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## **The green gap of organic food consumption in Portugal**

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MsC in Management

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## Resumo

A indústria alimentar é uma das responsáveis pelos problemas ecológicos devido a dietas e processos de produção não sustentáveis. Para alcançar o equilíbrio ambiental, as empresas têm adotado nas suas estratégias o conceito de sustentabilidade através métodos de produção diferenciados, como a agricultura biológica. A compra de alimentos biológicos tem vindo a aumentar, mas as vendas destes produtos ainda são limitadas. A literatura mostra uma discrepância entre a preocupação dos consumidores com os problemas ecológicos e as suas ações nesse sentido, um fenómeno designado por "green gap".

Esta investigação tem como objetivo analisar o “green gap” em Portugal; avaliando as razões das decisões de compra dos consumidores e as soluções que podem ser implementadas pelas empresas para ultrapassarem barreiras ao consumo destes produtos e, por sua vez, expandirem o mercado. Para tal, foi realizada uma pesquisa detalhada sobre o fenómeno, assente numa abordagem qualitativa com recurso a entrevistas.

Os entrevistados revelaram que as preocupações com a saúde e o ambiente são os principais fatores de motivação e que os preços elevados, a falta de disponibilidade, variedade e conhecimento são as principais barreiras à compra de alimentos biológicos. Para enfrentar esses obstáculos, as empresas podem adotar diversas estratégias, como educar os consumidores sobre o conceito de biológico através de campanhas de marketing, oferecer um preço mais acessível criando vouchers e descontos, investir numa maior variedade de produtos, garantir a sua disponibilidade nos supermercados e fazer parcerias com o governo para criar programas de incentivo aos consumidores e produtores de alimentos biológicos.

**Palavras-chave:** Comida biológica, sustentabilidade, fenómeno “green gap”, comportamento do consumidor

**Classificação JEL:**

Q01- Desenvolvimento Sustentável

Q13- Mercados e Marketing Agrícola - Cooperativas- Agronegócio

## Abstract

The food industry is one of the main factors for the current ecological crisis due to unsustainable diets and production processes. To accomplish environmental balance, companies have adopted in their strategies the sustainability concept and implemented distinctive producing methods such as organic farming. The number of individuals willing to purchase organic food has been increasing, nonetheless, the sales of these products remain limited. Literature shows a discrepancy between consumers' growing concern for ecological issues and their actions towards it, a phenomenon named the “green gap”.

This investigation aims to analyze the green gap of organic food consumption in Portugal by assessing the reasons behind the consumer purchasing decisions on organic food and possible solutions for companies to overcome the green gap and expand this market. Therefore, detailed research on the phenomenon was carried out and subsequently developed via a qualitative approach through interviews, aiming to understand the opinions of Portuguese consumers on this topic.

From the interviewees, it was shown that health and environmental concerns are the main drivers, and high price, lack of availability, variety, and knowledge as the key barriers to organic food purchase. To face these obstacles, companies may adopt several strategies such as educating consumers about the concept of organic through marketing and advertising campaigns, providing a more accessible price by creating vouchers and discounts, investing more in the variety of products, guaranteeing its availability in the main supermarkets and at last, partnering with the government to create incentive programs for consumers and producers of organic food.

**Keywords:** Organic food, sustainability, green gap phenomenon, consumer behavior

### JEL Classification:

Q01- Sustainable Development

Q13- Agricultural Markets and Marketing- Cooperative-Agribusiness

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## List of Abbreviations

**SDGs**- Sustainable Development Goals

**WCED**- World Commission of Economic Development

**TBL**- Tripple Bottom Line

**UN**- United Nations

**UNCED**- United Nations Conference on Economic Development

**SCP**- Sustainable Consumption and Production

**GHG**- Greenhouse Gas Emissions

**AEI**- Agro Ecological Intensification

**GMOs**- Genetic Modified Organisms

**TPB**- Theory of Planned Behavior

**EU**- European Union

**FAO**- United Nations Food and Agricultural Organization

**WHO**- World Health Organisation

# Chapter 1- Introduction

In the first chapter of this present thesis, there will be done a brief contextualization and presentation of the study. Therefore, the following topics will be presented: Contextualization; Problem Discussion; Research objectives, and Investigation structure.

## 1.1 Contextualization

Over the years, the growth of the world population led to an increase in consumerism and the demand for natural resources namely energy, transport, and food. As a consequence, environmental issues such as climate change, pollution, and global warming arose (Crenna *et al.*, 2019). The food industry is one of the main responsible for the problems previously mentioned because of society's current diets and system production processes (Benvenuti *et al.*, 2019; Willett *et al.*, 2019; Frehner *et al.*, 2020). In particular, the agriculture sector impacts many of the planet's boundaries due to the system activities, processes, logistics, retail, and consumption (Campbell *et al.*, 2017).

By 2030, it is expected that the global population will grow around 8.5 billion and 9.7 billion in 2050. According to the United Nations (2023), three planets would be required to provide the necessary natural resources to sustain society's current lifestyle. Thus, supplying a growing population with healthy diets and sustainable food systems is a critical challenge (Campbell *et al.*, 2017). Scholars and organizations developed theories and policies namely, the 2030 Agenda by United Nations (UN) introduced Sustainable development goal (SDG) number twelve, to ensure changes in both consumption and production patterns while promoting economic and societal growth as well as decreasing ecological problems (Geels *et al.*, 2015; Esposito *et al.*, 2018; Khan *et al.*, 2020). On one hand, decreasing consumption levels and modifying purchase patterns are some examples of the urgent changes in human behavior that are key to achieving sustainable progress (Benvenuti *et al.*, 2019; Khan *et al.*, 2020; Ripple *et al.*, 2020). On another hand, enterprises also play an important role in achieving sustainability with the modification of production processes to greener methods namely organic farming (Desquilbet *et al.*, 2018; Gomiero, 2018).

