinction between the omnichannel approach and the multichannel one is that in the latter the touchpoints that individually work well are not managed in a synergistic and perfectly integrated way (Hajdas et al., 2020; Beck & Rygl, 2015; Aiolfi & Sabbadin, 2018). On the other hand, the cross-channel approach is different: it tries to fill this gap by connecting different channels, which thus become complementary to each other and are used to guide the user throughout the customer journey. An example is receiving an email after buying a product in the store with a discount coupon for an upcoming online or in-store purchase.

The omnichannel strategy seeks to focus more on the overall brand contact experience regardless of the channels used, building on a holistic view of the customer journey and letting customers use different channels simultaneously and interchangeably during the buying process (Herhausen et al., 2015; Lazaris & Vrechopoulos, 2014). Thus, it becomes increasingly complicated for firms to control the use of different channels. As a result, there are two opposite phenomena that emerge when buying in an omnichannel context:

- Showrooming is a specific form of research shopping in which a customer does the research primarily offline, and subsequently purchases the item online. Consumers often search for information in physical stores and, at the same time, also on their mobile devices to see where they can find the most attractive price (Gauri et al., 2021; Verhoef et al., 2007; Trenz, 2015; Gensler et al., 2017).
- Webrooming has been a popular phenomenon, especially in the past (Brynjolfsson et al., 2013), and consists of customers looking for products online and then purchasing them offline (Aiolfi & Sabbadin, 2018; Gauri et al., 2021).

Omnichannel retailing is able to blur the lines between electronic and physical channels, that is, between the in-store experience and the digital one (Trenz, 2015). This is made possible by a system of interconnection and exchange of data regarding information and behavior of consumers who interact with different channels. In the omnichannel world people are constantly connected to the online-offline marketplace wherever they are. Therefore, they are spurred to use different channels at the same time and have plenty of ways to more easily compare products, especially in terms of price and promotions (Brynjolfsson et al., 2013).

In a nutshell, the first step to achieve a long-term competitive advantage that helps firms to survive in a retailing landscape that is dominated by high competition and convergence between channels is through implementing an omnichannel strategy (Aiolfi & Sabbadin, 2018).

2.4. Customer experience and customer journey: an overview

For the past decade customer experience has been at the heart of both marketing research and practice since managers believe that creating and managing superior customer experience is vital to the firm's competitiveness (Verhoef et al., 2009). We have said that consumers today constantly interact with the firm through a myriad of touchpoints, both online and offline. This makes the customer journey more complex, in part because of the different channels and social media, as well as the opinions of peer customers, which in turn are likely to influence consumers' experiences (Verhoef & Lemon, 2016). As a consequence, it is becoming increasingly difficult for businesses to create and manage a favorable customer experience, as they have much less control over both the customer experience itself and the customer journey of each individual (Verhoef & Lemon, 2016; Bilgihan et al., 2016). In this regard, it is deemed appropriate to shed light on the concept of customer experience, with particular reference to the online customer experience.

2.4.1. Defining customer experience

A stream of academics and researchers (Bolton et al., 2014; Gentile et al., 2007; Lemke et al., 2011; Verhoef et al., 2009; Verhoef & Lemon, 2016) gave an influential definition of customer experience: "*the customer experience originates from a set of interactions between a customer and a product, a company, or a part of its organization, which triggers a reaction. Thus, the customer experience can be conceptualized as holistic in nature, composed of multiple interactions across touchpoints that incorporate the cognitive, emotional, affective, sensory, and social elements of the customer*" to a company's offerings throughout the customer's purchase journey (Bolton et al., 2018). In accordance with scholars, recent business practice has shown that customer experience is a multidimensional construct that "*includes every aspect of a company's offerings such as the quality of customer care, advertising, product and service characteristics, packaging, etc.*" (Meyer & Schwager, 2007). As a result, there are multiple

definitions of customer experience in the literature. Here we have decided to rely on the most quoted one which is provided by Verhoef & Lemon (2016).
Recent research has emphasized the importance of examining the customer journey to understand the customer experience. The customer experience is also built up through a multitude of touchpoints between the organization and the consumer through all the stages of the customer decision-making process or purchase journey (Puccinelli et al., 2009; Verhoef et al., 2009; Homburg et al., 2015). Therefore, it is clear that customer experience and customer journey are closely related concepts: as Verhoef & Lemon (2016) reiterate, the customer journey is the process that characterizes the interaction between consumer and company, which starts from the need for a product or service and ends with the purchase of the latter. The various stages of this *"journey"* that can take place both online and offline are called touchpoints. Over the years, however, the customer journey has evolved, mainly due to changes that have occurred in both consumer behavior and touchpoints (Verhoef & Lemon, 2016; Vakulenko et al., 2019; Hamilton & Price, 2019; Kuehnl et al., 2019). Moreover, creating a favorable customer experience is also linked to adopting the most effective retail strategies which we have already discussed in *paragraph 2.3 et seq*. (Gentile et al., 2007; Verhoef et al., 2009; Rose et al., 2012).
According to Verhoef & Lemon (2016), the customer journey is a dynamic and iterative path composed of three phases: pre-purchase, purchase and post-purchase (Puccinelli et al., 2009; Neslin et al., 2006; Verhoef & Lemon, 2016). The following briefly outlines these three phases:

- Pre-purchase: this is the first stage that includes all aspects of the consumer's interaction with the brand, in other words, it encompasses the entire consumer experience before the purchase takes place, from the moment the consumer recognizes his need, takes it into consideration and starts his research.
- Purchase: this second phase includes all the interactions the consumer has with the brand and its environment during the moment of purchase. It, therefore, covers a series of behaviors such as choosing, placing the order and paying.
- Post-purchase: this third phase encompasses all consumer's interactions with the brand after purchase that relate to the product/service or the brand itself. It includes the consumption and use of the product, post-purchase engagement and

all ancillary services. At this stage, the most critical touch-point is the product itself.

Every company must be able to interpret the needs and requests of its customers and respond to their needs. At each stage of the customer decision journey, customers experience different types of touchpoints, which can be either online such as websites or social media marketing campaigns, or offline such as physical stores. Only some of these touchpoints can be managed directly by the company, the so-called "*brand-owned touchpoints*" (e.g., advertising campaigns, points of sale, websites, product attributes, packaging, assortment and price) or are managed indirectly, as in the case of reviews, WoM and comments in online forums, and these are called "*external/independent touchpoints*" (Argo et al., 2017; Hoyer et al., 2020; Verhoef & Lemon, 2016; Vakulenko et al., 2019). The consumer may engage with each of the touchpoints at different stages of the experience, and likewise, the importance of each touchpoint may vary from one stage to the next. Once the touchpoints have been identified, it is then necessary for the organization to understand how they can be influenced (Verhoef et al., 2009). Thus, organizations respond to customers and shape markets by designing and delivering unique experiences that lead to customer retention and profitability (Verhoef et al., 2009; Bolton et al., 2014).

2.5. Online customer experience

In this section we would like to review the extant literature on the online customer experience by analyzing its core determinants and how they affect its formation for e-commerce firms.

2.5.1. Dimensions of the online customer experience

Bleier et al. (2019) pinpoint four most critical dimensions that characterize the online customer experience:

- informativeness

- entertainment
- social presence
- sensory appeal

Informativeness is defined by Lim & Ting (2012) as "*the degree to which the website provides consumers with relevant, content-rich information*". So, the website and the way in which product information is displayed help the user make a purchasing decision (Gentile et al., 2007). As for entertainment, instead, it is the immediate pleasure that the shopping experience itself provides regardless of whether the Internet makes online shopping easier. This dimension is not only related to the user's website experience, but also to the fun and playfulness that is synonymous with online shopping. Then, developing a social presence on the webpage is fundamental too. This refers to an atmosphere of warmth, sociability and a feeling of human contact that to some extent the webpage gives the user when browsing, which can positively affect both the consumer's level of entertainment as well as his purchase intentions and loyalty. Finally, sensory appeal includes all those aspects that contribute to stimulating the sense organs (Gentile et al., 2007). Although the online environment limits the scope of sensory experiences, sensations can be evoked through imagery (e.g., pictures and videos) or through website graphics (Bleier et al., 2019). Consequently, whenever a user is looking for a good to buy through e-commerce, this entails a multidimensional experience that goes beyond informativeness, i.e. the pure conveyance of product information (Brakus et al., 2009; Verhoef & Lemon, 2016; Bleier et al., 2019) and the affective dimension, but includes a social and sensory dimension as well. This multidimensional framework somehow reminds us of the conceptualization of the offline customer experiences (Brakus et al., 2009; Verhoef & Lemon, 2016).

When consumers decide to purchase online, they attach profound value to what is called the "*shopping experienc*e". It must be said that how much the experience succeeds in promoting the purchase of a product online may vary depending on the attributes of the product itself and the level of uncertainty that actually goes with online shopping. The fact that the customer can evaluate the quality of the product only from images and factual information supplied by the service provider results in a certain level of uncertainty related to online product evaluation (Bleier et al., 2019). Therefore, even though one of the Internet's major advantages is its ability to make information searches much easier and faster as well as to facilitate transactions (Bilgihan et al., 2016), for the long-term success of their e-commerce it is paramount for firms to not only present product information, but also nurture positive relationships with customers by offering a satisfying shopping experience (Sharma & Aggarwal, 2019; Mofokeng, 2021).

2.5.2. Determinants of customer experience for e-commerce firms

We will now delineate the factors e-commerce firms have to take into account as they deeply influence customer experience, namely website characteristics, trust, past experiences, satisfaction, and loyalty.

Website Characteristics

Scholars have studied the online customer experience by looking at the specific characteristics of e-commerce websites. If the website makes the users feel safe and comfortable, it helps to create a unique experience and thereby increases their purchase intention (Pei et al., 2015). The layout of the website, the ability to choose among several payment methods and shipping options, as well as the ability to track orders and have clear information on their returning policies, have a powerful effect that drives customer experience (Wetherbe et al., 2012; Pei et al., 2015). Moreover, the ability of the retailer to convey relevant and valuable product information to the consumer is at the core of the online customer experience as well as the retailer's capability to evoke human interaction (Bleier et al., 2019). For instance, De Bruijn et al. (2007) pointed out that the ability of a website to not only catch the user's attention but also to hold it for a period of time is an important consideration in the light of the many competing websites available to customers. Another relevant issue to the consumer is the frequency with which information and content is updated by the seller (De Bruijn et al., 2007). Thus, the factors that most attract the online user are the architecture of the website combined with ease of use, speed of the transaction, the different payment options and the element of personalization.

Information quality, website attractiveness, website security, functionality and usability, and presentation are all website characteristics that deeply affect the online customer experience. The results of the research conducted by De Bruijn et al. (2007) showed that both attractiveness in content and presentation and usability are major concerns for the requirements of e-commerce websites (De Bruijn et al., 2007; Camilleri, 2021). In addition, in online shopping customers are not able to touch, feel and try products, which therefore calls for more rigorous knowledge for decision making. In light of these requirements, e-retailers should not only create quality content but actively maintain and improve the quality of their websites too (Liao et al., 2006). The e-commerce website is the first point of contact for online buyers (Miao et al., 2021), so an effective and eye-catching website must be appealing on an aesthetic level as this reduces the consumer's search costs. Then, another even more valued element is a user-friendly, understandable website (Hult et al., 2019; Miao et al., 2021). The combination of all these ingredients both prompts and motivates customers to remain on the website instead of leaving it. On the other hand, website functionality is an influential dimension that enhances customer satisfaction (Adam et al., 2020; Camilleri, 2021) and refers to the website's ability to offer pertinent product information. Online users should find it easy, intuitive, and straightforward to access all of this content with minimal effort, as customers expect to find what they are looking for as quickly and effortlessly as possible (Camilleri, 2021). Hence, e-commerce websites must be trustworthy, concise, complete, timely and accurate. As for website security, this is the degree to which online shoppers perceive the webpage as safe and their personal data and information as secure. So, convincing consumers that the e-commerce site is safe, trustworthy and offers secure transactions is essential (Camilleri, 2021). Businesses and online marketplaces are in charge of protecting their customers' personal data. For this reason, they can use SSL certificates[4] to prove that their transactions are safe and secure. In this way, online users will be reassured that e-commerce sites are reliable, as they are safeguarding their online details (Camilleri, 2021).

The role of trust

Trust propensity indicates "*the extent to which an individual is willing to rely on an exchange partner*" (Chen et al., 2015). Trust is crucial in e-commerce because the transaction is virtual, as the seller and the buyer do not face each other while trading

[4] A valid TLS/SSL certificate ensures that the connection between the company's web server and the user's web browser is secure. This certificate also protects both the end users' information during its transfer and authenticates the website's organization identity to make sure that users are interacting with legitimate website owners.

and there is a physical separation between consumers and the products they need. That is why many studies in the literature have analyzed the pivotal role of trust in the online context (Bleier et al., 2019; Dhingra et al., 2020; Miao et al., 2021). Furthermore, other researchers underline how an online user's low level of trust can be counterbalanced by the presentation, the design, and the layout of the e-commerce site or by customizing the content based on consumers' preferences and tastes (Urban et al., 2009; Bleier et al., 2019). There is evidence about the influence that both trust and satisfaction have on online customer loyalty (Bleier et al., 2019).
One of the greatest concerns of e-commerce is that the cost of attracting and retaining a customer is usually higher than selling through traditional physical channels, and the customer's loyalty online is relatively lower (Liao et al., 2006). Every year companies tend to lose a significant number of customers, as they worry too much about trying to expand their customer base instead of concentrating more on existing customers thereby paying more attention to the notion of loyalty, the creation of a strong, long-lasting relationship with the consumer (Liao et al., 2006). We have remarked that people are reluctant to disclose their personal data for online purchases, as they both find it difficult to assess the retailer's capability to meet its commitments and protect the privacy of their sensitive information, as well as the fear that their data may be misused or stolen by hackers or third parties. These concerns further increase the perceived risk of online transactions. So, the trust that consumers place in e-retailers can help them overcome their perceptions of risk and insecurity (Liao et al., 2006; Chen et al., 2015). Also, social networks and e-WOM[5] have been demonstrated to positively influence e-commerce as they reduce the perceived risks associated with it (Kim & Park, 2013; Chen et al., 2015).

The influence of past experiences

Many studies have come to the conclusion that consumers' past online experiences affect their future purchasing behavior. For instance, Naseri, et al. (2021) realized that the more customers have experienced online shopping, the more it increases. So, prior online shopping experience intensifies customers' inclination and active engagement toward online purchases (Miao et al., 2021). Since consumers are risk-averse, those who

[5] Electronic word-of-mouth (e-WOM) refers to consumers' positive or negative statements and opinions regarding their knowledge and experience about a product or service provider which are made available to people and organizations via the Internet.

have little experience or have never bought something online would either avoid online shopping or have a low inclination towards it (Ventre & Kolbe, 2020). Literature suggests that consumers initially make small purchases, and each purchase favorably affects their trust, satisfaction and perceived value, thus leading toward purchase intention (Liu & Li, 2019; Miao et al., 2021).

The importance of satisfaction and loyalty

Customer satisfaction has primarily been conceptualized as "*the alignment between the actual delivered performance and customer expectations*" (Verhoef & Lemon, 2016; Tueanrat et al., 2021). If customers' expectations are met, then it follows that the positive shopping experience encourages the consumer to repurchase from the same retailer in the future (Quan et al., 2020; Miao et al., 2021). Consumer repurchase intention is usually regarded as the likelihood that consumers will continue to purchase goods from the same seller or website (Nguyen et al., 2018). Some researchers have stressed that firms that succeed in satisfying their clients retain them, while also attracting new ones through WoM (Quan et al., 2020). Other scholars, instead, verified the presence of a positive correlation between customer satisfaction, customer retention and repurchase intention. In fact, Miao et al. (2021) and Yin & Xu (2021) state that "*consumer satisfaction promotes repurchase intention as well as a sustainable relationship with customers*".

The steady growth in the use of social networks has inevitably brought about a rapid increase in interactions among consumers, who are increasingly interested in sharing with others their shopping experiences and their opinions and thoughts about a product or service they have purchased and used (Capriotti et al., 2021; Huang et al., 2014). As a consequence, e-WOM has an incredible impact on social networks as customers' thoughts, feelings and referrals can convey conflicting and confusing brand messages to millions of online users (Camilleri, 2021). In this regard, online consumer loyalty (i.e., e-loyalty) is at the core of what drives consumers to return to the same e-commerce website and repeat their purchase, thereby contributing to increasing the profitability of the seller (Camilleri, 2021; Yin & Xu, 2021).

2.6. The state of B2C e-commerce

This part of the chapter aims at providing a detailed picture of the B2C e-commerce market. Starting from a short worldwide overview, we then move to analyze the situation at the European level up to the Italian context. For the purposes of this work, the focus is on B2C e-commerce with greater emphasis placed on products, as they have been the protagonists of an undisputed growth during the last two years (Osservatorio eCommerce B2c & Consorzio Netcomm, 2021). On the contrary, services experienced a dramatic collapse in 2020 due to the restrictions imposed by the governments and the mobility limitations that to some extent still persist today (Osservatorio eCommerce B2c, 2021).
The statistics that will be used are the result of measurements and estimates made by Politecnico di Milano University's B2C E-commerce Observatory and other sources, namely eMarketer, E-commerce Europe, and Forrester Research (Osservatorio eCommerce B2c, 2021; Lone et al., 2021; Lebow, 2021). Moreover, we need to be aware of and therefore take into account the limitations of data collected in this way: the main problem is that samples are rarely representative of the population. In fact, figures are different depending on who is calculating them. Consequently, this explains the discrepancies between the values identified by Casaleggio Associati and the B2C E-commerce Observatory, which are the only organizations that provide an annual review of the state of Italian e-commerce. Since the data supplied by Casaleggio Associati in 2021 only look at data from 2020, here we are going to refer to data from the B2C E-commerce Observatory which instead provides more up-to-date figures from 2021. Behind this decision, there is also the author’s willingness to maintain consistency in the use of the references that will be also taken to explore food e-commerce hereinafter.

2.6.1. The numbers in the world and in Europe

The Covid-19 pandemic has been affecting our lives for more than two years now, radically changing the way we live as well as the way companies do business. The year 2020 was when the pandemic broke out and spread exponentially all over the world, whereas in 2021 economies, including the Italian one, began to recover and get back on track. Nevertheless, we must refer to the pandemic as it is at the center of the surge that e-commerce has been experiencing.

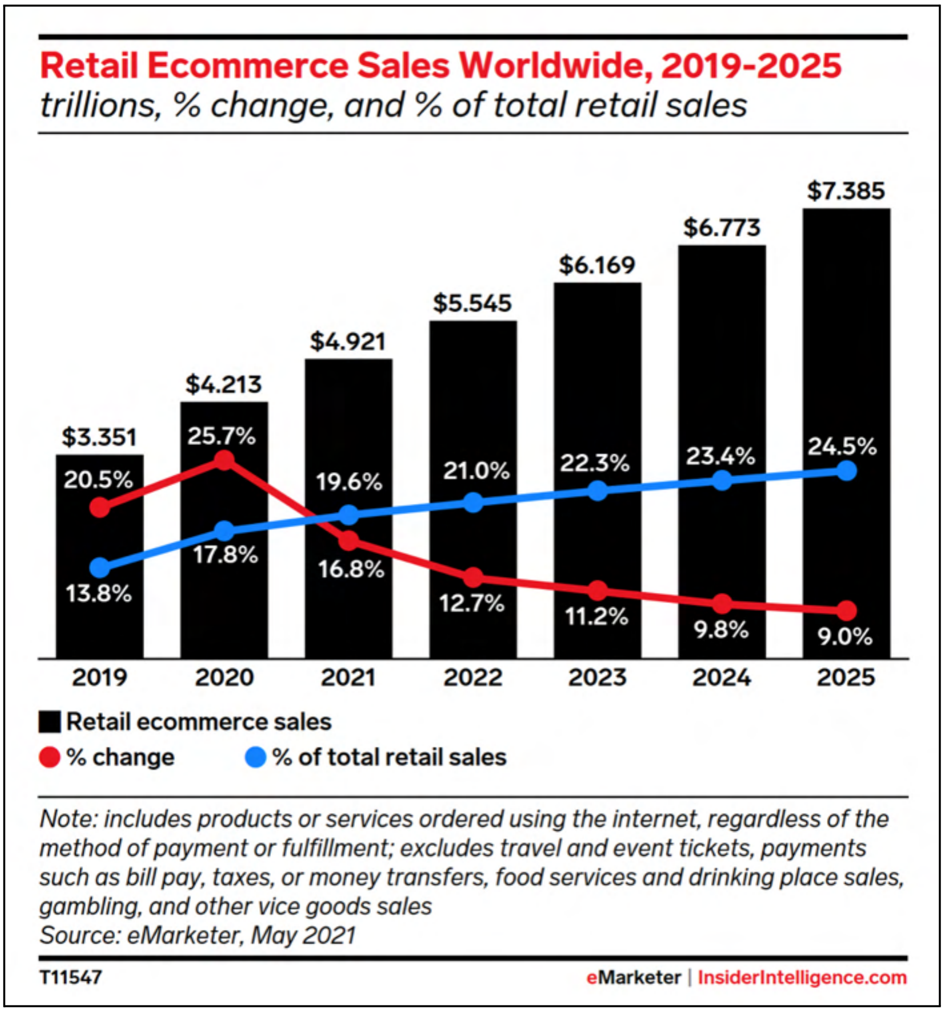

Figure 2.4: eMarketer's predictions of retail B2C e-commerce sales worldwide, 2019-2025 (Lebow, 2021)

Based on eMarketer's predictions, the global B2C e-commerce is worth $4.9 trillion as of 2021 (Lebow, 2021). This amount is set to grow significantly in the coming years as well. Following a major shift to the online channel that occurred in 2020, e-commerce retail sales are expected to continue to grow in double digits through 2023 and account for an increasing share of total retail sales worldwide. It is interesting to see that the red line in *Figure 2.4* marked the peak of the e-commerce growth (approximately +26%) that occurred in 2020 which then declined, but overall retail e-commerce sales still keep increasing. Furthermore, the market research company expects worldwide retail e-commerce sales to hit over $6 trillion by 2023 and make up 22% of total retail sales, thus nearly doubling in value compared to 2019 (Lebow, 2021). Next, eMarketer claimed that e-commerce would maintain steady growth throughout 2021 as the pandemic persists in most parts of the world and consumers have become to a certain extent comfortable with buying online. China is the largest retail e-commerce market in the world with over 52% of total sales worldwide, followed by the US with 19%, whereas the rest of the world's e-commerce markets only make up 5% of sales share (Lebow, 2021). Therefore, the situation outlined by eMarketer is in line with the findings of Politecnico di Milano's B2C E-commerce Observatory regarding the current state of e-commerce in the world (Osservatorio eCommerce B2c, 2021). The aim, in fact, is to get an idea of the world B2C e-commerce and how this market has been evolving, even in the face of the pandemic.

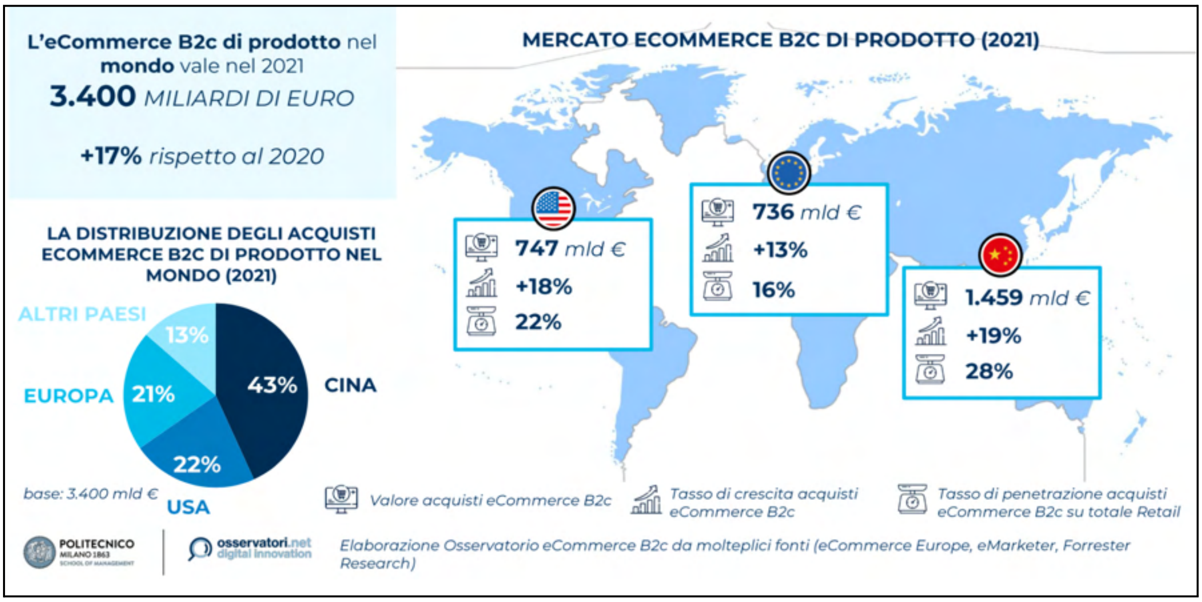

Figure 2.5: The value of B2C product e-commerce worldwide (Osservatorio eCommerce B2c, 2021)

According to the B2C E-commerce Observatory and the Netcomm Consortium (2021), product e-commerce in the world in 2021 is worth about 3400 billion euros, with a growth of +17% compared to 2020. However, this value is distributed rather unevenly among the world's leading markets. At an aggregate level, the top three markets for B2C online purchases are China, the US and Europe. As eMarketer previously stated, China is the largest market and accounts for over 40% of global product e-commerce, thus reaching a share that is equal to Europe and the US together. In recent years, the growth of the Chinese market has been so strong that China has reached an absolute value of

1500 billion euros versus 747 billion euros in the US and 736 billion euros in the European Union (Osservatorio eCommerce B2c & Consorzio Netcomm, 2021). If we then look at the growth rate and the penetration rate of these markets, we find dissimilarities there too. The growth rate is an index to understand the dynamic nature of a given market. China has the highest growth rate (+19%) and is closely followed by the US (+18%) and Europe (+13%): this percentage highlights that China is the country in which e-commerce is most widespread and is also the market which is growing most rapidly when compared at an aggregate level with the other markets (Osservatorio eCommerce B2c & Consorzio Netcomm, 2021). Additionally, there are significant differences in the penetration rate as well. The penetration rate represents the ratio of online consumption over total consumption and is an indication of the maturity of a market, i.e. it indicates how relevant e-commerce is to total retail. So, it should be pointed out that China is the first market by value of online sales penetration on products with 28%, well ahead of Europe and US (Osservatorio eCommerce B2c & Consorzio Netcomm, 2021).

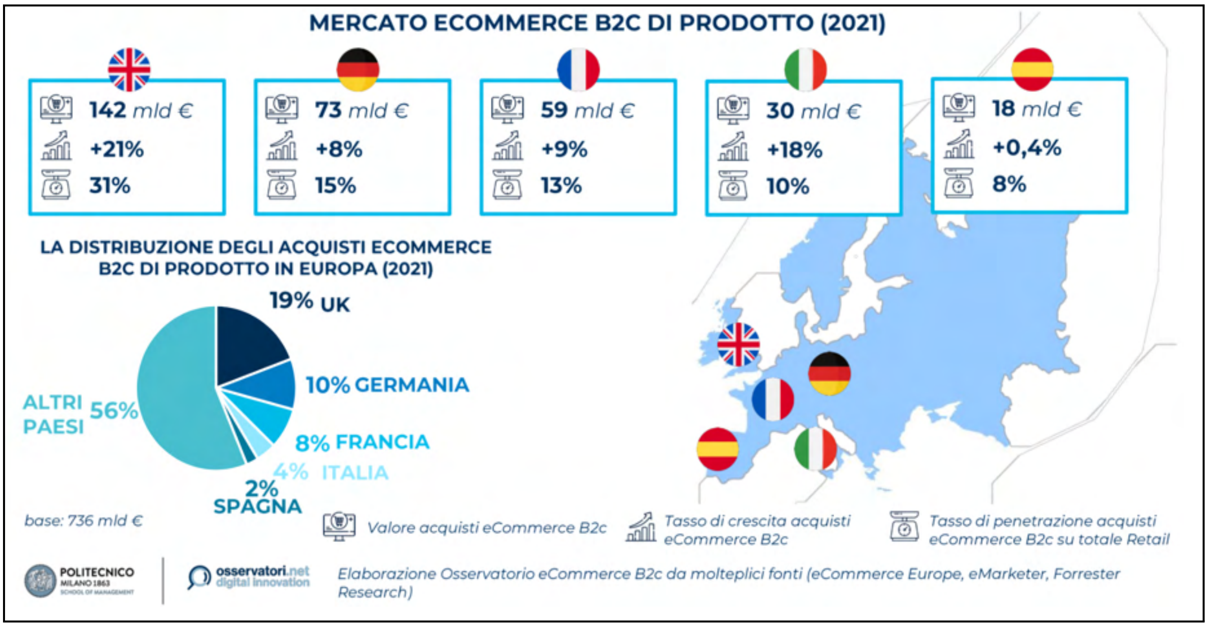

Figure 2.6: The value of B2C product e-commerce in Europe (Osservatorio eCommerce B2c, 2021)

Data reported in E-commerce Europe's 2021 report shows a total of €757 billion in 2020 in Europe with a 10% growth over the previous year (Lone et al., 2021). Almost a fifth of total online product purchases in Europe is generated by the UK (142 billion euros), and then by other markets, namely Germany and France, Italy and Spain

(Osservatorio eCommerce B2c, 2021). Again, the differences between countries do not only relate to the absolute value, but to growth and penetration rates as well. In Italy, the penetration rate is about 10%, a figure that can now be compared with France (13%), although it is still a long way from Germany (15%) and the UK, which is the most mature market in Europe (31%)(Osservatorio eCommerce B2c, 2021). On the other hand, as far as the growth rate is concerned, our country is one of the most dynamic markets with a +18% growth over 2020 (Osservatorio eCommerce B2c, 2021). Underlying this sizable e-commerce growth is both the boost of the COVID-19 as well as the many initiatives advanced in the food & grocery sector, which has recorded the most impressive growth in all major European and global markets. Accordingly, if we had to classify Italy's positioning, we could state that the Italian B2C e-commerce market today holds a more dynamic position but is still small compared to the UK, Germany, and France.

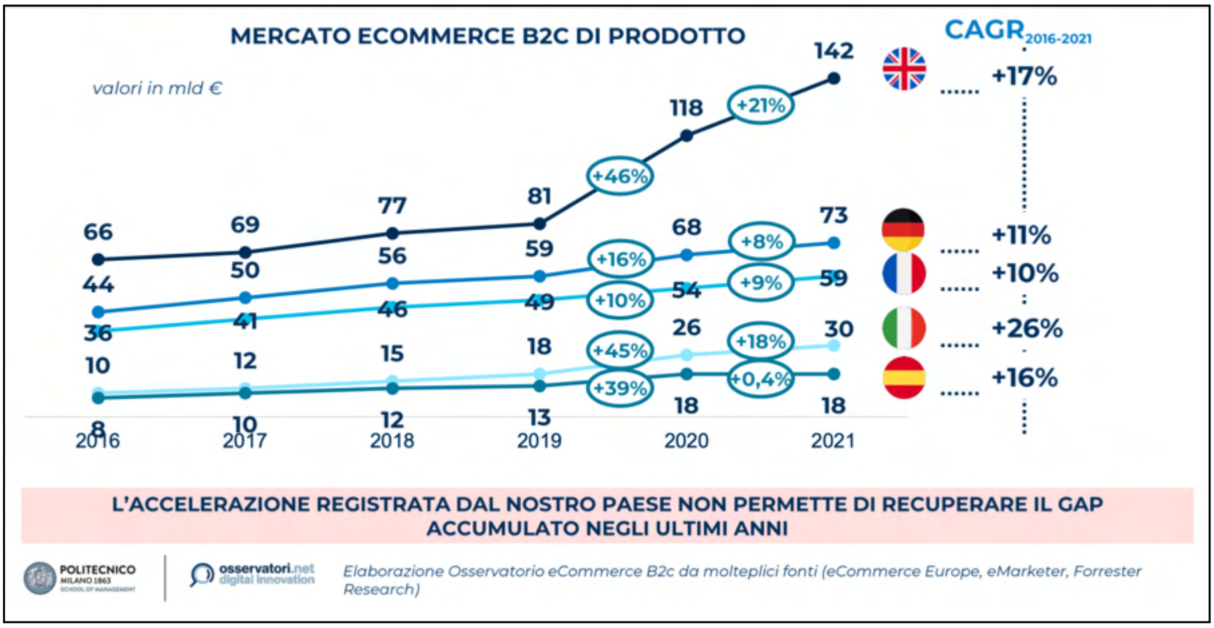

Figure 2.7: A comparison between Italy and the main European countries in B2C product e-commerce (Osservatorio eCommerce B2c, 2021)

The last two years, in particular, allow us to make a comparison regarding B2C product e-commerce among the main European countries. France and Germany continued their e-commerce growth path but without a remarkable acceleration due to the virus. They recorded +10% and +16% in 2020, a year in which, due to the advent of the pandemic, e-commerce was expected to explode compared to previous years. This expansion then continued in 2021 but at a much lower rate, (+9% and +8% respectively)(Osservatorio eCommerce B2c, 2021). On the other hand, Spain experienced a peak of +39% in 2020, only to have a rebound effect in 2021, thus showing +0.4%. Finally, Italy and the UK are the two countries with the most significant acceleration in 2020 (+45% and +46%), although this growth rate is applied to very diverse absolute values (Osservatorio eCommerce B2c, 2021). It is worth mentioning that the UK started from 81 billion euros, while Italy from only 18 billion euros in products. In response to the rapidly changing commercial reality and to the healthcare crisis, many Italian retailers have had to accelerate their digital transformation and innovation. By 2021, both countries had low but comparable growth at around 20%. Furthermore, we can notice that Italy has grown with an average rate of 26% (CAGR) which is the highest over the last five years (Osservatorio eCommerce B2c, 2021). Nonetheless, the gap that Italy has accumulated in recent years, which is measured vertically by the distance between the countries in *Figure 2.7*, has not been filled.

2.6.2. E-commerce in Italy

We will now move on to a more comprehensive review of the Italian B2C e-commerce scenario, drawing on data from Politecnico di Milano's B2C E-commerce Observatory (2021). The perimeter of this analysis is twofold: on the one hand, it involves the macro-category of products that require physical delivery (fashion, furniture, publishing, food & grocery, IT and consumer electronics) as well as a number of minor segments such as beauty and pharma that are grouped under “other products”. Then, there are the services, namely insurance, tourism and transport, and others.

Our focus is on the demand side, i.e. on the purchases of Italian consumers both from merchant websites operating in Italy as well as from foreign merchant websites not operating in Italy.

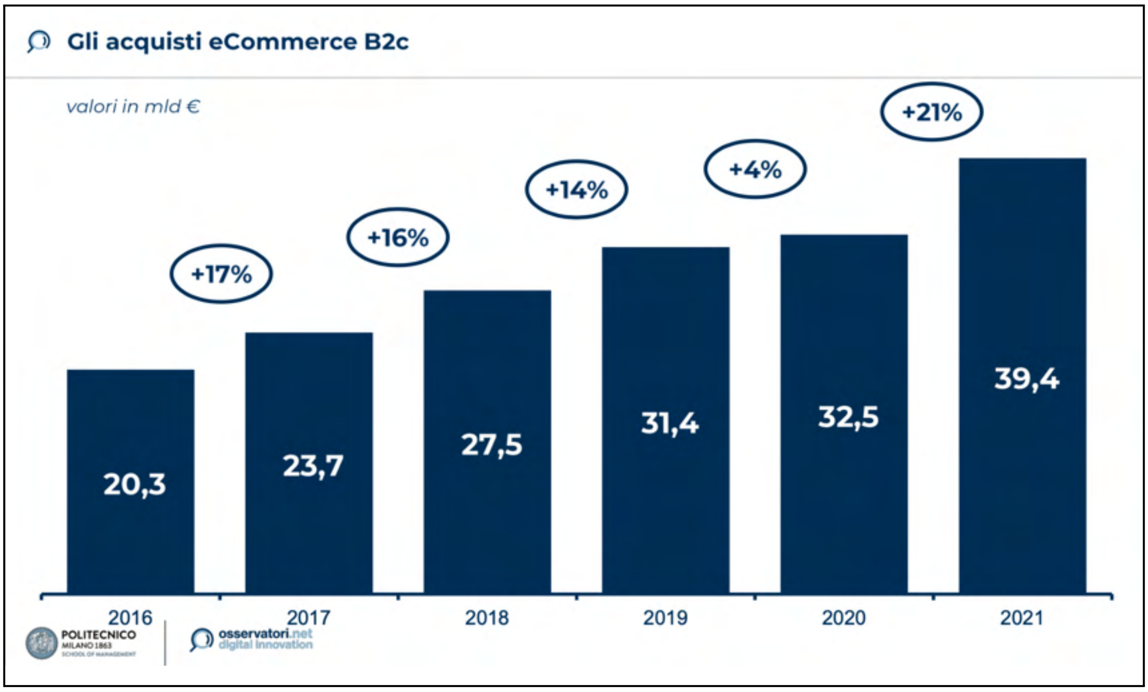

Figure 2.8: Italians' B2C e-commerce purchases, 2016-2021 (Osservatorio eCommerce B2c, 2021)

It is inevitable to observe how there has been a steady growth of B2C e-commerce in Italy over the years. In 2020 online purchases reached 32.5 billion euros with a +4% growth compared to 2019. In 2021, instead, a peak of 39.4 billion euros was registered, meaning that Italian e-commerce returned to double-digit growth (+21%) (Osservatorio eCommerce B2c, 2021). However, this growth rate is dictated by trends that differ between products and services. By looking at *Figure 2.9* we can see that in 2020 there was a setback in the online purchase of services (-52%), while products grew at a very fast rate (+45%). Last year, by contrast, products grew at a lower rate (+18%), reaching 30.5 billion euros. Instead, service purchases slightly recovered (+36%), thus reaching 8.9 billion euros which are still far from the pre-pandemic values (Osservatorio eCommerce B2c, 2021).

By showing online purchases by sector, *Figure 2.10* allows us to find out whether we can actually talk about a slowdown in products. It is obvious that there was a very high growth rate in 2020, especially in food (+86%), furniture (+58%) and IT (+38%). On the contrary, in 2021 growth continued but was more limited in all sectors. In any case, the industry which has been growing the most in percentage terms has been food & grocery, which now exceeds 4 billion euros (Osservatorio eCommerce B2c & Consorzio Netcomm, 2021).

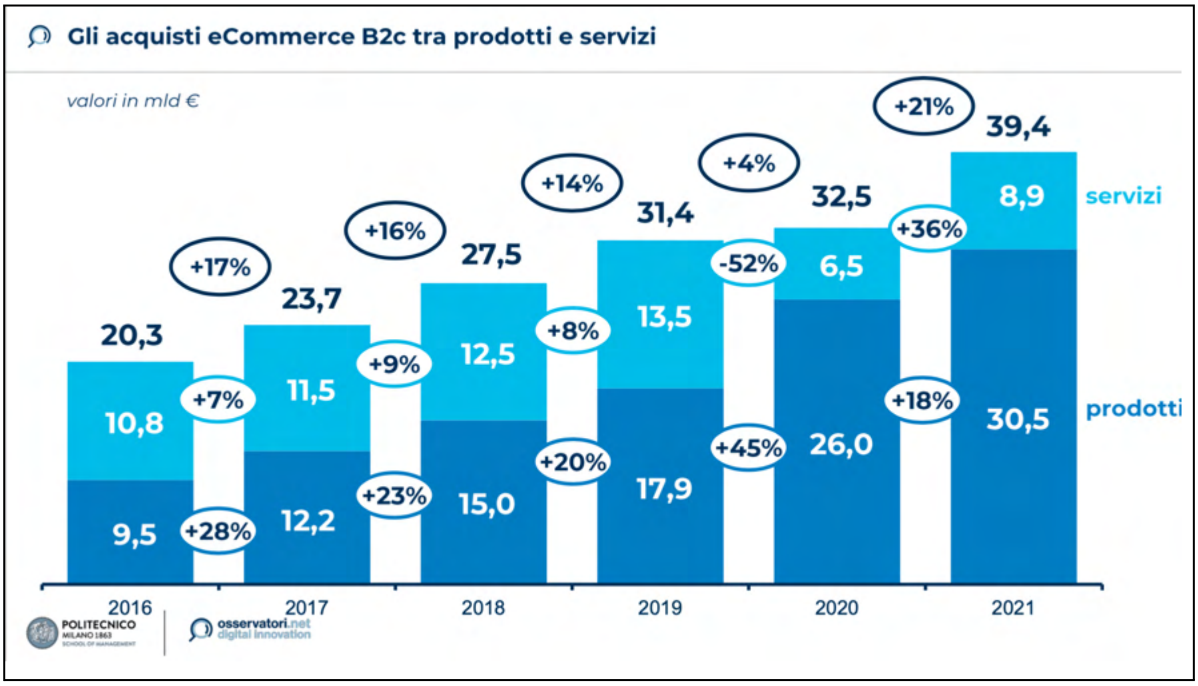

Figure 2.9: Differences between products and services in Italians' B2C e-commerce purchases, 2016-2021 (Osservatorio eCommerce B2c, 2021)

As a result, there would appear to be a slowdown in products, but before coming to hasty conclusions, let's take a closer look at the contribution that the various sectors have made to e-commerce development.