## 1.2 Problem discussion

As previously mentioned, in the food industry, one of the approaches for diminishing environmental impacts is the adoption of organic farming, recognized as an eco-friendlier manufacturing system (Akaichi *et al.*, 2019). This type of agriculture is perceived by consumers as better for the environment, the well-being of animals, and human health compared to conventional food (Seufert & Ramankutty,

2017; Feil *et al.*, 2020). Therefore, the number of people willing to buy organic food has been gradually increasing however, the sales of this type of food remain limited (Rana & Paul., 2017; Murphy *et al.*, 2022; Willer *et al.*, 2023). There is an inconsistency between the growing concern of consumers about the current ecological issues and their actual actions and behaviors towards them. This phenomenon is recurrently described in the literature as the “green gap” (Elhaffar *et al.*, 2020; Wang *et al.*, 2021).

Consumer actions and behaviors are essential to developing green production systems and thus, the demand for organic food is essential to transform the food industry into a more sustainable business (Feil *et al.*, 2020; Hansmann *et al.*, 2020). Consequently, understanding the determinants behind the consumer's purchasing decisions is crucial to expanding this market (Hansmann *et al.*, 2020).

Throughout the years numerous studies have been carried out to understand and explain the consumer's perspective nonetheless, it was revealed contradictory results since the items, the methods, and the countries tested were different and prevented the explanation of the “green gap” phenomenon (Basha *et al.* 2019; Testa *et al.*, 2021). Therefore, the debate regarding the discrepancy between the consumer's willingness to purchase organic food products and their actual buying behavior remains unsolved, offering the possibility for new research in this field (Joshi & Rahman, 2015).

### **1.3 Research Objectives and Questions**

Considering the context presented above, the need for a deeper study arose to understand the green gap of the organic food consumption in Portugal by taking a comprehensive approach of the Portuguese consumer perspective. The main aim of the dissertation is to analyze the organic food market and explore the factors that influence the purchase of this type of food. Additionally, it focuses on the customer's perception of the role of companies in maximizing the organic market. Therefore, it is intended to provide new and useful insights for both companies and marketers to align their business strategies according to consumers' expectations and needs, and ultimately, increase the organic food domestic market.

To address the primary research objective, this investigation intends to answer four research questions which will be further explained in Chapter 4:

1. *What is the consumers' perception and behavior towards organic food?*
2. *What are the main drivers that lead to the consumption of organic food?*
3. *What are the main barriers that prevent organic food consumption?*
4. *What is the consumers' perception of the company's role in maximizing the organic food market?*

Conceivably, this project is expected to contribute to the advanced existing literature regarding the green gap phenomenon by providing information on the potential barriers and drivers of organic food adoption as well as possible solutions to solve the “green gap”. Additionally, it is aimed to close some of the knowledge gaps that exist around the abovementioned topic, namely, the need to provide empirical evidence in different geographies.

#### **1.4 Investigation Structure**

This research will be organized into six main sections with different aims and purposes.

Chapter 1 presents a brief contextualization of the studied subject which explains the main research problem, the key objectives, and research questions.

Subsequently, Chapter 2 is regarding the literature review about the green gap theme, which is divided into different sub-topics namely, Sustainability, Sustainable production and consumption, Overview of the food industry, Organic farming, and Factors affecting organic food consumption.

Diverse points of view and theories were gathered from the literature review resulting in the creation of research questions presented in Chapter 3.

Moreover, Chapter 4 describes the methodology used and the steps taken to collect information regarding the topic investigated.

In Chapter 5, an analysis will be done from the data gathered from the qualitative methodology used for this study.

Lastly, in Chapter 6, a summary of the results will be presented, detailing the main findings of this investigation as well as its limitations and suggestions for future research.



## Chapter 2- Literature Review

The second chapter of this present thesis will be based on the research and review of the bibliography of the studied theme, the green gap in the organic food market. Therefore, the following topics of the literature review will be Sustainability, Sustainable production and consumption, Overview of the food industry, Organic farming, and Factors affecting organic food consumption.

### 2.1 Sustainability

The roots of sustainability date back to the 17<sup>th</sup> and 18<sup>th</sup> centuries when forestry experts, due to the forest resources reduction in Europe, introduced the concept of sustainable yield. This concept refers to a sustainable harvest that can correspond to the market demand without damaging the soil. The concept of sustainability, from the beginning of its origins, was related not only to ecological preservation but also to social and economic perspectives (Vogt & Weber, 2019, Purvis *et al.*, 2019).

Political economists, after the first industrial revolution, started to question the limits of economic and demographic growth as well as the balance between social equity and wealth creation. Moreover, in the 19<sup>th</sup> and 20<sup>th</sup> centuries, scientists and ecologists raised questions regarding the preservation of the ecosystem and the importance of sustainable consumption (Purvis *et al.*, 2019).

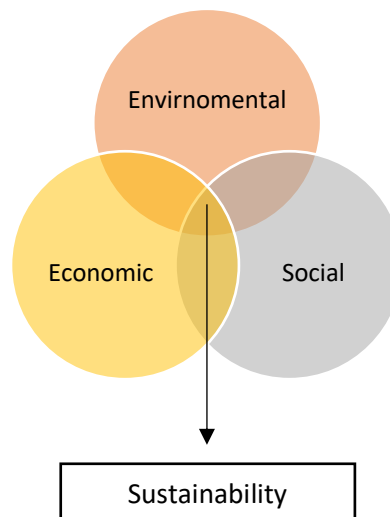
Even though sustainability had been discussed for some time, only in the late 1980's it became a more common concept with the publication of the first sustainability report, "Our Common Future" (Trivedi *et al.*, 2018). The report, also known as the Brundtland Report, was composed by the World Commission on Economic Development (WCED) and introduces the most cited sustainable development concept: "Sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987).

Despite the universal approval of the sustainability definition proposed by the WCED, the research on this topic expanded which led to its evolution. Since then, several authors characterized sustainability through a systematic approach. This framework was created by Barbier (1987) who identified three basic pillars for process development: environmental, social, and economic. The main objective of this approach is to achieve sustainable development through the maximization of the goals across the three systems and the balance of the trade-offs. Thus, the economic pillar should aim for efficiency and simultaneously, consider the effects on biodiversity preservation as well as the repercussions for social stability and justice (Barbier & Burgess, 2017).

Furthermore, in the late 1990s, the Triple Bottom Line (TBL) by Elkington gained recognition within business literature. This framework, also known as "People, Planet, and Profit" is intended to

support firms in the implementation of sustainable development as well as to encourage managers to contemplate long-term perspectives within the decision-making process. Parallels to the three pillars of sustainability can be seen in the TBL as firms assess their profits not only based on financial profit but also social and environmental performance. Sustainability is often synonymous with TBL and thus, it is a common framework in the corporate world of the 21<sup>st</sup> century (Trivedi *et al.*, 2018; Purvis *et al.*, 2019; Ranjbari *et al.*, 2021).

Figure 1- Triple Bottom Line



Source: Self-elaborated

The contemporary sustainability literature focuses on the United Nations (UN) Sustainable Development Goals (SDGs). To achieve sustainable development and thus, guarantee peace and prosperity for current and future generations, in 2015, the UN developed the 2030 Agenda (Purvis *et al.*, 2019). According to the UN (2015), the sustainable agenda considers global challenges related to poverty, hunger, inequality, economic prosperity, climate change, and justice. This complex approach includes 17 SDGs that are divided into 169 targets and about 230 indicators to evaluate these targets that all UN members, including Portugal, should act upon by 2030.

Additionally, in the UN agenda, the conceptualization of the three pillars regarding sustainability can be observed, as previously discussed. It is emphasized that all 17 goals are intertwined, and that is essential to guarantee their integration to achieve sustainable development. Also, each SDG can be attributed to one of the systems either as an economic, an environmental, or a social goal (Barbier & Burgess, 2017).

In conclusion, the sustainability concept encounters different challenges and has been seen as a “fuzzy notion”. However, this complex term can be characterized by diverse dimensions such as,



ecological, political, ethical, socio-economic, democratic, cultural, and technological. As defended by Vogt & Weber (2019), the core of sustainability can be defined as the “planning and anticipating of the economy in the ecological metabolic cycle and its rhythms of time”. Hence, it is essential to understand the consequences of human activities for the current society as well as for future generations. Two of the main human activities that affect the sustainability of the planet are production and consumption which will be discussed in more detail in the next section to better understand what it means and its causes.

### **2.1.1 Sustainable consumption and production**

With the rise of the human population and consumerism, the demand for natural resources in several sectors namely energy, transport, and food has intensified. Consequently, emissions, pollution, and the use of the earth’s scarce resources led to the increment of environmental pressures (Crenna *et al.*, 2019). To face these issues, sustainable consumption emerged as the main subject of Agenda 21 composed by the UN during the Conference on Environment and Development (UNCED), in 1992. The fourth chapter of this agenda focuses on the urgency of modifying society’s current lifestyles due to its high demand for natural resources (Bartolj *et al.*, 2018; Araújo *et al.*, 2021).

Afterward, at the Oslo Symposium (1994), was establish introductory policies to foster a consumption pattern based on the use of fewer resources while maintaining economic growth and social stability. During this convention, the concept of sustainable consumption was first described as the use of goods or services to satisfy society’s basic needs and improve their quality of life while decreasing the application of natural resources and poisonous materials during the life cycle, for the safeguarding of the future generations (Bartolj *et al.*, 2018).

More recently, in 2015, the importance of green production and consumption was contemplated in the United Nations’ 2030 Agenda for Sustainable Development with the introduction of SDG number twelve: “Ensure sustainable consumption and production patterns” (UN, 2015). To achieve this goal changes in both consumption patterns and manufacturing systems are needed to promote economic growth and social progress without compromising the protection of the environment and future generations (UN, 2015; Esposito *et al.*, 2018; Khan *et al.*, 2020).

In the literature, the debate regarding sustainable consumption and production (SCP) has also become an important topic. According to Geels *et al.*, 2015, this debate includes two main intellectual positions that can be defined as “reformist” and “revolutionary”. On one side, the reformist position focuses on the creation of eco-innovations by businesses and the purchase of eco-efficient products by consumers. On the other side, the revolutionary position defends the abrogation of capitalism and consumerism and promotes a new system of value based on sufficiency. Other authors such as Lorek

& Funchs (2013) defined this dichotomy as “weak” and “strong” sustainability consumption or as “an efficiency” and “sufficient” approach.

The “reformist”, “weak”, or “efficient” consumption position has been dominant in both political and scientific contexts. It can be defined as a product-based approach that focuses on the improvement of resource efficiency through technological solutions to achieve sustainable consumption. Within this framework, market incentives such as the promotion of best practices and single-product advice encourage consumers to play an active role by purchasing green products (Lorek & Funchs, 2013; Geels *et al.*, 2015; Bengtsson *et al.*, 2018). Additionally, other authors presented generic activities related to the reformist position namely green supply chain (improvement of the ecological performance of the supply), pro-environmental behavior change (product certification and social marketing), eco-efficient production (processes innovation that lessens environmental impact), and cleaner production (product designs that reduce waste) (Lebel & Lorek, 2008; Geels *et al.*, 2015).

Even though the reformist position is necessary to achieve sustainable development, it provides limited outcomes and is insufficient to tackle the current ecological and social challenges. This position focuses on short-term with incremental improvements instead of long-term sustainable gains. Moreover, it is argued that questions of social, political economics, and justice are ignored, and minor incremental changes in the system based on technological solutions will not be enough to reverse current patterns of unsustainability. Therefore, it is inevitable a transaction from “weak” to “strong” sustainable consumption, from unsustainable growth to the improvement of human well-being (Lebel & Lorek, 2008; Geels *et al.*, 2015; Bengtsson *et al.*, 2018; Glavic, 2021; Sandberg, 2021).

The “revolutionary”, “strong” or “sufficient” position focuses on environmental, social, economic, and political problems. According to this position, the ecological issues are related to the current capitalist society, especially with the economic growth and excess of consumption, and thus, economic, and sociocultural structures need to be transformed (Lebel & Lorek, 2008; Geels *et al.*, 2015; Glavic, 2021). Under the revolutionary approach, the importance of changes in the purchase patterns and reduction of consumption levels to achieve sustainability is defended. Some authors presented generic activities related to this position within the economic, cultural, and innovation dimensions (Lebel & Lorek, 2008; Geels *et al.*, 2015; Glavic, 2021).