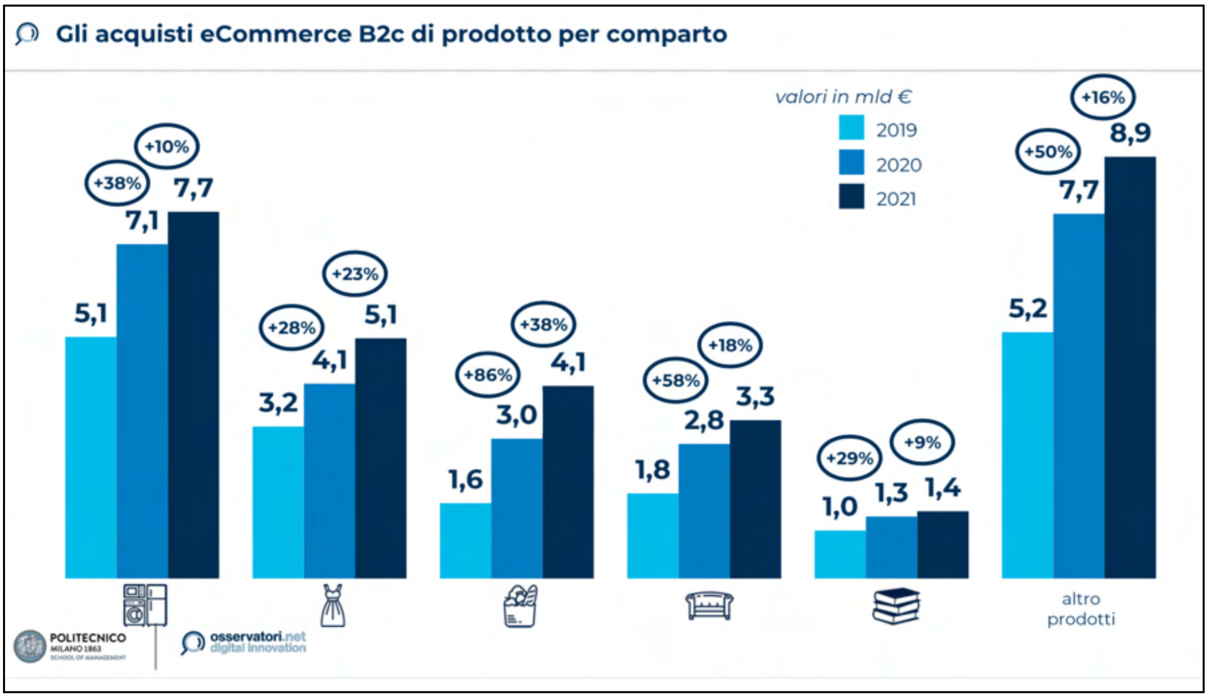

Figure 2.10: Italian consumers' B2C e-commerce purchases of products by industry (Osservatorio eCommerce B2c, 2021)

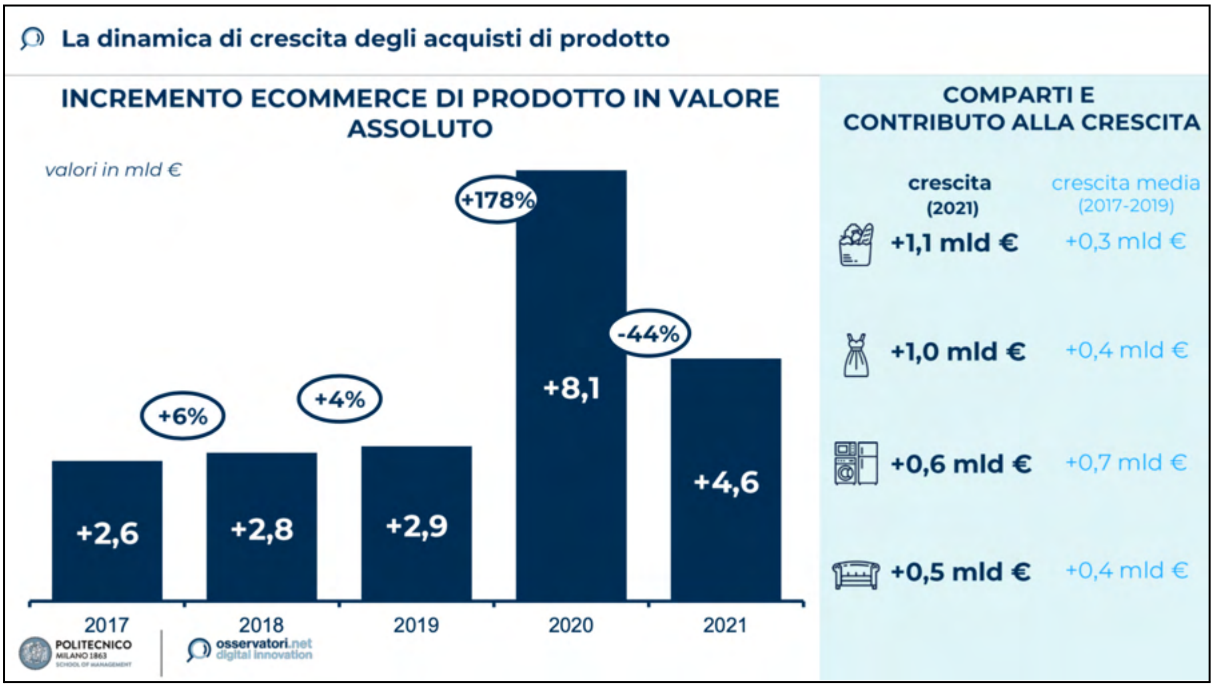

Figure 2.11: B2C product e-commerce growth and the contribution of the various industries (Osservatorio eCommerce B2c, 2021)

Data in *Figure 2.11* indicate that there has not been a halt in the B2C e-commerce purchase of products, because the rise that occurred in 2021 is still remarkable (+4.6 billion euros) and is higher than the figures we had been used to in the years before the pandemic, except for 2020. This actually gives us some valuable information: after the 2020 boom (+8.1 billion euros), many e-commerce experts as well as researchers were expecting a drop in online purchases, which did not happen. From the chart in *Figure 2.11* we can infer that the food & grocery industry (+1.1 billion euros), then fashion (+1 billion), IT and furniture are the industries which have most contributed to the 2021 e-commerce expansion (Osservatorio eCommerce B2c & Consorzio Netcomm, 2021).

2.6.3. How Italian consumers' online shopping has changed

How have Italians' purchases changed with both the pandemic and the trends that existed before COVID-19 which it has helped to reinforce?

Basically, within 5 years e-commerce has doubled its value (both products and services) and its composition as well. In 2016 53% of the value of online purchases was represented by services. However, Italian e-commerce is now strongly skewed on products. Indeed, in 2021 products account for three quarters of the market (77%) (Osservatorio eCommerce B2c, 2021).

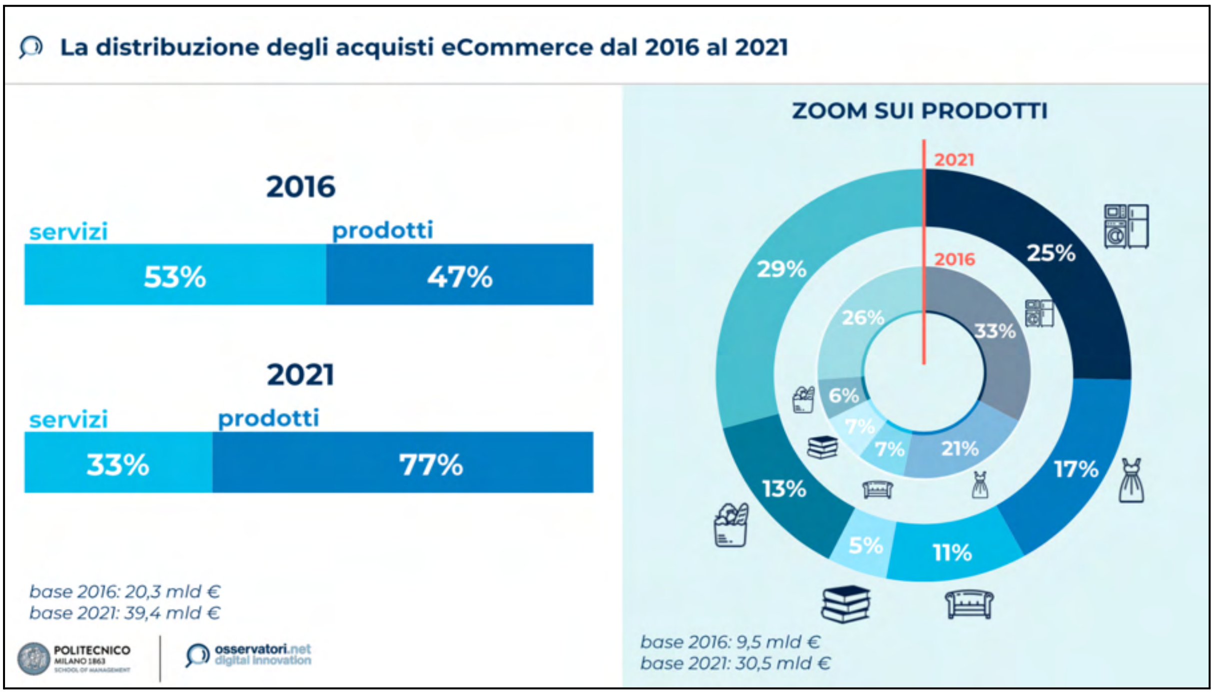

Figure 2.12: Italy's distribution of online purchases, 2016-2021 (Osservatorio eCommerce B2c, 2021)

As can be seen in *Figure 2.12*, in 2016 the IT and fashion industries made up around 55% of the market while other segments had a marginal role. In 2021 it becomes apparent that there is no longer such a high concentration on just two industries: IT and fashion together account for about 40%, whereas food & grocery and furniture have gained a significant role in the market (13% and 11%) (Osservatorio eCommerce B2c, 2021). In addition, the sharp increase in the food industry, which went from being the last sector in 2016 to the third largest one within products in 2021, is to be stressed.

One more fact to be considered in order to better understand how e-commerce has evolved over time relates to the incidence of mobile phones on the total B2C purchases. Nowadays, e-commerce is profoundly dependent on smartphones: 55% of Italians' total online shopping is generated through smartphones versus only 18% in 2016.

2.6.4. The incidence of the online channel

In order to get a deeper understanding of the e-commerce sector, it is not only important to look at the absolute monetary value of this sector, but it is also advisable to compare what happens in the online channel with respect to the overall consumption. Valentina Pontiggia, director of the B2C E-commerce Observatory, confirms that "*today the online channel is consciously chosen for everyday shopping by an increasing number of Italians*" (Osservatorio eCommerce B2c, 2021). In 2021 the incidence of B2C e-commerce on total retail sales reached 10%, which means that for every €100 that Italians spend, €10 will transit through the online channel. In the product macro-category alone, penetration went from 9% in 2020 to 10% in 2021 (+1 percentage point compared to 2020) with a smaller gain compared to what had been recorded between 2019 and 2020 (+3 percentage points)(Osservatorio eCommerce B2c, 2021). As a result, 2020 for e-commerce was an outstanding year because Italy made an evolutionary leap that it usually makes in 3 years.

It is evident that the main reasons behind the growth of the Italian e-commerce can be traced back to the Covid-19 pandemic outbreak that kept stores closed for months, driving customers to online marketplace platforms and that, in turn, pushed retailers to consider the opportunities offered by the digital channel to survive and maintain their market share. The fact that e-commerce continues to grow stems from the fact that consumers are less afraid of this channel and what used to be considered barriers to online shopping are now less perceived. In fact, note how the pandemic has brought changes, in that there is no longer a big difference between product and service penetration. For example, in 2018 the penetration of products was half of that of services, while today we are pretty much even (10% of products vs. 11% of services). Nevertheless, the pandemic has not completely revolutionized the balances in Italy as e-commerce remains a secondary channel and it only generates 10% of total consumption (Osservatorio eCommerce B2c, 2021).

As for the online penetration rate in the different sectors, in 2019 online penetration in the food industry was only 1%, a percentage that would seem quite insignificant. But if we think that it took us twenty years to get to that 1% and that in the last two years we have gained one percentage point per year, this is evidence of the tremendous effort that companies have been putting into food & grocery.

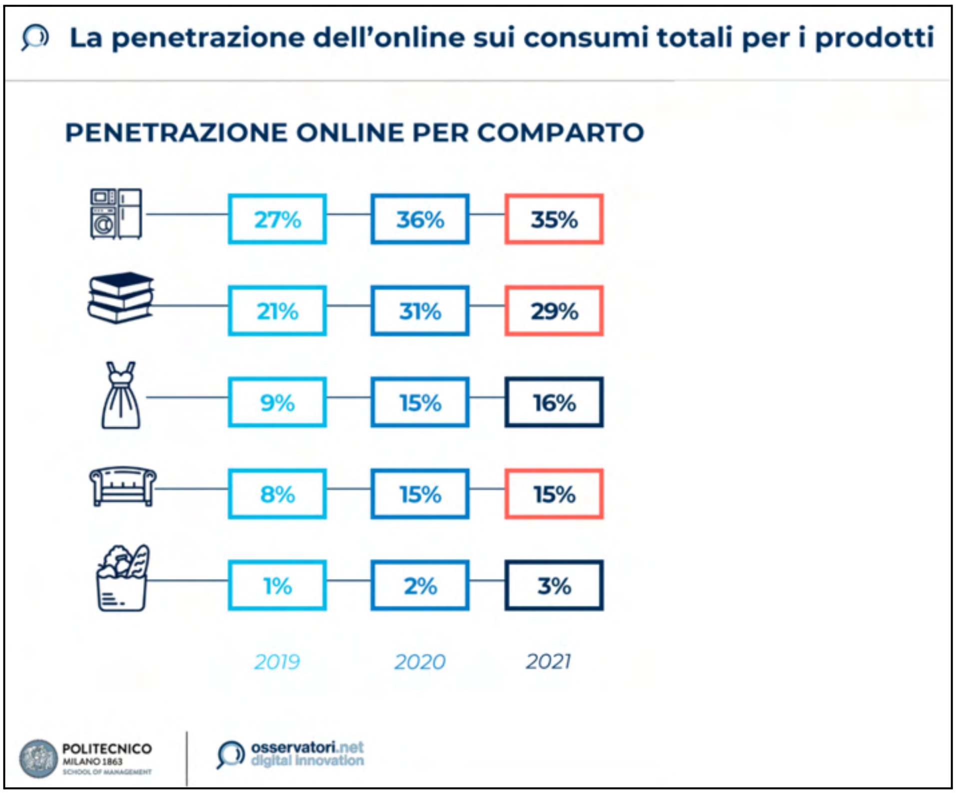

Figure 2.13: Online penetration of Italians' total consumption by industry (Osservatorio eCommerce B2c, 2021)

As can be seen in *Figure 2.13*, in 2021, however, IT, publishing and furniture experienced a decrease in online penetration compared to 2020. These are the industries that were actually shut down for several months in 2020 due to COVID-19 lockdowns. So, keeping the online penetration at these levels in 2021 is a positive result. The year 2021 has not marked a return to normality: on the one hand, there is the online channel which is dynamic and young, whereas, on the other hand, there is the physical channel that is still the predominant channel. Nonetheless, because of its dynamism and freshness, e-commerce is the engine of growth and innovation of all retail. Even though it only weighs 10% of total retail, it is responsible for 20% of the overall growth in Italian consumption. This is what the E-commerce B2C Observatory research (2021) reveals. Alessandro Perego, scientific director of the Politecnico di Milano's Digital Innovation Observatory, asserts that before COVID-19 in Italy the B2C e-commerce was already one of the key drivers of growth and innovation in retail. Then, with the pandemic, not only have purchasing behaviors changed, but retailers have also become aware of the need to develop a business strategy based on the integration and collaboration between physical and online channels (Osservatorio eCommerce B2c & Consorzio Netcomm, 2021). In fact, as Roberto Casaleggio points out: "*the lockdown was the tipping point of Italian e-commerce that made it mainstream and within everyone's reach*" (Casaleggio Associati, 2021). Hence, nowadays in Italy, it is no longer possible to competitively think of a business without taking this sales channel into account.

2.7. Trends of e-commerce

We have seen how 2021 was the year in which e-commerce resumed growth at rates similar to those recorded pre-pandemic. Based on predictions made at the beginning of 2022, we go on to elaborate on what are expected to be some of the key trends to keep an eye on in the e-commerce scenario.

Social commerce and shopstreaming

According to Hootsuite's Digital 2021 report, numbers updated to July 2021 tell us that users who regularly browse the Internet have hit 4.80 billion (Hootsuite et al., 2021). Hootsuite et al. (2021) capture how digitalization has undergone a real surge over the past year. In the past three years, in particular, social media has gained one billion new users with a 13% growth over the past year, bringing the global total to 4.48 billion. One of the reasons behind this spike is social commerce, which is an innovative trend that blends e-commerce and social media together, thus enabling consumers to buy products and services through these channels. By now, almost all major brands offer their users and followers the ability to make purchases directly from social networks, or to explore items from social networks like Instagram and Facebook and then be redirected to the company's e-commerce website to finalize the purchase (Addeo, 2021; Dara, 2022). One of the most important advantages of social commerce is to make the customer journey more fluid and less likely to be interrupted because it is most likely to end with one or a few clicks, as well as the ease with which consumers come across new products and brands.

Strictly connected to social commerce is what is called "*shopstreaming*". This form of social commerce first took off about five years ago in China, especially for fashion and beauty products. According to Arora et al. (2021), considering how the phenomenon has grown exponentially in China in the last few years, live commerce sales could account for as much as 20% of all e-commerce by 2026. Following the restrictions imposed because of the pandemic, many marketplaces became familiar with the shopstreaming approach as it looked like one of the most effective ways to "simulate" the in-store shopping experience (Arora et al., 2021; Lockhart, 2022). As a result, many experts predict that live shopping is going to be one of the biggest e-commerce trends of the future. As of today, live shopping is still a niche market in the western world, but we need to see what will happen in the near future.

Shopstreaming, a term that is often interchanged with live commerce or shopping party, indicates a sort of 2.0 version of teleshopping, which is mostly organized by merchants and physical retailers on social networks and live streaming platforms (Dara, 2022). It is "*the combination of e-commerce and livestreaming*", which thus refers to the sale of products and services during live videos or live streaming on social networks or apps and platforms for e-commerce, allowing customers to digitally "walk" around a store, watch the people as they explain their products, and even interact with other customers as if they were actually there (Henkel, 2020). In this way, those people who follow these live events can make their purchases directly while watching. Therefore, the purpose of shopstreaming is to make the online shopping experience more engaging, attractive and fun (Dara, 2022). Buying during a live event on Instagram or Twitch, for instance, can be more fun for consumers than making a purchase on a firms' e-shop or marketplaces such as Amazon or eBay. Furthermore, in some cases these livestreams are designed as real shows to entertain their fanbase and only then to sell (Henkel, 2020, Lockhart, 2022). In addition to increasing online sales, this practice focuses on engaging with the brand in order to improve the online customer experience.

Artificial Intelligence and virtual assistants

Augmented reality (AR) and virtual reality (VR) are proving to be two critical technologies for e-commerce in the near future. Anyone with an e-commerce business must try to transform the traditional physical shopping experience into a virtual shopping experience. So, the keyword would seem to be "*phygital*", which means trying to combine elements of both the physical and virtual channels. In order to do so, it may be useful to leverage artificial intelligence in order to enable consumers to interact with the product just as they would do in store (Lockhart, 2021; Shopify, 2021; Dara, 2022). These new technologies make the online customer experience more engaging and interactive, thereby improving conversion rates. The Covid-19 pandemic has definitely accelerated the process of adoption of these technologies by companies (Addeo, 2021). Customers can visualize and interact virtually with it, they can see it at 360% from different perspectives or they can preview how it would look on them or understand how it would look in the room where it would be placed as if they were actually in front of the product in a physical store (Lockhart, 2021). All of this helps a lot in making a better and more informed buying decision than just having simple images of what they would be buying. Then, another aspect that e-commerce firms should take into account is the increasing popularity of virtual assistants, which we now use to search the web for what we need. The success of voice assistants like Alexa and Google Home is also due to voice shopping, which deals with the possibility for consumers to make online purchases using their own voice (Dara, 2022). So, an e-commerce website should be optimized for vocal search, which is to deliver information that is easily accessible and understandable even from the voice search engine in order to guide the user to the e-shop.

Direct to Consumer sales

Another trend of e-commerce is direct sales. At the core of online direct to consumer (DTC) sales is product personalization within a short period of time and at a low cost by selling it directly to the end consumer, thus establishing a direct relationship with the latter (Angulo, 2021; Dara, 2022). So, the DTC allows customers to bypass the steps with any type of third-party retailer, wholesaler or other intermediaries. Based on Forbes' estimates (2021), the DTC may become an e-commerce trend in many industries, even in those that have so far opted for a more traditional sales and distribution model. Evidence of this will also include the fact that direct sales will no longer attract only tech-savvy consumers but will reach the mass market as well (Loveless & Forbes Business Council, 2021).

Flexibility and customization in logistics

Flexibility, efficiency and customization in logistics appear to be other buzzwords to be considered. In addition to actual online purchasing with the delivery directly to your doorstep, the pandemic has also enabled shoppers who were and still are very much tied to the classic brick-and-mortar store to opt for alternative purchasing formulas, such as ordering online but then opting for in-store delivery. So, methods such as "*click and collect*" are becoming increasingly popular (Osservatorio eCommerce B2c & Consorzio Netcomm, 2021; Dara, 2022). This is a service that today more and more businesses are making available to customers and consists of buying products online and then picking them up in the physical store or other dedicated pick-up points within a few hours. This solution is a good compromise especially for those who are not so familiar with online shopping yet or for those who want to save on shipping costs (Osservatorio eCommerce B2c & Consorzio Netcomm, 2021).

Buy now pay later (BNPL) and cryptocurrencies

Firms are continuously asked to offer customers a wide variety of choices, and this needs to be done for payment systems and solutions too. Therefore, the so-called *"buy now pay later"* payment method is innovative in e-commerce and came into play with the advent of the pandemic (Osservatorio eCommerce B2c & Consorzio Netcomm, 2021). It is now one of the fastest-growing areas in the world of digital payments and services. It is a sort of short-term interest-free financing which allows you to buy the product now but pay for it in a future time by monthly installments (Paypal, 2021). In this way, the primary benefit for sellers is to prevent shopping cart abandonment and increase the likelihood of attracting and retaining customers. On the other hand, consumers have the opportunity to defer their spending over time. This division into installments is now available on more and more e-commerce websites to promote online shopping: to name but a few, Paypal, Klarna, Scalapay, and ClearPay are some of the most famous ones (Addeo, 2021).

Furthermore, the use of blockchain technology ought to be mentioned. It has gained popularity over the past few years thanks to cryptocurrencies such as Bitcoin and Ethereum. In addition to security and ease of payment, some of the major benefits of using cryptocurrencies as a payment system include the absence of intermediaries in transactions and lower costs, because the seller incurs very low or no processing fees (Angulo, 2021). Despite being a volatile market, the world of cryptocurrencies continues to be trending and, day by day, more and more businesses announce their entry with their participation and investments (Angulo, 2021; Dara, 2022). So, even those who sell online should start thinking about how they can receive payments in cryptocurrencies, since crypto seems to be the right way to attract new customers and boost business. Plus, cryptocurrencies can also play a relevant role in transaction security, which has always been a crucial issue in e-commerce.

THIRD CHAPTER

Food e-commerce in Italy and the impact of the Covid-19 pandemic

3.1. Changing consumption and purchasing habits with the pandemic

Before delving into the analysis of food e-commerce, which has been the absolute protagonist of an incredible growth, it is worth examining what has triggered such a growth and how the purchasing and consumption habits of Italian consumers have changed, while also observing what has been the general pattern of consumption in most countries following the advent of the Covid-19 pandemic.

It was on January 30, 2020, when the World Health Organization proclaimed the Covid-19 virus a global pandemic resulting in a state of emergency that spared no country (Di Renzo et al., 2020). At the beginning of March 2020, the Italian government adopted stricter containment measures and on March 8th approved the decree of the President of the Council of Ministers, also known as *#iorestoacasa* decree (Caso et al., 2022), which would mark the start of the national lockdown period a few days later. Italy was the first European country to introduce the lockdown as a response to the impressive magnitude of the virus. The emergency measures imposed significantly reduced individual mobility, thus only allowing people to move around for proven health, work or other needs (such as buying food in stores and supermarkets, and other essential goods/services such as medicines)(Braut et al., 2022).
The impact of the pandemic on the food supply chain has been substantial and its aftermath is still visible and continues to affect our daily lives. The restrictions in different countries have made more difficult and complex the interactions between the various sections of the food system, from field to fork, thus seriously modifying food consumption, access to food, purchasing behaviors, and food waste (Scarmozzino & Visioli, 2020; Cranfield, 2020; Güney & Sangün, 2021; Ben Hassen et al., 2021). Social distancing and quarantine as a strategy for flattening the epidemic curve deeply impacted our lives, altering daily behaviors and habits, including food ones (Di Renzo et al., 2020; Caso et al., 2022; Braut et al., 2022). The closure of all non-essential stores,

such as restaurants and cafés, combined with psychological and social factors caused by the pressure of this unprecedented situation, influenced and therefore transformed many people's dietary choices (Scarmozzino & Visioli, 2020; Caso et al., 2022). Italians found themselves redesigning their routines, changing their needs and priorities, thus embracing new lifestyles which are more and more centered on technology and sustainability (Di Renzo et al., 2020; Ben Hassen et al., 2021; Braut et al., 2022; Coop, 2022). As a result, even companies have been forced to adapt and reinvent the way they do business to meet new consumer requirements. In this context, the Food & Beverage industry has been one of the most severely affected, leading to substantial rethinking and transformation.

Since food is essential to live, people continued to purchase food even during the lockdown, but where and when they purchased may have changed (Cranfield, 2020)**.** This means that consumers may have been pushed to buy from smaller supermarkets or neighborhood stores that they may not have considered prior to the virus just to try to reduce their travel and contact with other people (IRI, 2020; Braut et al., 2022). At the same time, the fear of infection and the restrictions caused the number of trips to the grocery store to decrease, perhaps increasing the average value of the purchase (Cranfield, 2020; Braut et al., 2022). Several studies found that mobility restrictions boosted online food and beverage purchases in many countries, among which Italy, where many shoppers shifted their shopping channel from offline to online (Ben Hassen et al., 2021; Güney & Sangün, 2021; Grunert et al., 2021; Braut et al., 2022). As consumers of all generations were forced to stay and eat at home, they have become more comfortable with online shopping as well as more engaged and faster in deciding what to buy. Underlying their purchasing decisions, the main criterion is the search for high-quality products at a reasonable price. (Gu et al., 2021; Lemes Bausch et al., 2021).

In a highly uncertain and unpredictable environment such as the outbreak of a global pandemic, some changes in food-related behaviors can immediately appear and quickly fade away. At the beginning of the pandemic, there was a lot of uncertainty about what would happen and what its implications would be. With regard to food, people were uncertain about whether food supplies would be guaranteed. In fact, what took place at a global level, including Italy, was a very common phenomenon at the onset of natural disasters or crises that is known as "panic buying", along with stockpiling behaviors (Cavallo et al., 2020; Grunert et al., 2021). This phenomenon consists in a manifestation of people losing control: people, driven by fear and panic, increased the volume of food purchased, thus storing larger quantities of cupboard goods, long-life products and frozen food than they actually needed at that moment. This hoarding behavior is instinctive and is usually the natural reaction to perceived external threats and fear of being caught unprepared for the worst. However, this caused challenges to the food supply chain resulting in a shortage of products and an inability to cope with increasing demand, thus leading to higher prices for these goods (Cranfield, 2020; Cavallo et al., 2020; Lemes Bausch et al., 2021; Islam et al., 2021; Chenarides et al., 2021; Caso et al., 2022). After this first phase, food-related behaviors did not follow a predetermined logic but varied across countries and consumers. For instance, Di Renzo et al. (2020) reported that during the first months of the pandemic in Italy, there was a dramatic increase in the purchase of raw materials such as flour, eggs and yeast for the home preparation of baked products, whereas the purchase of snacks, processed meat and sugary drinks decreased (Braut et al., 2022). People who used to eat out a lot found themselves rediscovering home cooking, as they were eating all their meals at home for the first time in a long time. Along with temporary or permanent business closures, this increased the amount of free time available to workers, who could experiment and acquire new cooking skills (Caso et al., 2022). In this regard, it is important to underline how the lockdown resulted in two different attitudes among consumers. On the one hand, some people tried to overcome stress and uncertainty by using food as a distraction from stress and a regulator of their conflicting emotions associated with the pandemic. In fact, stress pushed people to eat more than they should, especially of the so-called "comfort food" which is rich in sugar (Li et al., 2022). On the other hand, other people took advantage of the lockdown to take care of themselves and their health, by preparing healthier meals and monitoring their intake. This trend was recorded, for instance, in the study by Caso et al. (2022) and in other research carried out at an international level (Grunert et al., 2021; Li et al., 2022). A 38-country study by De Backer et al. (2021) demonstrated how consumers, in general, have become more aware of the health and nutritional dimensions of food and have made their food choices accordingly. By contrast, Molina-Montes et al. (2021) in their 16 European countries study showed how the lockdown led to a greater adherence to the Mediterranean diet, which has always been seen as a synonym for good and healthy eating (Grunert et al., 2021). So, since there are different types of consumers who reacted to the pandemic in different ways, the aforementioned findings suggest that not all research in the literature has come to the same conclusions. Whether food consumption and food choices during this peculiar period improved or worsened remains an open question.

3.2. How Italians' food consumption has changed with Covid-19

Food is not only pleasure and sharing for Italians, but it has always been an integral part of their national culture and of both their personal and collective identity. The Mediterranean diet is still a cornerstone of our culture, but different consumption patterns are emerging in the population. The focus on health together with an approach towards the consumption of organic and local food is getting increasingly dominant. Behind these trends, there is a stronger awareness of social, ethical, and environmental sustainability, which is reflected first and foremost in food purchasing needs and preferences (Coop, 2022). Along with the purchasing channels that changed with the pandemic, consumers have also changed the drivers of their purchasing decisions: today, Italian consumers' shopping carts are based on values such as quality, wellbeing and environmental protection. The brand, instead, seems to play only a secondary role. The new requests and needs triggered by the health emergency have brought about the birth of new trends that point to their here-to-stay power.
According to the Coop Report (2022), 8 out of 10 Italians have been maintaining the new habits acquired during the pandemic even in the last year. Moreover, consumers have proved to be more selective when making their purchases and many Italians have reawakened their desire to cook and knead. As already stated above, an increase in home cooking and baking was inevitable during the lockdown period due to the large amount of time spent at home, which initially led to a reduction in ready meals. (Di Renzo et al., 2020; Cranfield, 2020; Lemes Bausch et al., 2021; Ben Hassen et al., 2021; Güney & Sangün, 2021). Also, the survey carried out by Altroconsumo in September 2021 confirmed that the pandemic has changed us, as it has changed our eating behaviors as well (Cervilli, 2021).

3.2.1. The trend of sustainability in food choices

The Covid-19 pandemic has made sustainability even more of a hot topic among consumers' interests and an important new driver in their buying decisions. Individuals have become more sensitive to the environmental impact of their choices and this has also become apparent in Europe, with firms having to react accordingly. Even before the virus, individuals had begun to prioritize sustainability, but surely the pandemic accelerated this process. According to PwC's December 2021 Global Consumer Insights Pulse Survey (2021), half of consumers globally said that they have become more eco-friendly and consciously consider sustainability issues in their purchasing decisions. This trend continues to be most evident for millennials. Both business leaders and analysts expect eco-friendly consumerism to continue in the future. Specifically, with regard to food shopping, consumers already wanted to know more about the origin of their products, but now they are placing even more emphasis on health and safety conditions, as well as showing strong support for local businesses. An increasing number of Italian consumers are concerned about health and the environment, and thus tend to make their food choices accordingly. In fact, the demand for alternative protein sources such as plant-based food has been growing, thus boosting a trend already existing before Covid-19. Therefore, the composition of the shopping cart is also changing, in particular towards items that have a low environmental impact (Deloitte Italy, 2021). As stated in the Coop Report (2022), Food and Retail managers foresee for 2022 a higher consumption of 100% Italian, local, organic and sustainable food products. Driving these new behaviors are above all the profound attention to global warming and climate change.

According to the latest data made available by the Coop Report (2022), almost 9 out of 10 Italians state that they take sustainability aspects into account when they go shopping. In the first six months of 2021, 70% of Italians bought food from firms that promote and are actively committed to environmental sustainability (Grunert et al., 2021; Aprile & Punzo, 2022).

Figure 3.1: Factors related to sustainability that Italians consider in their food & beverage purchases in 2021, percentages of total Coop sample (Coop, 2022)

Furthermore, for 33% of Italian consumers, sustainability is not only a synonym for food made using organic, environmentally friendly production methods and without the use of additives and antibiotics, but they believe that a food & beverage product is also sustainable in terms of its packaging, which must be made from eco-friendly materials and plastic free. Furthermore, it should be noted that for more than 1 Italian out of 5 (21%), sustainability includes local production and controlled supply chain (Coop, 2022).

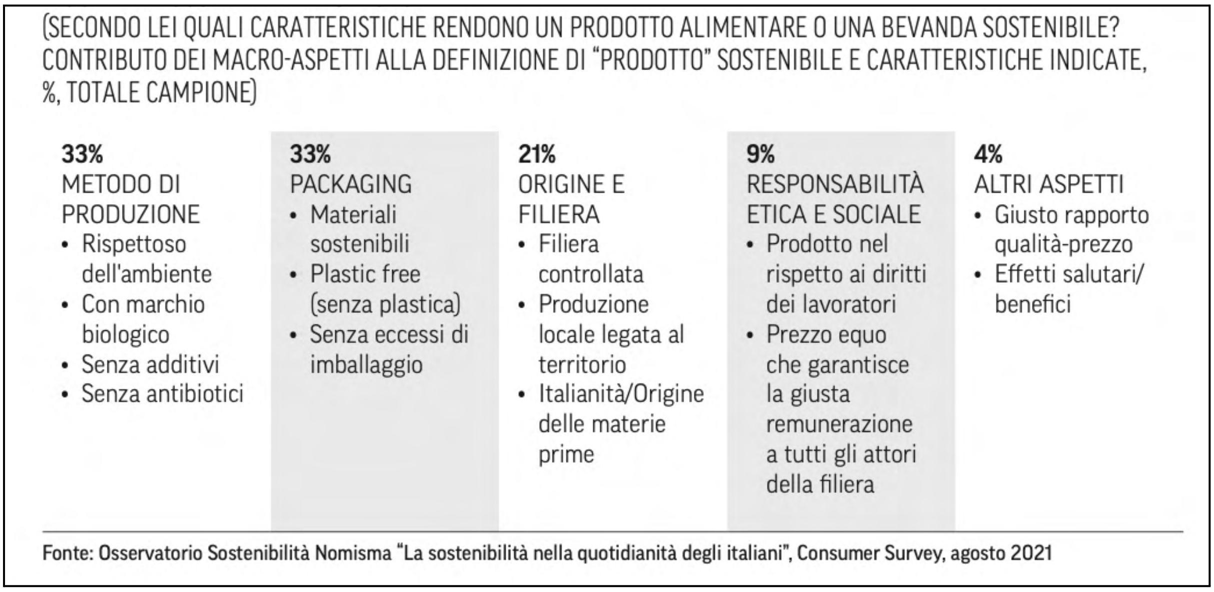

Figure 3.2: Characteristics that according to Italian consumers make a food product or beverage sustainable, percentages of the total Coop sample (Coop, 2022)

As evidenced by Deloitte's findings (2021), the pandemic has emphasized the tendency of Italian consumers to opt for local products, as they are increasingly looking for foods whose raw materials and/or processing take place within a certain radius and which therefore support the local economy. According to the study conducted on Italian consumers, 40% of them said that they were willing to pay a premium price to have a local food product (Deloitte Italy, 2021). As a result, while the pandemic has contributed to making consumers more conscious and attentive to the impact of their consumption on the environment, ecosystems and climate, younger generations in particular seem to be making more environmentally conscious choices, even when buying online. So, sustainability is a key element for businesses to cope with the current scenario and keep up with changes in customer demands. But sustainability does not have to be just a trendy word or a "sticker" to apply to a firm's products. A retailer that really wants to commit to this issue will have to implement sustainability also in terms of product tracking or, for example, by extending the life cycle of products that are already in use. As today's consumers are mature and aware, sustainability must be demonstrated, measured and effectively perceived and communicated. In fact, it emerges how consumers, precisely on the basis of the choices derived from their values, are willing to pay a little more when they feel they can actively contribute in some way to a process of transformation and improvement (Deloitte Italy, 2021).

3.2.2. The trend of food waste reduction

Food waste is an economic, social and environmental concern that occurs throughout the food supply chain, and it is one of the 17 Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development. The third goal of the SDG 12 (target 12.3) on responsible production and consumption aims to "*halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses*" (Amicarelli & Bux, 2021; Amicarelli et al., 2021). The Food and Agriculture Organization of the United Nations (FAO) estimated that annual food waste worldwide is worth more than 1.3 billion tons, or about one third of global food production, of which approximately 50% is generated by indoor and outdoor consumers (Amicarelli & Bux, 2021). Considering that all outdoor food service facilities were closed for months and therefore millions of people found themselves staying at home, this could suggest an upsurge in food waste at household level, especially following the drastic change in consumers' food purchasing habits and the "stock-effect" that took place in the first months of the pandemic. On the contrary, an opposite and unexpected trend has taken hold among Italian consumers: the lockdown allowed people to better plan food shopping, to improve in-house food storage, and to dedicate more time to cooking, thus increasing the use of leftovers as well (Amicarelli & Bux, 2021; Amicarelli et al., 2021). In addition, it was shown that the stock-effect positively influenced the reduction of food waste, because the fear of reduced food availability in the medium and long term encouraged people to use resources in a more efficient and sustainable way. In this context, food delivery has also proved to be fundamental for food management, since thanks to digital apps (e.g., Just Eat, Glovo, Deliveroo) and social networks (e.g. Whatsapp, Telegram, Facebook), it has improved consumers' food programming, thus leading them to make more conscious food choices in line with their tastes and preferences (Amicarelli & Bux, 2021).

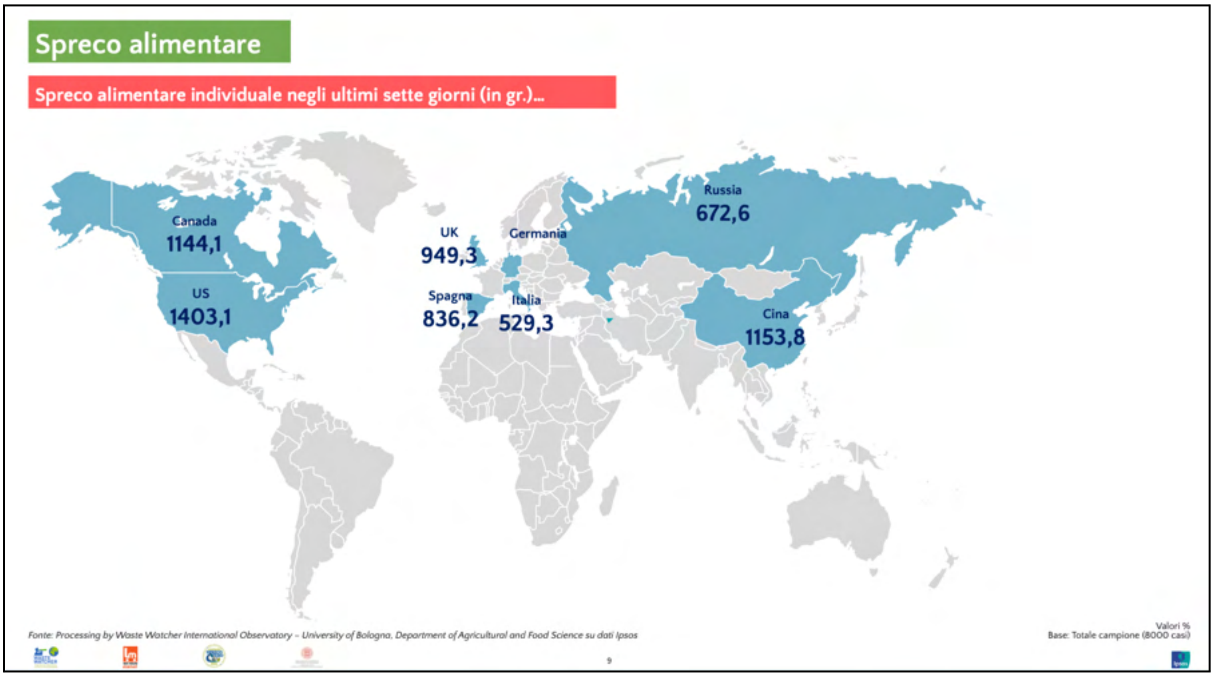

Figure 3.3: International data on food waste from 8 countries worldwide in a study conducted by Waste Watcher International Observatory - University of Bologna (Waste Watcher International Observatory, 2022)

In 2021 Italians threw away a little more than half a kilo of food per week (529,3 grams), i.e. 27.5 kg of leftover food that was wasted last year per person (Daina, 2022). This figure is comforting as it is 12% lower than 2020 and the best of the 8 countries surveyed by the International Waste Watchers Observatory. Hence, it is clear that with the pandemic, Italians have become more careful about what goes into the trash and therefore they have enhanced their anti-waste habits. The effect of quarantine, combined with the increased sensitivity of citizens and the consequences of the economic crisis, has decreased the tendency to waste at home (Principato et al., 2020; Ben Hassen et al., 2021). Altroconsumo (2020) also highlights this positive trend among Italian consumers: 41% of respondents said that they reduced the amount of food wasted, 37% planned meals more continuously, and 32% reused leftover food more. In addition, 68% of Italian households surveyed affirmed that they threw away almost nothing, a figure that shows a major improvement from before the pandemic.

Figure 3.4: Italian families' food waste as of February 2022 compared to 2021 (Waste Watcher International Observatory, 2022)

However, on February 4, 2022, the National Day of Food Waste Prevention 2022 took place and updated data on food waste in our country were presented. A part of these data is to be reported here as they have undergone a slight modification following the progressive recovery of social life. As of today, in Italy, weekly household food waste accounts for slightly less than 600 grams per capita, with an increase of about 15% compared to 2021 in which 529.3 grams of food were thrown away. Hence, we could claim to have lost some small habits that we had been adopting in the last two years of the pandemic. The comeback to social life with the consumption of some meals outside has certainly made us a little less attentive to the food management and fruition, especially when it comes to what happens in our fridge and in our pantry. As for the top 5 foods that Italians most often throw in the garbage, these have remained unchanged since 2021 and are mainly fresh foods such as vegetables and fruits, fresh bread and tubers, as they are the ones that deteriorate most easily. On the other hand, comparing what happens at a disaggregated level in Italy, Northern and Central Italy tend to be less prone to food waste compared to the national average and above all compared to Southern Italy (which wastes almost 20% more than the national average). This could be due to the fact that in the south and in the islands meals are traditionally consumed very frequently at home. Also, it is possible to highlight how families without children, and singles tend to waste more on a per capita basis.

3.3. Food e-commerce in Italy

It has already been pointed out many times how e-commerce has stepped into the lives of all people worldwide and, even in Italy, its growth continues undaunted. More and more Italians are choosing the online channel even after the stores have reopened their doors to customers.

Despite the serious difficulties and the negative consequences that it has brought to the business world, the Covid-19 pandemic has definitely helped to shake up Italian companies: in times of acute crisis like these, there are no alternatives to survival other than innovating, i.e. doing business differently than in the past. And that is true even more than ever in an industry that has always been regarded as traditional and physical as the food industry. Until a few years ago, talking about huge investments and financial operations on food e-commerce would have seemed risky and foolish to many, such as Tannico's 49% acquisition by the Campari Group or the case of Supermercato24 (today Everli) which succeeded in raising 100 million dollars of capital. However, it is precisely thanks to the pandemic that in Italy we have realized the importance of aligning ourselves with what has been happening in the world for some time now, thus stimulating and promoting the development of online food. Of course, those firms which already operated in the food industry through e-commerce platforms could not be in a better place in recent years. Nowadays, the inevitable direction that is becoming more and more consolidated is that of a consumer who does not want to wait any longer, and who wants to be able to take advantage of food through the online channel as well. So, the main obstacle for this sector today is not a lack of demand, but a supply that cannot satisfy a large and increasingly demanding demand (Biasin, 2021). For this reason, online food in Italy has not yet reached sales volumes that can even come close to its real potential, mainly because businesses are not yet able to fully meet customers' expectations in terms of quality of service, commercial proposal and convenience. As a result, the process of buying food online is still complex for the consumer. Hence, it is essential that companies improve their relationship with customers by creating a relationship based on constant interaction, listening and providing them with the appropriate service that they expect (Biasin, 2021).

At the very beginning, we explained how the Covid-19 pandemic has accelerated so much the digital transformation process of many Italian firms. "*The boost recorded by the food & grocery online in 2020 was possible thanks to the investments made by the supply side which, driven by the health emergency, has finally gained awareness of the potential of B2C e-commerce. This is an enhancement of the service, and its ability to meet the demand, which has found Italian users ready right from the start",* states Riccardo Mangiaracina, Scientific Manager of the Politecnico of Milano's B2C E-commerce Observatory (Osservatorio eCommerce B2c, 2021). Nonetheless, "*the benefits of these investments are not contingent on the pandemic but are meant to last over time"*, as in this way the basis for a sure and sustainable growth of online food in Italy has been laid. Even though many businesses have found themselves in trouble due to the higher level of complexity that characterizes this sector compared to others, watchwords like digitalization and innovation have proved to be vital in the food industry (Biasin, 2021).

Now we would like to illustrate food e-commerce and how it has recently evolved. Food & grocery is, in fact, the most attractive and dynamic field of Italian e-commerce at the moment (Osservatorio eCommerce B2c, 2022).

Translated into numbers from the B2C E-commerce Observatory, already at the end of 2019 food & grocery represented the most dynamic sector with the fastest growth rate, but also the least mature due to the lowest penetration rate. With the outbreak of the crisis, online demand for food products grew exponentially and B2C e-commerce purchases in 2021 in Italy exceeded 4 billion euros with a +38% growth over 2020 (Osservatorio eCommerce B2c, 2022). In 2020, instead, food & grocery experienced an unprecedented growth (+86%) but with different dynamics in the various segments (food grocery, food & wine and food delivery). Even if last year food e-commerce grew less in percentage terms than in 2020, in absolute value we are substantially in line. It must be said, however, that consumers no longer have those needs to buy food products online that were typical of the lockdown period which marked the initial phase of the pandemic.

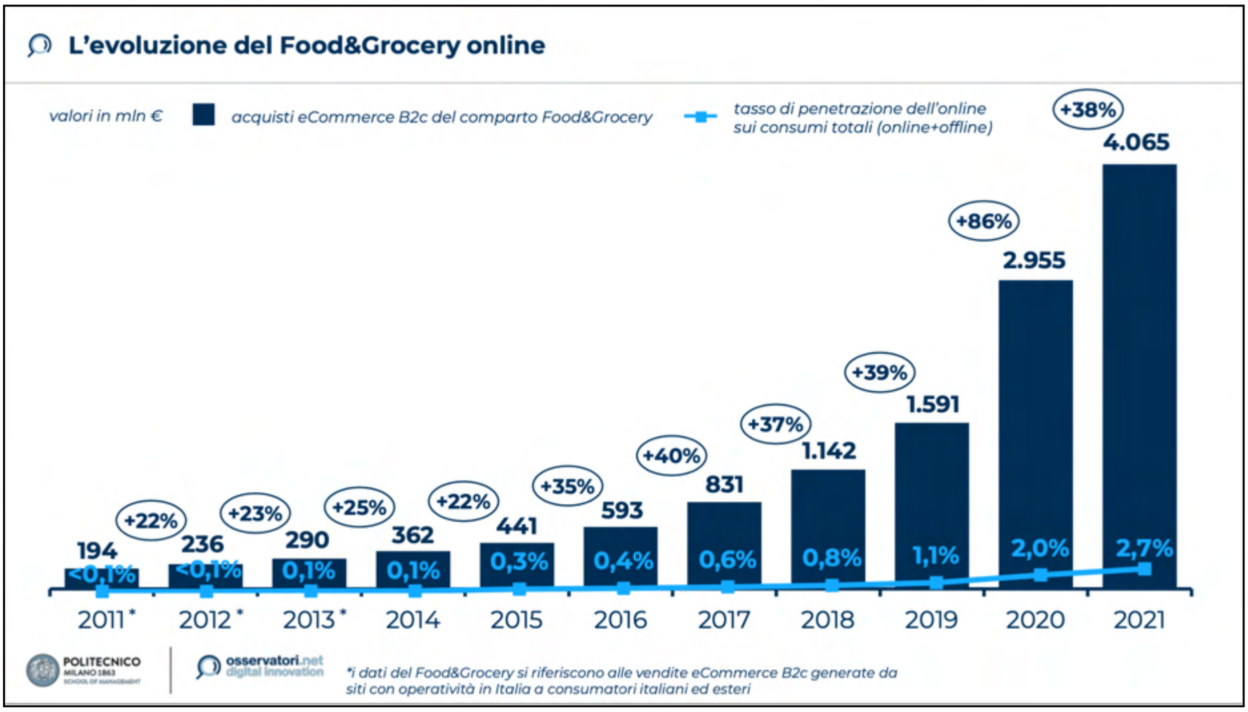

Figure 3.5: B2C e-commerce purchases in food & grocery in Italy and the online penetration rate, 2011-2021 (Osservatorio eCommerce B2c, 2022)

As a result, the online penetration of the sector has also increased as we can deduce from *Figure 3.5*: in 2019 it was 1.1%, in 2020 it became 2% whereas last year it reached 2.7% (Osservatorio eCommerce B2c, 2022). This is evidence that the path to enhancing the sector has begun but there is still a long way to go.

3.4. Segments of food e-commerce

In the food & grocery sector we can identify three separate segments that lend themselves to online sales (Osservatorio eCommerce B2c, 2022):

- **Food grocery** (or **e-grocery**) is the purchase of supermarket grocery products in online supermarkets or traditional retailers that have an e-commerce website.
- **Food & wine** deals with buying typical Made in Italy food products, wine and local specialties or fine foods that are generally not available in large-scale retail trade.
- **Food delivery** refers to the purchase of ready-to-eat and already cooked meals made by restaurants, pizzerias and other businesses that are purchased through online channels and delivered directly to the consumer's door either by the producer himself or through dot-com platforms that act as marketplaces.

In general, food & grocery includes several types of products, food and non-food, which have a different effect on Italians' online shopping carts. The main component - in terms of shopping value - is represented by food, accounting for 88%, up by 40% compared to 2020 (Osservatorio eCommerce B2c, 2022). The health & care component, in contrast, accounts for the remaining 12%. Food is, in turn, made up of over 90% of food purchases (fresh, dry and frozen food) and 10% of beverages and spirits.

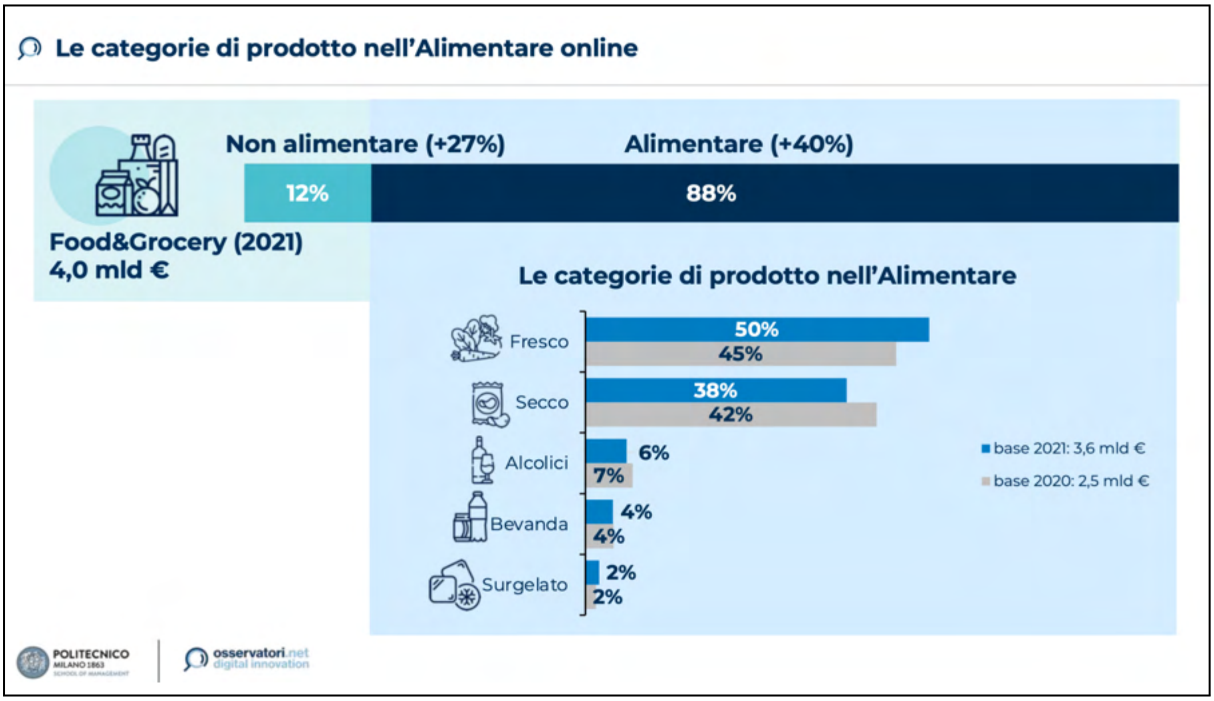

Figure 3.6: Product categories in online food & grocery in Italy (Osservatorio eCommerce B2c, 2022)

Out of the total value of 4 billion euros, food accounts for 3.6 billion euros and includes various product categories. The fresh (50%) and dry (38%) segments together make up almost 90% of the market in 2021. Furthermore, it is immediate to observe how the fresh segment is the first food segment, thus constituting half of the total. If we consider a “normal” basket of Italians' spending, we then have spirits (6%), beverages (4%) and frozen food (2%)(Osservatorio eCommerce B2c, 2022). In this regard, it should be pointed out that the increase in online purchases in the fresh food segment is partly due to the fact that there is an increasingly evident alignment in the composition of the basket between physical and online grocery shopping, and in part also due to the expansion of food delivery.

From another perspective, food online can be divided into three main sections, which we will now explore in more detail: e-grocery, food & wine and food delivery.

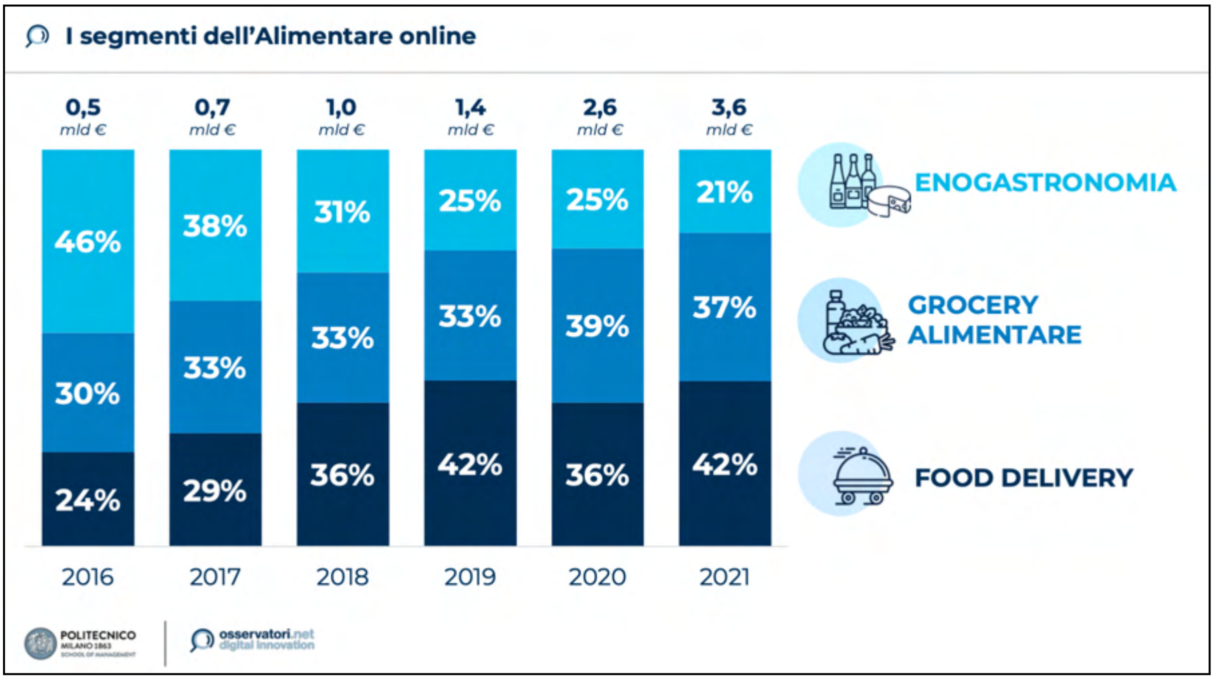

Figure 3.7: Online food & grocery segments in Italy: e-grocery, food & wine and food delivery, 2016-2021 (Osservatorio eCommerce B2c, 2022)

In 2020, the contribution of food grocery expanded significantly, thus driving the entire sector. What was found by the Observatory (2022) and seems to be still happening is the growth of online food shopping even after the healthcare emergency (Osservatorio eCommerce B2c, 2022). This means that the online channel was not only chosen as an “almost forced” decision during the lockdown, but even later on. Up until 2019, food delivery was recording strong growth that continued year on year to gain market share, food grocery was stable over time whereas food & wine was losing a bit of market share, especially to food delivery. With the Covid-19 pandemic, the dynamics have slightly changed: food delivery recorded a halt in the early months of 2020 because also the supply on these platforms had a collapse and the demand slowed down accordingly. This explains why food delivery lost some share in the first half of the year. It then rebounded in the second half of 2020 as some restaurants reopened and at the same time new online ventures emerged. In contrast, food grocery saw an explosion in demand at the start of the pandemic by reaching 39% in 2020, while food & wine remained largely unchanged, thus maintaining its position. In 2021, however, the snapshot of food e-commerce is very similar to that of 2019 with food delivery (42%) and food grocery (37%) leading the way (Osservatorio eCommerce B2c, 2022).

3.4.1. Food Grocery

The first segment of online food & grocery that we are going to analyze is food grocery. The term “grocery” is often used to indicate consumer goods, such as fresh or packaged foods, home and personal care products, etc., that are sold in grocery stores and supermarkets (Inside Marketing, 2019). In Italy, ISTAT provides a specific definition of consumer goods which include foodstuffs, household cleaning products and personal care products (Ministero dello Sviluppo Economico - Osservatorio Prezzi e Tariffe, 2019). For this reason, the product category we usually refer to is that of the large-scale retail trade (GDO) and these products are called “fast moving consumer goods” (FMCG), because they have a high rotation on the shelves, account for a large part of household shopping and are thus repurchased quite frequently.

Within grocery stores, there are different types of retailers: convenience stores, i.e. small grocery stores where you can find mainly essential products but with a rather limited assortment compared to what is usually found in a supermarket (Inside Marketing, 2019). Supermarkets, on the other hand, are characterized by a wider variety of products and also differ from hypermarkets, which are large stores with not only a wide range of food products, but household and personal items and small appliances as well. In addition, grocery stores include stores that specialize in selling typical food products such as ethnic stores and greengrocers that instead only sell fresh fruits and vegetables, as well as numerous other retailers that focus on a single food category such as vegetarian or vegan and organic products (Inside Marketing, 2019). Nevertheless, today, when we talk about grocery, we often use the expression "online grocery" or "e-grocery", which indicates the online sale of foodstuffs, or rather fast moving consumer goods, through a B2C e-commerce site. It should be noticed, however, that this segment includes only the food component and consequently excludes household and personal care products.

Online grocery shopping is an increasingly popular practice among Italian consumers. In 2020 the value of Italians' e-grocery shopping almost approached 1 billion euros with an exponential growth of +114%, a value that is about three times the growth recorded in previous years (Osservatorio eCommerce B2c, 2022). E-grocery was definitely the segment that boomed the most with the first lockdown, in which so many Italians found themselves having to embrace the online channel to do their food shopping. So, 2020 was also the year in which the supply side had to deal with an unexpected peak in demand, and responded with huge investments accordingly. Additionally, in 2020 the food grocery segment became the first segment of Italians' online food purchases, thus surpassing food delivery.

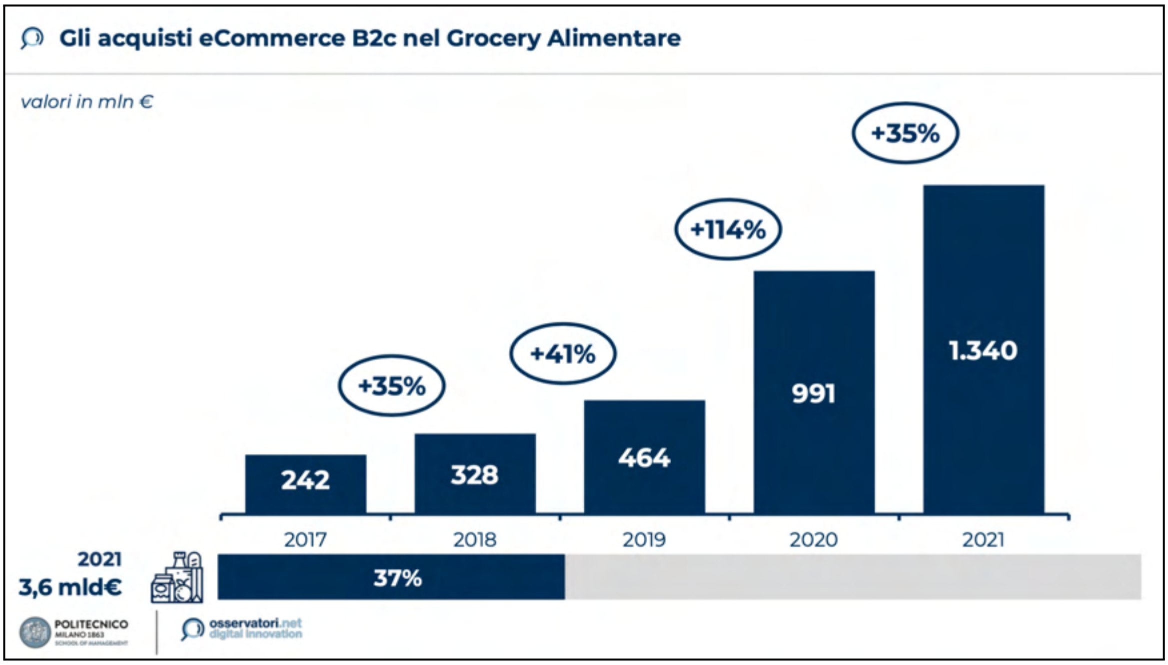

Figure 3.8: B2C e-commerce purchases in the online food grocery in Italy, 2017-2021 (Osservatorio eCommerce B2c, 2022)

Last year, instead, growth was estimated at +35% with an absolute value of purchases of almost 1.4 billion euros, with an increase of roughly 400 million euros compared to 2020. However, it is worth noticing how the growth in 2021 was definitely lower than the extraordinary growth in 2020 (which was €500 million)(Osservatorio eCommerce B2c, 2022). Although the initial healthcare emergency has been slowing down, this is to validate that by now the market has gone digital and we are still seeing this concretely today. Food grocery now accounts for 37% of the food & grocery sector and is thereby taking on a more and more relevant role in Italian consumers' purchasing habits.
As far as logistics is concerned, there have been revolutions, dictated by the urgent needs of consumers in e-commerce. In food & grocery web shoppers demand speed, scheduling and punctuality in delivery. Special attention must be paid to last-mile flexibility: customers must be able to decide when they want their goods to be delivered, make sure that the delivery is on time and, if needed, change the delivery details. More specifically, in e-grocery we can distinguish between two major types of distribution:

- Click & Collect
- Home delivery

As for Click & Collect, there are more and more brick-and-mortar retailers, groceries and supermarkets that make this option available to customers, which, in relation to food, consists of the possibility of ordering food products online and then collecting them directly at the point of sale (Dominici et al., 2021). In this instance, goods can be picked up directly in-store, near a point of sale via drive-through mode, or another option involves ordering online and picking up at dedicated pickup points. On the contrary, home delivery is still the predominant e-grocery distribution method and the most classic online solution. In this case, the purchase is made online and the delivery from the warehouse or the store comes directly to the customer's home, albeit incurring delivery costs (Maltese et al., 2021). The Coop Report (2022) acknowledges that the Click & Collect practice has grown considerably in recent years, with peaks of 20% in value across all food e-commerce, despite the preferred delivery method for online shopping still being home delivery.
The E-commerce B2C Observatory (2022) divided the online grocery purchase volumes among the players that generate these sales: on one hand there are the dot-coms, i.e. those players such as online supermarkets and those aggregators born to operate online

which are specialized in grocery shopping (e.g. Amazon Prime Now, Everli), while on the other hand there are the traditional retailers (e.g. Esselunga, Carrefour, Coop) that generate over 70% of sales. In 2020 it was primarily the traditional large-scale retail operators that grew in terms of e-grocery by +127% compared to +82% of dot-coms (Osservatorio eCommerce B2c, 2022). Such growth reflects how traditional retailers decided to focus more on the online channel: those that already had an active business have strengthened it, while others chose to enter the digital world for the first time by launching new initiatives. Conversely, in 2021 there was a similar growth between the two types of players. Consequently, it is evident that traditional players are the ones generating the highest volumes of online purchases in food & grocery which is for sure something to be taken into great consideration: in fact, food grocery is one of the few areas of Italian e-commerce where large-scale distribution has such a strong, priority and prevalent role. To support this statement, an analysis was conducted by the Observatory, aimed first of all at investigating the geographic distribution of online grocery shopping initiatives in the Italian regions. We refer to the "potential coverage" since this is an indicator that explains the potential access that the Italian population has to this service. In fact, the indicator is meant to show the number of initiatives, but they are not always able to meet the demand of a given region or population. The trend from 2019 to 2021 clearly identifies a noticeable and rather homogeneous increase in e-commerce initiatives related to food grocery. This is evidence that the providers are heavily investing to extend service reach and territorial extensiveness. Today there are 8 Italian regions (Campania, Emilia-Romagna, Lazio, Liguria, Lombardy, Piedmont, Tuscany and Veneto) that are covered by more than 10 initiatives overall (they were 4 in 2020). As of 2021, 97% of Italian provinces have at least one active online grocery shopping service, compared to 86% in 2020 (Osservatorio eCommerce B2c, 2022). Also, if we look at the size of the province in terms of number of inhabitants and geographic area, we can see that there are differences in the spread of initiatives between the north, the center and the south, resulting in higher figures in the north of Italy. In 2021, the number of e.grocery initiatives increased in all provinces regardless of their population size. It is true that these services started in more populous cities, but in reality they are now spreading like wildfire even in cities with fewer than 300000 inhabitants (+117% in the average number of active initiatives per province compared to 2020). Of course, in larger cities the average number of initiatives is still higher, with an average of 17 active projects. Indeed, as the size of the province increases, so does the number of initiatives. The widespread geographic coverage leads us to reflect on another very interesting fact: today, 86% of Italian citizens have potential access to online food grocery, with is a considerable jump compared to 2019, when this percentage was only 68.5%, and to 2020 (73%)(Osservatorio eCommerce B2c, 2022).

3.4.2. Food & Wine

Another category of the online food & grocery is food & wine which includes both enology and gastronomy and refers to the different types of wine and food of a specific territory. Here, when we talk about food & wine, we refer to the online purchasing of local food products and alcoholic beverages which are typical of Made in Italy and can thus be considered “niche products”, as they are not usually available in supermarkets. Specifically, this includes: long-life, fresh and ultra-fresh food, wine, beer, spirits and liqueurs.

The value of B2C e-commerce purchases in food & wine in Italy reached 645 million euros in 2020, up by +78% (Osservatorio eCommerce B2c, 2022). So, it is clear that there has been a great speed-up fueled both by the fact that consumers are more comfortable with buying online and by the fact that the supply has become ever more digitized to be closer to the final consumer. Nonetheless, in 2021 a slowdown in the growth rate can be noticed with only +17%, a percentage that is very similar to those reported in the pre-pandemic period. Furthermore, this slower growth makes food & wine lose a few percentage points in the food basket of Italians' online purchases, thus accounting for only 21% in 2021.
A peculiar feature of online enogastronomic products is their territorial coverage which is diffused and homogeneous all over Italy. In fact, food and wine is the only segment of food & grocery to have a 100% spreading on the whole national territory (Osservatorio eCommerce B2c, 2022).

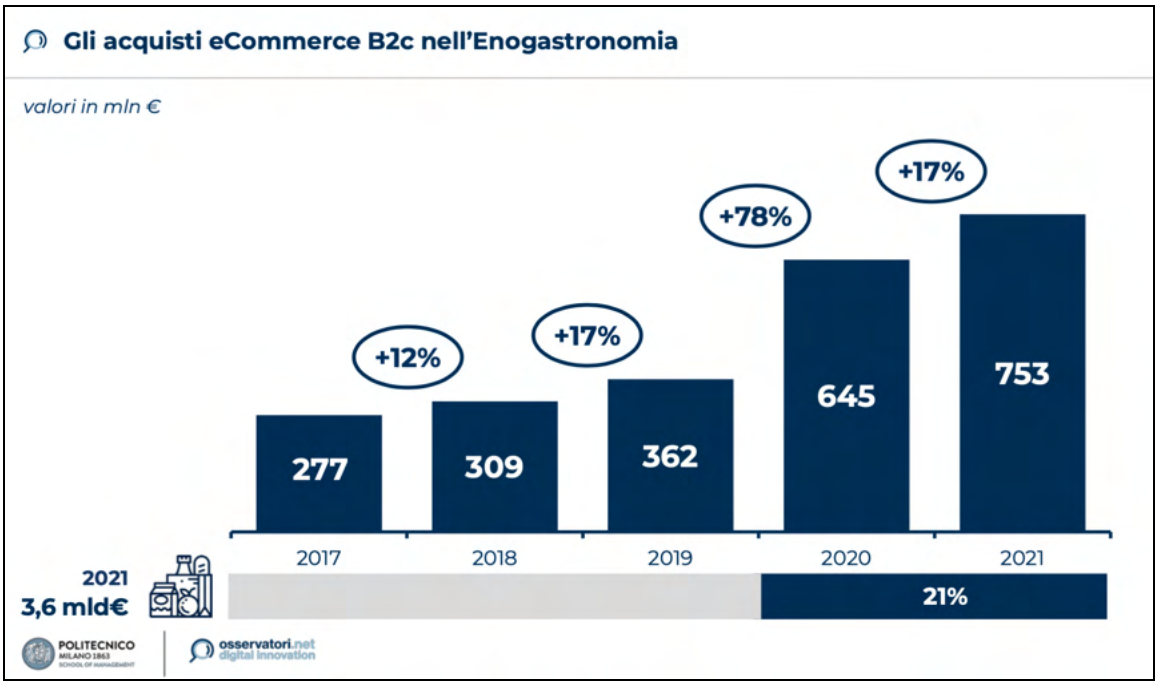

Figure 3.9: B2C e-commerce purchases in food & wine online in Italy, 2017-2021 (Osservatorio eCommerce B2c, 2022)

This entails that the whole Italian population potentially has access to online food and wine. In addition, it is important to underline how food & wine is also an outstanding part of Italian food exports abroad, with the main destination countries being Europe and USA, but Asia is also getting a certain potential for growth as well.

As for the reactions of the food & wine businesses to Covid-19, two types of operators have been identified: those who were not present online and therefore did not have an e-commerce site, and the players who already had an active online channel instead. Operators who did not yet have an active e-commerce website were thousands of small producers who in 2020 approached the online channel for the first time, either through "digital" sales methods (such as orders by mobile phone, instant messaging or email) or by collaborating with external actors. On the other hand, merchants who already operated through e-commerce had to deal with a surge in demand that led to some critical issues in the fulfillment of orders. They had to respond to that, particularly by working on operations, for instance by increasing production capacity and warehouse efficiency as well as optimizing deliveries on predefined days. In this regard, Sergio Fassi, manager of Destination Gusto, claims that both 2020 and 2021 have been two years of major breakthrough for their business, which is "a niche within a niche" in the online food industry (Osservatorio eCommerce B2c, 2021). Destination Gusto is witnessing a shift in the search for products by their consumers, who are no longer looking only for gourmet products, but for everyday food products such as pasta too (Osservatorio eCommerce B2c, 2021).

3.4.3. Food delivery

Just like grocery shopping, home delivery of ready-to-eat food is a particularly promising segment, which is gradually spreading not only in the most densely populated cities, but also in smaller towns, in order to reach an increasing number of potential customers. A full menu that can be easily consulted online, the quality of the product and good food preservation, as well as the speed of delivery, are the main reasons that drive many people to order their meal online. Food delivery involves the purchase of food and ready meals from the websites of two possible types of retailers:

- aggregator platforms
- traditional retailers

The first category of retailers are the “aggregator platforms”, i.e. intermediaries that provide delivery services to a variety of restaurants, such as Just Eat, Glovo and Deliveroo. The second category includes retailers' own websites, such as restaurants and fast food chains like Mcdonald's, Domino's Pizza, KFC and Old Wide West (Cheow Sern Yeo et al., 2017).

B2C e-commerce purchases in food delivery reached 939 million in 2020 in Italy (Osservatorio eCommerce B2c, 2022). The first weeks of the lockdown were marked by a slowdown in the growth rate of this segment due to contingent dynamics, but then this was offset by a lot of momentum in the second half of 2020, leading to an overall market growth rate of +59% over 2019. In 2021, the growth rate was confirmed to be about +60%, meaning that the market continues to grow steadily. Such acceleration has enabled food delivery to establish itself as the leading online food & grocery segment accounting for 42%.

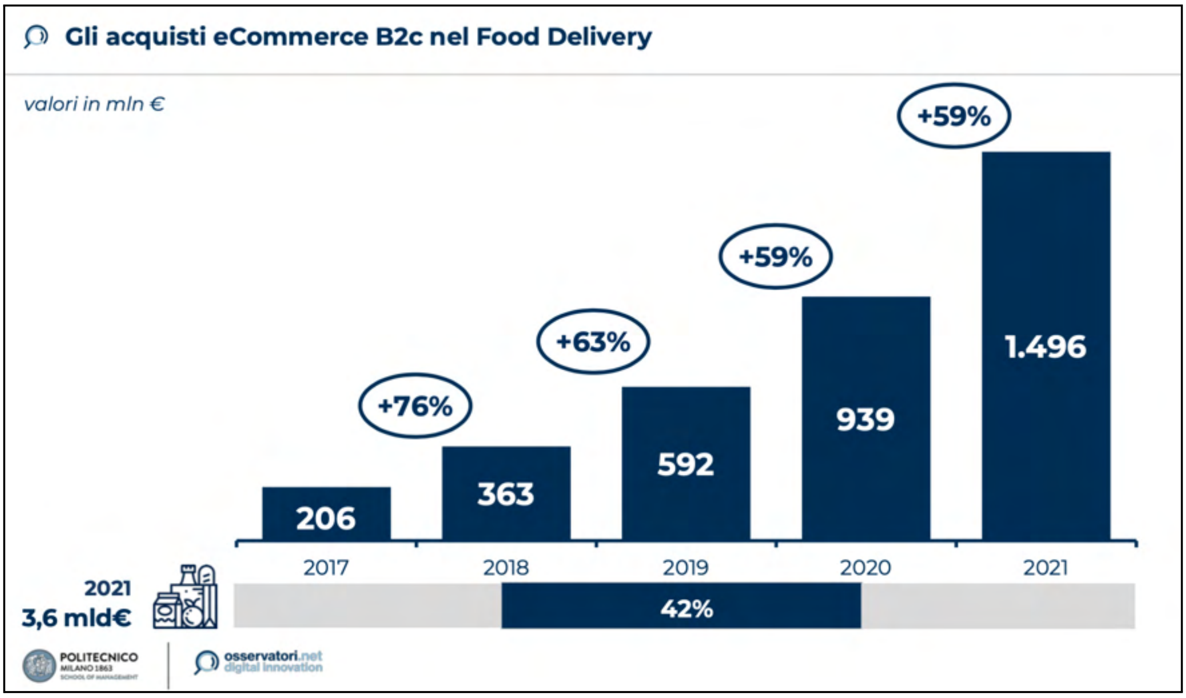

Figure 3.10: B2C e-commerce purchases in online food delivery in Italy, 2017-2021 (Osservatorio eCommerce B2c, 2021)

The current food delivery tendency is no longer just about buying pizzas and desserts, but data validates the surge in demand for healthy and green ready-to-eat food and superfoods. Just Eat reports a remarkable increase of +72% for healthy food and +127% for vegetarian food, along with vegan food registering +90% and poké +76% (Coop, 2022). So, we can affirm that meal delivery becomes a way for Italians to discover and experiment new cuisines, while also paying attention to health and the environment, which are two of the values that are today determining consumer choices and habits (Coop, 2022).

As for the players who operate in this segment, the largest share of food delivery sales is generated by dot-coms, i.e. online restaurants and aggregator platforms, as opposed to the food grocery and the food & wine segments. What draws attention is the growth rate of traditional businesses, which in 2020 was a bit higher (+59%) than that of dot-coms (+58%), because many traditional players have invested in digitalization as the only way to maintain direct contact with the end consumer (Osservatorio eCommerce B2c, 2022).

In Italy the geographic coverage of food delivery intensified from 2019 to 2021. In this regard, Daniele Contini, country manager of Just Eat Italy, reiterates how the pandemic has strongly impacted restaurants, which had to reinvent themselves during the lockdown periods, in part by reducing staff and in part by refocusing on food delivery, which has always remained one of the allowed activities, thus providing a big opportunity for restaurants to stay active (Osservatorio eCommerce B2c, 2022). By 2020, 100% of Italian provinces are already covered by at least one food delivery initiative compared to only 17% of Italian municipalities. Also, while it is obvious that as the size of the province increases, the same does the number of initiatives, in 2021 we witnessed an increase in the number of initiatives in the surrounding areas, meaning the areas surrounding large cities and metropolitan areas. If we compare this data to the number of food grocery initiatives, then it is clear that food delivery is a much more mature segment, as the number of initiatives per province is higher.

As far as the potential access to supply is concerned, in 2021, 68% of the Italian population potentially has access to food delivery, up by one percentage point from 2020 (Osservatorio eCommerce B2c, 2022).

Another relevant issue is the importance of an efficient logistics system in food delivery. And this includes the performance of last-mile delivery (LMD) as well. The last mile is the last stretch of the supply chain and therefore refers to the actual delivery of the item to the customer at their doorstep (Seghezzi & Mangiaracina, 2020). From the moment the order is placed, web shoppers usually expect to receive the order within 40 minutes, where 20 minutes are needed for food preparation and thus only 20 minutes are left for delivery. In addition, price is also a discriminating factor when choosing a food delivery provider, as consumers are not willing to pay much for delivery (Seghezzi & Mangiaracina, 2020).

Finally, a new business model that is emerging in the food delivery segment in Italy is worth mentioning, the so-called “dark or ghost kitchen”. This model takes advantage of the space in a professional kitchen to only prepare food for delivery. By focusing only on the delivery service, it allows to optimize production, resources and delivery times. With Covid-19, there has been a widespread adoption of this business model as the only way for some restaurants to ensure business continuity (Osservatorio eCommerce B2c, 2021).

3.5. Benefits and challenges of food e-commerce

We have said that food e-commerce deals with buying food products, including perishable ones, and more in general fast moving consumer goods via e-commerce platform. Nevertheless, this significantly differs from e-commerce in other product categories both in terms of food attributes, such as perishability, variability, and consumer preference for freshness and high quality, as well as the frequency of online food shopping, which is usually higher than general online shopping (Mortimer et al., 2016; Alaimo et al., 2020; Bauerová, 2021). Although still relatively new, there are several reasons for the spread of this environment, which can be attributed on the one hand to changes in consumer lifestyles and habits and on the other hand to the convenience and ease that are typically associated with online shopping (Hamad & Schmitz, 2019; Alaimo et al., 2020). Shoppers do not need to stress about parking or carrying their shopping bags to the car because their order is fully delivered to the desired location, thus avoiding the time required to travel and navigate the aisles of the physical grocery store (Anesbury et al., 2016). Other key advantages of online food shopping include the flexibility of the service and the opportunity to have access to an endless variety of products, even those which are not available in local markets. Furthermore, purchasing online makes it possible to learn about products through descriptions and images displayed on the vendor's website and consequently to compare products, their features and prices with each other, which would be more complicated in the traditional physical store (Anesbury et al., 2016; Driediger & Bhatiasevi, 2019; Grosso et al., 2020; Alaimo et al., 2020; Dominici et al., 2021; Alaimo et al., 2021). Online shopping substantially reduces search costs and therefore web shoppers can easily access a wide range of information about food products, including the label with the list of ingredients and allergens. The order can be made at any time with the possibility to receive it at home, thus saving time, money and energy (Chintagunta et al., 2012; Alaimo et al., 2020; Bauerová, 2021). Food e-commerce also offers the ability to buy rare foods or local products from other regions and/or countries. According to Grosso et al. (2020), Italian consumers buy online mostly pasta and cereals, coffee and tea, sweets and wine.

Alongside the benefits, some major obstacles to the development of the online channel for food products need to be pointed out. There are consumers who are still skeptical about food e-commerce, particularly if they are used to doing their shopping in person, they prefer to opt for the physical channel instead of ordering online. Another key aspect relates to the security of the transactions and the quality of the delivery service, which can be inadequate due to the characteristics of such products (Alaimo et al., 2020). The touch-and-feel experience (direct physical contact) is valuable for consumers when buying food in order to evaluate the quality of food objectively, especially fresh food such as fruits and vegetables. Since this experience is missing in the online channel, users rely on the vendors' product descriptions to examine food products (Chintagunta et al., 2012; Zheng et al., 2020; Dominici et al., 2021). This is one of the reasons why consumers often tend to perceive online food shopping as riskier. As a result, those who have previously experienced online grocery shopping are more likely to feel less uncertainty, and so they are more inclined to shop online again (Cheow Sern Yeo et al., 2017). The brand has a greater influence on web shoppers' purchasing choices when information about other product attributes is limited. Consumers, however, are very concerned about food safety and quality when buying food online, so attributes such as product origin and traceability can contribute to improving consumers' perceived quality (Zheng et al., 2020). At the same time, it has been found out that high delivery costs or lack of shipping information can discourage Italian consumers from completing an online order (Grosso et al., 2020).

3.6. Determinants of online food shopping

The starting point for explaining consumer buying behavior and the determinants of online food shopping are socio-demographic and situational variables. The current most visible situational factor is the Covid-19 pandemic, which has severely hit all countries worldwide (Dominici et al., 2021; Bauerová, 2021). The effect of socio-demographic characteristics has underpinned multiple studies on e-grocery shopping and has been discussed extensively in the literature. Many studies have investigated the impact of socio-demographic variables on e-grocery food purchasing in different countries (e.g., Hamad & Schmitz, 2019; Wang & Somogyi, 2019; Finotto et al., 2020; Hood et al., 2020; Dominici et al., 2021), but came to mixed conclusions on the impact and importance of these factors. Online food shopping has been found to be influenced by both consumers' personal characteristics and their perception of risk as well as their use of digital technologies. The importance of having a positive and interactive shopping experience, time savings, and flexibility of the service favorably affect perceived usefulness and ease of use (Alaimo et al., 2020). In this context, Mortimer et al. (2016) reveal that the trust component derives from a satisfying, long-term customer experience and this applies to both frequent and infrequent food shoppers. Perceived risk is still an important barrier to purchase intention (Mortimer et al., 2016). With regard to personal characteristics, some scholars found that, for instance, education and income are indicators of online grocery shopping (Dominici et al., 2021). Specifically, it has been observed that shoppers with a higher level of education and who live in wealthier households are more likely to buy online (Bauerová, 2021). Then, Alaimo et al. (2020) shed light on how some user characteristics determine the success of a positive online customer experience. People who claim to be familiar with online food shopping tend to be more satisfied with their shopping experience. This corroborates Hansen’s findings (2005), whereby consumers who are more familiar with digital technologies are more likely to buy food online, primarily because of the degree of satisfaction they experienced in their past shopping experiences. This implies that how much users perceive the complexity or user friendliness of online channels for buying food will affect their overall satisfaction. Furthermore, the results provided by Dominici et al. (2021) confirm what has already been detected in the literature on the role of gender. Although researchers' views on the influence of gender are conflicting, some studies suggest that the majority of both online and offline grocery shoppers are women, and the online channel seems to be used more often by younger consumers with higher incomes (Anesbury et al., 2016; Hamad & Schmitz, 2019; Dominici et al., 2021). Notably, Grosso et al. (2020) showed how Italian consumers living in the north-east of the country prefer to buy packaged goods and long-life products online and to read product labels as well. Also, in this case, it was observed that the majority of those who shop online are women and young people (Grosso et al., 2020). However, this data contrasts with what was observed by Finotto et al. (2020), who instead emphasized a greater propensity of men towards food e-commerce, especially those who have a job and are between 30 and 49 years old. But the latter study was conducted with a geographic limitation as the respondents were only from the Veneto region in Italy.

3.7. Business models in food e-commerce

Before launching an e-commerce project, it is necessary to clearly have in mind what type of business model to use. In Italy, the evolution that e-commerce has undergone in recent years has made a relevant contribution to the emergence of new recurring business models in food & grocery. As Davide Casaleggio states in Casaleggio Associati's research on Digital Food Strategy (2020), "*we are witnessing a proliferation of new business models in the food sector, alternative paths to build a direct relationship with the end consumer through new communication strategies and new solutions to manage direct sales*". Choosing the right model to be adopted depends first of all on the type of product and its intrinsic features; for instance, fresh food has a high rotation and very short expiry dates as well as a more complex logistics to keep products at the right temperature, which therefore entails higher management costs or the need to rely on third parties (Casaleggio Associati, 2020).

We will now proceed to briefly outline some of the business models in the food & grocery industry that Biasin (2021) has identified in his book "*E-commerce food. Tutto quello che devi sapere per vendere online nell'agroalimentare*".

The first major distinction, which has already been duly described in *Chapter 2*, concerns the choice between the B2B sales model in which the business sells online to other professionals or businesses, and the B2C model in which the firm sells directly to the end consumer. Another selection criterion is whether to sell throughout Italy or only in a specific geographical area. In this case, a distinction is made between a national e-commerce model and a local model, which mainly differ from a logistical point of view. Logistics, in fact, significantly impact the business and can shape the following growth strategies. The local business model is embodied by Cortilia, a company that sells food online with different delivery solutions. Hence, its strategy consists in developing partnerships with several logistics providers that can perform home delivery on its behalf in order to provide an excellent quality service to customers, while allowing them to choose the delivery time slot or schedule an appointment too. The Cortilia model is becoming more and more popular in our country, as it allows to fully satisfy the customer at an affordable cost. However, this business model has some difficulties in terms of scalability, i.e. in the extension of the service to other cities, as this would imply starting all over again with large investments and capital. On the other hand, the national model, embodied for instance by Fruttaweb, reaches a wider audience in absolute terms and can boast a catalog with many more items. So, while it is very easy to get to consumers and increase the pool of customers, the main challenges relate to the need to have a higher budget to create an e-commerce site, logistics and marketing that are structured and efficient, while also requiring the company to rely on a national supplier. Moreover, another model of food e-commerce that is increasingly spreading in Europe and also in Italy with the pandemic should be mentioned. This is the model centered on a subscription service, as offered by companies like Cortilia or Babaco Market. This model is typical for those foods that are consumed very quickly, such as fruits and vegetables. It is assumed that when consumers decide to buy a subscription food box, this includes products which are in line with their tastes and preferences or even their diet so that they can appreciate the “subscription concept”. A box of products is delivered to the consumer on a recurring basis, thus relieving him/her from the thought of constantly having to buy. Nonetheless, it is fundamental for firms to understand whether the products to be offered by subscription are suitable and so whether they lend themselves to being delivered at regular time periods. The subscription box model will be discussed more in depth in the next chapter.

Furthermore, there are some business models that are more specific and peculiar, and therefore are worth considering. The first model is the meal-kit model, that is the purchase of boxes that contain all the necessary, pre-portioned ingredients to cook a particular dish at home. Companies like HelloFresh and MyCookingBox give users the possibility to pick the recipes they want to eat during the week based on their needs, and then sign up for a subscription that will send them a box with all the precise ingredients and instructions for cooking them. This business model is having growing success worldwide but in Italy, to date, is still mostly populated by start-ups. A second model is about private sales and deals with the e-commerce sale of exclusive products that are reserved to a certain group of users, such as loyal users or those who have set up an account on the company’s website. So, this model requires considerable investment and a strong ability to precisely identify the group of consumers to be targeted. Then, in the food sector there is also the flash sales model, which instead leverages the idea of scarcity and urgency. The name itself suggests that flash sales are online sales of products that are available in limited quantities and for a limited time only, usually between 24 hours and a couple of days.

We would like to stress how these smaller business models that have just been outlined can be used either as standalone business models or can be part of other e-commerce business models as well.

It is extremely important that firms operating in the food e-commerce first plan and organize their online business strategy, then analyze the competitive scenario and it should also be very clear what solution they want to propose to the consumer and the model to set it. As a result, forecasting demand and adapting to best meet consumers' requirements is crucial for food & grocery businesses. Being present online can no longer be regarded as a choice for firms but is instead a request that comes directly from the consumers who want a direct relationship with the brand. Also, customers expect to get an insight into the food supply chain as they are more and more attentive to what they eat. Therefore, innovation is what will make the online food market explode, well beyond the pandemic.

FOURTH CHAPTER

The subscription boxes trend: focus on the food industry in Italy

"Humans crave experiences that repeat – especially in uncertain times. In this way, subscriptions can provide immense stability for both businesses and consumers".