In terms of economics, as mentioned by Glavic (2021), the degrowth of consumption and production is essential and is connected to “lifestyle changes, reduced material consumption, shortened working time, and increased quality of life”. In terms of culture, it is highlighted the shift of habits, behaviors, and lifestyles towards sufficiency. Conceptually, sufficiency proposes the reduction of the consumption amount, the modal shift to a less resource-intensive use, the extension of product longevity, and the sharing of products among individuals (Sandberg, 2021). Lastly, in terms of

innovation, an important driver for sufficiency transactions that enables citizens to reduce their consumption is social innovation structures (Lorek & Funchs, 2013). This type of innovation includes the participation of the community to find, create, and implement new solutions for social issues through transformations in relations, systems, and structures (Edwards-Schachter & Wallace, 2017).

Nevertheless, the “revolutionary” position presents a general approach with limited insight into the processes that promote radical changes in the system and, it is dissociated from the real circumstances of producers and consumers. The dichotomy of the “reformist” and “revolutionary” vision is ambiguous and dwindles the overall complexity of the debate regarding SCP. Both perspectives receive a critical appraisal from scholars, as previously mentioned (Geels *et al.*, 2015).

According to Geels *et al.* (2015) to progress from the dichotomy related to SCP, a middle-way approach is proposed and defined as “reconfiguration” which is based on the shift towards new social and technical systems and daily life practices regarding mobility, food, energy use, and housing. These dimensions are the main causes of overconsumption that account for 70% to 80% of the environmental impact of these categories’ lifecycles and thus, their reconfiguration may lower environmental pressures (Tukker *et al.*, 2010).

The transactions of systems and practices in the “reconfiguration” approach include the alignment of system elements (technologies, policies, user patterns, cultural discourses, and infrastructures) and the interactions between actors (consumers, firms, media, researchers, and advisory bodies) to a more SCP. Therefore, this solution provides a higher potential than technologies or behavior shifts according to the “reformist” position and has a more feasible implementation than the macro-changes proposed in the “revolutionary” proposition (Geels *et al.*, 2015).

To conclude, the current methods of consumption and production have been causing ecological unbalance as well as social and economic problems at a global level (De Moraes *et al.*, 2021). Thus, green consumption and production become an important topic in both political and research contexts. On the political side, the SDGs by the UN are a crucial guide to achieving sustainable development. In particular, SDG number 12 aims at greener consumption and production patterns while respecting environmental boundaries and promoting the development of the economy and society. Simultaneously, in the academic debate emerged distinctive approaches such as the “reformist”, “revolutionary”, and “reconfiguration” that aim to make sense of the complexity of the SCP concept and can be applied in real-world practices (Geels *et al.*, 2015). However, it is a complex and slow process that requires a holistic approach (Scherer *et al.*, 2018; Wang *et al.*, 2018).

Additionally, one of the main sustainability issues is regarding the food system due to the impact on health, resources, society coherence, and the economy (Sala *et al.*, 2017; Gwozdz, *et al.*,

2020). Therefore, the next section of this literature review will explore the characteristics of the food industry and the current challenges it faces.

## **2.2 Overview of the Food Industry**

Although diet is an essential part of society's well-being, the current food system is related to the pressing environmental problems of today. Food systems are composed of all the activities and elements (people, processes, infrastructures, and institutions) regarding the production, distribution, preparation, and consumption of food (Willett *et al.*, 2019). With the current diets and production processes, greenhouse gas emissions (GHG), water scarcity, soil deterioration, biodiversity loss, and chemical pollution are a few ecological challenges that the food industry faces (Benvenuti *et al.*, 2019; Willett *et al.*, 2019; Frehner *et al.*, 2020). This system is the largest cause of global environmental changes, it is responsible for one-third of the global energy used, human-caused GHG, and terrestrial acidification. Moreover, the overuse of nitrogen and phosphorus in food production causes almost 80% of the heart's eutrophication (Poore & Nemecek, 2019; Willett *et al.*, 2019; Glavic, 2021).

In particular, the agriculture sector impacts many of the planet's boundaries mainly due to the system activities, processes, logistics, retail, and consumption (Campbell *et al.*, 2017). This sector is the main contributor to the transgression of both biosphere integrity (functional and genetic diversity loss) and biogeochemical flow (excess use of nitrogen and phosphorus) global limits. Additionally, agriculture production is the most extensive form of land use which occupies more than 40% of the world's surface and causes changes in land-system changes namely, deforestation (Poore & Nemecek, 2019; Willett *et al.*, 2019; Campbell *et al.*, 2017). Of all human activities, agriculture consumes the highest amount of freshwater (about 70% of all water withdrawals) and emits large quantities of GHG throughout the entire food supply chain which influences climate change (Campbell *et al.*, 2017).

By 2030, it is expected that the global population will grow around 8.5 billion and 9.7 billion in 2050. To sustain humanity's current lifestyle, three planets would be required to provide the necessary natural resources (UN, 2023). Moreover, it is expected that with the growth of the world population, the food demand will also increase. Therefore, supplying a growing population with healthy diets and sustainable food systems is a critical challenge (Campbell *et al.*, 2017). A part of the solution to address the food industry's current challenges is transitions in human diets (consumption side), and production systems (market side).

On the consumption side, the purchase of goods and services is associated with several ecological problems, therefore the decisions and behaviors of consumers have an important impact on the protection of the planet. If consumers change their way of living by making conscious choices namely in terms of their diet, there will be a dwindling of unsustainable practices that are fed by the

excess of consumerism (Khan *et al.*, 2020). Additionally, as defended by Frehner *et al.*, (2020) the dietary transactions involve, on the one hand, the reduction of animal-source food, and on the other hand, the increase in plant-based food consumption. Other food regime shifts include diets such as, vegan (exclude all animal-source foods), vegetarian (can include dairy products), or flexitarian (mostly plant-based with the sporadic inclusion of meat or fish) (Derbyshire, 2017; Chen *et al.*, 2019). However, these diets carry the risk of deficiency of some nutrients that are present in animal-based products. Nevertheless, nutritional regimes with a reduced amount of animal-based food prove to have positive impacts on both human health and the environment namely the dwindling of GHG, water, and land savings (Chen *et al.*, 2019; Ripple *et al.*, 2020; Kustar & Echeperri, 2021).