–The 2022 State of Subscription Commerce report

For some time now, we have been experiencing an evolution of retail at quite an accelerated pace due to transformations induced by technological innovations, as well as in business models which reflect changes in consumer purchasing and consumption behaviors. Digital technologies allow for more informed decisions, more targeted and beneficial offers, faster services, and better experiences (Tao & Xu, 2018).

Social media advertisements and promotions of subscription boxes are quite common across a range of industries, from food to apparel and books to beauty. This market trend points to a prevalence of a particular business model, namely the subscription box model. The 2018 research conducted by McKinsey points out how subscription boxes have exploded in popularity, thus recording a steady annual growth of more than 100% over the last five years (Chen et al., 2018). This business model is increasingly gaining momentum in Italy as well, especially in the wake of the coronavirus.

4.1. The subscription box model and how it works

Subscribing is the process of signing up for a subscription. A subscription business model involves customers signing up for an agreement with a firm that provides products or services over a specified period of time for a recurring fee. In the case of a subscription box, the customer subscribes to a box with several products delivered on a regular basis. Since the deal is usually concluded online, it is also referred to as "e-commerce subscription" (Sannino & Olivetti, 2018; Woo & Ramkumar, 2018;

Crivellaro, 2021). Therefore, we may define this phenomenon as an extension of e-commerce, a customer loyalty that does not exhaust its usefulness in the first purchase but requires renewal or continuous update. It differs from traditional e-commerce because the products are delivered at fixed time intervals in exchange for a subscription fee paid by the subscriber. As a result, it is very common for companies that resort to this business model to use retention tools such as collections of points, discounts, and other methods to attract and keep customers (Crivellaro, 2021).
The concept of subscription per se is not new, but what is new is its development as a business model across multiple industries, including physical consumer goods (Kim & Kim, 2020). A business model depicts *"the rationale for how an organization creates, delivers, and captures value"* (Rosengren & Bianchi, 2020). It is worth noting that the subscription box model cannot only necessarily be implemented as a pure business model, but hybrid models in which subscription boxes constitute an add-on, i.e. an additional service that extends and thus complements the company's product range, are also increasingly widespread: the subscription component is added to the option of purchasing products and services separately.
While there are some differences depending on the industry, some characteristics are common to all subscription boxes (BlueCart, 2021):

- **Recurring shipments**: Boxes are typically delivered on a regular basis, which can be weekly or monthly depending on the type of consumer goods and the type of subscription box chosen. They are also useful to let consumers try out unfamiliar brands or new products of their favorite brands. At the same time, they allow the organization to get rid of those goods that could potentially become dead stock. In order to be encouraged to buy, consumers need to perceive the convenience element, i.e. they need to clearly see that the subscription enables them to save some money.
- **Recurring Payments**: One of the primary reasons why many organizations are attracted to this business model and thus would like to enter the subscription box market is the guarantee of regular payments from subscribers.
- **Themed boxes**: subscription boxes are usually created based on an underlying theme that connects the products in the box. For example, they could all be sustainable products or products that come from local businesses.

Nowadays, it is possible to purchase almost anything in a subscription box, from beauty sample boxes to meal delivery services. People are intrigued by subscription boxes because of their convenience and the excitement of receiving a surprise package. As far as target industries are concerned, there are a number of subscription boxes such as beauty and makeup boxes that contain products from a single brand or several brands including some little known ones. Then, there are food subscription boxes, the focus of this chapter, that can include products such as fresh fruits and vegetables, meat, snacks or ready meals. Other categories of boxes that have become popular are those that include grooming supplies, pet supplies, coffee, wine, garments, and books (BlueCart, 2021). In general, subscriptions have a monthly cost of between 10 and 80 euros depending on the type of product and often aim to impress subscribers by exploiting the surprise effect: those who receive them may not know in advance exactly what they will find in the box. The major appeal is in fact the gratification of getting something new and unexpected (Sannino & Olivetti, 2018; Il Post, 2019).

4.2. History of subscription boxes

The subscription box model is not a completely new trend. Subscription-based delivery services for magazines, newspapers, fashion catalogs, and fresh foods (such as dairy products) have been around since last century, although the delivery process did not include any online component (Woo & Ramkumar, 2018). Since the early 2000s, digitalization has brought about a revival of subscription models, at first driven by purely digital goods, such as streaming media services (e.g. Netflix and Spotify). But more recently, the subscription business model has also made its way into the world of physical consumer goods (Rudolph et al., 2017). Subscriptions have emerged as a fascinating alternative to the so-called “one-off purchase” of goods and services ever since (Livingston, 2021). The subscription box model originally started developing in the United States in 2010 with players like Birchbox, which sells beauty products; the Dollar Shave Club, which provides razors and other body care products for men; and Blue Apron, which is a leading meal kit company instead. These firms reported subscriptions for about $15 billion in sales in 2018 (Cheng, 2019). Actually, the first subscription boxes in the U.S. date back to 2008, at which time they were not very successful (Il Post, 2019).

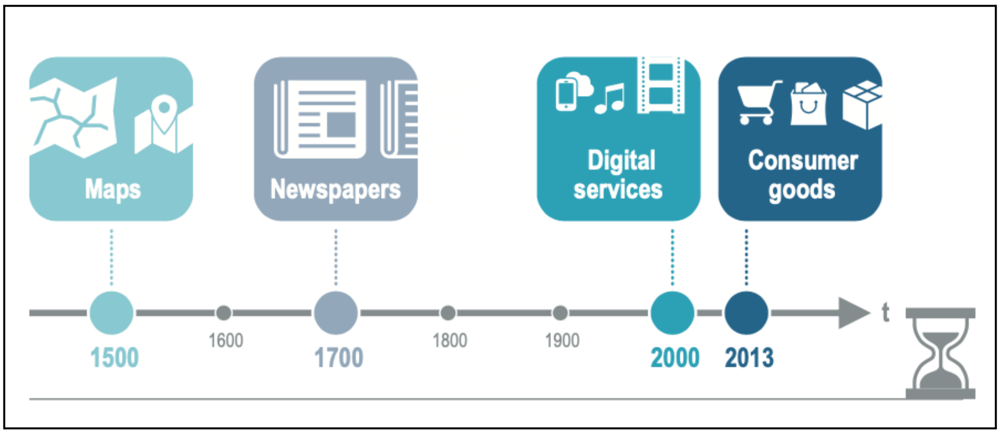

Figure 4.1: The process of subscription development over the years (Rudolph et al., 2017)

Nevertheless, the modernized business model as we know it today, involving online subscription, is thought to have been pioneered by Birchbox, a beauty subscription-based online service which delivers samples of trendy beauty products to customers each month for a “flat fee subscription” (Woo & Ramkumar, 2018). As this model has grown in popularity in recent years, multinational giants such as Amazon (Amazon Subscribe & Save), Procter & Gamble (Venus Club), and Walmart (Beauty Box) have also approached it (Andonova et al., 2021). As a consequence, competition in this market is getting fiercer. One of the most widely used subscription box models is the so-called “tiered pricing model” in which multiple versions of each box are created with different levels of value, e.g. fruit and vegetable boxes of different sizes based on the number of people the box is designed for, with prices that vary accordingly (BlueCart, 2021).

According to McKinsey, in 2018 there were about 3,500 subscription box services in the U.S. and nearly 7,000 globally. In addition, an industry association has also been created since 2017, known as the Subscription Trade Association. SUBTA views the subscription commerce economy as composed of six segments: Subscription Box, Subscribe and Save, Membership, Media and Publication, Digital/Software, and Streaming (Video and Music)(Sannino & Olivetti, 2018; Kim & Kim, 2020).

4.3. Subscription boxes and bundling

Bundling is one of the most widely used pricing strategies by many companies (Won & Shapiro, 2021). It is a marketing strategy which is used to get consumers to buy more than they had planned to and consists of offering several products and selling them together at a normally reduced price. This technique can be quite appealing to customers who value discounts, while making it more complicated for them to compare prices. However, it is extremely important that the bundle of products a company offers is more cost effective than buying the items included in the package individually. If customers feel that they are saving money, their willingness to buy the bundle will increase (Chiambaretto & Dumez, 2012). In the 1980s, Guiltinan (1987) also introduced the price element, thus defining price bundling as "*the act of marketing two or more products and/or services in a single package for a special price*". A distinction is then made between price bundling and product bundling. Price bundling is a commercial practice that consists of selling two or more separate products at a discount (Stremersch & Tellis, 2002), i.e. there is a price reduction on the items in the package or on the package as a whole due to the fact that the consumer buys several goods at once, otherwise there would be no incentive to purchase the bundle.

By applying these concepts to subscription boxes, when the box is offered as an add-on that complements the firm's product offering, it can be viewed as an example of mixed bundling, as customers have the opportunity to purchase the products contained the box either in a box or separately, yet it is still cheaper to buy the bundle (Won & Shapiro, 2021). On the contrary, if the company makes subscription boxes its predominant business model, so that the products can be bought only in a package and not individually, thereby creating a unique purchase opportunity for the user, then this is an example of pure bundling (Won & Shapiro, 2021). In this regard, the so-called "product kitting" is frequently associated with the subscription box model. Kitting is one of the services which is most commonly used in e-commerce by producers and retailers to boost their profits while minimizing costs. It is a shipping and warehousing technique that has become well-known with the surge in online shopping (BlueCart, 2021; Weatherwax, 2022). Within the context of subscription boxes, we refer to product kitting because multiple products come packaged and shipped like a single bundle. These goods are included in a single package and shipped to the consumers on a recurrent basis, thus increasing the customer perceived value. So, this model is intended to make sure that users always recognize value in the company's offerings as it makes them pay the subscription fee periodically.

4.4. Benefits and challenges of subscription boxes

Now we attempt to answer a crucial question: Why would a firm choose to use this model?

The benefits of subscription boxes arise both for those who purchase the subscription service and for those who sell it. Indeed, users may see the subscription as a way to save money and time on repeat purchases. For this reason, in addition to media and software, the latest categories where this model works best include home and beauty products, and food.

The first benefit to mention for the business is the increase in Customer Lifetime Value (CLV). This is a metric that is used to gauge how much money a customer gives as he or she stays with the company. So, this means that if a customer subscribes to a box, their time with the company will increase and consequently the CLV will increase as well[6]. In addition, adopting a subscription model allows the company to automatically have customers every month. Since subscribers pay a fixed fee each period, the steady revenue stream is an added benefit for the firm. Studies have demonstrated how subscription models are 200% more profitable for the business than comparable one-time payments since they deliver a higher perceived value to the subscriber. Once the firm knows the number of subscribers, it is not difficult to predict its overall revenue. Similarly, it can also master a major challenge, namely greater business predictability, which is another relevant reason behind its rapid uptake. This model makes it possible to predict demand in advance, thus resulting in efficient inventory storage and management (Bischof et al., 2020). Unlike the pay-once model, a subscription business model eliminates uncertainty about inventory restocking, because you know exactly which items need to be restocked, in what quantity and how often.

[6] https://giuliaverzeletti.it/business-ad-abbonamento-cose-il-modello-subscription/ [accessed on March 9, 2022]

Another key point is the fact that subscribers do not usually only value the products they buy, but the shopping experience with the company and the convenience of the service as well. The core of a subscription-based model thus lies in the ability of the firm to provide constant value to shoppers in order to make them appreciate and most importantly justify the money they are spending on a regular basis. And a customer who has a positive and satisfying experience is a loyal customer. Also, it should be pinpointed that this model represents a further tool to constantly communicate and interact with customers, thereby being present in their minds and in their daily lives[7]. In fact, this is a great opportunity for businesses to reap the benefits of loyalty: it is five times easier to retain a customer than to acquire a new one and on average (Fusco & Cardile, 2021). Higher customer retention implies greater business stability as well as the existence of loyal customers. Along these lines, word of mouth and social media advertising have contributed a lot to consumer awareness about this innovative retail service.

Consumers receive many benefits from subscribing to a box, first of all convenience, i.e. saving not only costs but also time and energy: the user saves money because it costs less to order a box with numerous products than to buy products individually. On the other hand, convenience also lies in the fact that the system is automated, i.e. the renewal is automatic and requires only a credit card payment authorization. Hence, a subscription box makes sure that you do not have to remind yourself to place an order before you run out of product stock or physically go to a store to get it. As such, it solves the dilemma of limited time to shop or forgetfulness. Another advantage for consumers is that the subscription box allows them to experiment with new products or buy them in smaller amounts in order to understand which ones they like best and meet their needs (Bhatt, 2018; Tao & Xu, 2018; BlueCart, 2021). Based on what many subscribers have said, what arouses interest and curiosity about boxes is also the fun and suspense dimension for a package that is about to come: that pleasant feeling akin to receiving a birthday gift over and over again (Livingston, 2021). Other perks of subscription boxes include custom picked items, meaning that many subscription boxes enable customers to receive custom picked products based on their preferences and requests which adds to the thrill of opening the box and the feeling of being unique (Tao & Xu, 2018; Livingston, 2021). Moreover, by building a long-lasting relationship with customers, it is

[7] https://giuliaverzeletti.it/business-ad-abbonamento-cose-il-modello-subscription/ [accessed on March 9th, 2022]

possible to gain an in-depth understanding of their preferences and thus offer tailored solutions, which would have been challenging to do for consumers who only shop occasionally.

Subscription shopping also comes with some notable drawbacks. One of the most obvious ones is that while there is the thrill of waiting for your box, most subscription services do not allow you to customize or choose the items you receive. As a result, you might find yourself opening a box containing products that you don't use or need. In this case, convenience and time saving would also be lost because the purchase does not correspond with what you actually need. Another issue with subscription-based services relates to the value of the box, which is not always clear. When buying a single product, you can look at all the different alternatives and compare their prices to see which is the best deal, whereas in the case of a subscription box, the product assortment changes from time to time and sometimes you do not even know exactly what the products will be. So, this makes it much harder to see if the box is really worth the value you are paying for it (Livingston, 2021). Other challenges with this model are found in consumer conversion. The relationship must be nurtured and monitored more closely than usual, as losing a subscription agreement is more costly for the enterprise than losing a one-time customer purchase (Tao & Xu, 2018).

4.5. Types of subscription boxes

At the heart of the enduring success of a subscription box are a number of ingredients that firms need to pay close attention to, otherwise the likelihood of failure is right around the corner. First of all, subscriptions need to solve a significant problem for consumers, meaning that only when consumers express a particular need that must be fulfilled, should companies consider introducing this business model. But at the same time, a lot of perseverance is needed on the supply side, i.e. firms need to be sufficiently prepared to optimize their offering and plan for the long term. Finally, the way in which products are presented and marketed must be somewhat innovative in order to be able to distinguish from competitors and generate customer interest.

Rudolph et al. (2017) extended existing research on subscriptions and came to define different types of subscriptions (they are known for identifying replenishment, curation,

and surprise boxes) based on the degree of surprise involved, i.e. based on whether or not buyers can control the content of their box. These authors postulated that subscriptions in which consumers know exactly what products they are going to purchase are risk-free and qualify as unsurprising subscriptions, whereas those in which customers do not have control qualify as surprising subscriptions and pose a risk that the shopper will get something unwanted (Rudolph et al., 2017; Bischof et al., 2017, 2020). Conversely, Chen et al. (2018) focused on the importance of personalization in such subscription services and the motivations that drive purchases. Furthermore, the researchers claim that subscription boxes are found to be more prevalent primarily among millennials. (Chen et al., 2018; Bischof et al., 2020; Andonova et al., 2021). Chen et al. (2018) also added the so-called "access subscription boxes" that result in additional member-only benefits, such as lower prices and exclusive products. In this sense, it is deemed crucial to analyze the taxonomy of subscription boxes developed by Bischof & Rudolph (2021), which includes all four basic types of subscription boxes. These differ from each other not only in the type of products offered, but more importantly because they are intended to provide a different benefit to consumers.
Subscription boxes have two key dimensions: the degree of surprise and the degree of personalization. With regard to the degree of surprise, a subscription box can be more experience-oriented or transactional, depending on whether or not it includes a surprise element. As for the level of personalization, instead, providers adapt or not the content of the box according to the customer's individual expectations and wishes (*Figure 4.2*). Based on these aspects four types of subscriptions can be defined: predefined, access, curated, and surprise ones (Bischof & Rudolph, 2021). The following is a description of the different types.

4.5.1 Predefined or replenishment subscription boxes

Replenishment or predefined subscription boxes leverage convenience and cost savings, do not involve surprises, and offer customers self-selected products, thus saving them trips to the grocery store. This type of subscription thus gives maximum convenience to the customer as products are replenished automatically and periodically (Bischof & Rudolph, 2021). Consumers choose to automate the purchase of essential items and consequently will have a dedicated discount on them. These are products such as fruits and vegetables, pet food, razors, diapers, etc. For instance, Amazon's program "Subscribe & Save" is already active in many countries including Italy, and enables shoppers to subscribe to groceries or household items instead of purchasing them individually. Product quantities and delivery times are selected by the customer in exchange for a small discount given to subscribers on selected items. So, consumers know exactly which products they will receive. As such, predefined subscriptions carry no risk and provide customers with full transparency (Bischof et al., 2020).

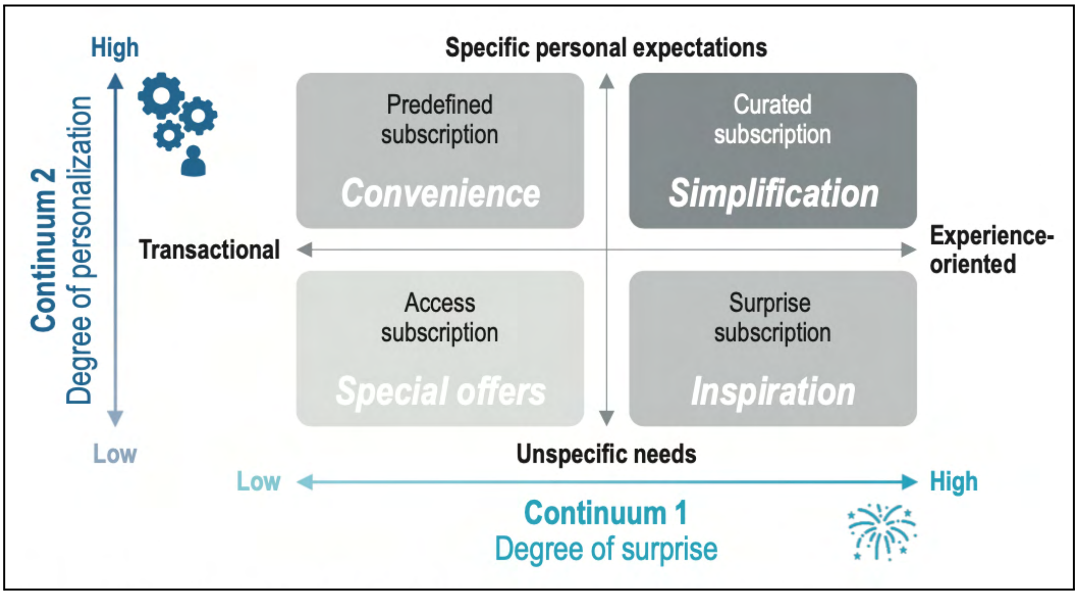

Figure 4.2: The four basic types of consumer goods subscription boxes based on the degree of personalization and the degree of surprise (Bischof & Rudolph, 2021)

Since the demand for these items is regular, the main advantage of this type of box is that it helps the firm to have higher retention rates because the products are actually fulfilling a real need, so customers will stay longer than with other kinds of subscription boxes.

4.5.2. Curated subscription boxes

Curated subscription boxes are the most popular ones. They feature a series of products that are not previously arranged with customers, who just select a macro-category of reference (apparel, beauty products, food and beverage, etc.), and then receive exclusive and personalized products from time to time. One of the most valuable benefits of curated subscriptions is the reduction of complexity, as they meet the demand for variety and personalization in product selection while simplifying the buying process (Bischof & Rudolph, 2021). Providers such as Birchbox, Sephora Play, and HelloFresh offer curated subscriptions for fashion, cosmetics, and food respectively. They ship surprise boxes whose contents are selected by the provider, but tailored to the subscriber's individual tastes and wants. Consumers who buy this box are risk-averse and seek variety or time savings even when it comes to research in their purchases. The surprise factor is mitigated to some extent by the fact that these boxes are designed for individual consumers, but still motivate them to explore the latest products. While these boxes are very captivating for shoppers, they are also the ones that tend to suffer the highest churn rates. In this regard, Bischof & Rudolph's study (2021) revealed that 30% of customers who subscribe to curated subscriptions cancel within the first month (i.e., after the first delivery). This high churn rate far exceeds that of predefined (14%), surprise (20%), and access (20%) subscriptions and is often justified by customers as an unconvincing subscription. Nevertheless, if a curated subscription tends to meet subscribers' tastes more, it thus has great potential for customer retention and very high profit. Curated subscriptions add value by exposing consumers to novel products, but the loss potential here is much higher than with predefined subscriptions when for example products do not match consumers' tastes or in the event that they get undesired items (Bischof et al., 2020).

4.5.3. Surprise subscription boxes

Surprise subscription boxes characterize themselves for having a highly developed surprise mechanism. They fulfill experience-oriented needs and a large demand for product variety as they provide subscribers with new and unexpected items. However, they do not give customers any control or knowledge of what they will receive prior to purchase. Surprise subscriptions and curated subscriptions both satisfy the need to be inspired by new products, but unlike curated subscriptions, consumers receive a set of products that are not tailored to their individual preferences and are therefore much riskier from the supplier's perspective, as it is solely up to them to decide the composition of the box (Bischof & Rudolph, 2021). From this point of view, the surprise factor may turn out to be a double-edged sword for subscription providers since it can lead to both positive consumer experiences due to learning about new products, but at the same time the risk that customers may receive unattractive, unwanted or disappointing products is high, thereby negatively affecting their shopping experience. Hence, companies can reduce this perceived risk by implementing a free return option (Bischof et al., 2020). Surprise subscriptions pose risk-related challenges for both providers and consumers, as the latter is not afraid to test innovations. Firms offer variety and desire for novelty, as well as emphasize the experience itself since in this type of box purchases are emotional and hedonic and associated with pleasure and adventure. Additionally, it should be underlined that users deliberately choose to purchase a surprise subscription, being aware that they cannot control its content (Bischof et al., 2020).

4.5.4. Access subscription boxes

The last category of subscription boxes, instead, refers to those who provide certain products, mainly clothes or food, with special discounts or exclusive benefits that you would not be able to take advantage of if you were not subscribed (Bischof & Rudolph, 2021). In fact, such items exist as unique and discounted products for subscribers only. Thanks to this model e-commerce firms can really leverage exclusivity by enticing customers to sign up and stay thanks to your ability to offer them products or discounts that no one else is offering. So, it is fundamental to make sure that the subscription delivers something attractive and worthwhile and in line with exactly what a client wants. Access subscriptions appeal to consumers who are highly interested in limited offers and are looking for price advantages and a special selection of products just because they subscribe to the service (Bischof & Rudolph, 2021).

4.6. The churn rate

A major challenge that subscription box providers continually face is the high customer churn rate, which is primarily due to the fact that they not only provide consumers with a range of products but also with an actual shopping experience. If this does not meet consumers' expectations, they will quickly unsubscribe. (Chen et al. (2018) report that on average 40% of subscribers have canceled a subscription service, with churn rates varying across product categories: specifically, this rate is lower for beauty and apparel products (around 10% for both categories) (Subscription Trade Association, 2019), while it peaks at 60-70% for meal kits (Chen et al., 2018). Hence, this implies that most people are simply trying out the service or taking advantage of a promotional or introductory offer. The higher the churn rate, the more complicated it becomes for vendors to both cover the massive costs of acquiring new customers and eventually scale their revenue.

Some common reasons for subscription churn can be attributed to the consistent spending for the boxes and consumer dissatisfaction with the diversity of products received. Additional explanations for high churn rates include ineffective marketing strategies that do not take into account consumer needs and preferences (Andonova et al., 2021; Toteva et al., 2021). Thus, companies must somehow minimize the perceived risk associated with trying out a new service like subscription boxes, for instance by offering a kind of "bricks and clicks" approach where customers can physically test the product or service and then decide whether or not they want to subscribe (Bischof et al., 2020; Andonova et al., 2021). Another effective way to help reduce the churn rate is to make it clear to the consumer the convenience related to a subscription box so that they are willing to pay more in order to avoid research and evaluation of multiple alternatives (Bischof et al., 2020). As for meal kits, which will be discussed next, their value also lies in the comfort of having all ingredients delivered directly to your house without having to go to the supermarket (Randall et al., 2016). Likewise, time savings in meal planning and preparation as well as in the search for recipes to be prepared are made possible by the box that already has everything needed: it is only required to put the ingredients together and cook the dish. In order for consumers to enhance their perception of convenience, it is imperative that firms seek to use engaging communication and storytelling to highlight this feature in consumers' minds as well as the benefits associated with the box (Andonova et al., 2021). Furthermore, firms must focus on delivering value to the customer and ensure that this is clearly perceived at all times, notably in light of the quick cancellation of some boxes. Similarly, leveraging uniqueness and exclusivity so that customers perceive that what they are subscribing to is unique and hard to find in other providers could be an effective tool for both attracting potential customers and retaining them (Andonova et al., 2021). It is also possible to increase consumers' perception of value by enabling them to personalize the content of their boxes: if they can choose which items to receive and what price to pay for the box, this may help to lower churn rates while strengthening the value proposition and differentiating from competitors as well. The key is to adapt the value proposition according to changing needs and consumer expectations (Andonova et al., 2021; Tan & Chen, 2021).

4.7. The subscription box shopping experience

Navigating the subscription box landscape successfully is very complex and requires managers to be guided on the most critical decisions to be made, especially given the large number of organizations moving to this business model and the fact that some well-known businesses failed to implement it. However, it must be said that literature on subscription box services is very limited and tends to focus more on subscription box services in general rather than on the specific sectors where they can be applied (e.g. Rudolph et al., 2017; Noorda, 2019; Bischof et al., 2020). Even so, few studies have been undertaken to identify consumer motivations and barriers related to subscription adoption as well as little is known about whether consumer behavior differs across the types of subscription services (Bray et al., 2021). Despite the boom in subscriptions, including those to consumer goods in recent years, research in this area is still nascent. According to what Bischof & Rudolph (2021) pointed out, subscribers belong to that portion of the market that has a higher propensity to adopt a new technology, the so-called “innovators” and “early adopters”, because they are the ones who want to test new products first and thus are more willing to take risks than non-subscribers. While men tend to be more interested in products that are automatically replenished like razors, for instance, women, on the other hand, appear to be more inclined to buy boxes where there is the surprise element such as beauty boxes. Chen et al. (2018) in their US market study found that most subscribers tend to be young women (60% of total subscriptions) living in urban areas, but men (42%) have an average of three active subscriptions compared to 28% of women (Chen et al., 2018). Furthermore, it has been observed that subscription boxes tend to be more in vogue among people with higher incomes and especially among millennials (Andonova et al., 2021). As for the typical subscription box customer, 15% of those who shop online in the United States - primarily young people living in large cities - also subscribe to one or more of these services (Il Post, 2019).

Unlike the traditional purchasing decision-making process both in the physical retail store and through e-commerce websites, when users decide to subscribe to a box, they do not necessarily have to go through all the stages of researching product information or the latest trends, then comparing the different alternatives, selecting the product to buy, and so on. Hence, it may be necessary for the subscriber to research the product information, evaluate the alternatives and choose which box to subscribe to, but this process is certainly less demanding in terms of resources and time than traditional shopping (Woo & Ramkumar, 2018).

As already mentioned, only a handful of studies have investigated what motivates people to engage with subscription retail, classified as utilitarian and hedonic motivations. Convenience and value for money are generally considered utilitarian motivations, while excitement and surprise are emphasized as key hedonic ones. Furthermore, it is noteworthy that the few existing studies on this topic have investigated subscription boxes in the beauty and fashion industries (Bray et al., 2021). Ramkumar & Woo (2018) attempted to examine how hedonic and utilitarian motivations, as well as consumption traits, affect consumer purchasing behavior toward subscription boxes. As a result, they primarily concentrated on how benefits could enhance subscriptions' appeal. With regards to fashion and beauty subscription boxes, these researchers found out that subscribers are more likely to be women with a higher level of fashion awareness. Also, they realized that a high level of e-tailer trust was a predictor of subscription, but age was not correlated with the likelihood of subscribing. In contrast, Chen et al. (2018) in their larger survey actually found that age is a variable that significantly impacts the likelihood of subscribing, and found that people between 25 and 44 are more inclined to subscribe, especially urban residents and those with higher incomes. In terms of product types, their research revealed that women are more willing to subscribe to beauty and apparel boxes, whereas men are more inclined to opt for razor, game and meal kit subscriptions (Bray et al., 2021). On the other hand, Bray et al. (2021) identified convenience and ease of use as the main motivations for subscription box adoption. Respondents relate convenience to the automation of the shopping process and time savings since they do not have to remember to order products on a routine basis. Other drivers that were emphasized by shoppers were value for money and gaining access to a wider range of products followed by staying up to date and learning about new products (Bray et al., 2021). Whilst value for money was highlighted as a motivation, it was also cited by many as a prominent barrier, primarily due to the fact that consumers may end up paying for some products that they do not use or did not want in their box. While these scientific papers provide some interesting insights on the subject, their findings are fragmented, so there is still a big gap in the literature regarding which process and state variables influence consumers' willingness to purchase a subscription box. Although they do not specifically refer to subscriptions, Chiu et al. (2014) analyzed utilitarian and hedonic state variables of e-commerce shopping that could be applied to subscription purchases as well. The authors showed that consumers' utilitarian and hedonic traits and attributes impact attitudes toward the offering and thus impact repeat purchase intention (Chiu et al., 2014; Ramkumar & Woo, 2018; Woo & Ramkumar, 2018; Bischof et al., 2020). Some academic research centered on subscription boxes in fashion. For instance, Tao & Xu (2018a) went to examine the factors that influence the adoption of a fashion subscription by stressing the importance of convenience, economic benefit, and perceived enjoyment. Tao & Xu (2018b) also conducted further research in this area and identified a number of utilitarian motivations such as convenience and customer value and experiential shopping motivations, including adventure and gratification, which drive subscription purchases as well (Bray et al., 2021).

As far ar barriers to using the subscription services are concerned, Tao and Xu (2018a) noted that “missing social shopping experiences” and “anticipated difficulties in canceling subscriptions” are hurdles to subscription purchases, while Bischof et al. (2020) mentioned the “risk of receiving unappealing products”, so they argue that free returns could improve this barrier. Other factors that could lead consumers to cancel subscriptions include poor product quality, dissatisfaction with the assortment, and lack of perceived value (Chen et al., 2018; Bray et al., 2021). So, there is a clear need for further research into consumer attitudes and perceptions towards subscription boxes, especially in industries such as food & grocery which have seen significant and rapid growth in these services but have not yet been extensively explored in the literature.

4.8. Food subscription boxes in Italy

Some of the solutions we came up with in the midst of the Covid-19 lockdown to make a virtue out of necessity have proven to be viable and promising even in the newfound normality (Zonin, 2021). As already pointed out in the previous chapter, during these last two years, Italians have dedicated more time to cooking. In fact, when we could no longer go out, cooking became a way to make up for lost conviviality, but also to take care of ourselves, as well as to learn new recipes. In this scenario, it is not surprising the dramatic growth that food subscription boxes have experienced worldwide (Fiore, 2021). Indeed, in Italy, food-related boxes are the ones that have experienced the greatest success (Rubini, 2020). As a result of Covid-19, there has been an unexpected demand for food boxes mostly because of their convenience and personalization factor as well as their concerns about sustainability and healthy eating. Literally, these subscription boxes can be regarded as an evolution of online grocery shopping because they deliver a box containing a selection of certain food products to subscribers' doorstep. The challenge induced by the Covid-19 pandemic and the rapidly changing consumer preferences will be to sustain these levels of growth and, more importantly, to keep them over time.
As stated earlier, there are a number of benefits that spur consumers to subscribe to a box, and food-related boxes are no exception. More specifically, with reference to food subscription boxes, three are the most prominent benefits (Rubini, 2020):

- **The choice**: we are constantly overwhelmed by a myriad of information, alternatives among which to make an evaluation and so the choice implies a lot of effort. In this case, a valid option is offered by meal kits since they delegate the decision about the dishes to be cooked to someone else, but they still take into account the buyer's nutritional needs and personal preferences.

- **Time constraints**: the hectic everyday life pushes us to buy fresh food boxes that comfortably come to our house on a regular basis or to order ready meals in advance for the week. Such options help save time and energy while at the same time avoiding the supermarket checkout line.
- **Sustainability**: a very sensitive subject for consumers, so paying attention to what you eat as well as product traceability or having a box with tailored ingredients for what you have to cook is a good way to tackle food waste.

Nonetheless, it should also be said that food boxes are not very affordable and accessible to everyone. For businesses operating in this market, in fact, it turns out to be complex to make a certain profit since procurement, storage and distribution costs are quite high. Consequently, this does not allow to lower prices to the point of making them really competitive. It is evident, then, that a unique selling proposition must focus on other features, particularly those that are most important to consumers and which can thus play a decisive role in their purchasing decisions. Among the most outstanding features of subscription boxes in the food industry are the environmental sustainability and the fight against food waste on which firms offering these services frequently rely on to be attractive to consumers (Fiore, 2021). In addition, it is critical to appeal to the motivations for maintaining specific dietary habits and eating regularity, such as someone who wants to start a diet, follow a healthier eating regimen, or undertake a vegetarian, vegan or low-carb diet.

4.9. Types of food subscription boxes

The most widespread types of food subscription boxes in Italy are meal kits, fresh food boxes, personalized healthy meals and surprise boxes with snacks or typical foodstuffs from foreign cuisines. We will now take a closer look at each typology, including a few companies that provide these types of subscription boxes in the Italian territory.

4.9.1. Meal kits

There are two main categories of food that fall within the food delivery service (Cho et al., 2020):

- Ready-to-eat food
- Ready-to-cook food

Ready-to-Eat (RTE) food is so defined because it does not require any preparation, but rather it is already cooked and possibly only needs to be reheated before consumption. On the contrary, Ready-to-Cook (RTC) food involves meals that either have already been prepared and require only reheating or provides raw food ingredients that are partially already prepared (shelled, peeled, cut or washed), but still need complete cooking of some or all of its components (Costa et al., 2001). Meal kits are the most popular food delivery service among all Ready-to-Cook (RTC) food products since they offer ease and convenience in making an elaborated dish at home (Cho et al., 2020).
We may realize at the last minute that we are missing an item to cook dinner with, that we haven't bought enough, or that we got carried away and our fridge is full of ingredients that we don't know how to use. If the time to do the food shopping is too little and you do not know how to answer the question "what shall we cook tonight?", then a meal kit can be a winning solution to impress both family and guests. For some years now, the meal kit delivery trend has been increasingly standing out both internationally and in Italy as the latest frontier of home food delivery. These kits have already gained popularity in the United States, where Blue Apron[8] has turned it into a business listed on the stock exchange. They consist of a box with all the ingredients and toppings which are already semi-prepared and individually packaged based on the number of people consuming the meal so that you can recreate traditional recipes as well as the ones of the most famous chefs in a home-made version (Cookist, 2020; Bardi Carni, 2021; Andonova et al., 2021). Thus, on the one hand, they combine the demand for fresh, quality raw ingredients without having to go to the grocery store to get them, while on the other hand meal kits include an illustrated explanation for each recipe with step-by-step instructions and cooking tips to complete it. Sometimes some components are prepared in advance to make the cooking experience simpler or faster, but the meal

[8] https://www.blueapron.com

still requires the subscriber to assemble it (Heegaard & Fanlo, 2021). What the customer receives is not just a home-cooked dish, but a real experience: meal kit providers should therefore try to treat and pamper the customer as if he or she were at a restaurant, even if all this takes place at home (Bardi Carni, 2021).

The preparations are all concerned with healthy, balanced nutrition and in line with the Mediterranean diet. Furthermore, some brands propose programs for plant-based meals, gluten-free options, dairy-free meals, and a meal plan focused on organic foods in order to meet all the different nutritional needs of customers (Wells, 2017). But the convenience of meal kits is not just about getting high-quality, environmentally friendly products at home. It is also a way to save hours of precious time. Hence, the meal kit is intended to be a good option for those who want to cook without the hassle of overthinking what and how (Quomi, 2021; Fuentes & Samsioe, 2021; Moores et al., 2021). Additionally, meal kits focus on providing convenience by eliminating the need to plan meals, find recipes, and purchase necessary ingredients (Cho et al., 2020). Their convenience also lies in the fact that the recipes are easy to follow and thus even accessible to less experienced cooks. Pre-measured ingredients allow you to easily try new foods and dishes without buying a large quantity of a particular ingredient (Wells, 2017; Heegaard & Fanlo, 2021). In the research by Cho et al. (2020) four attributes have been identified as the most important drivers of meal kits success: the provision of high-end restaurant quality meals, labor savings, menu variety and reasonable price. In particular, high quality and menu variety were the most valued attributes of meal kits as they both contribute to improved hedonic and functional value for consumers. So, the key value of meal kits is that they can be linked to two different types of subscription boxes on the basis of those identified by Bischof & Rudolph (2021): curated subscription or replenishment subscription depending on the primary benefit consumers seek from the box. If what consumers expect in terms of perceived benefits is primarily related to convenience, the meal kit is considered as a replenishment service, because it continuously supplies the client with a range of food products that are frequently consumed. Instead, it is regarded as a curation service when the perceived benefit is a curated surprise (Bischof et al., 2020), i.e., the element of personalized surprise since the shopper does not know beforehand the products he or she will receive in the box which have been exclusively designed to be in line with his or her needs.

Despite their many opportunities, however, meal kits are not without drawbacks and challenges related to their adoption, which are potentially significant: some consumers have discussed the price as out of reach for many people, the difficulty for these businesses to acquire new customers and one of the highest churn rates of all subscription boxes. Indeed, what typically happens is that consumers decide to start such a subscription to take advantage of introductory discounts or promotions and then cancel it soon after. As a consequence, firms should put a lot of effort into customer retention strategies. Communication is essential: the recipes, as well as the instructions for preparing the food, must be appealing and easy to understand so that consumers have no difficulty in following all the steps and can easily manage to follow the recipes as they were intended (Ahmad Khan & Sowards, 2018; Heegaard & Fanlo, 2021).
In this scenario, the U.S. accounts for the largest share of the market. From 2015 to 2017, sales of meal kits tripled in the U.S., which is evidence of their rapid growth in popularity (Levy, 2018; Cho et al., 2020).

Figure 4.3: Example of a meal kit by HelloFresh (HelloFresh, 2022)

Germany has also taken an influential role in the market thanks to HelloFresh[9], a company founded in Berlin in 2011 that debuted in Italy in 2021. As Stefano Cracco, COO of HelloFresh explains, "*People's consumption habits are fundamentally evolving both in Italy and worldwide. We would like to offer Italian consumers a more convenient*

[9] https://www.hellofresh.it

and sustainable alternative to grocery shopping at the supermarket". HelloFresh aims to revolutionize the way people eat and cook through a business model built around sustainability and an innovative supply chain that directly connects the producer to the consumer. In fact, the company makes sustainability the key point of its business model by carefully selecting suppliers and favoring local producers and farmers who themselves adopt sustainable practices (Redaelli, 2018; Nunziata, 2021). If these businesses can be considered the market leaders on a global scale, then in Italy meal kit delivery is a trend that is on the rise, even though some organizations existed even before the pandemic (Bardi Carni, 2021). Some of the most successful Italian providers include Quomi, MyCookingBox and SecondChef.

Figure 4.4: Example of a meal kit by Quomi (Balboni, 2019)

Quomi[10] is widely recognized as the pioneer of meal kits in our country, as it was the first Italian company to introduce this kind of service. It delivers a food box full of fresh and high-quality components to your house or office in order to make simple and healthy dishes. The system works through a flexible subscription to two distinct plans (couple plan and family plan) and can be suspended and reactivated at any time (Cookist, 2020). It is worth underlining how the startup is strongly focused on

[10] https://quomi.it

sustainability: among other things, the customer is explained how to recycle the box, which is always biodegradable and eco-friendly. In addition, the food maintains all its organoleptic characteristics and freshness thanks to the isothermal packaging in which the fresh food is placed. In this way, meat, fish and dairy products can be transported safely without being damaged. Vegetables are packed in paper bags with low environmental impact, while dry products, such as pasta and rice, are placed in the non-refrigerated part of the box (Quomi, 2021). To enjoy this experience to the fullest, customers can either choose a single order or a subscription, although the latter is more affordable.

Figure 4.5: Example of a meal kit by SecondChef (Cookist, 2020)

SecondChef[11], which has been operating in the industry since 2017, works in a similar way. The subscription can be weekly, every 15 days or monthly with prices that change based on the number of servings and recipes ordered. Hence, you can create your own food box on the website with recipes designed by chefs and nutritionists (Cookist, 2020). The box includes pre-measured ingredients that come from selected Italian

[11] https://www.secondchef.it

producers, with a nutritional table and cooking instructions for the recipes. The menu is updated every week.
On the contrary, My Cooking Box[12] is the Milan-based startup founded by Chiara Rota specializing in typical regional dishes (classic or revisited), which are signed by a chef and presented in boxes with everything you need to avoid food waste and cook your dish in comfort and simplicity. The firm offers each food box as a single purchase so as not to bind the customer too much with a subscription yet still provides a number of recipes for different occasions as well as gift ideas. Unlike Quomi and SecondChef, each box has all the ingredients for a single recipe and supplies oil and salt as well. In this case, the "catalog" of recipes is wider, but they do not vary on a weekly basis. So, this last option is very reminiscent of a restaurant menu: you pick the recipe and order the number of desired portions of it (Cookist, 2020; Ferri, 2020; Quomi, 2021).

Figure 4.6: Example of a meal kit by My Cooking Box (Mycookingbox.it, 2022)

4.9.2. Surprise food boxes

Another format of food subscription boxes that is proving to be promising even in Italy is the surprise subscription box which includes an assortment of surprise food, snacks or beverages covering a themed selection of items such as healthy snacks of the month

[12] https://mycookingbox.it

or a box of Japanese or American snacks. These boxes give people the opportunity to receive products, themed or just released on the market, whose total price exceeds that of the whole box while also enabling customers to try new products (Bischof & Rudolph, 2021). In fact, this kind of boxes seems to have great success, especially for their novelty and the surprise effect, so they are often used as gifts for this reason. As we have previously seen, Bischof & Rudolph (2021) provide a comprehensive taxonomy of the types of subscription boxes. With regard to surprise subscription boxes, Rudolph et al. (2017) posit that the element of surprise is central to the subscription experience. Besides being a distribution method, subscription boxes have an experiential, communicative and social dimension that may also be viewed as gift giving. When the recipient is surprised by the gift, that is a key component. As an emotion, surprise is an asset that is communicated through and elicited in the gift-giving experience (Noorda, 2019). In this regard, a number of surprise boxes are emerging in Italy. Even in this case, the purchase can be one-off or a subscription can be made on a recurring basis.

We will now introduce a few Italian businesses that are known for supplying surprise boxes, namely Micatuca, Too Good To Go and American Uncle.

Figure 4.7: Examples of Micatuca's surprise gift boxes (Micatuca.com, 2022)

Micatuca[13], which stands for "Mi Casa es Tu Casa" (My Home is Your Home), is a subscription box with foods from a foreign country chosen as a surprise, which are

[13] https://www.micatuca.com

specially created to explore, experience and discover different cultures and traditions through their local food (Cimpanelli, 2019; Prandoni, 2020). Sometimes it is also used as a surprise gift idea to approach ethnic cuisine. The mechanism of this service is very similar to that of the surprise boxes, which combine the sensory side with the idea of a gratifying and unusual self-gift: every two months subscribers receive a box containing eight food products that are hard to find and typical of a foreign cuisine such as foods, spices, drinks and snacks in order to prepare a sweet and a savory recipe. The recipes are given in the box and written by a local of the country, together with an explanation for each product (Abate, 2020; Prandoni, 2020). It is possible to subscribe to a single box, two boxes or three boxes that will then be delivered every two months.

In view of the growing concern and awareness about sustainability and food waste as well as their impact on Italian consumers' food choices, over the last few years, we are witnessing a proliferation of initiatives on this subject, one of them being the Magic Box with surprise food organized by the leading anti-waste app in Italy, Too Good To Go[14]. This initiative helps to reflect on the impact that even small actions, such as saving and not wasting food, can have on our planet.

Figure 4.8: Example of Too Good To Go's Magic Box (Kalscheur, 2020)

[14] https://toogoodtogo.it/it

The Magic Box allows you to buy a surprise box with mixed products close to their expiry date at a discounted price, thanks to the collaboration of the Too Good To Go with the Red Cross, Altroconsumo and several food companies (Riccio, 2021). The aim is to ensure that restaurants and retailers are able to offer daily boxes with a surprise selection of fresh food and products that remain unsold at the end of the day and cannot be sold again the next day so as to avoid food waste (Simonetta & Sica, 2021). By accessing the app from their smartphones and geolocating themselves to find the nearest participating businesses, users can book and pay for the box with the app and then pick it up at the appropriate store during the specified time slot. If we bear in mind that each Magic Box saves 2.5 kg of carbon dioxide, it is obvious to see how Too Good To Go acts concretely not only in the fight against food waste, but also against climate change (Simonetta & Sica, 2021; Too Good To Go, 2021). Since March 2019 when the app first came to Italy, it has reached major milestones marking over two million Magic Boxes sold across Italy to date (Too Good To Go, 2021). However, this is not the first flourishing idea launched by the app. Already in the midst of the pandemic Too Good To Go had committed itself to the forefront by creating the Super Magic Box that included mixed food products in order to fight food waste while at the same time making itself available to distribute the food products that were stuck in warehouses during the lockdown, thereby trying to help those food producers and distributors that needed to dispose of the huge amount of food stock with a 70% saving (Too Good To Go, 2020; Maccotta, 2020; (Vanity Fair, 2022). Even though Too Good To Go's surprise food box is not a subscription box but a single-purchase box, we believe that it is still important to mention it here because of how the app has managed to combine a critical issue like sustainability and reduction of food waste in Italy with the surprise effect, whereby more and more people are enticed to purchase a food box whose contents are not known beforehand.

American Uncle[15] operates with a similar rationale that leverages the surprise factor and thus acts as a gift box that customers receive directly at home. It is an Italian e-commerce website that gives the opportunity to taste the best of American food that is not available or is hard to find on the Italian market, such as sweet and salty snacks and drinks, as well as limited editions and new releases. Shopping on their website is easy

[15] https://www.americanuncle.it

and intuitive: all you have to do is choose the box you like best based on price and content as a one-off order. It is possible to buy boxes of 20, 30, 50 or more than 100 products, as well as the most popular box, that is the American box of the month which contains more than 30 products chosen by the community itself (American Uncle, 2022). As Alessandro Gargiulo, American uncle's co-owner and business partner, says, *"our goal is to provide a unique experience to be repeated more than once and aimed to thrill those who would like to feel a little bit in America but, for one reason or another, cannot"* (Marciello, 2019).

Figure 4.9: Example of American Uncle's surprise food boxes (American Uncle, 2022)

4.9.3. Fruit and vegetable boxes

As the Covid-19 pandemic broke out, consumers have expressed a desire to explore different ways to shop online while staying at home. Replenishment subscriptions can fulfill consumers' need for reassurance that the products they regularly need will be delivered to their doorstep without the hassle and risks associated with traveling to physical stores and mingling in crowds (Tan & Chen, 2021). The subscription to a fresh food box like fruits and vegetables, whose items vary according to availability and seasonality, has become very popular among Italians. These boxes are in fact appealing mainly because of their focus on sustainability and on offering food from local producers (Heegaard & Fanlo, 2021). In addition to the convenience of fresh produce at a reasonable price, the short food supply chain and direct-to-consumer sales are highly valued (Mattioni & Caraher, 2018; Hashem et al., 2018). The spread of this box scheme may be attributable to a rising interest in organic or local food, to a combination of both or to other sustainability-related factors. A number of studies conducted in the UK and France attempted to gain insight into the motivations behind consumers' choice to purchase local, organic food through box schemes (Hashem et al., 2018). For example, Brown et al. (2009) remarked that the main motivations for English consumers to buy local, organic food through a box scheme were attributed to altruistic reasons, such as reducing food miles. In contrast, French consumers were more concerned with product quality like freshness and taste of food (Hashem et al., 2018). At the Italian level, on the other hand, no studies have yet been carried out to validate the motivations underlying the subscription to these boxes, possibly due to the novelty of the service. Certainly the taste and freshness aspect as a synonym of quality combined with local production and environmental sustainability seem to be predominant for the purchasing decision of these boxes. Thus, it is evident that there is a combination of several interacting forces, including growing consumer awareness on food safety and personal health as well as environmental protection and support of local agriculture, and the promotion of organic food and farming. (Feldmann & Hamm, 2015; Hashem et al., 2018). The research carried out by Hashem et al. (2018) outlined how consumers perceive small, local organic farming as more sustainable than large-scale production. Moreover, they consider buying through local food boxes as an important way to reduce food miles and food waste (Hashem et al., 2018). The health dimension also proved crucial as these fresh, local foods are perceived as safer, meaning that consumer interest is strongly influenced by the fact that they want to be sure that what their family and they are consuming is healthy (Hashem et al., 2018; AbuSabha & Gargin, 2019; Craveiro et al., 2021). Extant scientific literature indicates that some purchasing methods, such as box schemes, whereby boxes of fruits and vegetables are regularly delivered to consumers based on a paid subscription fee, may be more beneficial than others in promoting healthier and more sustainable diets**.** Farm-to-table delivery programs are experiencing significant growth in Europe and the U.S., thus innovating the distribution and marketing of fresh produce, while most are based on Community-Supported Agriculture (CSA)[16] projects,

[16] Community Supported Agriculture (CSA) aims at building a relationship of mutual support between local communities and food growers. It refers to a community of individuals that focuses on a partnership between farmers and consumers in which the responsibilities, risks and benefits of food production are shared (Marzocchella, 2018).

cooperatives, or other farmer networks (Craveiro et al., 2021). Fruit and vegetable boxes have previously been shown to be associated with higher levels of fruit and vegetable consumption, but evidence on potential explanatory mechanisms is still lacking (Craveiro et al., 2021).

The Waste Watchers Observatory (2022) has exposed how fruits and vegetables are among the foodstuffs that are most often wasted. One reason for this relates to the fact that people are often reluctant to consume fruits and vegetables that deviate from the typical aesthetic standards, such as oddly shaped fruits and vegetables that cannot be sold in supermarkets and are thus more likely to be wasted (Stöckli & Dorn, 2021). There is evidence that consumers are more prone to buy abnormally-shaped fruits and vegetables when they obtain price reductions or discounts that allow them to save money (Stöckli & Dorn, 2021). Furthermore, the element of authenticity of odd-shaped fruits and vegetables and the sustainability associated with their consumption motivates buyers to purchase them since these attributes go a long way toward increasing purchase intention and perceived quality (Stöckli & Dorn, 2021).

In this context, we would like to present two firms that have been showing remarkable success in Italy as far as fruit and vegetable boxes are concerned, Babaco Market and Cortilia.

Babaco Market[17] is an all-Italian business that was born with the pandemic in June 2020 in Milan, and has been experiencing strong growth since then. The company specializes in delivering 100% Made in Italy subscription boxes of odd fruits and vegetables in terms of sizes and/or aesthetic features, i.e. unique products that are perfectly suitable for consumption but with small aesthetic imperfections (small peel flaws, funny shapes and smaller-than-usual sizes), deriving from overproduction or coming from slow food presidia and that are discarded by the large-scale retail distribution due to aesthetic standards which are too restrictive (Nieddu, 2020). Thus, the twofold objective is to build a sustainable e-commerce supply chain and support the Italian agricultural sector by reducing waste from the field to the market. At the same time, it aims at limiting the use of packaging materials and plastics by using only plastic-free boxes and over 60% of these are delivered by eco-friendly means of transport such as electric bikes and vans. (Nieddu, 2020; Vanity Fair, 2022; FOOD, 2022).

[17] https://babacomarket.com

Figure 4.10: Babaco Market's Jungle Box of fresh fruits and vegetables (Babacomarket.com, 2022)

As Francesco Giberti, Babaco Market's CEO, corroborated to Sole24ore, "d*uring the first lockdown we noticed a radical change in Italian consumers' relationship with food and precisely during that time we took the opportunity to launch a new service. In this sense, the figures confirm a stronger consumer sensitivity towards the problem: the company is now growing more or less by 40% month on month, both in terms of number of users and number of boxes delivered"* (Rusconi, 2021). In the first year since it was founded, in fact, over 140 tons of fruits and vegetables that risked being wasted were recovered and 350 tons of CO2 were prevented from being released into the atmosphere (Myfoody, 2020; Nieddu, 2021). Babaco Market's system is simple and intuitive: the customer orders the box he or she prefers and decides whether to receive it weekly or bi-weekly, thereby favoring conscious consumption that enhances the value of the food on the table. The service is currently present in over 50 municipalities in Lombardy and Piedmont, and continues to expand, now including three cities in Emilia Romagna, Bologna, Parma and Reggio Emilia respectively (FOOD, 2022).

Based on market availability, Babaco Market selects which fruits and vegetables need to be saved according to the principle of seasonality and buys them directly from the producer at a fair price. Then, these are sold in boxes that come to your house after you subscribe online.

Figure 4.11: Babaco Market homepage (Babacomarket.com, 2022)

The content of the box changes every week, and for the consumer the opening of the box is a moment of anticipation, excitement and discovery. An effect that works because it allows to respond to Italian consumers' new needs: the growth of online shopping and the greater understanding of the importance of a more sustainable consumption which allows them to know and consume healthy food they did not know before and to change their eating habits accordingly.

Cortilia[18] was founded in 2012 by Marco Porcaro, current CEO of the company, as an e-commerce of agricultural and farming products with an eye to quality and traceability of the food chain, thus connecting the fruits and vegetables producers and breeders to the final consumers (Cortilia, 2021). Its purpose is in fact to bring together supply and demand without the intervention of expensive large-scale retail intermediaries (Kummer & Milestad, 2020). In this way, it gives small farms a chance for visibility that they could hardly have had otherwise and ensures a fairer price for their products.
You sign up for free and you choose the shopping method. Single shopping allows you to choose among more than 2500 references. Otherwise, the company is particularly well-known and appreciated by Italians for its subscription boxes (weekly, fortnightly or monthly) which are composed of fruits and/or vegetables, only meat, meat and cheese, the vegan box or the mixed box which instead makes it possible to taste various products (Cortilia, 2021).

[18] https://www.cortilia.it

Figure 4.12: One of Cortilia's fresh fruits and vegetables boxes (Cortilia.it, 2022)

In addition, there are also customized boxes that are created specifically for celebrations and holidays in order to meet any type of consumer need, even the most demanding one. The subscription boxes have different prices depending on their size and content that changes every week according to seasonality and availability of fresh products. In this way, quality, freshness and genuineness of products is emphasized (Bottin, 2020; Cortilia, 2021).

A key touchpoint for Cortilia is represented by its delivery vans, which enable people to receive their groceries within a short period of time, with a wide choice of day and time slots (Bottin, 2020). Another relevant touchpoint is its packaging, i.e. the box in which the goods are delivered, which, together with the vans, constitutes another major element of word of mouth.

Today Cortilia is an innovative e-commerce platform that is currently active in Lombardy, Piedmont, Emilia-Romagna, Veneto and Liguria, but plans to continue its expansion throughout the Italian territory. Since last September, the service has also been available in Veneto in the provinces of Verona, Padua, Vicenza, Treviso, in the area of Mestre and surrounding towns as well as in Genoa (My Fruit, 2021).

Figure 4.13: Cortilia's subscription boxes webpage (Cortilia.it, 2022)

In December 2020 Cortilia amended its charter to become a Benefit Corporation (Società Benefit in Italian), a legal business form that allows a for-profit company to balance a public benefit with shareholder profits (Cortilia, 2021). Also, the beginning of 2021 marked for the company a new phase of sustainable growth thanks to a new investment round for 34 million euros underwritten by the existing shareholders and Red Circle, Renzo Rosso's investment company, who also joined Cortilia's board of directors (Cimpanelli, 2021; Cortilia, 2021; Astorri, 2021). It is worth noting that the firm in 2020 had a turnover of 33 million euros, thus recording a +175% growth over 2019. Furthermore, last year Cortilia also launched a line of supermarket shopping products under its own brand name *"Scoperto da Cortilia per voi"* ("Discovered by Cortilia for you")(Soressi, 2021). This is a project that has been developed to further enhance the value of local producers. The assortment currently includes 160 references such as dairy products, preserves and bakery products and aims to significantly increase the number of references in order to meet customers' different and evolving tastes.

Particular attention is then paid to organic products, which represent more than 40% of these references (Soressi, 2021). With these products Cortilia also intends to tell and enhance the stories of some of its partner producers who daily do their best to preserve food culture and know-how, and to protect biodiversity, the identity of the land and the flavors of the past. For this reason, the name of the producer is not hidden, but is "put in the middle" of each package in order to make it stand out to the consumer. In addition, behind this initiative there is always a profound emphasis on environmental sustainability: packaging is in fact made from recycled or recyclable materials that have less impact on the environment.

Figure 4.14: Some of the food products of Cortilia's selection "Scoperto da Cortilia per voi" (Cortilia.it, 2022)

4.9.4. Healthy meal boxes

For some years now, in Italy, there has been a home diet plan through subscription boxes offered by businesses such as NutriBees, Squat&Basilico[19], and Feat Food, which are renowned for delivering healthy dishes that only need to be warmed up and prepared according to nutritionists' instructions. The functioning of these platforms is quite similar: by placing a one-shot order or by subscription, you can select ready-made meals to be delivered at home in a special box (Zonin, 2021). During quarantine, these companies proved to be the perfect fit for those who wanted to avoid grocery stores as

[19] https://www.squatebasilico.it

much as possible, but without being forced to order junk food or pizza every day (Zonin, 2021). Indeed, many Italians have decided to try new nutritional trends, including healthy delivery services. The trend is highly developed in big cities, but start-ups and dedicated platforms that deliver all over Italy have sprung up. A convenient alternative for those who have little time to devote to cooking or lunch break, but even for those who need a supply when food is about to run out (Caporale, 2020). The common mission is in fact to try to eat better, in a healthy and balanced way, while saving time and resources as well. Moreover, it is possible to opt for a personalized meal plan based on calorie counting. In the latter case, it is first necessary to fill out a questionnaire about your physical shape and eating habits, then you must specify how many meals per day you would like to get and how many days (Caporale, 2020). Meals are prepared with fresh and seasonal ingredients, using techniques that preserve nutrients such as steaming for vegetables, and low temperatures for meat and fish. With no preservatives or additives, the food is then blast chilled and packaged in a protected atmosphere so that the nutrients are preserved for more than a week.
We will now briefly describe the value proposition of two firms operating in the Italian healthy food delivery arena, namely Feat Food and Nutribees.

Feat Food[20] has been defined as a fitness food-tech company that aims to make people's daily lives easier with a service that enables them to receive personalized, healthy and affordable meals (Simonetta & Rusconi, 2020). Again, the user can either choose the single dishes that are available on the website with an explanation of the calorie and macronutrient intake or alternatively select a personalized weekly plan. Therefore, this is an ideal solution for those who need a healthy diet but do not have time to cook. The way Feat Food works is straightforward and uses Artificial Intelligence, in particular it is built around a machine learning algorithm: users fill in their basic body parameters such as weight, height, age and gender, then indicate their goal. Afterwards, the platform proposes a food plan tailored to the person's goals. The diet is fully customizable, even on the basis of nutritionists' advice, as you can pick your favorite ingredients and you have a tailor-made portion weight (Astorri, 2020; Milano, 2021). One of the interesting and innovative features of this service is that it allows users to shop for ready-to-eat meals by looking at their nutritional value, weight and calories. Additionally, it is also

[20] https://featfood.it

possible to modify the portion weights to make them even more personalized. Meals are then delivered to your home in a box in order to achieve your fitness and health goals. The startup founded in 2015 recently closed a new €1.5 million investment round, but had already raised around €2 million.

Figure 4.15: Example of a healthy meal by Feat Food (Featfood.it, 2022)

Feat Food's current partners include Amadori and Riso Gallo, which provide some raw materials as well. In 2020, the startup delivered 50,000 thousand meals to Italians, for a total of 200,000 meals since it was launched, thus reporting +240% of customers growth (equal to 2,000 new subscribers to its platform) and a tripled turnover compared to 2019. 2021 continued in this vein with +300% attested growth (Food Community, 2021; Italia a Tavola, 2021; Feat Food, 2021). The company's CEO Andrea Lippolis declared that “*the investments raised will be used for technical upgrades in order to make the platform even more flexible by enhancing the range of innovative services for their customers, as well as to expand their business model beyond national borders, thus continuing to innovate in the personalized food sector*” (Feat Food, 2021). Furthermore, at the end of 2020 Feat Food acquired the startup Diet To Go with the aim of scaling the market both online and offline and thereby approaching large-scale retail distribution as well (FOOD, 2020).

With a mission that is very similar to Feat Food but based on an even more personalized approach, Nutribees[21]'s slogan is *“We cook, you live”*. Aiming at providing a personalized food delivery, the Milan-based startup specialized in preparing and delivering healthy and balanced food to your doorstep allows the user to perform a test on eating habits to understand his or her tastes and nutritional needs, and then to choose the meals that make up the personalized weekly menu, by specifying both the amount of meals to receive and for how long (Nutribees, 2018; Caporale, 2020).

Figure 4.16: Example of Nutribees's balanced and healthy meals delivered in a subscription box (Nutribees, 2020)

The whole concept had a great success and in the lockdown months touched peaks of up to +150%-200% in orders, as stated by Nutribees’s CEO and founder, Giovanni Menozzi: *“during the lockdown we lost our office customers but meanwhile more people started to know our business and these new users are still using our service even now, so much that volumes have doubled compared to the pre-covid period”* (FOOD SERVICE, 2020). After hitting the two-million threshold at the end of 2020 partly due to the pandemic surge in orders, the startup has now set itself the goal of reaching the three-million mark in 2021 (Rus, 2021). Their target customer base is between 35 and 55 years old, works and thus has little time to cook, but still does not want to give up on healthy eating. Likewise, those employees who, following the pandemic, started working from home have now become important users of this service, as Giovanni Menozzi confirms. What also attracts consumers to this service is the attention to food waste (Nutribees, 2022):

[21] https://www.nutribees.com/it_IT/

- It helps you order the right amount of meals you need for the week, so it encourages you to consume only what you ordered.
- Meals store safely in the refrigerator for 15 days from when they were made and stay fresh thanks to the Modified Atmosphere preservation method.
- Each meal is intended to be a complete meal, so there is no need for large food stocks in the refrigerator that can easily perish.

In view of what has been outlined so far, this chapter has provided an overview of subscription boxes, with a particular focus on food subscription boxes, which are spreading considerably in our country. In spite of their development at the international level as well as more recently in Italy, coupled with the increasing demand for them, as of today, there is still no study in the literature addressing this phenomenon at the Italian level.

FIFTH CHAPTER

An exploratory survey on the food subscription box market in Italy

5.1. Research objectives

As the trend of food subscription boxes is showing steady growth, consumer adoption plays a vital role in their diffusion and success. Nevertheless, to date, few studies have been conducted at an international level to assess the level of awareness, consumer perception and motivations for subscribing to food boxes. The very few studies available relate to subscription boxes as a whole or more specifically to subscription boxes in the fashion and beauty sector. To the best of our knowledge, the only research carried out so far on subscription boxes at the European level is the one by Bray et al. (2021), in which boxes are analyzed in different product categories by administering a questionnaire to consumers. As for the food sector, however, although some work has been done on meal kits, mainly in the American market, there is still a gap in the literature for both meal kits and other types of food subscription boxes. This gap is even bigger when it comes to Italy, given the novelty and recent development of this business model.

The first objective of this research is to explore the process of development and adoption of food subscription boxes in Italy. In particular, the study aims to address the following research questions:

- to understand what is the degree of awareness and general knowledge of Italian consumers of food subscription boxes
- to identify the motivations that drive or could drive the purchase of food boxes, i.e. how specific attributes impact on the purchase intention
- to understand whether and to what extent current issues that are highly perceived by consumers (e.g. attention to the environment and health) are reflected also in their food choices, and how these issues impact or could influence the purchase intention of food subscription boxes

- to identify what would be the main type of food box that Italian consumers would be most willing to purchase
- to understand if there is a relationship between people who already purchase online and the propensity to purchase a food box
- to determine which Italian businesses are best known for food boxes.

In this regard, this empirical research is intended to identify and test the most significant and determining factors in predicting and affecting the behavior and purchase intention of Italian consumers regarding food boxes. Examining the motives that could encourage the purchase of a food subscription box allows to offer a deeper understanding of the dynamics behind a food-related subscription service. In doing so, consumer research of this kind would serve two key purposes: advancing research on this topic from a theoretical point of view, while also providing critical insights to food subscription retailers so that they are able to deliver a service that meets customers' requirements. In order to achieve this, a survey was developed and administered to a sample of Italian consumers. In addition to providing an overview of a still-evolving trend from the consumer's side, the findings could also provide insights into the specific consumer characteristics who are willing to buy food boxes and what would be the most important motivations for them to do so. Furthermore, the outcomes could also be useful for companies operating in the industry or planning to approach it in the future in order to target consumers and deliver tailored marketing accordingly.

5.2. Theoretical background

5.2.1 Utilitarian and hedonic motivations

Purchase motivation is affected by each individual's own values, goals, and needs. When consumers recognize a need that they want to satisfy, the motivation process begins. So, there are two major types of motivations that have been explored in the literature: utilitarian motivations and hedonic ones.

Utilitarian motivations are related to the function of the product, whereas hedonic motivations are associated with multisensory aspects, emotions, and the shopping experience itself (Hirschman & Holbrook, 1982; Babin et al., 1994; Childers et al., 2001; Arnold and Reynolds, 2003; To et al., 2007). In attempting to account for the rationale behind purchasing decisions, Hirschman & Holbrook (1982) posited that individuals can engage in two different kinds of behavior:

- they behave as problem solvers, meaning that buying a product or service is to satisfy a functional need or goal.
- they behave as experiential enjoyers, i.e. they see the consumption of a product or service as a way of fulfilling an aesthetic, emotional or experiential need.

In this sense, the motivations are said to be utilitarian, while in the second case we talk about hedonic motivations.

Several studies have been conducted in order to better comprehend and determine the effect of utilitarian and hedonic values on core dimensions such as customer satisfaction and purchase intention of products and services (Arnold & Reynolds, 2003). Yet few scholars have focused on the impact of these drivers in the context of online shopping (To et al., 2007; Redda, 2020)

People who are motivated to buy in order to achieve utilitarian benefits seek first of all convenience in terms of saving time and money, so one of these core motivations is the search for value for money. But there are consumers who expect to obtain hedonic benefits from the purchase of a product and/or service as well. Therefore, they place great importance on an out-of-the-ordinary shopping experience, seeking a dimension of entertainment, adventure and pleasure that will satisfy them (Ramkumar & Woo, 2018).

With regards to subscription boxes, they deliver both utilitarian value and hedonic value to the consumer, with a different focus depending on their type and the service they provide. As far as utilitarian value is concerned, a high level of convenience cannot be overlooked which in food boxes, for instance, includes perceived time and cost savings, selection and availability of information. Hedonic benefits, on the other hand, may include exploration in trying new or trendy food and in receiving curated food products i.e., designed just for customers' special needs. Another central point is that of surprise, as the box imitates the experience of receiving a gift package. In this regard, it is the literature itself that states that these utilitarian and hedonistic benefits in the adoption of a subscription box could increase the consumer's attitude towards this service, thus spurring them to enjoy these benefits (Childers et al., 2001).

5.2.2. Other possible motivations for food subscription boxes

Besides drivers such as convenience and ease of purchase, competitive price, and online shopping experience, other motivations for subscribing to a food box may also exist (Clemes et al., 2014). Some of the queries posed to consumers to understand how likely they would be to subscribe to a food box relate to the sphere of environmental sustainability, food waste reduction as well as the benefits of consuming locally produced food. In fact, food products that comply with these requirements are perceived by consumers as being better, both in terms of higher quality, freshness and genuineness. Along these lines, we would like to touch upon some dimensions: intrinsic quality, local production, health consciousness, environmental awareness, the desire for unique products, post-purchase online customer experience, food characteristics and conditions, product customization and packaging.

Intrinsic quality

Extant literature demonstrates that intrinsic quality is a multidimensional concept (Fandos Herrera & Flavian, 2006) and one of the parameters which is most commonly used by consumers to evaluate and compare food products with each other (Memery et al., 2015). The literature distinguishes between intrinsic and extrinsic quality: intrinsic quality means an assessment of objective quality through those intangible, product-specific attributes that cannot be altered without changing the nature of the product itself (Fandos Herrera & Flavian, 2006).

Local production

Generally speaking, consumers tend to perceive local food, particularly when bought in its season of production, as having a higher intrinsic quality, i.e. with regard to taste, freshness, naturalness, health and food safety. The importance and search for these attributes in food products proved crucial, in particular during the Covid-19 pandemic, as people have considerably enhanced their awareness and understanding of these current issues, thus making them an integral part of their purchasing decisions, especially in food. In fact, local foods are considered to be free of preservatives and chemicals, GMO-free, and thus perceived as more natural and beneficial to health (Memery et al., 2015). Consequently, intrinsic quality is a relevant motivation for consumers to purchase local food, even during the pandemic (Ghali-Zinoubi, 2021).

Health consciousness

Health consciousness refers to the degree to which health is valued and integrated into a person's daily activities and choices. Customers with high health consciousness are more likely to engage in healthy eating habits and take proactive measures to protect their health (Ghali-Zinoubi, 2021). In the same way, proximity to the production process, which focuses on the relationship between the producer and the consumer, the transparency of this process as well as the minimization of contamination risks in terms of food safety, become important drivers to rely on to reassure customers, especially as the safety and nutritional attributes of products are taken into account. This safety issue has been further accentuated among consumers with the Covid-19 pandemic (Ghali-Zinoubi, 2021).

Environmental awareness

One of the ways to reduce pollution and environmental impact is linked to the consumption of local food products, as well as to improve food safety, since a short supply chain, besides being more sustainable from an environmental standpoint, also reduces the risk of contamination (Ghali-Zinoubi, 2021). However, the research by Maehle et al. (2015) proposes mixed results when it comes to values such as health, environmental concern, and social equity that contribute to shaping purchasing behavior. For example, a number of studies claim that consumers are becoming more sensitive to the impact of their purchasing and consumption choices on public health, on the environment, and on global society as a whole. As such, they may be more inclined to choose healthy and more eco-friendly products (Maehle et al., 2015). Conversely, others demonstrate that there are consumers who are not willing to pay more for these products, i.e. they would not pay a price premium for organic or environmentally or socially conscious products.

Desire for unique products

Another reason for subscribing to a box is the shopping experience itself, as this service allows subscribers to try in advance new, unique products from unfamiliar brands. Consumers' desire to acquire new products has been proven by many scholars, a lever on which more and more firms are centering their marketing strategy (Ramkumar & Woo, 2018).

Post-purchase online customer experience

A reliable and timely delivery is at the core of online customer satisfaction, thus helping retain customers (Xiaohui Ma et al., 2021). Indeed, delays or errors in delivery annoy customers and push them away from some retailers. For online food purchases, particularly fresh food, a reliable delivery system turns out to be critical because fresh food is closely related to a high standard of delivery that must be almost immediate and on time (Yu et al., 2020). One of the reasons behind online food shopping is to save time and effort, so people expect fast and accurate delivery, which is also leveraged to attract more customers and ensure that they become loyal (Xiaohui Ma et al., 2021). Fresh food online shopping repurchase intention: the role of post-purchase customer experience and corporate image. At the same time, consumers value high food quality and pay increasing attention to sustainability and food safety (Xiaohui Ma et al., 2021).

Food characteristics and conditions

At the pre-purchase stage, users form an expectation toward the taste and flavor of food based on the information provided on the website and then evaluate the food characteristics (e.g. taste, flavor, size, aesthetics) and conditions (e.g. freshness and quality), as well as the value for money only after receiving it at home. Only when the characteristics and condition of the purchased food meet their expectations will they feel satisfied and be more willing to continue buying online from the same provider (Xiaohui Ma et al., 2021).

Packaging

Packaging has a relevant role in both influencing customer satisfaction and online food purchasing as well. Besides its most widely recognized functions such as protection and convenience, packaging is actually seen as a critical element used by consumers in the online post-purchase phase to evaluate the condition of food and the maintenance of freshness, quality and organoleptic properties (Yu et al., 2020; Xiaohui Ma et al., 2021).

Customized products

Customizing orders is often an option that can make a difference in online shopping. Consumers have a strong need for stimulation, search for novelty, independence towards experiences conveyed by others, and need for uniqueness. In this way, personalized products could help fulfill these desired consumer necessities (Aminah et al., 2021).

5.3. Research methodology

5.3.1. Research design and data

In order to collect data, a survey was designed and submitted electronically to a sample of individuals aged 18 years or older living in Italy. The administration took place in the period between March 20, 2022, and April 20, 2022, and reached more than 300 people. The survey was created with the support of Google Forms and was administered to consumers online through snowball sampling starting from the author's social media profiles, Whatsapp or it was sent by email. Respondents were only asked the questions that were relevant to them based on their previous answers. This contributed to reducing the length of the questionnaire and possible withdrawal. The survey primarily consisted of closed multiple-choice questions or questions to be answered on a 1-5 Likert scale. The questions revolve around the degree of awareness of food boxes, the motivating or dissuading factors for consumers to subscribe, and their preferences and attitudes towards subscription services.

5.3.2. Survey structure

The survey is composed of three parts, namely online shopping, food subscription boxes, and the socio-demographic profile of the respondents. The first part of the survey aims to dig into consumers' familiarity with online shopping, especially for food products, what type of food they buy online, their shopping habits and whether or not these have changed with the pandemic. The second part revolves around food subscription boxes in order to ascertain the degree of consumers' awareness and general knowledge of the food subscription box market. A general definition of food box was given in order to make respondents better grasp the actual topic on which the questions are based on. The definition is as follows: *"a food subscription box deals with subscribing to a box containing a selection of food products that are delivered to the customer on a regular basis for a recurring fee"*. Following this definition, respondents were asked, "Have you ever purchased food subscription boxes?". Those who answered in the affirmative were further examined by asking them what type of food box they bought, how they learned about this service, the company(s) from which they have purchased, how long they maintained or have been maintaining the subscription, and, if they canceled it, the main reason why they did so. Instead, ad hoc questions were developed for those respondents who had never purchased a subscription food box. Firstly, we wanted to know why they made this choice and whether or not they were familiar with this phenomenon prior to this research, as well as which firms operating in this market sounded familiar to them. Nonetheless, the section about the motivations that induce or could induce the adoption of a food subscription service was submitted to both groups, as well as those questions on the socio-demographic variables.
As for buying motivations, a Likert scale from 1 to 5 was used as a measurement, where 1 represents "not at all important" and 5 "very important". A list of statements that pertain to a number of variables was submitted to consumers in order to understand how important it is to them that the subscription food box they intend to purchase has certain attributes. Then, another set of questions about the food attributes in the subscription box was posed. These questions were asked of those who responded that they have never used food subscription boxes too. Finally, in the last section of the questionnaire, respondents were asked to specify some personal data such as gender, age, job, level of education, number of people in their household, number of children,

income and region of residence. This information makes it possible to classify the interviewees according to their demographic traits and to highlight whether there are differences towards the adoption of this subscription service accordingly.

VARIABLES AND ITEMS	SOURCE
PURCHASE INTENTION - you intend to purchase food through subscription boxes in the near future (e.g., in the next 3 months) - you are interested in purchasing a food subscription box to meet your and/or your family's food and nutritional needs - you are likely to adopt the subscription food service - you plan to purchase food through subscription boxes in the near future	Michaelidou & Hassan (2008); Lian & Yen, (2014); Kim & Kim (2020); Day et al., (2020); Mohammed (2021)
CONTINUOUS USE INTENTION - you plan to continue using the food box subscription you currently have - you are willing to try a new subscription food box service	Chiu et al. (2014); Kim & Kim (2020)
CONVENIENCE - saves money compared to buying individual products - saves time - offers quality food products at a competitive and advantageous price - are easy to prepare/consume - are ready to eat - are useful for a meal away from home (e.g. university or office)	Childers et al. (2001); To et al. (2007); Chiu et al. (2014); Yu et al. (2018); Wang et al. (2020); Onwezen et al. (2019); Arroyo et al. (2021)

SELECTION - allows you to have access to a greater variety of food products at the same time - allows you to learn about new brands that you may not have known before	To et al. (2007); Yu et al. (2018); Day et al. (2020)
LACK OF SOCIALITY - allows you to avoid social interaction with other people/customers - allows you to buy products without feeling embarrassed	To et al. (2007); Lian & Yen (2014)
CUSTOMIZED PRODUCTS - enables you to customize the content according to your specific needs - are designed and created specifically for you	To et al. (2007)
SOCIAL INTERACTION - has already been bought by relatives and/or friends	To et al. (2007); Chiu et al. (2014); Yu et al. (2018)
PRICE CONSCIOUSNESS - allows you to take advantage of promotions or discounts	Arnold & Reynolds (2003); To et al. (2007); Lee & Yun (2015); Katt & Meixner (2020)
DESIRE FOR UNIQUE PRODUCTS - allows you to try out products and/or services in advance - allows you to keep up with new trends and consumption habits - offers you a service for special occasions (e.g. dinner with guests) - are rare and hard to find	Arnold & Reynolds (2003); To et al. (2007); Chiu et al. (2014)

OTHERS' REVIEWS - has already received positive reviews from other consumers	Wang et al. (2020)
ENVIRONMENTAL AWARENESS - has a sustainable and environmentally friendly packaging - helps to reduce food waste - are locally produced - are from organic farming - are in season - do not contain GMOs - have recyclable or biodegradable packaging - have been produced or processed in a sustainable way - their origin and traceability is clearly indicated	Maehle et al. (2015); Lee & Yun (2015); Verain et al. (2016); Onwezen et al. (2019); Katt & Meixner (2020); Day et al., 2020); Ghali-Zinoubi (2021); Arroyo et al. (2021)
POST-PURCHASE ONLINE CUSTOMER EXPERIENCE - has easy to track delivery - has no shipping costs - allows you to choose the time and day to have your package delivered to you	Kumar & Anjaly (2017); Ma et al. (2022)
HEALTH VALUE - are healthy - are of good quality - are fresh - are preservative-free - help you improve your health	Onwezen et al. (2019); Arroyo et al., (2021))
SENSORY APPEAL - provide you with pleasant sensations (e.g., in terms of texture, aesthetics, smell and taste, etc.)	Lee & Yun (2015); Onwezen et al. (2019)

FOOD SAFETY - tell me information related to food safety	Michaelidou & Hassan (2008); Onwezen et al. (2019); Wang et al. (2020); Ghali-Zinoubi (2021); Arroyo et al. (2021)

Table 5.1: Measurement items and reference variables both for food subscription boxes and the attributes of the food included with related literature source (Author's own elaboration)

All measurement items listed in *Table 5.1* were assessed using a five-point Likert scale, thus measuring the respondents' level of agreement with the statements provided. The items measuring utilitarian motivations, e.g. convenience intended as both value for money and time savings, selection, and customized products were adapted from scales used in previous works by Childers et al. (2001); To et al. (2007); Chiu et al. (2014); Yu et al. (2018); Onwezen et al. (2019); Day et al. (2020); Wang et al. (2020); Arroyo et al. (2021)**.** In contrast, items measuring hedonic motivations like social interaction were adapted from the scale developed by To et al. (2007); Chiu et al. (2014); Yu et al. (2018). Furthermore, some questions were tailored from the study on subscription boxes by Bray et al. (2021).

With this introduction, aimed at outlining the items and structure of the survey as well as how it was constructed and administered, we now move on to exemplify the obtained results.

5.4. Description of the sample

At the end of the administration period, 315 surveys were completed. Before examining the collected results, we will try to identify some substantial traits, showing common propensities among the respondents, while also stressing some major issues. The first phase of sampling the findings was employed in order to pinpoint the general characteristics of the respondents, by organizing and segmenting their personal data.
As can be seen from *Figure 5.1*, the sample to be analyzed is demographically distributed as follows: the sample is made up of 229 females and 86 males. 41% of the individuals are concentrated in the youngest age group, aged between 18 and 30, followed by the

51-60 and 41-50 age groups, with 23% and 18% respectively. The remainder is split between consumers in the 31-40 age bracket and those over 61, with the former prevailing over the latter. It should also be noted that in all of the segments there is a predominance of the female gender over the male one, with 73% of the total responses.

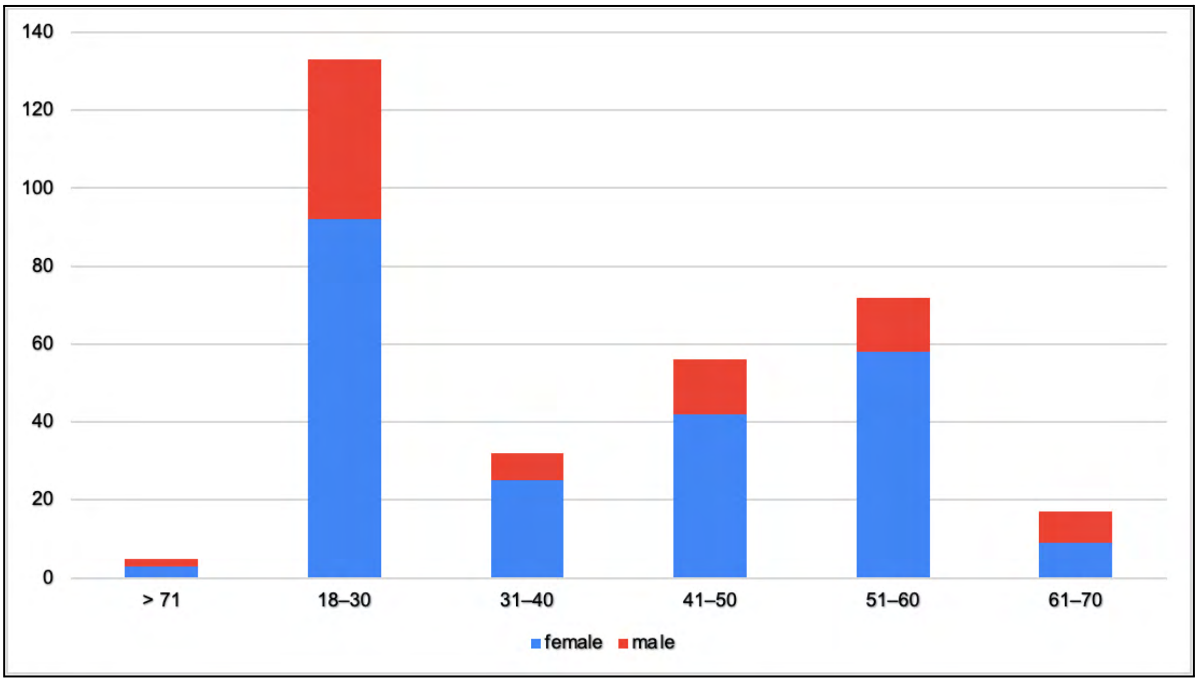

Figure 5.1: Gender of respondents based on their age group (Author's elaboration on survey data)

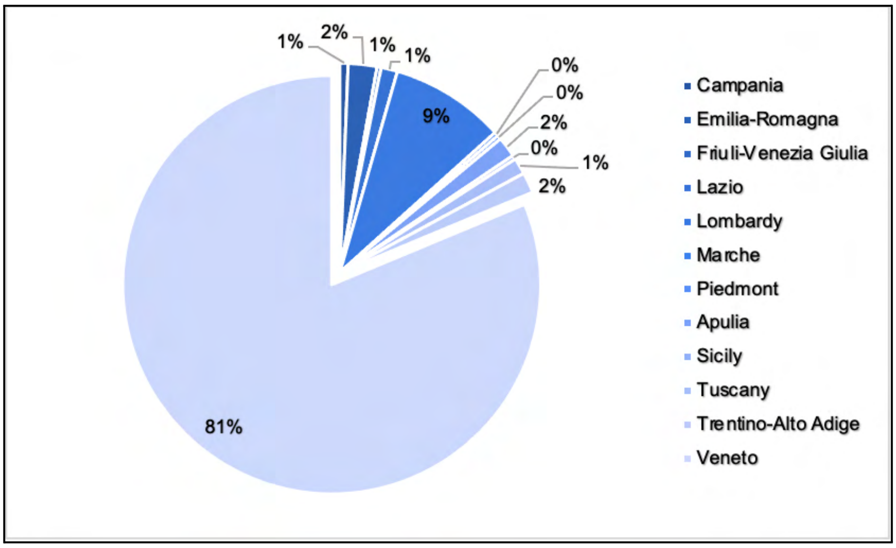

Figure 5.2: Italian region where the sample comes from (Author's elaboration on survey data)

Another significant piece of demographic data concerns the geographic distribution of those surveyed as pictured in *Figure 5.2*: unlike the other classifications, this one shows percentages that are not very homogeneous, but more closely concentrated in a single segment. Responses were gathered from only 12 Italian regions out of 20. Nonetheless, it is obvious that there is a net prevalence of responses from the Veneto region, which makes up 81% of the sample, and from Lombardy with about 9%, while other regions such as Latium, Puglia, Tuscany, and Trentino-Alto Adige reported very low numbers, or even close to zero. It is, therefore, possible to state that almost all of the sample is clustered in the North of the country.

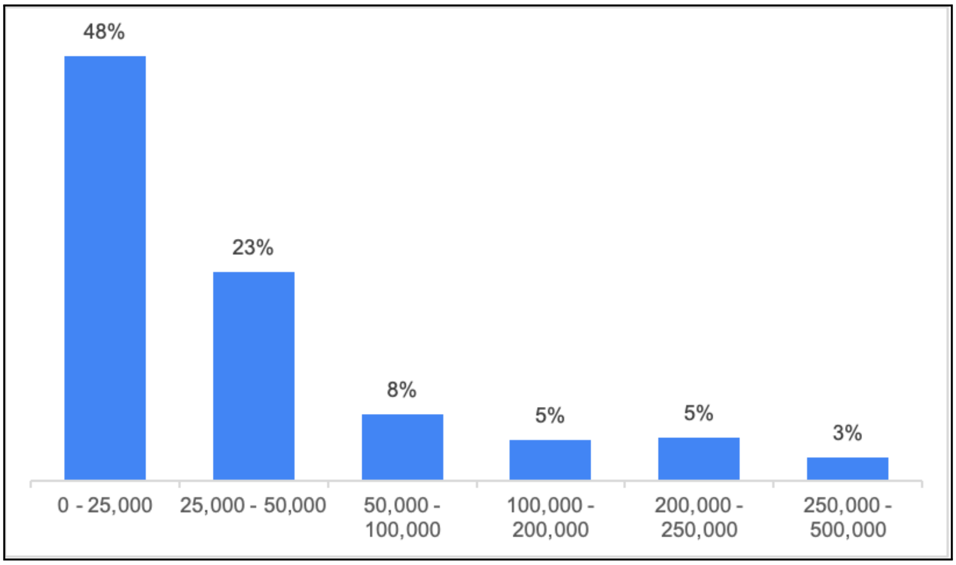

Figure 5.3: Number of inhabitants in the city where the sample resides permanently (Author's elaboration on survey data)

We now look more deeply at where the sample lives. With regard to the number of inhabitants of the city of residence, or in the case of students and workers away from home, the number of inhabitants of the city where they usually live, it can be noticed that about 50% of the people live in small cities of up to 25,000 inhabitants. Then, 23% of people live in cities with 25,000 to 50,000 inhabitants, whereas cities with 50,000 to 100,000 inhabitants and with more than 500,000 inhabitants account for 8% and 9% of the responses, respectively.