On the market side, companies have received criticism as well as pressure due to society's distrust of their ethical, social, and environmental behavior. Consequently, the concern regarding sustainability has become an essential element in businesses' core activities (Carroll & Shabana, 2010; Ritala *et al.*, 2018). With food production instigating preeminent environmental risks, green food methods must operate within the scales of the planet Earth. The revolution of the current food systems entails agroecological intensification (AEI) which integrates ecological principles and biodiversity management in farming systems and thus, increases productivity, decreases external inputs dependency, and enhances ecosystem services. Conservation agriculture, organic agriculture, and precision agriculture are part of the systems of AEI (Garbach *et al.*, 2016; Willett *et al.*, 2019). Furthermore, other activities to reduce the environmental impacts of the food industry are closing yield gaps on cropland, livestock efficiencies, changes in crop and feed management, and enhancing biodiversity within the system. These solutions allow producing more food whilst reducing the use of land, water, energy, and fertilizers (Röös *et al.*, 2017; Willett *et al.*, 2019; Frehner *et al.*, 2020).

Hence, eco-friendly food systems and healthy diets are serious themes in the political agenda (Vanham, 2020). According to the United Nations Food and Agricultural Organization (FAO) and the World Health Organisation (WHO) (2019), sustainable diets are “dietary patterns that promote all dimensions of individuals’ health and wellbeing; have low environmental pressure and impact; are accessible, affordable, safe and equitable; and are culturally acceptable.” The adoption of sustainable diets plays a crucial role in achieving the SDGs of the UN concerning hunger, health, nutrition, climate change, natural resources, biodiversity, and social and economic factors (Willett *et al.*, 2019).

Furthermore, to face environmental challenges the European Commission, in 2019, implemented a sustainable economic plan, “The European Green Deal”. The main goals of this program are for Europe to progress into a circular economy that exploits resources efficiently, eliminate all inequalities in society, and cease climate change by being the first climate-neutral continent by 2050 (Glavic 2021; Nae & Panie, 2021). One of the main policy areas of the European

Commission's Green Deal is regarding the food system, "Farm to Fork". This strategy focuses on creating a sustainable, healthy, and fair food value chain through the implementation of sustainable practices namely, organic farming, improvement of animal welfare, restoration the biodiversity, and reduction of fertilizers and pesticide usage (EU, 2020).

To conclude, the challenges of feeding a growing population and simultaneously protecting the environment are urgent (Chen *et al.*, 2019). As so, to transform the current food system all stakeholders of the food supply chain should work collectively to achieve a global sustainable diet (Willett *et al.*, 2019). Among the strategies to reduce the ecological pressures, it is emphasized major improvements in food production practices, the adoption of healthy diet patterns, and the reduction of both food loss and waste (Willett *et al.*, 2019). Agriculture plays a key role in the complex food system, and the improvement of agro-food practices is perceived as an important step toward sustainable development (Campbell *et al.*, 2017). One innovative sustainable food system that can be adopted is organic farming which preserves the environment and natural resources, and it is seen by several countries as the main driver of sustainable economic development (Melović *et al.*, 2020). Therefore, in the following section, it will be further presented this concept and the challenges it faces.

### **2.2.1 Organic farming**

In recent decades, the intensification of agriculture practices has led to the rise of food availability and caused adverse environmental impacts (Muller *et al.*, 2017). The increased awareness of the ecological issues of present food systems contributed to the popularity of organic farming as a possible sustainable agricultural alternative to conventional farming (Desquilbet *et al.*, 2018; Gomiero, 2018). According to the EU, organic food is defined as agricultural products that are produced using organic farming methods. These methods combine the best environmental and climate practices, natural resources protection, and the maintenance of high standards for animal welfare. Moreover, the EU limits the use of artificial fertilizers and excludes the use of genetically modified organisms (GMOs), hormones, and ionizing radiation in the production of organic food. At last, this type of farming focuses on the enhancement of soil fertility, biodiversity, and ecological balance (European Parliament and Council, 2018).

Even though organic production is a promising suggestion for the improvement of sustainability in food systems, its feasibility is controversial by a few researchers (Muller *et al.*, 2017; Desquilbet *et al.*, 2018). One on hand, authors such as Connor (2008), Pickett (2013), and Gabriel *et al.* (2013) stated that organic farming produces lower yields and thus, requires more area to produce the same amount of output when compared to conventional agriculture. As so, organic farming production would not be sufficient to meet the food demands of a growing population (Connor, 2008).

In response to this criticism, De Ponti *et al* (2012) and Seufert & Ramankutty (2017) argued that under certain circumstances namely, specific crop types, regions, and management practices, the organic yields are a close match to conventional systems. Ponisio *et al* (2015) suggested that the increase in research on agriculture systems would reduce the yield differences. Moreover, Schrama *et al.* (2018) defend that despite organic farming being less productive than conventional, over time (10-13 years) the organic yields achieve the same productivity levels, and thus, the yield gap between both methods is reduced.

Despite the controversy regarding organic production, various authors defend that this method provides clear benefits namely, delivers equal or more nutritious food with less or no pesticide residues, achieves higher productivity in some conditions, benefits the soil's health, enhances profitability, supports social interactions between farmers and consumers and improves the development of the community economy. Additionally, by forbidding the use of pesticides in organic practices, these residues are not spread into the environment or the food chain and thus, do not threaten the health of humans and the ecosystems (Reganold & Watcher, 2016; Gomiero, 2018). Furthermore, animals are kept at shorter stocking densities and are subject to lower productivity demands. It is forbidden the use antibiotics as growth promoters and thus, it also benefits public health and promotes a more compassionate treatment of farm animals (Gomiero, 2018). Overall, this method is more eco-friendly than conventional agriculture (Reganold & Wachter, 2016; Seufert & Ramankutty, 2017; Akaichi *et al.*, 2019).