Once this level of categorization was made, we went on to identify the respondents' occupation. It can be highlighted that 53% are employees, followed by a high number of students who constitute 29% of the sample. Self-employed and retired people, instead, both make up 5%. An even smaller percentage is attributable to housewives, entrepreneurs and the unemployed, who together account for 3% of responses.

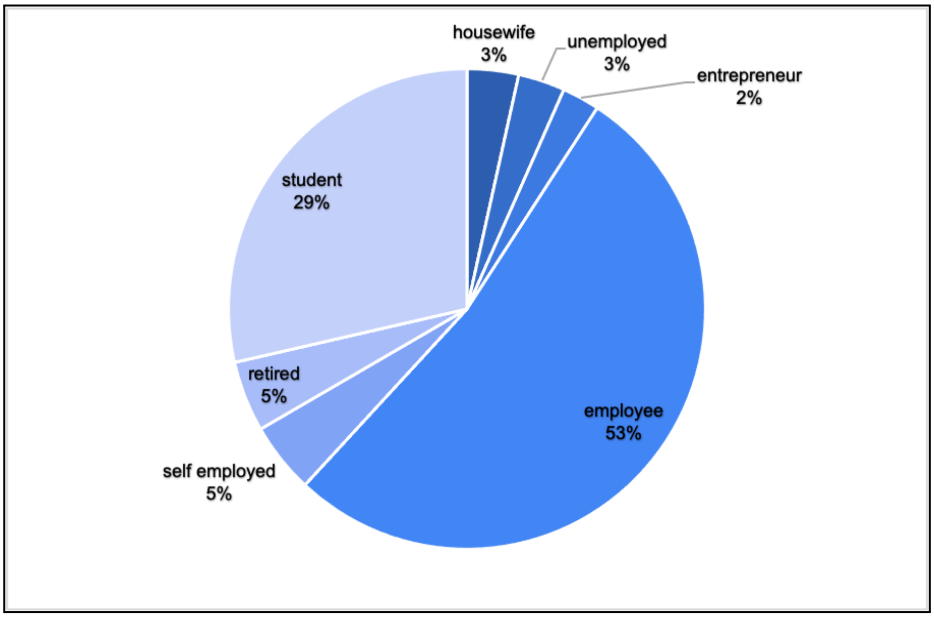

Figure 5.4: Employment status of the sample (Author's elaboration on survey data)

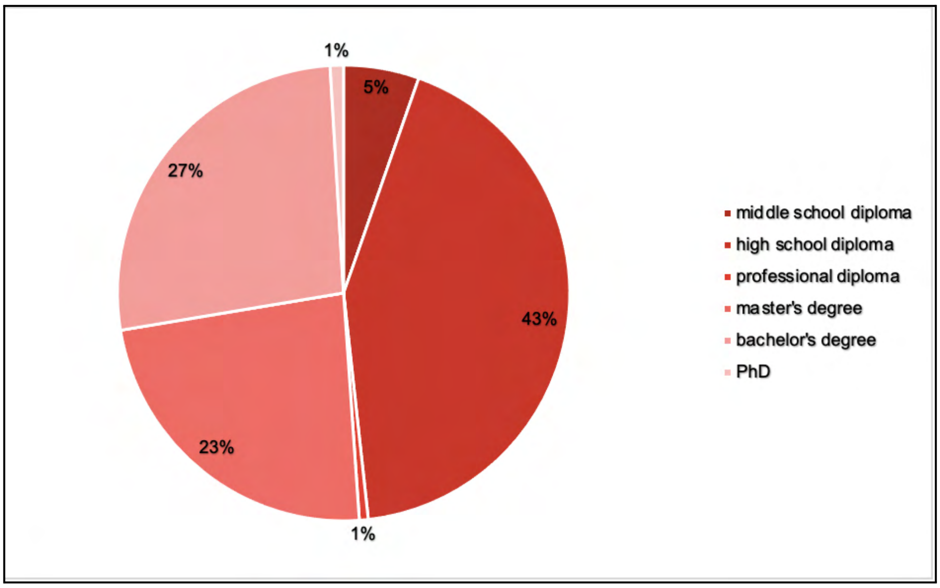

Figure 5.5: Level of education of the sample (Author's elaboration on survey data)

As for the level of education, it appears that 43% of individuals have a high school diploma, followed by those who graduated with a bachelor's degree (27%) and a master's degree (23%). However, much lower is the number of those who have only a middle school diploma (5%), while a minimal percentage (1%) are those who have a professional diploma or a PhD.

Finally, the last figure relates to how many family members are in the household. According to *Figure 5.6*, households made up of three (33%) and four individuals (35%) are the most recurrent among those surveyed. Smaller but still considerable proportions are those relating to a household composed of two (14%), one (11%) and five people (5%). Moreover, one question in the survey sought to ascertain whether the respondents had children: 58% of participants said they had no children compared with 42% who answered in the affirmative. Of these 180 people who said they had children, they were asked a follow-up question that consisted of indicating how many children they had for each age group.

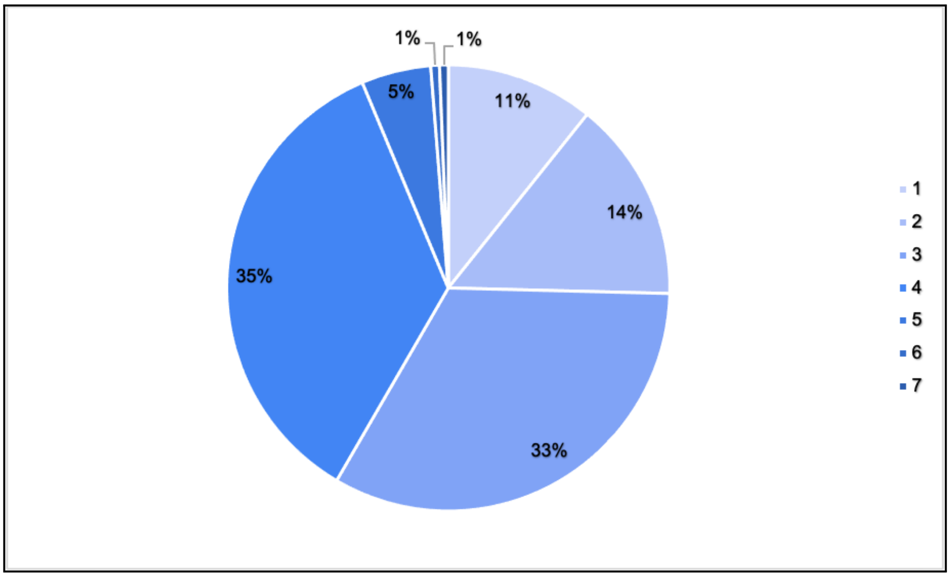

Figure 5.6: Number of family members in the household of the sample (Author's elaboration on survey data)

In light of this, the findings suggest that 35% have at least one child going to university or working, while 22% have at least one child attending high school. As far as the other age groups are concerned, i.e. kindergarten, elementary school, and middle school, it emerges that the proportion of those with at least one child in these groups is almost the same, at around 11%. On the contrary, those having at least one child aged 0-3 years represent the smallest share, at 8%.

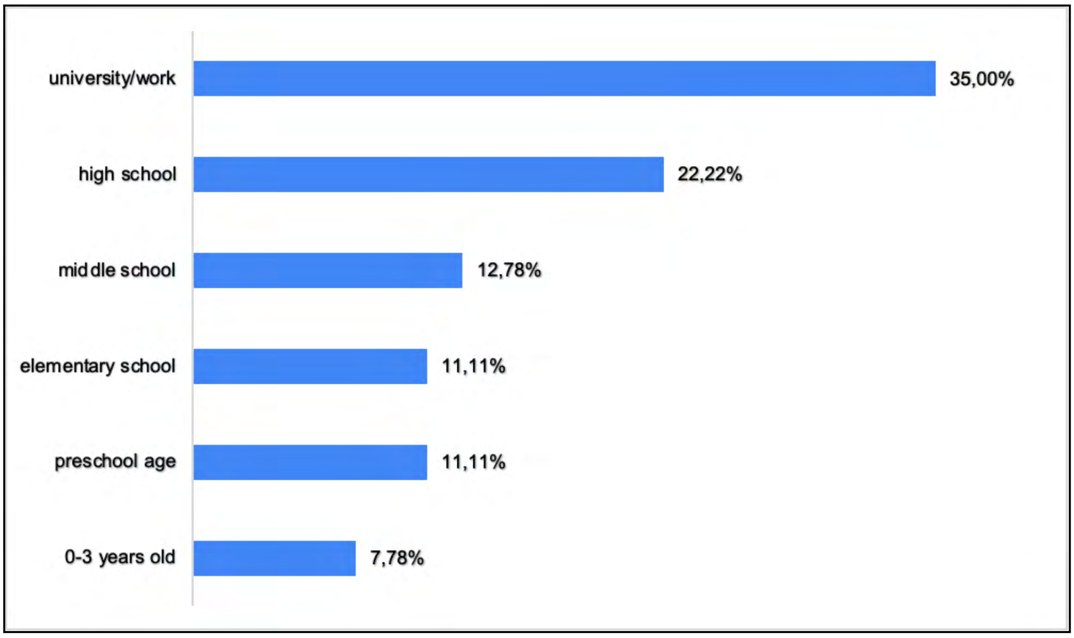

Figure 5.7: Respondents with at least one child by age group (Author's elaboration on survey data)

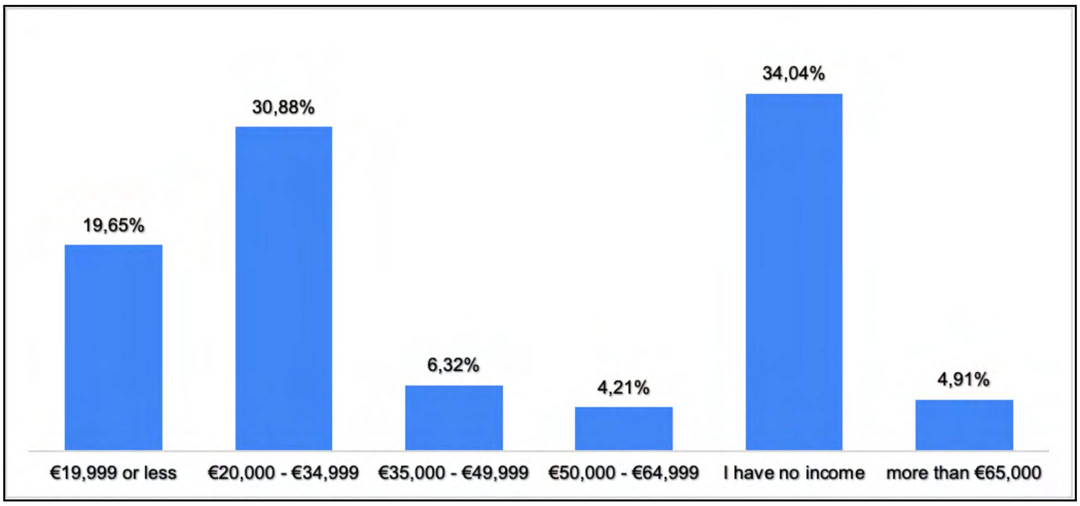

Figure 5.8: Income level of respondents (Author's elaboration on survey data)

In order to get a more extensive overview of the sample, a further question regarding the income was also submitted to consumers. Yet, this question was not requested as mandatory so as to avoid someone ending up not filling out the survey just because they did not want to report their annual income. Hence, this explains why only 280 people answered this question. From the graph we can see that respondents are mainly concentrated in three income brackets: 34% state that they do not earn any money, 31% earn between €20,000 and €34,999 and 20% earn up to €19,999. On the other hand, those who make more than €35,000 are in the minority (15%), and 5% of these people have an income of more than €65,000.

5.5. Analysis of results

After this first analysis of personal data, we will now proceed to evaluate the responses provided by the respondents on the proposed topics.

The first section of the survey is meant to investigate how often people shop online and how familiar they are with food shopping on the Internet, while also taking into account whether and how much the Covid-19 pandemic has altered their purchasing and consumption habits. Therefore, an initial set of questions asked consumers about how often they usually shop online, whether and how the Covid-19 pandemic has impacted their purchasing behavior, and the channel they use to shop.

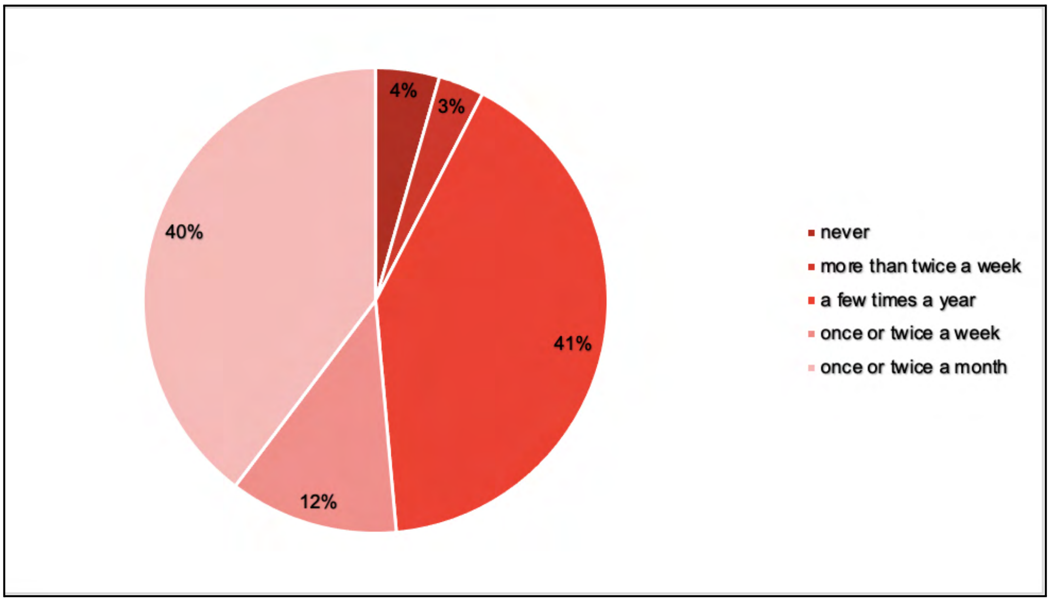

Figure 5.9: "How often do you shop online?" (Author's elaboration on survey data)

From this perspective, the sample reported buying online once or twice a month (40%) or a few times a year (41%). Instead, those who use this channel more frequently, i.e. once or twice a week are a lower percentage (12%). Nevertheless, it is worth pointing out that actually there is still a 4% of people who have never bought anything online and a 3% of individuals who shop on the Internet more than twice a week.

Undoubtedly, the sudden and disruptive advent of the Covid-19 pandemic has dramatically boosted and accelerated Italian consumers' approach to online shopping, mostly through e-commerce websites. This has also been backed up by the majority of respondents: 52% claimed to have increased how often they shop online and 15% said they have very much increased their Internet purchases with the pandemic. However, there is 27% of respondents who instead claim that the pandemic crisis has not changed their online purchasing behavior, which has remained unchanged from the pre-Covid-19 period.

We continued with a first discriminating question about online food shopping. To this query, only 38% of our sample said yes. In contrast, the majority (62%) declared that they have never purchased food products on the Internet. So, although Italian consumers have inevitably become more familiar with this sales channel in recent years, most of them are still deeply anchored in the traditional channel, especially when it comes to buying food.

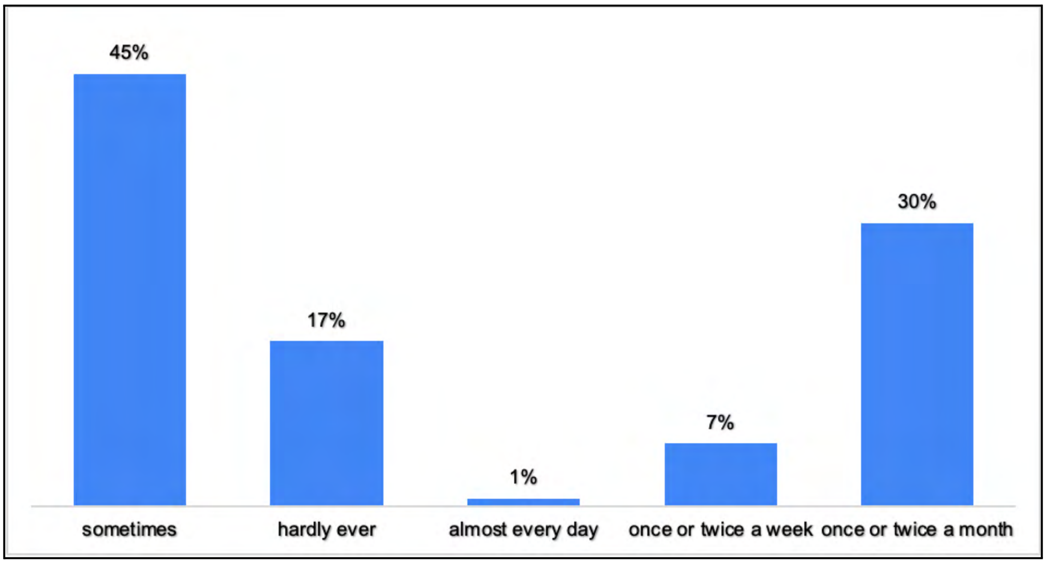

Figure 5.10: "How often do you buy food online?" (Author's elaboration on survey data)

For those who replied that they buy food online, we wanted to elaborate on that with relative questions. 45% affirm that they shop for food online once in a while, 30% once or twice a month compared to 17% of people who instead rarely buy it. Yet, there are some individuals who resort to the Internet for their food shopping once or more a week (7%) or almost every day (1%). Similarly to what has already been said for online shopping as a whole, the pandemic has made its contribution to online food shopping, thus speeding up a process that before was in its early stages: in fact, for 67% of those surveyed the pandemic has increased their regularity of buying food online.

Additionally, 5% of individuals felt that the pandemic was the primary driver that brought them closer to this channel for the purchase of food products.

In more specific terms, consumers were asked what type of food they bought online with multiple answer option in case they experienced more than one category. Among the types of food that are most commonly purchased online (*Figure 5.11*), food delivery ranks first with about 43% of choices, followed by grocery products with 27%. It should be mentioned that a portion of those who buy food online, albeit a minority, also buy food subscription boxes (13%) and typical food & wine products (8%). A few respondents also pointed out buying unprocessed foods over the Internet such as oil and coffee pods, supplements and protein foods. Plus, a number of consumers said that they buy Too Good To Go's Magic Box as well.

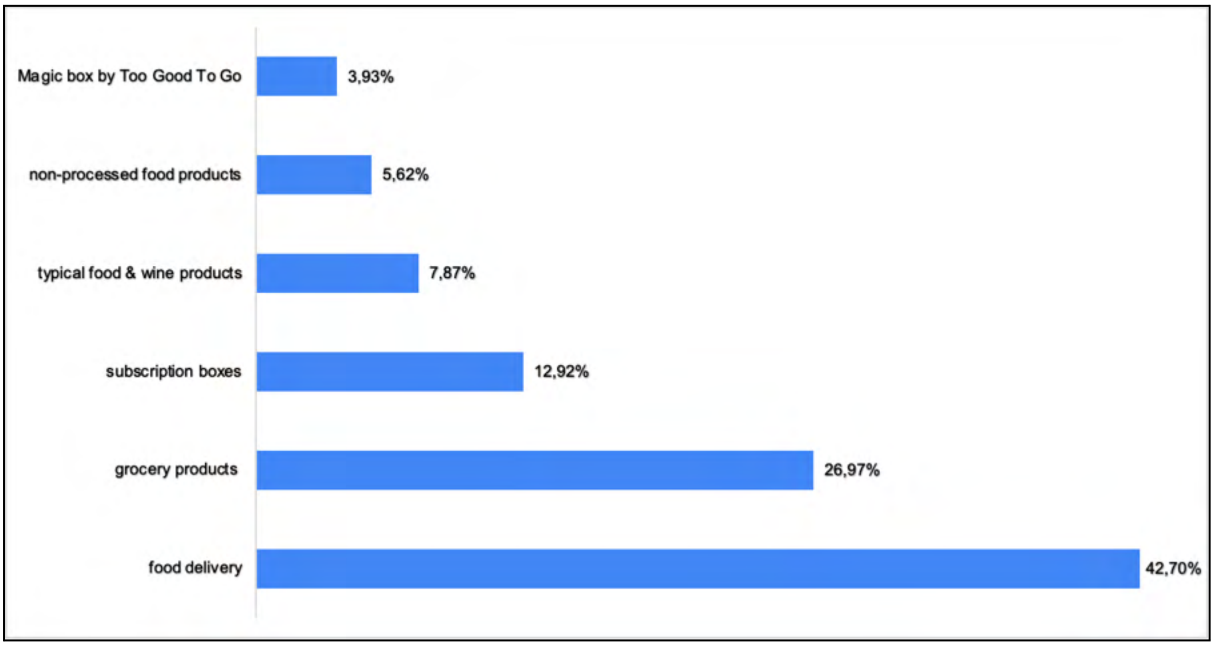

Figure 5.11: Most popular food products purchased online by respondents (Author's elaboration on survey data)

As can be deduced from *Table 5.2*, if we look at the relationship between the regularity of those who shop online and whether or not they buy food online, it can be noticed that consumers who shop through e-commerce sites more often, i.e. several times a week or a few times a month, are also the ones who are more likely to shop for food online. As a result, one could assume a possibly greater propensity of those who typically purchase online to also buy food products through the same channel.

How often do you shop online?	never bought food online		bought food online	
	absolute value	%	absolute value	%
never	14	7%	0	0%
more than twice a week	3	2%	7	6%
sometimes during the year	104	54%	25	21%
once or twice a week	14	7%	23	19%
once/twice a month	59	30%	66	55%
total	**194**	**100%**	**121**	**100%**

Table 5.2: How often respondents shop online based on whether they have bought food online or not (Author's own elaboration of survey data)

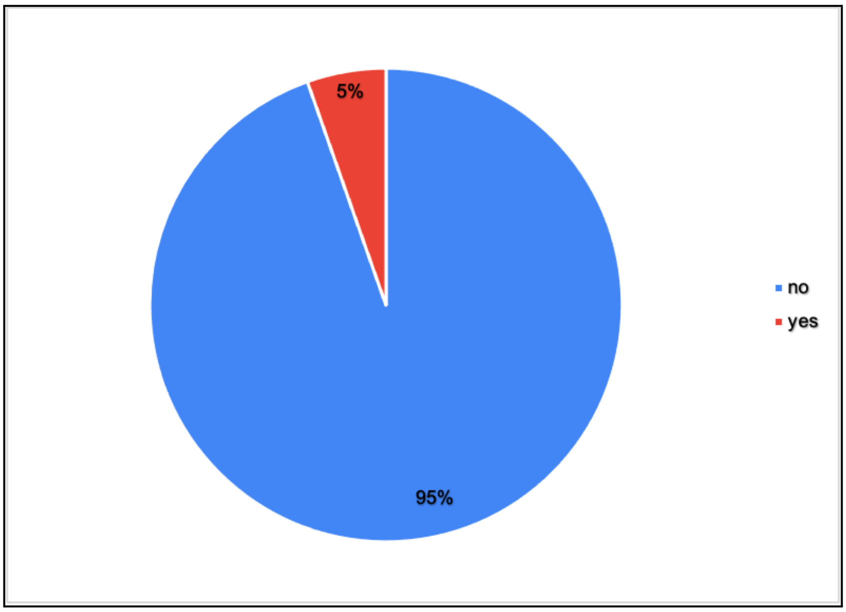

Figure 5.12: "Have you ever purchased food subscription boxes (i.e. Cortilia, Hello Fresh, Babaco Market, Quomi, Feat Food, etc.)?" (Author's elaboration on survey data)

The second part of the survey deals with the core topic of the research, i.e. food subscription boxes. In this regard, the first question of this section is seen as a turning point, as the other questions changed based on how they answered this one. However, the part of the questionnaire regarding which type of food boxes they would be most interested in purchasing and the motivations that might prompt their purchase was submitted to both groups. When asked "Have you ever purchased any food subscription boxes?", only 5% of the sample responded in the affirmative, that is, 17 individuals, while the remaining 95% admitted that they have never purchased one.

5.5.1. Analysis of those who have purchased a food subscription box

Of the 5% of the sample who claimed to have purchased at least one food subscription box, 12 respondents are females and 5 are males. In order to gain an understanding of which businesses they subscribed to a food subscription box from, they were presented with a number of providers in a multiple-answer option question. As shown in *Figure 5.13*, the outcome is that 9 people only purchased from one provider while the remaining ones tried food boxes from at least two or more separate businesses. As a result, Cortilia and Quomi in equal numbers, followed by Ortago came out as the most common choices among box users.. A few people also said they started a subscription with Nutribees and HelloFresh, while only a very small proportion subscribed to a Japanese snack box (TokyoTreat and SeoulBox).

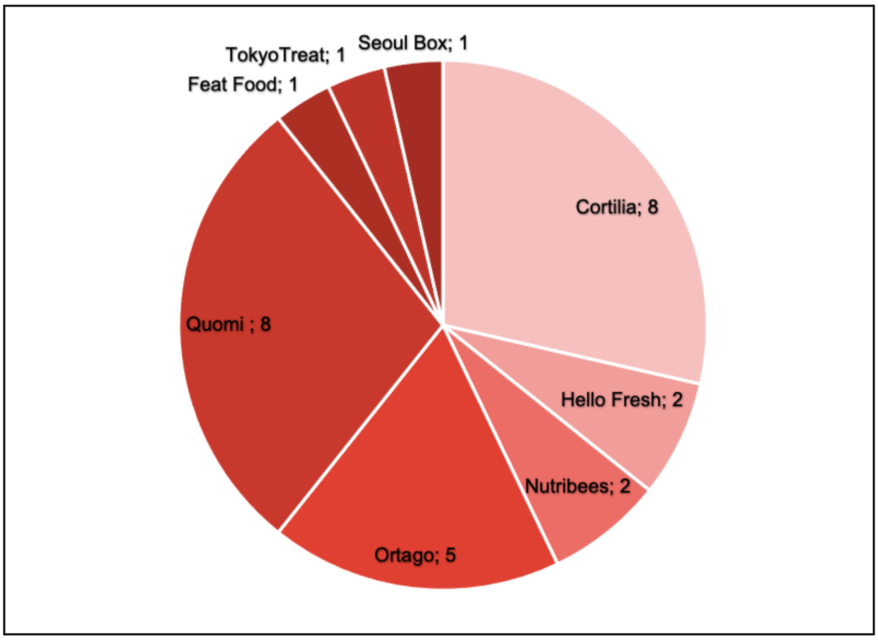

Figure 5.13: "Which company(s) have you purchased a subscription box of food from?" - Multiple answer option (Author's elaboration on survey data)

Then, another multiple-answer option question about how they first heard about food subscription boxes was proposed to them. 12 respondents came across sponsored posts on social media, whereas 7 learned about food subscription boxes through online research. Other 7 people were told about the subscription service through positive recommendations and reviews from family members and friends. Instead, only 2 consumers claimed to have first heard about the service on online advertising banners that included promotions or discounts on the subscription. Thus, it can be inferred that the ways in which food box providers communicate are fundamental to reaching the end consumer as well as a favorable online purchasing and post-purchasing experience that is in line with expectations so as to create positive word of mouth. Speaking of which, upon being asked "How likely would you be to recommend a food subscription box to a family member or friend?" 10 out of 17 participants would certainly recommend subscribing to a food box to relatives and friends, 6 would be neutral about it and only 1 person would be unwilling to advise the service, considering it too expensive. When asked "How long have you kept/are you keeping your subscription", only 1 individual claimed that he/she has had a subscription for more than a year. On the other hand, 7 respondents said that they kept their subscription for a month or less, others for 3 or 6 months, 5 and 4 people respectively. As a consequence, this indicates that one of the main drivers that encourage consumers to try this service seems to be the possibility of taking advantage of initial discounts or promotions. Further along these lines, consumers were also asked what was the primary reason why they had decided to cancel their subscription to a food box.

At the time of filling out the questionnaire, 9 consumers had an active subscription to a food box, while 8 said they did not. Although 6 people stated that they had never unsubscribed, on the other hand, 5 asserted that they had stopped subscribing to a food box because of the quality of the food products they received which did not meet their expectations. Moreover, for 3 people the price of the subscription was too high to justify the food products purchased, 2 thought that the shipping time was too long, and 1 person remarked that he/she had subscribed only out of curiosity to test new products for a short period of time.

Since food box subscribers are a very small fraction of the total sample, it follows that it is not feasible to conduct an in-depth study that would make it possible to profile the typical food box user. That being said, it is still deemed necessary to stress the characteristics that differ substantially from the total sample, so it could be hypothesized that these are food box users' peculiarities.

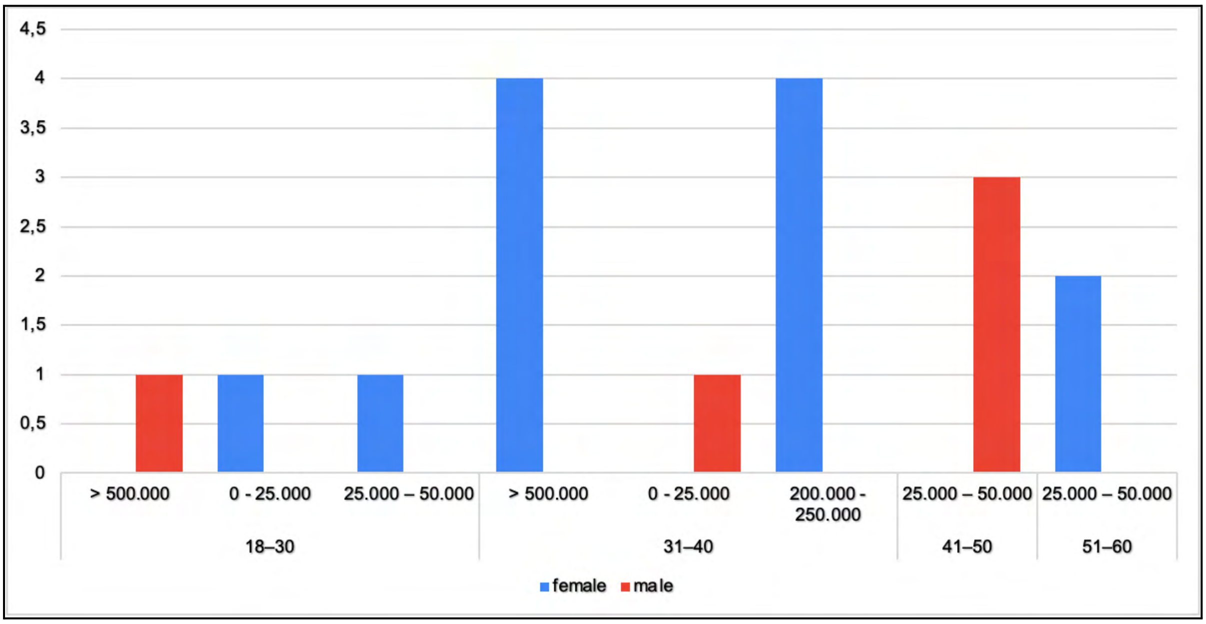

Figure 5.14: Relationship between age, gender, and number of city residents of those who are food box users (Author's elaboration on survey data)

On the basis of how some socio-demographic variables are distributed, we seek to ascertain whether there is a relationship between the age, gender, number of city inhabitants of those who have purchased food boxes. From *Figure 5.14* we can tell that most of them reside in medium to large cities in Veneto and Lombardy. In particular, 4 women live in a city with more than 500,000 inhabitants, other 4 live in a city in Veneto with 200,000-250,000 inhabitants and they are both between 31 and 40 years old, whereas those who live in small cities and are food box buyers are the minority. Also, there are two female consumers who are between 51 and 60 years old and 2 young people between 18 and 30. Likewise, we would like to underline that men who use this service are mostly between 41 and 50 years old, 3 of them live in a city with 25,000-50,000 inhabitants and two live in a small city with up to 25000 people instead.
Furthermore, *Table 5.3* allows us to compare the main socio-demographic characteristics between food box buyers and non-buyers in order to understand whether it is our sample that is skewed toward some segments or whether there are unique traits of buyers that stand out. It is certainly not surprising that food box users all come from Veneto and Lombardy, as 90% of the sample itself comes from these two

Italian regions. Likewise, also for gender, we cannot draw any meaningful conclusions regarding the greater propensity of women to subscribe to a food box since the sample itself is heavily skewed toward the female gender (73% are women). Notwithstanding the importance of the information on income, this comparison is not reported here due to incomplete results, as 10% of the sample preferred not to answer this question as it is not mandatory. However, some points can be made regarding the age group and the subscribers' city of residence. What stands out in this little segment of consumers and could thus be considered a distinguishing trait of the typical food box buyer is living permanently in a medium to a large city. In fact, it was found that 15 out of 17 purchasers live in medium-large cities, which actually contrasts with the composition of the total sample where 50% live in a small city with less than 25,000 inhabitants and 23% in a medium city with 25,000-50,000 inhabitants. Another remarkable finding arising from the comparison relates to the age group of those who have purchased food boxes. In fact, from *Table 5.3* it is clear that 9 out of 17 of the people who subscribed to a food box are between 31-40 years old, which corresponds to 53% of this small cluster. This figure is notable and differs considerably from the relative percentage of non-buyers (8%) where most of them are aged 18-30 (44%) and aged 52-60 (23%).

Have you ever purchased a food subscription box?				
	YES		**NO**	
Gender	absolute value	%	absolute value	%
female	12	70,59%	217	72,82%
male	5	29,41%	81	27,18%
	17	**100,00%**	**298**	**100,00%**
Age group				
> 71			5	1,68%
18–30	3	17,65%	130	43,62%
31–40	9	52,94%	23	7,72%
41–50	3	17,65%	53	17,79%
51–60	2	11,76%	70	23,49%
61–70			17	5,70%
	17	**100,00%**	**298**	**100,00%**

Number of city inhabitants				
> 500,000	5	29,41%	22	7,38%
0 - 25,000	2	11,76%	148	49,66%
100,000 - 200,000			15	5,03%
200,000 - 250,000	4	23,53%	12	4,03%
25,000 - 50,000	6	35,29%	68	22,82%
250,000 - 500,000			9	3,02%
50,000 - 100,000			24	8,05%
	17	**100,00%**	**298**	**100,00%**
Region of residence				
Campania			2	0,67%
Emilia-Romagna			7	2,35%
Friuli-Venezia Giulia			1	0,34%
Lazio			4	1,34%
Lombardy	6	35,29%	22	7,38%
Marche			1	0,34%
Piedmont			1	0,34%
Apulia			5	1,68%
Sicily			1	0,34%
Tuscany			4	1,34%
Trentino-Alto Adige			5	1,68%
Veneto	11	64,71%	245	82,21%
	17	**100,00%**	**298**	**100,00%**

Table 5.3: Gender, age group, number of city inhabitants and region of food box users and non-users both in absolute value and in percentage terms (Author's own elaboration on survey data)

With regard to the employment status and income level of subscribers, most are employees, 6 of whom earn between 20,000 and 35,000 euros, while 4 have a higher income between 50,000 and 65,000 euros. On the contrary, there are 4 self-employed food box subscribers, 2 of them with an income between 50,000 and 65,000 euros. Also,

there are 3 students who use this subscription even though they do not earn any income and even an unemployed person who, in turn, has an income between 20,000 and 34,000 euros. Hence, those who fall into the income bracket between 20,000 and 35,000 euros (7 people) and in the bracket between 50,000 and 65,000 euros (6 people) would seem more likely to adopt this subscription service. Although not all respondents answered the question about income, the sample is mostly composed of individuals who do not earn any money or who earn less than € 20,000 (56%) and only 30% between € 20,000 and € 35,000. Consequently, our study's finding that box buyers tend to have a higher income might suggest that those who are better off have a greater propensity to buy a food box. However, it is imperative to conduct further research on a larger scale to support this point with more certainty.
In addition, 7 of these consumers stated that they have children. Cortilia, Quomi and Ortago are the businesses from which they have purchased a food box. 50% of such consumers have one or more preschool-aged children, 30% aged 0-3 years and 20% have middle school-aged children. As such, it should be noteworthy how those who buy food boxes do not have any of their children attending high school, university, or working. Although this is only seven people, still this finding would seem to differ from the fact that 35% of the sample has at least one child attending college or working, and 22% have at least one child in high school.

5.5.2. Analysis of those who have not purchased a food subscription box yet

In this section we will investigate the group of respondents who claimed to have never purchased a food subscription box. As reiterated earlier, this is the majority of the sample, or more accurately 217 females and 81 males.
As an initial step, a generic question was posed to these consumers to find out if they had heard of this phenomenon before the present survey. Of these 298 people, 42%, even though they had never used this service, had already heard of it, while 58% had never heard of food boxes before. So, we can deduce that, although this business model has only gained popularity in recent years in Italy, especially with the spread of online shopping for food products in conjunction with the outbreak of the Covid-19 pandemic,

to date, as this survey also proves, many consumers are still not aware of the existence of this subscription service.

Since only 17 respondents out of 315 declared that they had already bought one or more food subscription boxes, the rest can almost be assimilated to the entire sample, 17 people being a relatively exiguous number which does not fundamentally change the composition and socio-demographic characteristics of the sample as a whole. While a description of the sample has been made in the paragraph above, it is worthwhile to point out again some of the traits that distinguish, in this instance, those who have never purchased a food box. Even if these consumers have not purchased a subscription food box, this does not necessarily imply that they are not active in terms of buying online: 65% state that they have never bought food products through the Internet, while the remaining 35% make use of it, albeit with different frequencies. Of the latter, 17% buy their food through the online channel occasionally, 7% hardly ever during the year, and 11% use it more often, namely once or twice a month (9%) and once or twice a week (2%).

These individuals were also asked the main reason why they have never purchased a food box by subscription. In this regard, the most striking results stand out in *Figure 5.15*: it can be observed that 47% of consumers strongly prefer the physical channel, as in this way they would rather go to the supermarket or grocery store in person for their food shopping. In fact, this remarkable figure could subtend a sign of distrust that is still existing for online shopping in our country, particularly for food shopping. Conversely, 13% claim not to resort to food subscription boxes as they tend to buy only the products they actually need. Therefore, this portion of consumers is not very keen on receiving unwanted or unnecessary items. Similarly, 7% fear that the food they will be delivered will not live up to their expectations, for instance in terms of product quality and freshness. In any case, 17% of participants did not express a specific reason why they had never used the service, other than they were not familiar with it beforehand, which would suggest that they might be willing to try this subscription once they have gained a better understanding of it.

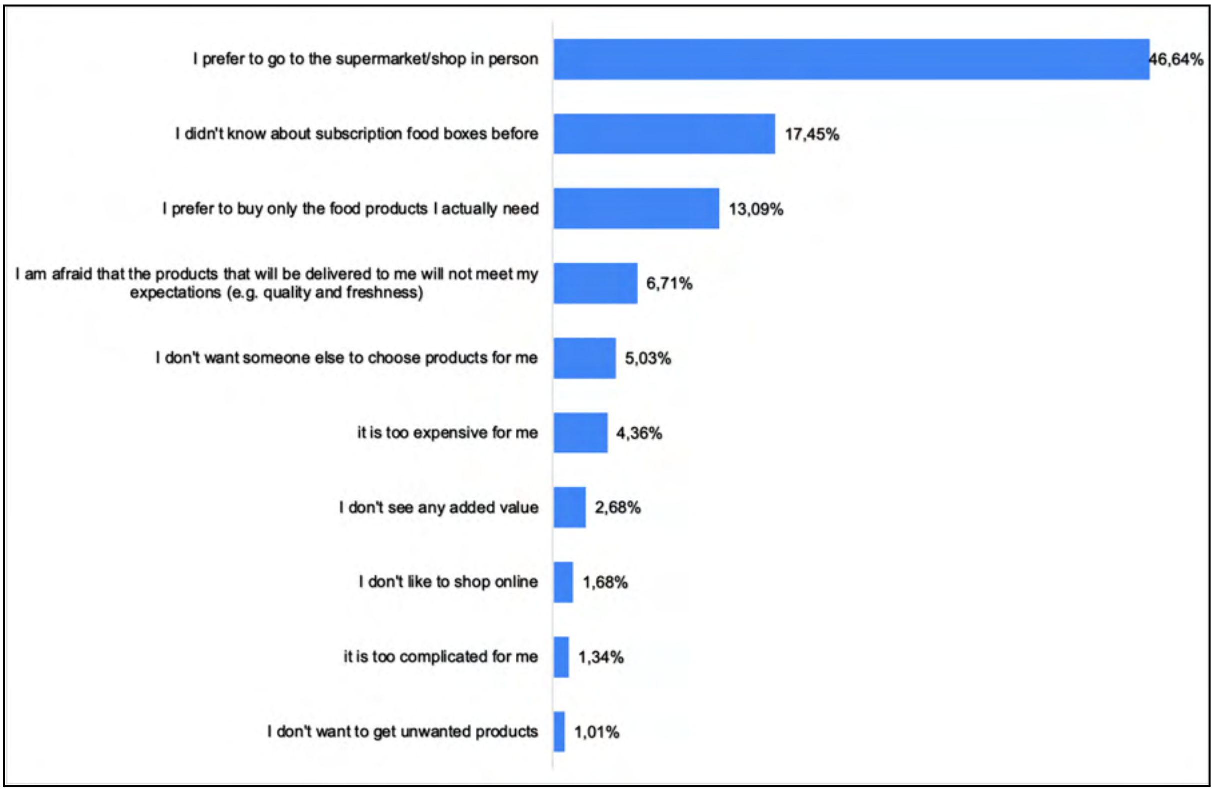

Figure 5.15: "What is the primary reason why you have never purchased a food subscription box?" (Author's elaboration on survey data)

As such, we sought to find out whether there is a gender gap when it comes to the reasons for not adopting food boxes. From *Figure 5.16*, we can infer that both men and women pinpointed the same three key motivations for them to favor the physical channel over the online one for food shopping: consumers are still strongly rooted in buying food in person, so they like to personally pick and feel the food before buying it. Others were not acquainted with food boxes prior to taking the questionnaire, whereas others just like to buy the food they really need. Generally speaking, although the motivation for going directly to the supermarket (48%) has a clear majority, the remaining proportion of women is more or less evenly spread among the proposed motivations. As opposed to men, women would also be more concerned both about someone else picking food products for them (6%) and about quality standards as well, as their own needs might not be fully captured by such a subscription (8%).

Also 42% of men indicated that their primary reason for not purchasing a food subscription box is their preference for physically shopping for food at the supermarket. However, some differences between males and females relate to the fact that 27% of men compared to only 14% of women report that they have never subscribed to a food box because they were not yet familiar with this service, or because they find the subscription too expensive (7% vs 3%), as well as because they dislike shopping on the Internet (2.5% vs 1,4%).