Since the beginning of organic agriculture, the production areas, market shares, and the number of consumers have grown (Hurtado-Barroso *et al.*, 2019). In 2021, the global organic market reached nearly 125 billion euros with over 3.7 million producers and covering 1,6% of the world's agricultural land which corresponds to 76.4 million hectares. Europe Union, which is the largest organic market (43.7%), grew from 18 billion in 2009 to 46.7 billion euros in 2021 with 9,6% of total farmland. Furthermore, in Portugal, the total value of sales in organic products reached 21 million euros in 2021 with more than 8% of the total farmland available being used for organic farming which translated into about 13 270 organic producers. Moreover, it is forecast that the organic market will continue to grow in the coming years (Willer *et al.*, 2023). As organic food is recognized as eco-friendlier food production, the European Commission, within the program "Farm to Fork" previously mentioned, outlined a set of actions to further develop this agriculture production to achieve 25% of total Europe's farmland (Neumayr & Moosauer, 2021). Additionally, with the growth of the European organic market, consumers' demand for trustworthy, green, and environmental products increased. Thus, the EU endeavors to ensure the authentication of organic food with the creation of an EU organic

logo. This logo can only be used in products that contain at least 95% organic ingredients and the remaining 5% respect the other strict conditions (Murphy *et al.*, 2022).

Organic farming has promising potential to be part of the global food system while ensuring the preservation of the ecosystem. However, an individual production method is not able to supply the growing population harmlessly (Reganold & Watcher, 2016). Hence, numerous suggestions to achieve a sustainable food system are made namely, the connection with existing innovative systems (agroforestry, conservation agriculture, integrated farming) as stated in Reganold & Watcher (2016), or the partial implementation of both conventional and organic systems according to Muller *et al.* (2017). Other complementary changes such as the improvement of the distribution and access of food, reduction of food waste, and modification of food patterns can contribute positively by reducing the consumption of animal products (Reganold & Watcher, 2016; Muller *et al.*, 2017; Seufert & Ramankutty, 2017).

In summary, although different governmental strategies are being implemented to increase organic farming, there is an imbalance between supply and demand. To achieve this goal, the organic market needs further expansion since its current market share is less than 10% (Rana *et al.*, 2017; Murphy *et al.*, 2022; Willer *et al.*, 2023). Therefore, the next section will be further presented the reason for this discrepancy in the organic food market, commonly called the “green gap”.

### **2.2.2 Green gap**

Consumers perceived that organic farming is better for the protection of the environment, the well-being of animals as well as healthier and safer than conventional products since it is free from any chemicals that might harm human health (Seufert & Ramankutty, 2017; Feil *et al.*, 2020). Despite the premium prices of organic food, consumers are willing to pay for these products due to their benefits (Hurtado-Barroso *et al.*, 2019). As demonstrated in a survey by the European Commission (2020), more than two-thirds of respondents consider that organic products comply with specific norms regarding pesticides, antibiotics, and fertilizers (82%), are environmentally friendly (81%), and have more quality (74%), better taste (65%) and are safer (71%) than other products. Even though individuals display positive attitudes toward green consumption, often these attitudes do not convert to intentions or behaviors, the so-called “green gap” (Elhaffar *et al.*, 2020; Wang *et al.*, 2021).

According to Elhaffar *et al.* (2020), the “green gap” is a phenomenon broadly recognized in the literature and can be defined as: “the inconsistency between what the individual says regarding his/her growing concern about the environmental problems and what he/she does in terms of actions, behaviors, and contributions to lessen the consequences of these problems”. Other terms such as,



“intention-behavior” and “attitude-behavior” are also used to describe the gap previously mentioned (Elhaffar *et al.*, 2020).

One of the barriers to the adoption of organic food consumption is the “green gap” (Wang *et al.*, 2021). On one hand, the farmers are reluctant to shift to organic agriculture due to economic challenges (certification, loans, assurance), lack of information and knowledge, infrastructure difficulties, and narrow market size. On the other hand, the growing environmental concern of consumers is not translated into their actual actions toward sustainable behavior (Reganold & Watcher, 2016; Rana *et al.*, 2017; Park & Lin, 2020).

Additionally, the unreasonable consumption patterns of consumers contribute to ecological deterioration so, the purchase of sustainable products can prevent or even reduce the negative environmental impact (Wijekoon & Sabri, 2021). Therefore, the future of the organic food market will be mostly based on consumer demand, and it is essential to understand the reason why customer attitudes have a lower impact on green purchase behavior (Akaichi *et al.*, 2019; Wijekoon & Sabri, 2021).

Attitudes are predictors of the intention to purchase and the actual buying behavior of consumers (Rana *et al.*, 2017; Khan *et al.* 2020). As defended by Khan *et al.* (2020), green attitude can be defined as the aggregation of beliefs and behavioral intentions that an individual has regarding environmental activities. Moreover, the same author described green behavior as "a set of planned activities in response to social and individual needs arising from environmental conservation." To further understand the ecological behavior of consumers, researchers such as Rusyani *et al.* (2021), and Wang *et al.* (2021) studied the relationship between green attitudes and behaviors and recognized that attitudes are an important factor for the purchase of eco-friendly products (Khan *et al.* 2020; Park & Lin, 2020). Overall, a consumer's favorable attitude is a good indicator of their action toward a behavior (Park & Lin, 2020).

Over the years, researchers discussed numerous factors and theories that influence the composition of attitudes as well as consumer behavior regarding green products namely, organic food (Rana *et al.*, 2017). The Theory of Planned Behavior (TPB) has been extensively applied in empirical studies and is linked with the attitude-behavior gap (Elhaffar *et al.*, 2020; Wang *et al.*, 2021). TPB was developed by Ajzen (1991) which proposes that attitudes, subjective social norms, and perceived behavioral control of a person impact their intention. Consequently, this intention affects behavior (Ajzen, 1991). Most studies that apply the TPB conclude that attitudes, subjective norms, and perceived behavioral control have a strong influence on the consumer's purchase intention (Wang *et al.*, 2021). Nonetheless, this theory did not correspond to the expectations regarding sustainable

consumption because, as mentioned before, the consumer's actual behavior towards environmental protection is not congruent with their positive green attitudes and intentions (Elhaffar *et al.*, 2020).

Other theories such as Attitude-Behavior-Context and Value-Belief-Norm have also been studied in the context of the green gap and according to Elhaffar (2020) are under the same “rational economic paradigm (of the TPB), where individuals consciously seek to maximize their utility through their consumption choice.” Numerous psychological theories have been applied to better understand the elements that lead to the generation of an intention and behavior to purchase organic food. Notwithstanding, the gap is still present (Chekima *et al.*, 2019).

To conclude, consumers show a positive attitude regarding eco-friendly products however, the purchase of these products unusually occurs (ElHaffar *et al.*, 2020; Park & Lin, 2020). The decision to acquire a good includes several reasons that increase the complexity and difficulty of comprehending this behavior (Park & Lin, 2020). In academic literature, a vast extension of investigations tried to identify which are the factors that determine green purchase behavior (Wijekoon & Sabri, 2021). Nevertheless, the conclusions of the studies are sometimes contradictory, due to different elements and methodologies which inhibited the clarification of this paradox (Testa *et al.*, 2021). Thus, the next chapter will explore the reasons for consumers' purchase of organic food to better understand the green gap in this market.

### **2.3 Factors Affecting Organic Food Consumption**

Throughout the years, there has been an increase in the number of individuals prone to acquire eco-friendly products nevertheless, the sales of these products remain limited. As so, it is recognized an inconsistency between the increased ecological concern of consumers and their actual behavior patterns, the “green gap” phenomenon previously referred to (Elhaffar *et al.*, 2020). The individuals' actions and behaviors are essential to developing green production systems and thus, the demand for organic food is essential to transform the food industry into a more sustainable business (Feil *et al.*, 2020; Hansmann *et al.*, 2020). Consequently, understanding the determinants behind the consumer's purchasing decisions is crucial (Hansmann *et al.*, 2020).

In an attempt to observe the factors that determine organic food consumption, Rana & Paul (2017) conducted a literature review and concluded that health consciousness; quality and safety; environmental friendliness and ethical consumerism; price and certification; willingness to pay, and social consciousness are a few of the main elements that influence the buying decision.

*Health consciousness* is referred to as an individual disposition to identify with and act toward the protection of their health (Hansen *et al.*, 2018). In several studies across the world, including in Portugal, it was verified that the more concerned the consumers are regarding their health, the

stronger their intention towards purchasing organic food since it is perceived as healthier and safer than conventional food (Rana & Paul, 2017; Chekima *et al.*, 2019; Guiné *et al.*, 2022; Teixeira *et al.*, 2022). The healthy attribute is the most relevant predictor of both attitudes and behaviors toward organic product consumption (Chekima *et al.*, 2019; Nunes *et al.*, 2022). Nevertheless, a few investigations, namely one by Husic-Mehmedovic *et al* (2017) recognized that health consciousness may conceive a positive propensity in individuals to consume organic food, although it may not translate into actual behavior.

*Food safety* is related to customers' concerns about the use of chemical fertilizers, artificial additives, and preservatives in foods (Teng & Lu, 2016). Over the years, recurrent food safety incidents and diseases led to a lack of trust in conventional food production (Basha *et al.*, 2019). Thus, to reduce the risks associated with chemically produced food, the shoppers shifted to organic products which are safer for their health (Basha *et al.*, 2019; Molinillo *et al.*, 2020). For Portuguese consumers, the absence of pesticides and the benefits for human health are the main reasons that incentivize them to purchase organic foods (Guiné *et al.*, 2022).

The quality of the goods remains a primary condition in the food market since the exigencies regarding the production process conditions whilst considering environmental protection are growing (Jánská *et al.* 2020). Consequently, the *perceived quality* of organic food is an important predictor of the consumption of such food. Taste, freshness, nutritional value, lower environmental impact, and the absence of pesticides are intrinsic qualities of food produced organically that influence consumers purchasing decisions (Chekima *et al.*, 2019; Escobar-López *et al.*, 2017; Jánská *et al.* 2020; Wojciechowska-Solis & Barska, 2021; Guiné *et al.*, 2022; Teixeira *et al.*, 2022).

*Lack of trust* represents a limitation to the development and growth of organic food demand (Vega-Zamora *et al.*, 2018). Organic food is an example of a credence good; its characteristics are intangible (nutritional value and natural composition) and present an important role in the buying decision process (Nunes *et al.*, 2021). Identifying and discriminating them from conventional products is a challenge even after the purchase or consumption which leads to mistrust or skepticism towards green product claims (Nuttavuthisit & Thøgersen, 2017; Vega- Zamora *et al.*, 2018; Madureira *et al.*, 2021). Customers choose organic foods because they are healthier, more environmentally friendly, and with better nutritional values (Rana & Paul 2017). Therefore, mistrust negatively impacts the customers' expectations regarding the benefits of organic food and consequently, reduces their motivation to purchase this food (Nuttavuthisit & Thøgersen, 2017).

On the contrary, *certification* is a relevant element that acts as a motivational antecedent for organic food consumption by increasing the buyer's confidence in the authenticity of these products (Rana & Paul, 2017; Madureira *et al.*, 2021). To gain the customer's trust is important for farmers to

validate their products through the certification established by the governments (Rana & Paul, 2017). Consumers need to believe that this type of food has important benefits when compared to traditional food, and confidence that the products purchased are organically made (Nuttavuthisit & Thøgersen, 2017). Moreover, the study of Silva (2017) demonstrated that most customers unnoticed environmental labeling, and thus, there is a great necessity for the propagation of these markers and their meanings. When both the quality of the product and the sustainable label were explained, there was a positive influence on the respondents with an increased intention to purchase. Labeling can modify the customer's beliefs and expectations about a product and a result, affect the sensory experience of consuming it.