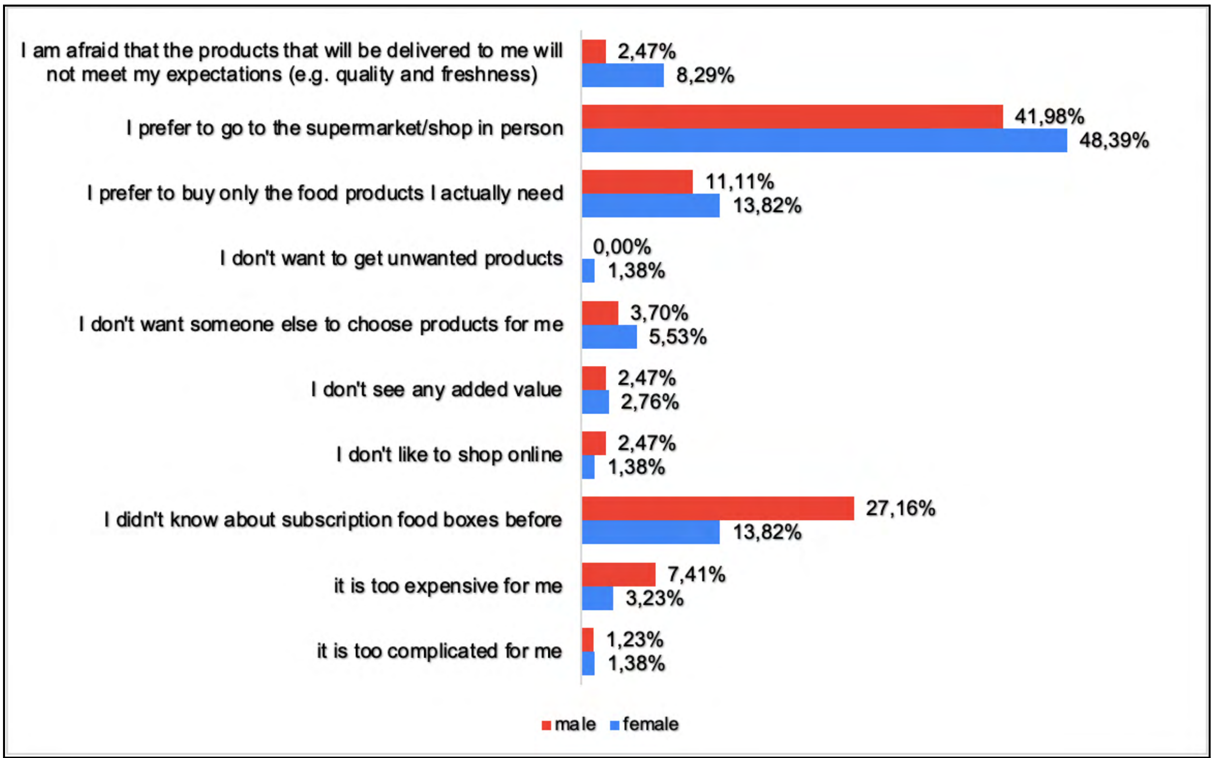

Figure 5.16: Relationship between gender of non-users of food boxes and the main reason they have never purchased one (Author's elaboration on survey data)

5.5.3. Analysis of the full sample

In order to get an idea of which companies are best known in the Italian market for food subscription boxes, as well as the motivations that might drive consumers to purchase, the last part of the survey was submitted to both groups of consumers, that is, those who have already tried a food box and to those who have never bought one yet.

To the question "Which of these firms that supply food subscription boxes do you know?", we realize that in the first place is Hello Fresh, known to 46 respondents, followed by Cortilia and My Cooking Box, with 36 and 21 people having mentioned them respectively in their answers. Babaco Market, Quomi and Feat Food, Ortago, and Nutribees are next on the list. On the contrary, the companies that were the least known among the participants are Biokistl, My FruttaWeb, TokyoTreat, SecondChef, and Diet to go. Furthermore, it should be emphasized that 198 respondents, i.e. about 63% of the sample, revealed that they did not know any of the companies presented in this question.

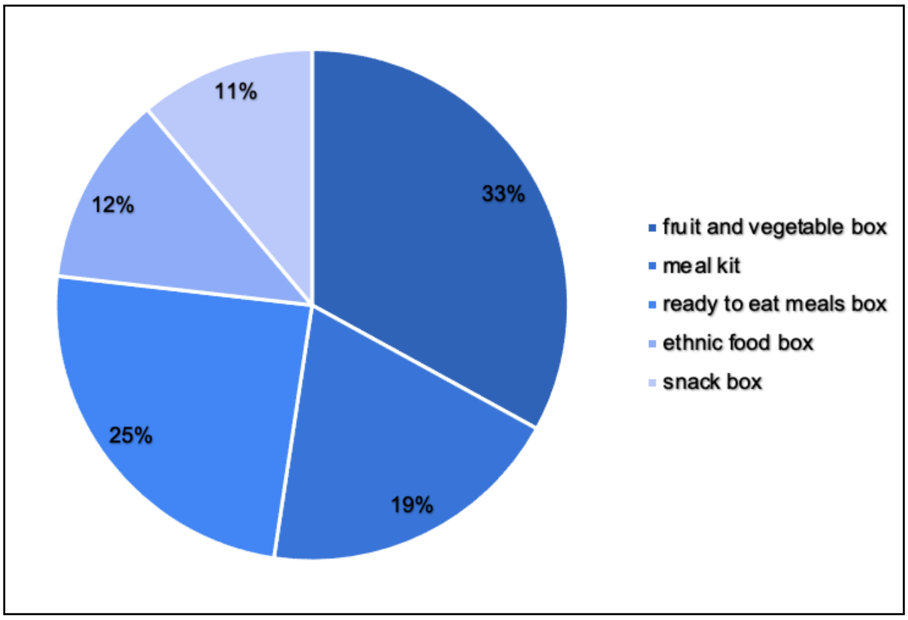

Figure 5.17: "What type of food subscription box would you be more interested in buying?" (Author's elaboration on survey data)

Next, this research set out to explore what type of food subscription box Italian consumers would be most willing to buy. A first question regarding specific types of food boxes indicated a preference among respondents for subscription boxes of fresh fruits and vegetables (33%). Another quarter of respondents (25%), instead, expressed greater interest in boxes containing balanced and personalized ready meals, while 19% would opt for a meal kit. With a lower percentage, 11% of consumers who would instead go for a box of ethnic food or special snacks.

Let's now take a look at whether there are any notable discrepancies in the type of food box that is preferred based on certain features of the sample, i.e. depending on the gender of the respondents, their age and whether or not they have children.

For women, there is a marked tendency to purchase a box of fruits and vegetables (34%) or a box of ready meals tailored to their dietary requirements (25%). After this, we find meal kits selected by 19% of the women surveyed. With reference to men, instead, the responses are more evenly distributed. Again, a fruit and vegetable subscription box is the favorite one (30%), followed by ready to eat meals.

By looking at *Figure 5.18*, we can notice that men would be more likely than women to buy a meal kit (21%), an ethnic food box (13%) or a snack box (13%).

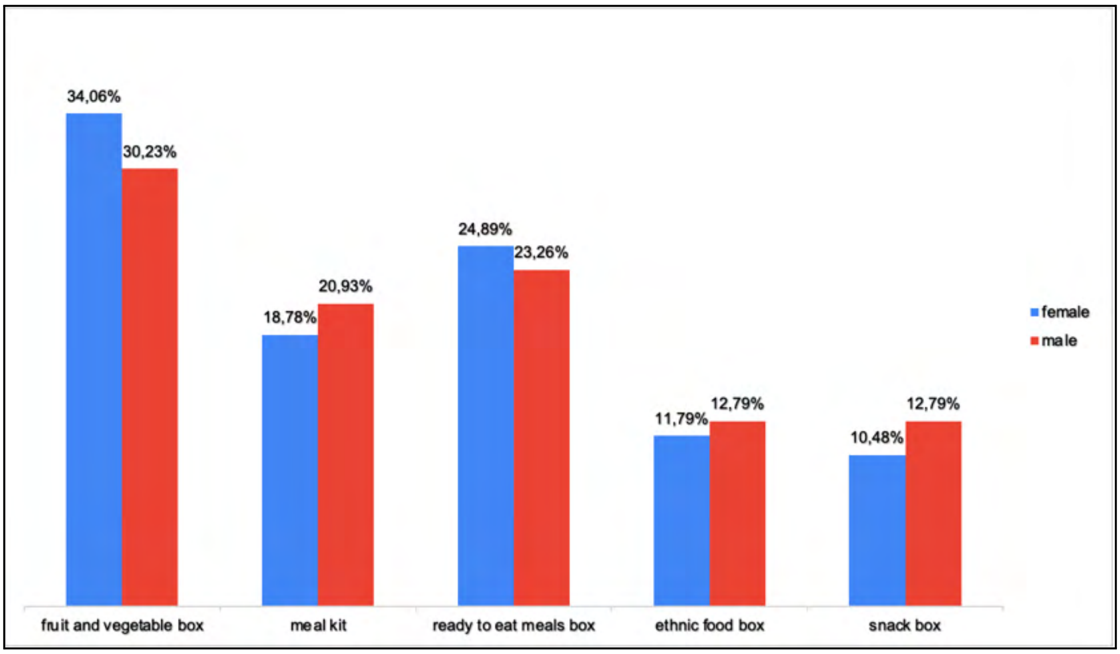

Figure 5.18: Relationship between gender of respondents and the favorite type of food subscription box (Author's elaboration on survey data)

As regards the type of box chosen on the basis of the age bracket of respondents, it can be noted that for consumers aged 18-30 years the inclination to buy a box of fruits and vegetables, a meal kit or a set of customized ready meals are more or less equally favored by the same percentage of respondents. Also, across all other age groups except for those over 70, there is a preference for the subscription box of fresh fruits and vegetables. Younger respondents aged 18-30 and even those aged 41-60 show interest in boxes of food or snacks from other countries as well.

A brief consideration should also be made about how consumers' preference for the types of subscription boxes varies on the basis of whether or not they have children. In *Figure 5.19* it is evident that consumers with children tend to prefer fruit and vegetable boxes (38%) compared to those without children. As for ready to eat meals, these are equally appreciated by both segments of consumers. Instead, it can be noticed how people with no kids are more willing to buy snack boxes (12%) and ethnic food boxes (13%). The latter are more likely to try meal kits (21%) as well.

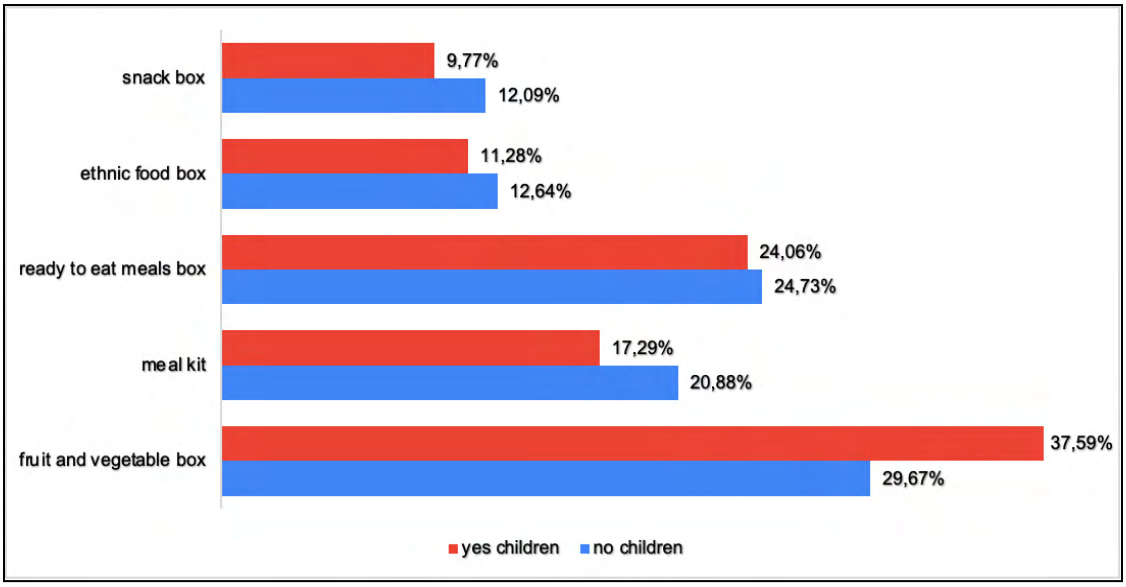

Figure 5.19: Preferred type of food subscription box based on whether respondents have children or not (Author's elaboration on survey data)

Subsequently, another question about the preferred type of food subscription box was posed to the sample, but this time relying on an adapted definition of the four types of subscription boxes identified by Bischof & Rudolph (2021) and applicable in different sectors. Here, we would like to highlight the fact that the answers given did not reflect a well-defined preference by the sample: as we can see in *Figure 5.20*, 28% of consumers would be most interested in so-called "replenishment food boxes", i.e., subscription boxes that provide a quick and convenient selection of everyday food items such as fruits and vegetables, meat and other fresh foods. Another 28%, instead, would go for "curated food boxes", which are those boxes that offer an array of personalized food products such as ready-to-eat meals designed to meet their specific nutritional needs.

Conversely, 22% would not give up on a food box that lets them take advantage of discounts or dedicated promotions that they would not be able to benefit from without a subscription. In the last positions are boxes that allow you to discover new foods and trends as well as meal kits, with 12% and 10% of responses, respectively.

Afterward, an attempt was made to measure the variable called "purchase intention" in order to understand the intention to purchase a food subscription box on the part of those who filled out the questionnaire. This variable is frequently used in literature as it turns out to be related to the consumer's desire to make a purchase (Xiaohui Ma et al., 2021).

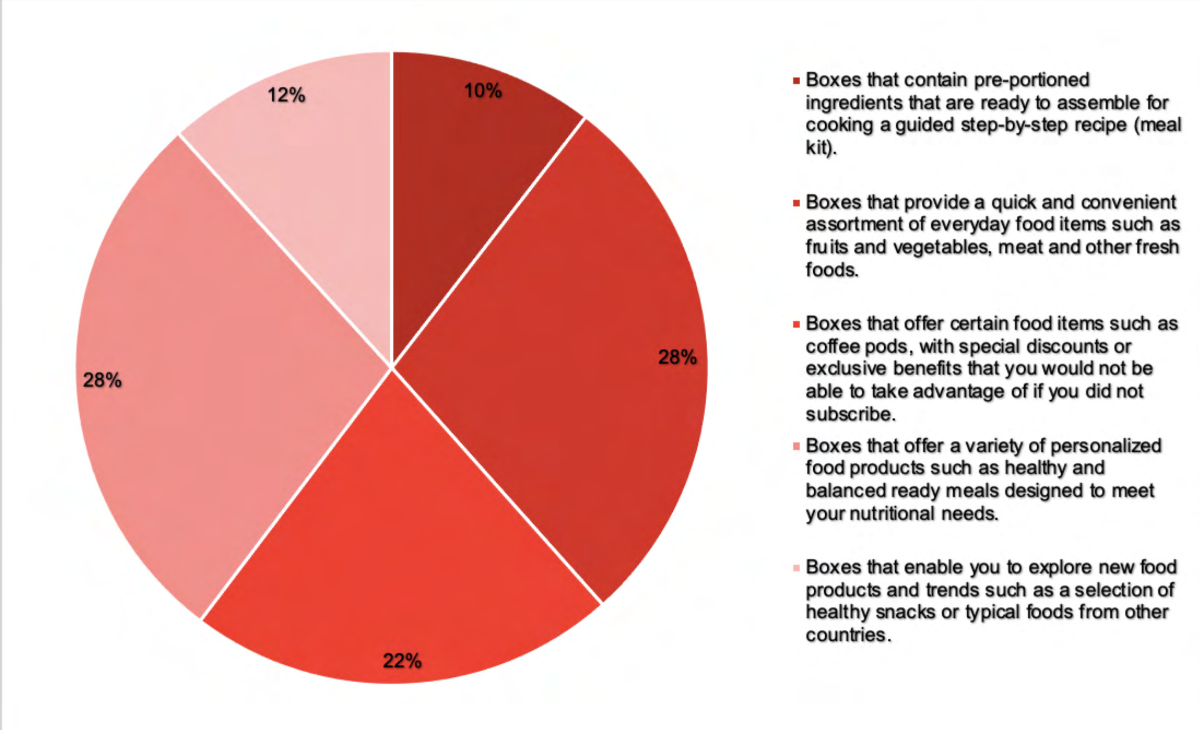

Figure 5.20: "What if I were to suggest the following types of food subscription boxes... Which one would you be most interested in?" (Author's elaboration on survey data)

For consumers who have already bought from a certain provider, the variable is even more meaningful as it indicates an individual's willingness to keep buying in the future (Xiaohui Ma et al., 2021). In this study, purchase intention was assessed through three items to which consumers were required to respond on a 5-point Likert scale, where 1=strongly disagree and 5=strongly agree. As can be seen from *Table 5.4*, on average the variable in question scored 2.46, thus showing that respondents generally do not feel very intent on purchasing a box in the near future. Notably, it is worth pointing out that 34% of the sample has a neutral stance on the matter, 27% disagrees and 23% totally disagrees with the proposed statements concerning their intention to subscribe in the next months. This finding seems to be consistent with earlier claims: first of all, the sample consists of 95% of people who have never actually subscribed to a food box, which may be contributing to their skeptical attitude towards this service. In addition, purchase intention is also significantly influenced by the fact that many participants were not yet familiar with the trend at the time of the questionnaire. Nonetheless, 15% of respondents agree with their intention to subscribe in the near future and 2% strongly agree that they will subscribe to a box in the coming months. However, note how the average assessment slightly increases to 2.58 when consumers are asked if they would be willing to use this subscription service to address their own and their family's nutritional needs.

MEASUREMENT ITEMS	AVERAGE
You plan to buy food through a subscription box in the near future (e.g., in the next 3 months)	2.43
You are interested in buying a food subscription box to meet your and/or your family's dietary needs	2.58
You are likely to adopt the subscription food service	2.37
PURCHASE INTENTION	**2.46**

Table 5.4: Average value of purchase intention and its measurement items (Author's own elaboration on survey data)

5.6. Potential motivations for subscribing to food boxes

With a view to gaining a better understanding of the elements that could drive the purchase of food boxes, this section examines the perceived importance of a number of attributes that food boxes should display in order to be more attractive to Italian consumers, thus encouraging their purchase.

Surveyed individuals were subjected to a series of statements about food subscription boxes to which they had to assign a score from 1=not at all important and 5=very important based on how important they felt that a subscription box should have a certain feature. Similarly, another set of statements about the properties that the food contained in a food subscription box should have was brought to the attention of the same individuals, who then had to evaluate each one from 1=strongly disagree and 5=strongly agree in order to express their degree of agreement or disagreement with the statements. Based on the responses obtained, the items were grouped by reference variable and average values were calculated accordingly. For the purpose of emphasizing some potential deviations in the evaluation of different items and their reference variables, we chose to calculate averages for all items and variables with respect to the entire sample. In this regard, the average scores were also calculated by gender and by the dichotomy of having already purchased or not having purchased one or more food subscription boxes.

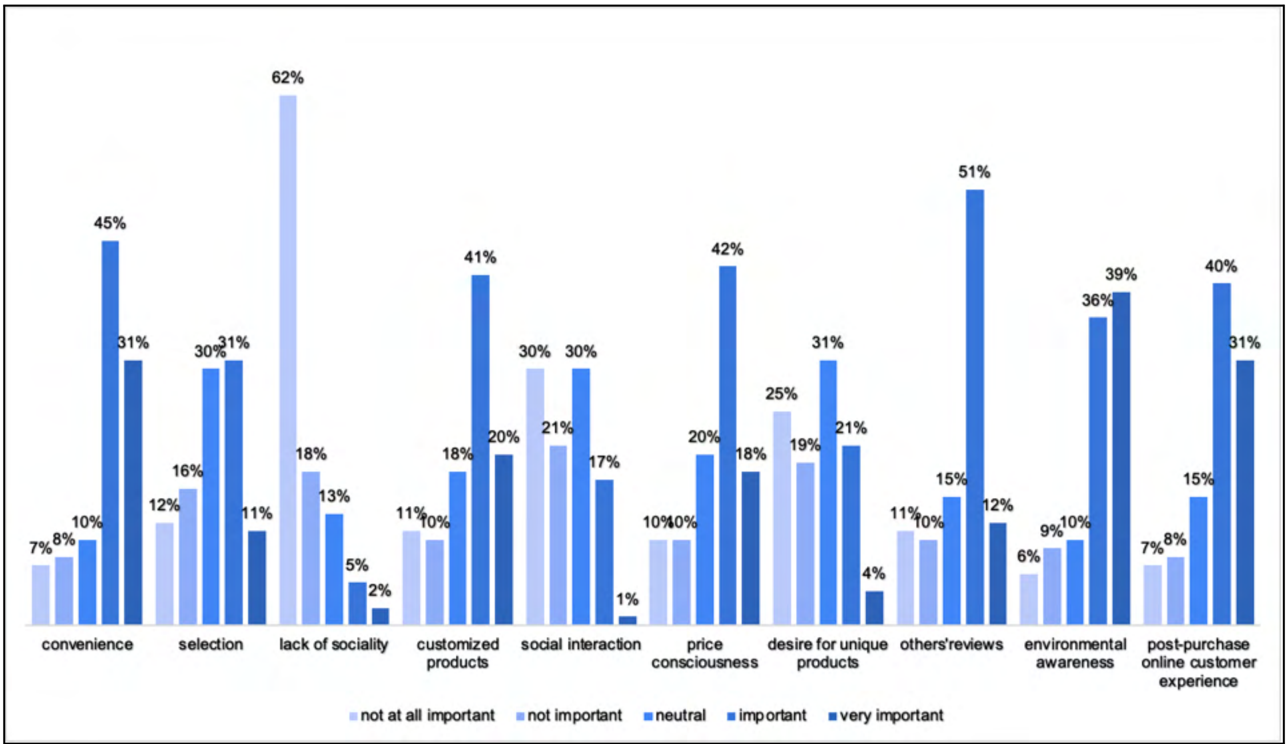

Figure 5.21: "How important do you think it is that the food subscription box you intend to purchase…" - percentages of the whole sample (Author's elaboration on survey data)

Moreover, the t test has then been computed on the reference variables in order to test for the significance of the differences found in the means. We, therefore, stick to t test analysis as our search criteria. If the difference is not significant, this implies with these data we are unable to prove a real difference between the means in the two groups. Here we computed the t test by looking at the group of food subscription box users and the sample of non-users. Next, the same test was calculated to identify the presence of significant differences between male and female respondents as well. In both t tests performed, the sample consists of the entirety of the consumers surveyed. In the first analysis, the two groups are 17 buyers and 298 non-buyers of food boxes, whereas in the other analysis the sample was divided by gender, i.e., 86 males and 229 females. A two-tailed t test was performed for independent samples to determine whether there were any differences in the evaluation of the variables with respect to both food subscription boxes as well as to the food items within the box itself.

In order to be able to perform the t test, firstly we tried to verify that there were no serious normality issues in the data distribution in the various subsamples. Hence, the skewness and kurtosis indices for all variables were calculated both by gender and whether or not the respondents were food subscription box purchasers. The obtained figures are presented in appendix A.

Some scholars established acceptable ranges for measures of skewness and kurtosis but there are no clear-cut guidelines for interpreting these indices (mainly because there are different ways to compute them)(Orcan, 2020). Specifically, according to Demir (2022), some authors identified the acceptable range of ±2, whereas other sources such as Demir (2022), Ramos et al. (2018), Huck (2012); Bulmer (1979) indicated the acceptable range of ±1 for skewness and kurtosis coefficients. Hence, with these references in mind and also taking into consideration that in order to have a normal distribution these coefficients should be close to 0, here we have approximated to a normal distribution those variables in which skewness and kurtosis are found to be around the -1 to +1 values. Conversely, whenever these indices were found to be too unbalanced and exceeded the range of acceptable values by a large amount, we then proceeded by performing the corresponding nonparametric test to compare the averages of two different samples, namely the Wilcoxon Mann-Whitney test. For those variables that are not normal, in fact, this test still made it possible to reveal whether the means of the two groups are significantly different or not. Similar to the t test for independent data, this test is used to compare two independent samples, but the variable under study does not comply with the applicability conditions of parametric tests.

The null hypothesis (H0) is that the means of the two groups are equal to each other, that is, the difference between the means is zero, meaning that the observed discrepancy in the mean ratings of the variables for the two groups is only due to chance. In contrast, the alternative hypothesis (H1) is that the means of the two groups in the population are different from each other. For the variables where the p-value was found to be less than the 0.05 significance level, then it can be concluded that the observed difference between the means of the two groups is statistically significant (p-value<alpha).

As far as the characteristics of subscription boxes are concerned, the items which on average are considered most important by consumers are environmental awareness (3.93), post-purchase online customer experience (3.79), and convenience (3.84). With regard to environmental awareness, those surveyed confirm an extremely attentive attitude towards the environment and sustainability-related issues in the broadest sense: 75%, in fact, asserted that it is important and very important that the box takes these aspects into account. More specifically, the fact that the food box helps to reduce food waste (4.02) and that it has sustainable and environmentally friendly packaging (3.83) are among the items deemed to be critical for the adoption of this service. Other characteristics of food boxes that are considered crucial relate to offering quality food products at a competitive price (4.00), as well as saving money (3.77) and time (3.74) when buying a bundle of products compared to single products. This is also validated at the percentage level: 75% of the sample regards convenience as a primary motivation for adopting a subscription box. In addition, having access through the box to a wider assortment of food products at the same time was positively evaluated by respondents (3.45) under the selection variable. Yet this variable registered an average of only 3.13, because trying products of new and little-known brands, in the food sector, is not particularly valued (2.82). On the contrary, discounts and promotions play a central role in the purchasing choices of Italian consumers, since even in the case of food boxes, they are considered important as an incentive to buy (3.49). A similar value was also found in the possibility that the box offers to get customized food products (3.49) and the fact that the subscription has already been tried by others and received positive reviews (3.43). The fact that the box allows to get food which was created specifically for the individual is appreciated by 61% of respondents while 17% do not see it as decisive for the purchase of this type of subscription. However, favorable reviews are taken into careful consideration by 63% of the sample, but it is necessary to reiterate that 21%, instead, does not consider them influential as a motivation for the purchase of a box. Another variable that impacts the intention to purchase a food box is the post-purchase online customer experience (3.79): free shipping and above all the possibility to easily track your package and choose the day and the precise time slot in which to have your box delivered (3.92) is a must-have to attract consumers to the subscription. At the same time, it is also necessary to stress some variables that did not receive much feedback from the respondents, namely lack of sociality (1.67), social interaction (2.67) and desire for unique products (2.61). For 80% of the respondents, avoiding social interaction thereby buying products that may cause embarrassment is not a relevant factor. Similarly, knowing that the food box has already been purchased previously by family members or friends is not so influential in determining purchase intention. This attitude is corroborated by 51% of respondents, while 30% take a neutral stance on the matter. Furthermore, surprisingly but potentially predictable in the food industry, whether the food box allows consumers to try food in advance or keep up with new consumer trends does not prove to be a decisive dimension for 44% of respondents, while 31% believe it to be neither important nor unimportant.

In general terms, it is apparent that those who have purchased a food box give more importance on average to all variables except lack of sociality than those who have not purchased a food box yet. But actually, when applying the t test or the Wilcoxon Mann-Whitney test for the two groups (*Table 5.5*), those variables for which the means are significantly different were identified. The parametric test was calculated for selection and desire for unique products, while the non-parametric test was applied for the other food box variables.

Although the average scores appear to be different from each other with regard to convenience, selection, customized products and desire for unique products, instead, the tests say that, on the basis of the data gathered, these differences are not statistically significant, thus contradicting what at first glance would appear to be a real difference. So, the only variable in which the difference is statistically significant is environmental awareness. In addition, it should be noted that even though the p value is very close to the 0.05 critical value for the selection and social interaction variables, it still cannot be claimed that the means between buyers and non-buyers are significantly different.

VARIABLES	**mean for food box users**	**mean for non-food box users**	**t test p value**	**Wilcoxon Mann-Whitney p value**
CONVENIENCE	4.04	3.83		0.9194
SELECTION	3.50	3.11	0,0694	
LACK OF SOCIALITY	1.50	1.68		0.3936
CUSTOMIZED PRODUCTS	3.94	3.46		0.2242

SOCIAL INTERACTION	2.82	2.34		0.0706
PRICE CONSCIOUSNESS	3.88	3.46		0.2765
DESIRE FOR UNIQUE PRODUCTS	3.00	2.59	0,1167	
OTHERS' REVIEWS	3.24	3.45		0.6233
ENVIRONMENTAL AWARENESS	4.47	3.89		0.0075
POST-PURCHASE ONLINE CUSTOMER EXPERIENCE	3.82	3.78		0.3457

Table 5.5: T test or Wilcoxon Mann-Whitney for variables of food subscription boxes comparing food box users and non-users (Author's own elaboration on survey data)

Starting with environmental awareness (4.47 vs. 3.89), this variable is perceived as fundamental in a box for both groups, but those who have already purchased a box consider it even more salient, especially for food waste reduction. Likewise, further differences, albeit minimal, refer both to the fact that food box users perceive the customization of products as more important (3.94 vs 3.46) as well as social interaction (2.82 vs 2.34), which relates to the importance of having family and/or friends already trying a subscription service. Moreover, price consciousness (3.88 vs 3.46), that is the fact that the subscription food box offers discounts while enabling people to try new products before others is evaluated more favorably by existing subscribers: 88% of the latter in fact rate this as an important and very important dimension compared to only 60% of those who have not purchased a food box yet. It is also worth calling attention to the importance of the subscription box being free of delivery charges, especially for those who have already purchased it.

VARIABLES	mean for male respondents	mean for female respondents	t test p value	Wilcoxon Mann-Whitney p value
CONVENIENCE	3.72	3.88		0.1678
SELECTION	2.95	3.21	0,0508	
LACK OF SOCIALITY	1.65	1.68		0.616
CUSTOMIZED PRODUCTS	3.40	3.52	0,4317	

SOCIAL INTERACTION	2.26	2.41		0.2654
PRICE CONSCIOUSNESS	3.26	3.57	0,0380	
DESIRE FOR UNIQUE PRODUCTS	2.55	2.63		0.5446
OTHERS' REVIEWS	3.36	3.46	0,5061	
ENVIRONMENTAL AWARENESS	3.72	4.00		0.0678
POST-PURCHASE ONLINE CUSTOMER EXPERIENCE	3.56	3.87		0.0087

Table 5.6: T test and Wilcoxon Mann-Whitney test for food subscription box variables comparing male and female respondents (Author's own elaboration on survey data)

As for gender, some differences between male and female respondents can be seen here as well. Overall, there is a clear tendency for women to assign items and variables a higher average score than men. This may lead one to suppose that women, in deciding to purchase a food subscription box, pay more attention to the specific characteristics that the box should possess. In this context, the key divergences between male and female consumers relate to price consciousness and post-purchase online customer experience. In fact, t test analysis on these variables in *Table 5.6* likewise confirmed that the means are significantly different. As for selection and environmental awareness, instead, although the p value is very close to 0.05 significance level, we accept the null hypothesis that there is no significant difference between males and females.

Based on our sample, women require the box to offer a greater variety of products and consider the presence of special discounts to be more relevant too. For 35% of men, instead, this variable is not deemed important to encourage the purchase of food boxes. Environmental awareness is also considered essential by 78% of women compared to 66% of men. Moreover, 16% of men are neutral about this and 12% do not perceive environmental sustainability as a driver for buying boxes. Moreover, women are more interested in the option of letting the customer decide the exact day and time of delivery as well. In fact, this item is included in the post-purchase customer experience variable which is considered at least important for 75% of women as opposed to only 58% of men, and of the latter 12% do not think delivery flexibility is important.

How important do you think it is that the FOOD SUBSCRIPTION BOX you intend to buy...	ALREADY PURCHASED FOOD BOXES		GENDER		
	YES	NO	MALE	FEMALE	TOTAL
saves money compared to buying individual products	4.00	3.76	3.65	3.82	3.77
saves time	4.12	3.72	3.64	3.78	3.74
offers quality food products at a competitive and advantageous price	4.00	4.00	3.86	4.06	4.00
CONVENIENCE	**4.04**	**3.83**	**3.72**	**3.88**	**3.84**
allows you to have access to a wider variety of food products at the same time	3.94	3.43	3.31	3.51	3.45
allows you to get to know new brands that you didn't know about before	3.06	2.80	2.58	2.90	2.82
SELECTION	**3.50**	**3.11**	**2.95**	**3.21**	**3.13**
enables you to avoid social interaction with other people	1.53	1.64	1.63	1.64	1.64
allows you to shop for products without feeling embarrassed	1.47	1.72	1.67	1.72	1.70
LACK OF SOCIALITY	**1.50**	**1.68**	**1.65**	**1.68**	**1.67**
allows you to customize the content according to your own needs	3.94	3.46	3.40	3.52	3.49
CUSTOMIZED PRODUCTS	**3.94**	**3.46**	**3.40**	**3.52**	**3.49**
has already been bought by family members and/or friends	2.82	2.34	2.26	2.41	2.37
SOCIAL INTERACTION	**2.82**	**2.34**	**2.26**	**2.41**	**2.37**
allows you to take advantage of promotions or discounts	3.88	3.46	3.26	3.57	3.49
PRICE CONSCIOUSNESS	**3.88**	**3.46**	**3.26**	**3.57**	**3.49**
allows you to try products and/or services in advance	3.18	2.66	2.74	2.66	2.69

allows you to keep up with new trends and consumption habits	2.88	2.26	2.20	2.32	2.29
provides you with a service for special occasions (e.g. dinner with guests)	2.94	2.85	2.71	2.90	2.85
DESIRE FOR UNIQUE PRODUCTS	**3.00**	**2.59**	**2.55**	**2.63**	**2.61**
has already obtained positive reviews from other consumers	3.24	3.45	3.36	3.46	3.43
OTHERS' REVIEWS	**3.24**	**3.45**	**3.36**	**3.46**	**3.43**
has a sustainable and environmentally friendly packaging	4.41	3.80	3.64	3.91	3.83
contributes to reducing food waste	4.53	3.99	3.79	4.10	4.02
ENVIRONMENTAL AWARENESS	**4.47**	**3.89**	**3.72**	**4.00**	**3.93**
has easy to track delivery	3.53	3.62	3.41	3.69	3.67
has no delivery costs	4.12	3.80	3.57	3.91	3.82
allows you to pick the time and day you would like to have your package delivered	3.82	3.93	3.70	4.00	3.92
POST-PURCHASE ONLINE CUSTOMER EXPERIENCE	**3.82**	**3.78**	**3.56**	**3.87**	**3.79**

Table 5.7: Average rating of items and variables for food subscription boxes by gender and based on whether respondents are food box users or not (Author's own elaboration on survey data)

We now proceed to review which attributes of the food included in a subscription food box are thought to be most important, first in relation to the sample as a whole, and then by identifying any potential gaps between men and women, those who have already purchased a food box and those who have not yet.

The average values attributed to the food box product properties that are likely to affect purchase intention are all approximately high. Health value (4.34), environmental awareness (4.11), and food safety (4.23) are the variables that obtained the highest average values. In fact, consumers expect first and foremost that the food in the box is of high quality, fresh and healthy, whose packaging is either biodegradable or low environmental impact and that its origin and traceability is clearly displayed. Another aspect deemed to be crucial is that of providing specific information about food safety. Conversely, the variables that scored lower are the desire for unique products and product customization. Hence, the fact that the box includes rare or very difficult to find food as well as the possibility to customize products are on average less important attributes than others.

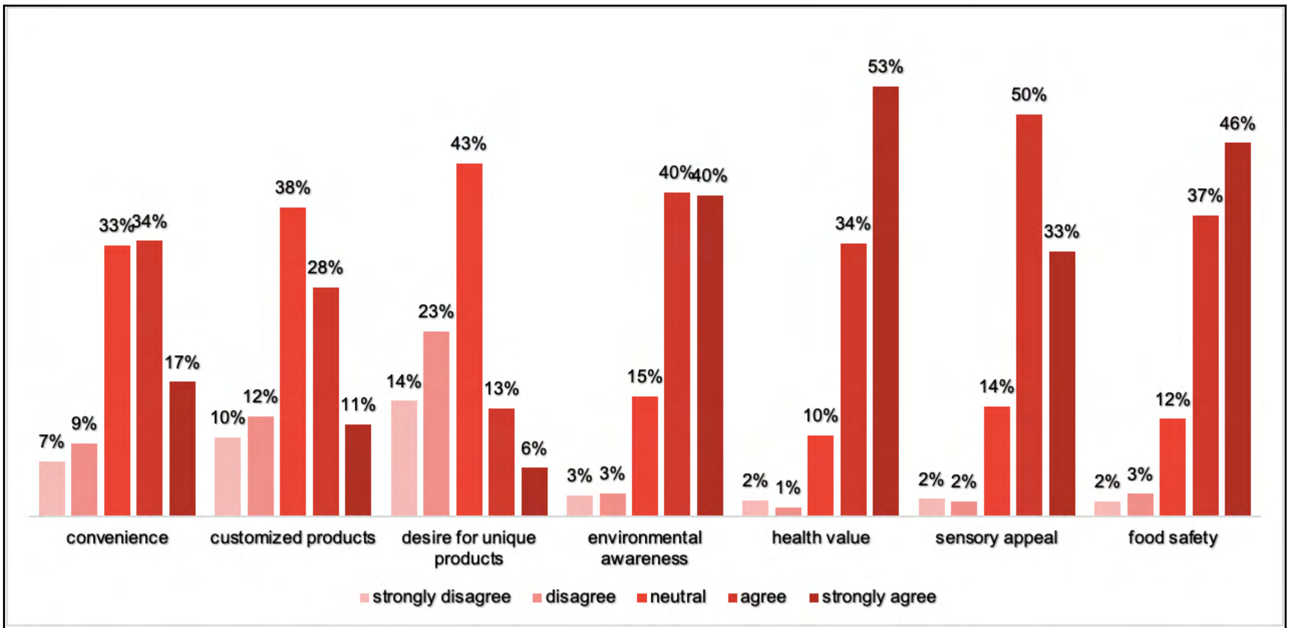

Figure 5.22: "It is important that the food contained in the food subscription box that you plan to purchase and consume…" - percentages of the whole sample (Author's elaboration on survey data)

VARIABLES	mean for food box users	mean for non-food box users	t test p value	Wilcoxon Mann-Whitney p value
HEALTH VALUE	4.34	4.34		0.845
ENVIRONMENTAL AWARENESS	4.10	4.11		0.5163
SENSORY APPEAL	3.94	4.09		0.2401
FOOD SAFETY	4.18	4.23		0.8422
DESIRE FOR UNIQUE PRODUCTS	2.82	2.73	0.7444	
CUSTOMIZED PRODUCTS	2.76	3.21		0.1518

CONVENIENCE	3.43	3.44		0.8134

Table 5.8: T test and Wilcoxon Mann-Whitney test for variables of the food products included in the food subscription box comparing food box users and non-users (Author's own elaboration on survey data)

If we then compare food box users with those who have not bought them yet, no significant differences emerge in terms of evaluation of food properties. While by looking at the average ratings ascribed to the food variables there would seem to be a minor dissimilarity in sensory appeal and customized products, upon calculating the p-value we instead realize that these differences are not statistically significant and therefore are due only to chance (*Table 5.8*). Hence, it can be argued that being a current food subscription box user or not seems to have no influence whatsoever on the evaluation of the attributes that the food products included in the box are expected to have.

VARIABLES	mean for male respondents	mean for female respondents	t test p value	Wilcoxon Mann-Whitney p value
HEALTH VALUE	4.17	4.41		0.0021
ENVIRONMENTAL AWARENESS	3.89	4.19		0.0015
SENSORY APPEAL	4.05	4.10		0.3761
FOOD SAFETY	4.02	4.30		0.0043
DESIRE FOR UNIQUE PRODUCTS	2.79	2.72	0.6194	
CUSTOMIZED PRODUCTS	3.19	3.19	0.9666	
CONVENIENCE	3.45	3.44	0.903	

Table 5.9: T test and Wilcoxon Mann-Whitney test for variables of the food products included in the food subscription box by comparing male and female respondents (Author's own elaboration on survey data)

As regards the answers given by men and women, there is a fluctuation in both health value and environmental awareness. In particular, women are more concerned about all those attributes of food that can somehow affect health, such as genuineness, product quality and absence of preservatives. Furthermore, greater importance is attributed to food being from organic farming and local production, as well as being GMO-free and produced in an environmentally sustainable way. Specifically, 83% of women consider environmental awareness to be important or very important compared to only 70% of men. In this sense, providing information on food safety is also valued more highly by women (87%) as opposed to 73% of men. Also, the Wilcoxon Mann-Whitney test shows that women attach greater importance to the variables of health value, environmental awareness and food safety, so statistical significance in the means based on the gender is clearly noticeable.

It is important that the FOOD contained in the food subscription box you intend to buy and consume...	**ALREADY PURCHASED FOOD BOXES**		**GENDER**		
	YES	**NO**	**MALE**	**FEMALE**	**TOTAL**
are healthy	4.59	4.38	4.23	4.45	4.39
are of high quality	4.41	4.56	4.43	4.60	4.55
are fresh	4.53	4.55	4.34	4.63	4.55
are preservative-free	4.18	4.11	3.94	4.17	4.11
help you improve your health	4.00	4.12	3.91	4.20	4.12
HEALTH VALUE	**4.34**	**4.34**	**4.17**	**4.41**	**4.34**
are from organic farming	3.94	3.81	3.59	3.90	3.81
are locally produced	3.82	4.01	3.73	4.10	4.00

are seasonal	4.12	4.14	3.88	4.24	4.14
have recyclable or biodegradable packaging	4.65	4.18	4.10	4.24	4.20
do not contain GMOs	4.12	4.08	3.69	4.23	4.08
have been produced or prepared in a sustainable way	4.35	4.16	3.95	4.25	4.17
their origin and traceability is clearly indicated	3.71	4.38	4.24	4.38	4.34
ENVIRONMENTAL AWARENESS	**4.10**	**4.11**	**3.89**	**4.19**	**4.11**
give you pleasant sensations, e.g. in terms of texture, look, smell and taste, etc.	3.94	4.09	4.05	4.10	4.09
SENSORY APPEAL	**3.94**	**4.09**	**4.05**	**4.10**	**4.09**
provide me with information about food safety	4.18	4.23	4.02	4.30	4.23
FOOD SAFETY	**4.18**	**4.23**	**4.02**	**4.30**	**4.23**
are rare and difficult to find	2.82	2.73	2.79	2.72	2.74
DESIRE FOR UNIQUE PRODUCTS	**2.82**	**2.73**	**2.79**	**2.72**	**2.74**
are designed and created for you	2.76	3.21	3.19	3.19	3.19
CUSTOMIZED PRODUCTS	**2.76**	**3.21**	**3.19**	**3.19**	**3.19**
are easy to prepare/cook	3.94	3.65	3.53	3.72	3.67

are ready to consume	2.88	3.08	3.14	3.04	3.07
are useful for a meal on the go (e.g. university or office)	3.47	3.60	3.69	3.56	3.59
CONVENIENCE	**3.43**	**3.44**	**3.45**	**3.44**	**3.44**

Table 5.10: Average rating of items and variables related to the food contained in a subscription box by gender and based on whether respondents are food box users or not (Author's own elaboration on survey data)

Besides presenting the respondents with a series of pre-arranged statements about the characteristics of subscription boxes and the food inside them, it was also useful to inquire whether in addition to the aspects already mentioned, there were any others that could prompt people to purchase a food subscription box. A number of interesting inputs were collected, which are similar in some respects to what was already brought to their attention. However, it is believed that they may be key factors in whether or not consumers are willing to buy, so food box providers should take them into close consideration.

The quality and freshness of the food, not being overly processed, its traceability, and environmental sustainability are said to be very important factors when buying a box. Likewise, food boxes that prioritize small local producers and more broadly support local producers are also highly valued. Another central point concerns the possibility of addressing consumers' diverse dietary needs, such as a vegetarian or vegan diet, by offering choices that are in line with these needs. Reducing food waste is also a requirement today, as is that the box does not give subscribers obligations either in terms of subscription or duration of the subscription.

5.6.1. Additional focus on those who have not purchased a food box yet

As already pointed out, the large segment of non-users of food boxes could be assimilated to the totality of the participants. For this reason, it was decided not to report the calculation of the average scores achieved by those who have not purchased by taking into account once again the men/women distinction. Yet, we believe that it is useful to take a further look at the answers provided by these individuals, in order to reveal further possible differences in the evaluation of the various drivers, in particular between those who have and do not have children, and the age group of the respondents. It should be stressed that, besides retaining existing clients, businesses operating in this market have the primary objective of acquiring new clients, especially those who are aware of the service but for some reason have not yet made use of it.

At first glance, there are no huge differences between the average scores given by those with children and those without children who have not purchased. A slight variation can be identified with regard to environmental awareness and convenience which are evaluated more positively by respondents without children than by those who have children.

By now taking a look at the main differences in the evaluation of the items provided by respondents based on their age group. It is clear that all the aspects related to the convenience that the box can offer are valued as more important by the youngest group of the sample (18-30) and by people aged 31-40. Selection scores lower than convenience in all age groups, but is more decisive in the 31-40 bracket. On the other hand, a series of variables, i.e. lack of sociality, social interaction and desire for unique products maintain a relatively low average score in all age groups. This means that these are not considered to be relevant factors in deciding whether or not to buy a box. The possibility that the box offers to customize products is mostly appreciated by those who are 18 to 40 years old, thus recording a higher average. In the same way, the fact that the box has already gained positive reviews from other consumers is valued more by the same group of respondents. When it comes to the use of discounts and special offers through subscriptions, the 31-40 age group gave a slightly higher average score (3.91) than the other respondents. Furthermore, the importance of environmental sustainability issues should be acknowledged. This is clear in the two youngest age groups, with an average rating of 4.18 and 4.13, respectively. However, it should be accentuated that these factors become less important as we move towards the subsequent age groups. This can be seen not only for environmental awareness but for all the variables considered. In terms of the post-purchase online customer experience, instead, the items "the subscription food box has no shipping costs" and "the subscription service allows you to choose the day and time in which you want to get your package” are the ones that are considered most important and provide the most incentive to buy a food box. This is particularly true for respondents belonging to the 31-40 bracket (4.10) and 18-30 (3.94). Moreover, it is evident that people aged 61-70 and over 71 tend to evaluate all the measurement items and reference variables in a much lower way than younger respondents. Although this is only 22 people (17 from the 61-70 bracket and 5 from the >71 bracket), it is still worth displaying and reporting these results.

How important do you think it is that the SUBSCRIPTION FOOD BOX you intend to buy...	**CHILDREN**		**AGE**					
	YES	**NO**	**18-30**	**31-40**	**41-50**	**51-60**	**61-70**	**>71**
saves money compared to buying individual products	3.68	3.81	4.08	4.04	3.68	3.41	3.06	2.20
saves time	3.67	3.75	3.92	4.35	3.57	3.59	2.82	2.20
offers quality food products at a competitive and advantageous price	3.83	4.13	4.35	4.04	3.91	3.69	3.18	3.20
CONVENIENCE	**3.73**	**3.90**	**4.11**	**4.14**	**3.72**	**3.56**	**3.02**	**2.53**
allows you to have access to a wider variety of food products at the same time	3.32	3.51	3.68	3.78	3.25	3.26	2.71	1.80
allows you to get to know new brands that you didn't know about before	2.90	2.73	2.76	3.26	2.83	2.89	2.41	1.60
SELECTION	**3.11**	**3.12**	**3.22**	**3.52**	**3.04**	**3.07**	**2.56**	**1.70**
enables you to avoid social interaction with other people	1.76	1.56	1.60	1.78	1.66	1.77	1.35	1.20

allows you to shop for products without feeling embarrassed	1.79	1.67	1.75	1.52	1.83	1.77	1.35	1.00
LACK OF SOCIALITY	**1.77**	**1.61**	**1.68**	**1.65**	**1.75**	**1.77**	**1.35**	**1.10**
allows you to customize the content according to your own needs	3.37	3.52	3.73	3.91	3.43	3.07	2.71	2.60
CUSTOMIZED PRODUCTS	**3.37**	**3.52**	**3.73**	**3.91**	**3.43**	**3.07**	**2.71**	**2.60**
has already been bought by family members and/or friends	2.37	2.31	2.48	2.30	2.25	2.36	1.65	2.00
SOCIAL INTERACTION	**2.37**	**2.31**	**2.48**	**2.30**	**2.25**	**2.36**	**1.65**	**2.00**
allows you to take advantage of promotions or discounts	3.48	3.45	3.62	3.91	3.36	3.43	2.53	2.00
PRICE CONSCIOUSNESS	**3.48**	**3.45**	**3.62**	**3.91**	**3.36**	**3.43**	**2.53**	**2.00**
allows you to try products and/or services in advance	2.55	2.74	2.85	2.70	2.66	2.51	1.94	2.00
allows you to keep up with new trends and consumption habits	2.26	2.25	2.30	2.57	2.32	2.24	1.59	1.40
provides you with a service for special occasions (e.g. dinner with guests)	2.83	2.85	2.96	3.17	2.98	2.69	1.94	2.20
DESIRE FOR UNIQUE PRODUCTS	**2.55**	**2.61**	**2.70**	**2.81**	**2.65**	**2.48**	**1.82**	**1.87**
has already obtained positive reviews from other consumers	3.21	3.62	3.83	3.35	3.34	3.21	2.35	2.00
OTHERS' REVIEWS	**3.21**	**3.62**	**3.83**	**3.35**	**3.34**	**3.21**	**2.35**	**2.00**
has a sustainable and environmentally friendly packaging	3.60	3.95	4.08	4.09	3.62	3.57	3.35	2.00

contributes to reducing food waste	3.80	4.12	4.28	4.17	3.74	3.79	3.47	2.80
ENVIRONMENTAL AWARENESS	**3.70**	**4.04**	**4.18**	**4.13**	**3.68**	**3.68**	**3.41**	**2.40**
has easy to track delivery	3.48	3.72	3.83	3.83	3.38	3.63	2.76	2.60
has no delivery costs	3.80	3.80	3.90	4.09	3.87	3.67	3.41	2.40
allows you to pick the time and day you would like to have your package delivered	3.85	3.98	4.10	4.39	3.91	3.79	3.00	2.60
POST-PURCHASE ONLINE CUSTOMER EXPERIENCE	**3.71**	**3.84**	**3.94**	**4.10**	**3.72**	**3.70**	**3.06**	**2.53**

Table 5.11: Average rating of items and variables related to food subscription boxes based on age group and on whether non-users of food boxes have children or not (Author's own elaboration on survey data)

We will now consider the attributes that the food in the box should have for those who have not yet purchased a food box. On average, both groups of consumers, those with children and those without children provided quite similar responses across all food-related variables. However, it is worth noting that respondents with children considered all health-related food attributes to be slightly more important. Similarly, the seasonality of products, their local production and origin from organic farming as well as the fact that they do not contain GMOs are evaluated somewhat more positively. On the contrary, with reference to the consumers' age groups, the attributes that got the highest scores from all age groups, except >71, are health value, environmental awareness, sensory appeal and food safety. More specifically, it should be emphasized that the 31-40 age group gave nearly maximum scores to whether the food products in the box are healthy (4.70), high quality (4.74) and natural (4.61) and whether they provide detailed information on food safety (4.52). In contrast, whether the box allows for having food tailored to personal needs is considered similarly important in all age groups except for those over 70. Yet, those aged 41 to 50 do not seem to be particularly interested in having food items customized (2.92). Additionally, some items related to convenience are also worth drawing attention to: the fact that the box provides goods that are easy to prepare or cook is regarded as a key factor, especially for the younger age groups (18-30 and 31-40) and the 51-60 one. Along similar lines, having the foods included in the box help with a quick meal away from home (e.g. at university or at the office) scored high on average, with a peak in 18-30 years olds (3.72) and the 51-60 age bracket (3.76).

It is important that the FOOD contained in the food subscription box you intend to buy and consume...	CHILDREN		AGE					
	YES	NO	18-30	31-40	41-50	51-60	61-70	>71
are healthy	4.44	4.34	4.28	4.70	4.42	4.54	4.35	3.20
are of high quality	4.59	4.54	4.57	4.74	4.57	4.64	4.29	3.20
are fresh	4.61	4.51	4.52	4.61	4.62	4.66	4.41	3.20
are preservative-free	4.31	3.96	3.91	4.26	4.26	4.31	4.35	3.20
help you improve your health	4.24	4.04	4.03	4.26	4.13	4.39	4.29	2.40
HEALTH VALUE	**4.44**	**4.28**	**4.26**	**4.51**	**4.40**	**4.51**	**4.29**	**3.04**
are from organic farming	3.88	3.75	3.70	3.83	3.79	3.99	4.06	3.20
are locally produced	4.14	3.91	3.78	4.00	4.25	4.24	4.29	3.20
are seasonal	4.24	4.08	4.01	4.30	4.28	4.27	4.29	3.20
have recyclable or biodegradable packaging	4.17	4.19	4.15	4.26	4.19	4.24	4.35	2.80

do not contain GMOs	4.17	4.02	3.95	4.26	4.23	4.14	4.41	3.00
have been produced or prepared in a sustainable way	4.15	4.17	4.15	4.22	4.13	4.23	4.35	3.00
their origin and traceability is clearly indicated	4.41	4.35	4.32	4.52	4.40	4.53	4.35	3.20
ENVIRONMENTAL AWARENESS	**4.17**	**4.07**	**4.01**	**4.20**	**4.18**	**4.23**	**4.30**	**3.09**
give you pleasant sensations, e.g. in terms of texture, look, smell and taste, etc.	4.07	4.11	4.17	4.00	4.06	4.19	3.88	2.40
SENSORY APPEAL	**4.07**	**4.11**	**4.17**	**4.00**	**4.06**	**4.19**	**3.88**	**2.40**
provide me with information about food safety	4.30	4.17	4.18	4.52	4.13	4.44	4.06	2.80
FOOD SAFETY	**4.30**	**4.17**	**4.18**	**4.52**	**4.13**	**4.44**	**4.06**	**2.80**
are rare and difficult to find	2.88	2.63	2.60	2.83	2.83	2.93	2.94	1.40
DESIRE FOR UNIQUE PRODUCTS	**2.88**	**2.63**	**2.60**	**2.83**	**2.83**	**2.93**	**2.94**	**1.40**
are designed and created for you	3.16	3.26	3.34	3.22	2.92	3.34	3.12	1.60
CUSTOMIZED PRODUCTS	**3.16**	**3.26**	**3.34**	**3.22**	**2.92**	**3.34**	**3.12**	**1.60**
are easy to prepare/cook	3.71	3.61	3.66	3.78	3.49	3.93	3.35	1.80
are ready to consume	3.17	3.01	2.94	3.35	3.04	3.29	3.29	2.20
are useful for a meal on the go (e.g. university or office)	3.53	3.65	3.72	3.52	3.34	3.76	3.47	1.80

CONVENIENCE	**3.47**	**3.42**	**3.44**	**3.55**	**3.29**	**3.66**	**3.37**	**1.93**

Table 5.12: Average rating of items and variables related to the food contained in a subscription box based on age group and on whether non-users of food boxes have children or not (Author's own elaboration on survey data)

5.7. Final remarks on the research

Let us summarize how the process of the investigation has been carried out and some of the most interesting points that have emerged from the survey.

The present study was conducted through the development of an ad hoc questionnaire which was adapted from extant literature and submitted to Italian consumers aged 18 and over. The first part of the survey deals with online shopping, focusing on the purchase of food products and how the Covid-19 pandemic has had an impact on both frequency and purchasing habits. The second section, conversely, delves into food subscription boxes with a view to understanding the level of knowledge of respondents, the most popular providers in Italy and the motivations that would be most likely to encourage their purchase.

Before going into the analysis of the findings, a thorough description of the sample was provided from a socio-demographic point of view. Next, the data were processed from different perspectives. The analysis primarily involved the sample in its entirety, but some sections investigated more closely the two consumer segments identified: those who hav

e subscribed to food boxes and those who have not yet done so.

Considerations have been made with respect to the sample, which consists of 315 participants, namely 229 females and 86 males. Most of them are between 18 and 60 years old and 90% come from the Veneto and Lombardy regions. The majority of the sample declares to shop online once or twice a month or a few times a year, while only 15% do so at least once or twice a week. Nonetheless, 62% of respondents said that they have never used the Internet to buy food. In any case, it has been corroborated how the Covid-19 pandemic has brought Italians closer to the online channel for food shopping. Of those who did buy food online, every so often and once or twice a month were the most popular responses. Also, some users (5%) even claim to have started buying food online with the pandemic. Food delivery (43%), grocery shopping (27%) and food subscription boxes, albeit for a smaller percentage (13%), are in this order the food categories most frequently purchased on the Internet.

Subsequently, the second section of the survey addressed the phenomenon of food subscription boxes. It was found that only 5% of the sample reported subscribing to one or more food boxes. Since subscribers account for a small number of the sample, the typical food box user's profile could not be outlined, but an attempt was made to bring out some of the traits when these seemed to be unique to this segment. Such users learned about food boxes through sponsored posts on social media or positive word of mouth from family or friends. As explained in the literature, also this study supports the tendency to maintain the subscription for a short time, in particular when there is the possibility to take advantage of initial discounts or promotions. Underlying the decision to unsubscribe in the first place seems to be the unsatisfactory food quality and the price of the subscription being too high.

All the people who have purchased food boxes live in Veneto and Lombardy, most of them are residents in medium-large cities and earn between 20,000 and 35,000 euros or between 50,000 and 65,000 euros. Furthermore, 7 subscribers were found to have children but none of them attend high school, university or have a job. At the same time, out of the 298 people who have never purchased a food subscription box, 58% had already heard about it. The most well-known Italian businesses in the field are Hello Fresh, Cortilia, My Cooking Box and Babaco Market. People's preference for the traditional channel for food shopping as well as the fear of receiving unnecessary products or that the food will not meet their level of expectations are the most common reasons that prevent Italian consumers from adopting this subscription service.

We also tried to understand which kind of food boxes Italian consumers would be more willing to use by subjecting both groups of consumers to a number of questions. The results proved that subscription boxes of fresh fruits and vegetables (33%) and boxes of custom-made ready meals (25%) are the most widespread choices. More specifically, while women have a stronger propensity to purchase a subscription box of fruits and vegetables or a box of ready-to-eat meals, men, by contrast, have a more uniform distribution among the different types of boxes. However, men are the ones who favor meal kits, ethnic food boxes and snack boxes compared to women. In addition, younger respondents 18-30 are the ones who express greater interest in boxes of foods or snacks from foreign countries.

With reference to purchase intention, half of the sample to date has no intention of buying a food subscription box while 34% define themselves as being neutral in this sense. In fact, this figure not only reflects that almost all of those surveyed have never bought one, but also that at the time of the survey a substantial proportion of people did not even know about their existence.
The central part of the survey was designed to explore the drivers that might persuade people to buy a food box, both in relation to the box as a whole as well as to its contents, i.e., what attributes the food in it should have. The findings tell us that environmental awareness, convenience and post-purchase online customer experience are the variables that scored highest on average. In fact, the participants consider themselves as very conscious of the environment and of the sustainability issue: 75% believe that it is important and very important that the box takes these aspects into account. Convenience is another sought-after dimension in the purchase of a box, especially it is relevant that the provider offers quality products at a competitive price as well as the time and money savings perceived in buying a bundle of products. Furthermore, if the subscription box allows access to a wider variety of food products at the same time and the use of dedicated discounts was positively evaluated by respondents, as well as the possibility of receiving customized food products. Conversely, consumers do not consider it important that the food box allows for less social interaction and embarrassment in buying some products. Similarly, neither the fact that the box has already been purchased by family members or acquaintances, nor the fact that it enables consumers to keep up with the latest consumer trends and novelties, is a determining factor for the purchase of a box. By comparing how users evaluated the food box variables with those who have not yet bought one, it can be concluded that the average scores given to environmental awareness are significantly different, in particular food box users consider this variable to be more important than non-buyers. In addition, when assessing the possible buying motivations, some differences can be observed between men and women, who generally tend to assign a higher average score to the items and thus to the variables. The most significant differences, which have been noticed by performing a t test or a Wilcoxon Mann-Whitney test analysis, concern price consciousness and post-purchase online customer experience. Women place a high value on the possibility of being able to select the precise day and time in which they want to receive their package.

As for food properties such as to influence purchase intention, the average scores ascribed to food attributes are all quite high, in particular health value, environmental awareness and food safety. These are in fact the variables that consumers perceive as being essential in the food they consume and consequently require them to be found also in the food they get in the box: first, they expect the food to be of high quality, fresh and healthy, with low environmental impact packaging, while expecting specific information about food safety as well. If we compare food box users with non-users, there are no significant differences in how they rate food properties, but some discrepancies between male and female respondents can be noticed. Women are more sensitive to the health side of food, such as genuineness, quality and absence of preservatives, thus considering it more important that the food is locally produced and does not contain GMOs.

As a final step, an additional focus was made on those who are not food box users in order to identify other possible changes in evaluating the buying motivations, most notably among those who have and do not have children and by consumer age group. In this instance, the main differences can be seen in the values provided by the various age groups. Environmental sustainability has very high ratings in the two youngest age groups. Nonetheless, it is very much appreciated by younger consumers and those in the 51-60 age bracket that the box contains food that is easy to prepare or cook and that is helpful for a meal out. Not just for environmental awareness and convenience, but more broadly for all the variables under consideration, the average scores become less and less important as we move towards older age brackets.

Conclusions

This work has analyzed the trend of subscription boxes, with particular emphasis on food subscription boxes, which can be implemented by firms either as a business model or as an appealing product that is included to complement an existing offer.

A survey was submitted to a sample of Italian consumers in order to measure the degree of consumer general knowledge of food boxes as well as the most relevant motivations that could drive their purchase. Hence, the purpose is to provide the reader with an overview of food subscription boxes in their key elements and development potential. Moreover, the methodology used and the focus of the research help to make this thesis of special interest to both companies already operating in this industry and those planning to approach it in the future.

We have witnessed how e-commerce has now become an integral part of people's lives and how the Covid-19 pandemic has necessarily affected this by leading to a major shift in Italian consumers' purchasing and consumption habits, even of those who previously tried to avoid it. In fact, most of our sample reported shopping online once or twice a month or a few times a year, while 15% do so at least once or twice a week. The majority said that the pandemic played a central role in their shopping choices and the channel used for shopping. While for some product categories buying through the Internet is a widespread alternative to the physical store, there is still some uncertainty and resistance in Italians when it comes to buying food products online: on the one hand, the overall picture has definitely been improving in recent times, but on the other hand, there is still a portion of Italian consumers who have never purchased food online. This was also validated by the respondents, as 62% stated that they have never used the Internet for their food shopping. In any case, it has been consolidated how the Covid-19 pandemic has brought Italians closer to the online channel for food shopping, with food delivery (43%), food grocery (27%), and food subscription boxes (13%) as the most popular food categories purchased online. Therefore, consistently with the previous findings by Caso et al. (2022); Li et al. (2022); Grunert et al. (2021); De Backer et al. (2021), and Ghali-Zinoubi (2021), also the present study supports how the pandemic has altered consumers' drivers and priorities regarding their food purchasing and consumption. While it denotes how the pandemic has contributed to pushing Italian consumers toward the online channel for their food shopping, it also shows an ever-growing concern for the health and sustainability side of their food choices.

In reviewing the results of the survey, considerations have been made with regard to the sample in its entirety, consisting of 315 respondents who mostly come from the Veneto and Lombardy regions. Furthermore, some sections of the research, especially those related to food boxes, more closely involved the two identified consumer segments: food box subscribers and non-subscribers.

Although food subscription boxes have recently developed in our country as well, it clearly emerges how this subscription service is actually still very new and for a sizeable portion of consumers still unknown. In fact, from this study it can be understood how the proportion of consumers surveyed to have actually subscribed to a food box is quite small: it is only 17 individuals out of 315, which corresponds to 5% of the sample. They are mainly women living in Veneto and Lombardy in medium to large cities. In addition, 7 subscribers have children, but none of them are in high school, college, or have jobs. As food box users make up only a small number of the sample, it was not possible to profile the typical food box user, yet we tried to draw out some traits when they seemed to be unique to this segment. Sponsored posts on social media or positive word of mouth from family and/or friends are the most frequently used methods by which subscribers learned about this service. As already evidenced in the literature by Chen et al. (2018), here again, the tendency to keep the subscription for a short period of time is corroborated, especially for the opportunity to take advantage of initial discounts or promotions or out of curiosity to try new products.

Next, a substantial part of the survey was devoted to exploring the factors that consumers consider most important as an incentive to purchase a food box, both in terms of the box as a whole as well as with reference to the properties that the food in it should have. The responses highlight the importance placed on environmental awareness, convenience, and post-purchase online customer experience, as these are the variables that received higher average values. More specifically, consumers expect the food box to be environmentally friendly both in terms of packaging and in terms of contributing to food waste reduction. Likewise, convenience turns out to be another dimension that is sought when subscribing to a box, as well as the importance of receiving quality products at a competitive price and the perceived savings in time and money in purchasing a bundle of products. In contrast, with regard to the aspects related to the post-purchase online customer experience, the flexibility in the delivery of the food box, i.e., the possibility to select the exact time and day on which to have it delivered to one's home, is highly valued. This is in line with findings by To et al. (2007), Chiu et al. (2014) and Alaimo et al. (2020) regarding the dimensions of convenience, access to a wider variety of products at once, and flexibility in service associated with buying food online. Even with reference to food subscription boxes, the results are in accordance with the evidence of Tao & Xu (2018) and Bray et al. (2021), as great importance is attached to the pursuit of convenience both in terms of monerary and time savings when purchasing a subscription box as well as the fact that the latter allows to receive personalized products based on one's preferences and requests. Generally speaking, it was found that food box users tend to give higher scores on average in all variables related to the food box than those who have never bought one. By performing a t test for those variables that approximately have a normal distribution or otherwise a nonparametric statistical test, i.e. a Wilcoxon Mann-Whitney test, a significant difference has been identified in environmental awareness. In the same way, some differences between men and women also stand out, as the latter on average evaluate the measurement items and thus the related variables more positively. The most noticeable variations relate to price consciousness and post-purchase online customer experience. Subsequently, divergences have also been observed in the scores provided by the consumers surveyed depending on their age group: it should be noted that younger age groups pay more attention to the specific features that a box should have as a relevant motivation for its purchase: firstly, this is true for environmental awareness, but for all the other variables as well. In fact, these aspects become less important as one moves toward older age groups. Next, we wanted to delve into the attributes that the food in a box should possess in the respondents' opinion. In this case, no significant differences have been detected between those who have already bought a food box and the group of non-buyers. But there are some variations between males and females instead: on average, women attach much more importance to the health side, environmental awareness, and food safety in the food they purchase and consume. They are also more concerned that the food is locally produced and organic, preservative-free, and GMO-free. With the pandemic, in fact, consumers have become more aware of the world around them, thus informing and educating themselves on what they consume in order to shop for products that are as healthy and safe as possible, thereby changing their eating habits accordingly. These results support those of other studies conducted by Coop (2022) and Deloitte Italy (2021) that demonstrate how Italians have been showing a stronger concern for sustainability in a broader sense, which is reflected in their dietary needs and food choices, thus seeking high quality, environmentally friendly and locally produced food when purchasing and consuming. It follows, therefore, that food subscription box providers should leverage these factors in their offer and aim for a marketing and communication strategy that would allow to inform people about how their choices would positively impact both environmental sustainability as well as their own health and fitness, and eventually support the local economy as well.

Given the small sample size and the percentage of those who have purchased a food subscription box, it is imperative to continue with further research and in-depth investigation into this topic. While it is evident that in Italy this trend started to spread in conjunction with the outbreak of the pandemic, there is still a large portion of Italian consumers who, in addition to never having purchased a food box, are not yet familiar with it. So, it can be concluded that food subscription boxes need a more targeted and direct popularization and advertising effort to raise the level of awareness, particularly among consumers who live in small towns. On the basis of the collected answers, only 15% of the people surveyed believe it is likely that they will adopt a food subscription box in the near future, 34% consider themselves to be neutral about it, whereas there are many consumers saying that they are not willing to try this subscription service, especially because they are deeply rooted in in-person food shopping or because at the time of filling out the questionnaire they had not yet heard of it. Building on research data from Politecnico di Milano's B2C E-commerce Observatory, it has been demonstrated that over the past few years, food e-commerce has been the freshest and most dynamic e-commerce segment, recording a boom that continues unstoppable growth in our country, even in the post-pandemic period. This is evidence that steps have been made in this direction even with regard to food subscription boxes. Nonetheless, it appears that somehow our culture is not yet fully ready to accept such a new product, which is why the phenomenon turns out to be still in its infancy.

Due to the lack of academic literature on the subject referring to the Italian context, some shortcomings in the analysis can be pointed out: as far as the design of the survey is concerned, the questions were actually created and adapted from extant literature even though this imposed some limitations on the type of questions and the topics covered. Furthermore, it is worth mentioning that the sample is too small compared to the reality, so it is not possible to extend the findings to the entire population, especially considering that only 17 people reported having purchased a food box. Another constraint relates to the fact that this research focuses only on the Italian market, whose answers come mainly from Northern Italy, with a clear predominance of respondents from Veneto and Lombardy. In view of the fact that to the best of our knowledge the present study is the first one to explore this phenomenon at the Italian level, we emphasize that an adequate amount of time is needed to not only publicize food subscription boxes, but more importantly, to conduct further research so as to grasp future prospects for their development and further evolution.

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Appendix A

The following table (*Table 5.13*) presents the skewness and kurtosis indices that have been calculated for all the variables of food subscription boxes and of the food items contained in them split by food box users and non-users and by male and female respondents.

	FOOD BOX USERS		NON-FOOD BOX USERS		MALES		FEMALES	
VARIABLES ON FOOD BOXES	skewness	kurtosis	skewness	kurtosis	skewness	kurtosis	skewness	kurtosis
CONVENIENCE	0.29	-0.12	-1.35	1.41	-1.40	1.49	-1.34	1.55
SELECTION	0.00	-0.98	-0.35	-0.41	-0.05	-0.56	-0.48	-0.19
LACK OF SOCIALITY	1.29	0.07	1.35	1.29	1.54	1.83	1.29	1.11
CUSTOMIZED PRODUCTS	0.10	-1.05	-0.67	-0.57	-0.65	-0.53	-0.73	-0.43
SOCIAL INTERACTION	-0.24	-0.50	0.18	-1.18	0.34	-1.16	0.08	-1.16
PRICE CONSCIOUSNESS	-0.40	1.90	-0.66	-0.46	-0.60	-0.48	-0.78	-0.21
DESIRE FOR UNIQUE PRODUCTS	-0.74	-0.79	0.05	-0.85	0.08	-1.01	-0.01	-0.85
OTHERS' REVIEWS	-1.27	-0.35	-0.83	-0.21	-0.68	-0.50	-0.93	-0.05
ENVIRONMENTAL AWARENESS	-2.64	7.51	-1.05	0.26	-0.92	-0.14	-1.14	0.55
POST-PURCHASE ONLINE CUSTOMER EXPERIENCE	-0.34	2.27	-1.07	0.55	-0.85	0.27	-1.18	0.92
	FOOD BOX USERS		NON-FOOD BOX USERS		MALES		FEMALES	
VARIABLES ON FOOD ITEMS	skewness	kurtosis	skewness	kurtosis	skewness	kurtosis	skewness	kurtosis
HEALTH VALUE	-2.86	10.10	-2.13	6.72	-1.47	3.33	-2.53	9.30
ENVIRONMENTAL	-2.77	9.21	-1.36	3.13	-1.06	1.57	-1.64	4.77

AWARENESS								
SENSORY APPEAL	-2.53	11.10	-1.20	2.15	-0.94	1.83	-1.29	2.42
FOOD SAFETY	-0.89	-0.11	-1.35	2.01	-0.88	1.00	-1.54	2.58
DESIRE FOR UNIQUE PRODUCTS	-0.64	-0.67	0.15	-0.26	0.09	-0.59	0.10	-0.16
CUSTOMIZED PRODUCTS	-0.32	-1.32	-0.31	-0.35	-0.15	-0.54	-0.39	-0.32
CONVENIENCE	-0.29	1.24	-0.50	0.43	-0.34	0.23	-0.55	0.60

Table 5.13: Skewness and kurtosis indices for all the variables of food subscription boxes and of the food items contained in them by food box users and non-users and by male and female respondents (Author's own elaboration on survey data)

Appendix B

The following pages present the structure of the survey which was submitted to Italian consumers from March 20, 2022 to April 20th, 2022.

Questionario food subscription boxes

Buongiorno,

Sono una laureanda magistrale in International Management presso l'Università Ca' Foscari di Venezia e il seguente questionario verrà elaborato ed analizzato per la mia tesi magistrale.

L'obiettivo del questionario è quello di capire il livello di conoscenza delle "food boxes", ossia delle "scatole o cassette" di prodotti alimentari in abbonamento e le principali motivazioni che spingono all'adozione di questo servizio da parte dei consumatori italiani.

Le risposte date saranno utilizzate in modo anonimo solo a questo scopo e i dati ricavati verranno trattati con la massima riservatezza e in forma aggregata, nel rispetto e secondo le modalità previste dal D.lgs 6/6/2003 n.196 e successive modifiche.

Ringrazio per la collaborazione,

Giorgia Barbiero

*Campo obbligatorio

PARTE 1 - Acquisti online

1. Quanto spesso fai acquisti online? *

Contrassegna solo un ovale.

- mai
- qualche volta all'anno
- uno/due volte al mese
- una o due volte a settimana
- più di due volte a settimana

2. Con la pandemia di Covid-19, la frequenza con cui hai acquistato online: *

Contrassegna solo un ovale.

- è aumentata molto
- è aumentata
- è rimasta la stessa del periodo pre-pandemia
- è diminuita
- non ho mai acquistato online

3. Hai mai acquistato prodotti alimentari online? *

Contrassegna solo un ovale.

- sì *Passa alla domanda 4.*
- no *Passa alla domanda 7.*

PARTE 1 - Acquisti online

4. Con quale frequenza acquisti prodotti alimentari online? *

Contrassegna solo un ovale.

- quasi mai
- ogni tanto
- una o due volte al mese
- una o due volte a settimana
- quasi tutti i giorni

5. Con la pandemia di Covid-19, la frequenza con cui hai acquistato cibo online: *

Contrassegna solo un ovale.

- ◯ è aumentata molto
- ◯ è aumentata
- ◯ è rimasta la stessa del periodo pre-pandemia
- ◯ è diminuita
- ◯ ho iniziato ad acquistare cibo online con la pandemia

6. Quale tipologia di cibo acquisti più spesso online? (possibile risposta multipla) *

Seleziona tutte le voci applicabili.

- ☐ cibo a domicilio (es. pizza, hamburger, pokè ecc.)
- ☐ prodotti della spesa da supermercato
- ☐ prodotti enogastronomici tipici
- ☐ scatole/cassette in abbonamento (es. meal kits, box di frutta e verdura fresca, piatti pronti, snack)
- ☐ Altro: ____________________

PARTE 2 - Food boxes in abbonamento

Una food subscription box o "scatola di cibo in abbonamento" consiste nell'abbonarsi ad una "scatola o cassetta" contenente una selezione di determinati prodotti alimentari che vengono consegnati a casa del cliente su base regolare a fronte del pagamento di una quota ricorrente.

7. Hai mai acquistato scatole di cibo in abbonamento (es. Cortilia, Hello Fresh, Babaco Market Quomi, Feat Food ecc.)?

Contrassegna solo un ovale.

- ◯ sì
- ◯ no *Passa alla domanda 18.*

PARTE 2 - Food boxes in abbonamento

8. Quale tipologia di scatola di cibo in abbonamento hai acquistato? (possibile risposta multipla)

Seleziona tutte le voci applicabili.

- [ ] cassetta di frutta e verdura fresca
- [ ] scatola contenente gli ingredienti già porzionati e pronti da assemblare per cucinare una ricetta guidata (c.d. meal kit)
- [ ] scatola di pasti pronti personalizzati salutari e bilanciati per la settimana
- [ ] scatola di cibo a sorpresa (es. snack particolati o prodotti etnici)
- [ ] Altro: ____________________

9. Quale/i tra queste aziende che forniscono scatole di cibo di abbonamento conosci? (possibile risposta multipla)

Seleziona tutte le voci applicabili.

- [ ] Cortilia
- [ ] Quomi
- [ ] Babaco Market
- [ ] Hello Fresh
- [ ] My Cooking Box
- [ ] SecondChef
- [ ] Feat Food
- [ ] Diet To Go
- [ ] Nutribees
- [ ] Ortago
- [ ] My Fruttaweb
- [ ] Altro: ____________________

10. Da quale/i tra queste aziende che forniscono scatole di cibo in abbonamento hai acquistato? (possibile risposta multipla)

Seleziona tutte le voci applicabili.

- [ ] Cortilia
- [ ] Quomi
- [ ] Babaco Market
- [ ] Hello Fresh
- [ ] My Cooking Box
- [ ] SecondChef
- [ ] Feat Food
- [ ] Diet To Go
- [ ] Nutribees
- [ ] Ortago
- [ ] My Fruttaweb
- [ ] Altro: ____________________

11. Come sei venuto a conoscenza delle scatole di cibo in abbonamento? (possibile risposta multipla)

Seleziona tutte le voci applicabili.

- [ ] passaparola/consigli di famiglia o amici
- [ ] post sponsorizzati sui social media (es. Instagram, Facebook, Twitter ecc.)
- [ ] sponsorizzazioni di influencer
- [ ] banner pubblicitari contenenti promozioni o sconti online
- [ ] sito Internet aziendale
- [ ] ho cercato online tramite Google o altro motore di ricerca
- [ ] Altro: ____________________

12. Con quale probabilità consiglieresti una scatola di cibo in abbonamento a un membro dell famiglia o a un amico?

Contrassegna solo un ovale.

	1	2	3	4	5	
per niente probabile						molto probabile

13. Attualmente hai attivo uno o più abbonamenti ad una scatola di cibo? *

Contrassegna solo un ovale.

- sì
- no *Passa alla domanda 16.*

PARTE 2 - Food boxes in abbonamento

14. Hai intenzione di mantenere l'abbonamento alla scatola di cibo che hai attualmente: *

Contrassegna solo un ovale.

	1	2	3	4	5	
fortemente in disaccordo						fortemente d'accordo

15. Sei disposto a provare un nuovo servizio di scatola di cibo in abbonamento fornito da un'altra azienda:

Contrassegna solo un ovale.

	1	2	3	4	5	
fortemente in disaccordo						fortemente d'accordo

PARTE 2 - Food boxes in abbonamento

16. Per quanto tempo hai mantenuto/stai mantenendo l'abbonamento ad una scatola di cibo?

Contrassegna solo un ovale.

- 1 mese o meno
- 3 mesi
- 6 mesi
- un anno
- più di un anno

17. Qual è il motivo principale per cui hai deciso di cancellare l'abbonamento ad una scatola d cibo?

Contrassegna solo un ovale.

- non ho mai cancellato un abbonamento
- la qualità dei prodotti alimentari non rispecchiava le mie aspettative
- il prezzo era troppo elevato
- i prodotti alimentari nella scatola non soddisfavano le mie esigenze
- la varietà dei prodotti alimentari nella box era limitata
- ho ricevuto prodotti alimentari indesiderati o non necessari
- il servizio clienti non era in linea con le mie aspettative
- la consegna della scatola non era personalizzabile (scelta giorno e fascia oraria)
- i tempi di spedizione della box erano troppo lunghi
- Altro: ____________________

Passa alla domanda 21.

PARTE 2 - Food boxes in abbonamento

18. Eri già a conoscenza delle scatole di cibo in abbonamento prima di questo questionario? *

Contrassegna solo un ovale.

- sì, ne avevo già sentito parlare
- no, non ne avevo mai sentito parlare prima

19. Quale/i tra queste aziende che forniscono scatole di cibo di abbonamento conosci? (possibile risposta multipla)

Seleziona tutte le voci applicabili.

- [ ] Cortilia
- [ ] Quomi
- [ ] Babaco Market
- [ ] Hello Fresh
- [ ] My Cooking Box
- [ ] SecondChef
- [ ] Feat Food
- [ ] Diet To Go
- [ ] Nutribees
- [ ] Ortago
- [ ] My Fruttaweb
- [ ] non conosco nessuna
- [ ] Altro: ____________________

20. Qual è il motivo principale per cui non hai mai acquistato una scatola di cibo in abbonamento?

Contrassegna solo un ovale.

- preferisco andare al supermercato/negozio di persona
- è troppo complicato per me
- non voglio ricevere prodotti indesiderati
- è troppo costoso per me
- non voglio che qualcun altro scelga i prodotti per me
- non mi piace fare acquisti online
- non vedo alcun valore aggiunto
- preferisco acquistare solo i prodotti alimentari di cui ho effettivamente bisogno
- temo che i prodotti che mi verranno consegnati non soddisfino le mie aspettative (es. qualità, freschezza)
- non conoscevo prima le scatole di cibo in abbonamento

PARTE 2 - Food boxes in abbonamento

21. Quale tipologia di scatola di cibo in abbonamento saresti maggiormente disposto ad acquistare?

Contrassegna solo un ovale.

- cassetta di frutta e verdura fresca
- scatola contenente gli ingredienti già porzionati e pronti da assemblare per cucinare una ricetta guidata così da stupire gli ospiti o la famiglia
- scatola di pasti pronti salutari e personalizzati per la settimana
- scatola di snack particolari a sorpresa (es. snack americani o giapponesi)
- scatola di prodotti alimentari etnici
- nessuna delle precedenti
- Altro: ______________________

22. E se ti proponessi le seguenti tipologie di scatole di cibo in abbonamento... A quale sarest maggiormente interessato?

Contrassegna solo un ovale.

- Scatole che forniscono un rapido e conveniente assortimento di prodotti di uso alimentare quotidiano come frutta e verdura, carne ed altri alimenti freschi.
- Scatole che permettono di scoprire nuovi prodotti alimentari e tendenze come una selezione di snack sani o di alimenti tipici di altri paesi.
- Scatole che offrono una serie di prodotti alimentari personalizzati come dei pasti pronti salutar e bilanciati pensati per soddisfare le tue esigenze nutrizionali.
- Scatole che contengono gli ingredienti già porzionati e pronti da assemblare per cucinare una ricetta guidata step by step (meal kit).
- Scatole che offrono certi prodotti alimentari come le capsule del caffè, con sconti speciali o vantaggi esclusivi di cui non si potrebbe usufruire se non venisse sottoscritto l'abbonamento.

PARTE 3 - Motivazioni all'acquisto delle food boxes

23. Quanto ritieni importante che la SCATOLA DI CIBO IN ABBONAMENTO che intendi acquistare...

Contrassegna solo un ovale per riga.

	per niente importante	poco importante	neutro	importante	molto important
ti permetta di risparmiare soldi rispetto all'acquisto dei prodotti singoli					
ti permetta di risparmiare tempo					
offra dei prodotti alimentari di qualità ad un prezzo competitivo e vantaggioso					
ti permetta di aver accesso ad una maggiore varietà di prodotti alimentari contemporaneamente					

ti permetta di conoscere nuovi brand che prima non conoscevi					
ti permetta di evitare l'interazione sociale con le altre persone/commessi					
ti permetta di acquistare dei prodotti senza provare imbarazzo					
ti consenta di personalizzarne il contenuto in base alle tue esigenze					
sia già stata acquistata da familiari e/o amici					
ti permetta di usufruire di promozioni o sconti					
ti permetta di provare prodotti e/o servizi in anteprima					
ti permetta di stare al passo con le nuove tendenze e abitudini di consumo					
ti offra un servizio per le occasioni speciali (es. cena con ospiti)					
abbia già ottenuto recensioni positive da altri consumatori					
abbia un packaging sostenibile e rispettoso dell'ambiente					
contribuisca a ridurre lo spreco alimentare					
abbia la spedizione facile da tracciare					
non abbia spese di spedizione					
ti permetta di scegliere l'orario					

e giorno in cui ricevere il tuo pacco					

24. Oltre a questi aspetti appena citati, ritieni che ve ne siano altri che possano spingerti all'acquisto di una scatola di cibo in abbonamento? Se sì, elencali brevemente

25. È importante che gli ALIMENTI contenuti nella scatola di cibo in abbonamento che intendi acquistare e consumare...

Contrassegna solo un ovale per riga.

	fortemente in disaccordo	disaccordo	neutro	d'accordo	fortement d'accordo
siano salutari					
siano di produzione locale					
ti diano delle sensazioni piacevoli, ad esempio in termini di consistenza, estetica, odore e sapore ecc.					
siano di qualità					
siano freschi					
siano senza conservanti					
siano da agricoltura biologica					
siano di stagione					
abbiano un packaging riciclabile o biodegradabile					

non contengano OGM					
siano stati prodotti o preparati in modo sostenibile					
la loro provenienza e tracciabilità sia chiaramente indicata					
mi diano informazioni relative alla sicurezza alimentare					
ti aiutino a migliorare il tuo stato di salute					
siano rari e difficili da trovare					
siano pensati e creati su misura per te					
siano facili da preparare/cucinare					
siano già pronti da consumare					
siano utili per un pasto fuori casa (es. università o ufficio)					

26. Ritieni che vi siano altre caratteristiche che gli alimenti contenuti in una scatola di cibo in abbonamento dovrebbero avere? Se sì, elencali brevemente

27. Rispondi con un punteggio da 1 a 5, dove 1=fortemente in disaccordo e 5=fortemente d'accordo:

Contrassegna solo un ovale per riga.

	fortemente in disaccordo	disaccordo	neutro	d'accordo	fortement d'accordc
intendi acquistare cibo tramite scatola in abbonamento nel prossimo futuro (ad esempio nei prossimi 3 mesi)	⬭	⬭	⬭	⬭	⬭
sei interessato ad acquistare una scatola di cibo in abbonamento per soddisfare le tue esigenze alimentari e/o quelle della tua famiglia	⬭	⬭	⬭	⬭	⬭
è probabile che adotterai il servizio di cibo in abbonamento	⬭	⬭	⬭	⬭	⬭

PARTE 4 - Profilo socio-demografico

28. Genere: *

Contrassegna solo un ovale.

- ⬭ maschio
- ⬭ femmina
- ⬭ preferisco non rispondere

29. Età: *

Contrassegna solo un ovale.

- 18–30
- 31–40
- 41–50
- 51–60
- 61–70
- > 71

30. Livello d'istruzione: *

Contrassegna solo un ovale.

- diploma di scuola secondaria di 1º grado
- diploma di scuola secondaria di 2º grado
- laurea triennale
- laurea magistrale
- Altro: ____________________

31. Condizione lavorativa: *

Contrassegna solo un ovale.

- disoccupato
- studente
- lavoratore dipendente
- lavoratore indipendente
- imprenditore
- casalinga
- pensionato

32. Reddito:

Contrassegna solo un ovale.

- non percepisco alcun reddito
- €19,999 o meno
- €20,000 - €34,999
- €35,000 - €49,999
- €50,000 to €64,999
- più di €65,000

33. Da quante persone è composto il tuo nucleo familiare? *

Contrassegna solo un ovale.

- 1
- 2
- 3
- 4
- 5
- 6
- Altro: ____________________

34. Hai figli? *

Contrassegna solo un ovale.

- sì *Passa alla domanda 35.*
- no *Passa alla domanda 36.*

PARTE 4 - Profilo socio-demografico

35. Indica quanti figli hai per ogni fascia d'età *

Contrassegna solo un ovale per riga.

	0	1	2	3	4	5	6
0-3 anni							
età prescolare							
scuola primaria							
scuola secondaria di 1^ grado							
scuola secondaria di 2^ grado							
università/lavoro							

PARTE 4 - Profilo socio-demografico

36. Con chi vivi? (possibile risposta multipla) *

Seleziona tutte le voci applicabili.

- [ ] da solo
- [ ] con il partner/marito/moglie
- [ ] con i figli
- [ ] con i genitori
- [ ] famiglia allargata (come cugini, zie, zii, nipoti, nonni)
- [ ] con amico(i) / coinquilino(i)
- [ ] Altro: ____________

37. Numero di abitanti del comune di residenza (se studente o lavoratore fuori sede indicare gli abitanti del comune dove si risiede abitualmente):

Contrassegna solo un ovale.

- 0 - 25.000
- 25.000 – 50.000
- 50.000 – 100.000
- 100.000 - 200.000
- 200.000 - 250.000
- 250.000 - 500.000
- > 500.000

38. Regione italiana di residenza: *

Contrassegna solo un ovale.

- Abruzzo
- Basilicata
- Calabria
- Campania
- Emilia-Romagna
- Friuli-Venezia Giulia
- Lazio
- Liguria
- Lombardia
- Marche
- Molise
- Piemonte
- Puglia
- Sardegna
- Sicilia
- Toscana
- Trentino-Alto Adige
- Umbria
- Valle d'Aosta
- Veneto