*Environmental concern* is based on the knowledge about the negative impacts of the individual's consumption patterns which results in their disposition to engage in pro-environmental behavior (Lima *et al.*, 2019). Over the years, consumers have become more conscious of environmental hazards which drove their willingness to protect both the environment and animals (Basha & Lal, 2019) by selecting products and brands that have the same concerns (Nguyen *et al.*, 2018; Nunes *et al.*, 2022). Numerous investigations found that consumers' concern with the environment causes a positive attitude toward the purchase of organic food, as well as in Portugal (Hansen *et al.*, 2018; Prakash *et al.*, 2018; Wojciechowska-Solis & Barska, 2021; Guiné *et al.*, 2022). On the contrary, some studies analyze that environmental concern, an altruist motive, is a non-significant predictor of organic food purchase and that health concern (altruistic motive) is a better indicator (Asif *et al.*, 2018; Fleseriu *et al.*, 2020; Hansmann *et al.*, 2020; Teixeira *et al.*, 2022). The study of Wojciechowska-Solis & Barska (2021) concludes that consumers present an egocentric behavior towards organics and thus, personal aspects such as health and product quality are of higher importance. Another possible reason for the preeminence of the health element over the environmental concern might be that the first is considered to have a more direct and personal impact whereas the second can be seen as distant to the consumers (Hansmann *et al.*, 2020).

*Social consciousness* is related to the individual's social concerns as well as their interest in their social surroundings (Hansen *et al.*, 2018). Customers not only buy products for their tangible features but also for their intangible ones namely, to support and protect the local communities and market (Rana & Paul, 2017; Bojnec *et al.*, 2019). *Product origin* is a relevant feature to consumers, in particular to those who associate their consumption with ideological issues and ethical motivations (Madureira *et al.*, 2021). Therefore, societal behavior motivates consumers to purchase local food which also influences their buying intention (Hansen *et al.*, 2018). In the study of Guiné *et al.* (2022), one of the determinants that motivated Portuguese participants to opt for organic food is that it can help local farmers. In opposition, Fleseriu (2020) found that social consciousness despite being a

significant predictor of defining personal attitude, does not have a direct influence on the buying intention or behavior regarding organic food.

Nowadays, individuals are more aware of the conditions and treatment of animals and thus, tend to buy cruelty-free products (Basha *et al.*, 2019). Since organic farming is known for promoting environmental protection and the well-being of farm animals (Gomiero, 2018), the ecological benefits of this type of farming can be connected to individuals' concerns about animal welfare (Teng & Lu, 2016). Consequently, *animal welfare* is an important determinant and motive for the purchase of organics (Wee *et al.*, 2014; Lee *et al.*, 2015). On the contrary, Basha *et al.* (2019) investigation in India showed that the welfare of animals is not considered in the purchase of organic food which could be due to the population's perception of "humans, animals, and living beings".

*Lack of accessibility, variety, and higher prices* of organic food are some components that discourage consumer demand (Rana & Paul, 2017; Hernández *et al.*, 2019; Chen *et al.*, 2022). Shoppers appear to be willing to pay a higher price for foods that are safer and more trustworthy (Basha *et al.*, 2019). Nevertheless, price acts as a barrier to consumers' choice to buy organic food due to the premium prices associated with this food (Yadav & Pathak., 2016; Basha *et al.*, 2019; Jánská *et al.*, 2020). According to the studies of Wojciechowska-Solis & Barska (2021) and Jánská (2020), even though the price is of less importance than the product quality and organic food benefits to the conscious consumers, the elevated cost the food is generally inaccessible to the population. Overall, the high price is the main obstacle in the choosing process of food (Guiné *et al.*, 2022). In Portugal, farms are often small, and producers are incapable of meeting the retailer-level demands which leads to their breakage of market entrance, reduction of the bargaining power, and lowering of the margins. The certification is costly and expensive to the small farmers who are the majority of organic manufacturers in Portugal (Dentinho, 2016; Salavisa *et al.*, 2021). Thereby, the high prices of organics do not reflect the producers' costs and as a result, these products are only accessible to a minority of the Portuguese population which represses consumption growth (Matos *et al.*, 2016).

The superior prices along with *lower availability* constrain the improvement of positive attitudes regarding organic agriculture (Rana & Paul, 2017; Nunes *et al.*, 2021). Although significant improvements in distribution channels occur, it is still an obstacle that usually hinders the purchase of organic food (Madureira *et al.*, 2021). Product availability is a relevant determinant of purchase intention, if consumers think that a product is difficult to find they will not try to acquire it. The demand is related to the supply, if the supply decreases so does the demand, and vice-versa (Teixeira *et al.*, 2022). Also, the lower proximity of selling points of organic farming foods can be a limiting factor in their purchase (Guiné *et al.*, 2022) and in reverse easy accessibility of such products affects positively their actual buying behavior (Singh & Verma 2017).

Another main element that alters the demand for organic food is the *lack of information and knowledge* among consumers (Nasir & Nasir 2017; Singh & Verma 2017; Koswatta *et al.*, 2022). Koswatta (2022) stated that there is not a full understanding of what is organic food and its characteristics that differ from other natural products. The data about this type of food is confusing and contradictory which may lead to consumer cognitive dissonance. Additionally, not being aware of the benefits of organic food and the belief they are not better than conventional products, is seen in some consumers' perception of greenwashing (Mkhize & Ellis, 2020). Singh & Verma (2017) made a critical review of several studies and concluded that in general, the awareness of organically produced foods is narrow, and the understanding of this food is inconsistent which negatively impacts the purchase intention. The familiarity with organics is a bit higher in Europe due to being a more developed market (Singh & Verma, 2017) for example, in the investigation of Guiné *et al.* (2022) it was showed that most Portuguese have good knowledge about organics, as well as higher consumption patterns when compared to the Turkish.

The *misunderstanding of labels* is also a component that backlashes the buyer's intention to purchase. Even though labeling aims to dwindle the information disparity between producers and consumers regarding the attributes of a product, the inadequacy of comprehending environmental labels leads to confusion or negative reactions from shoppers (Silva *et al.*, 2017; Mkhize & Ellis, 2020). Thus, increased knowledge and awareness of organic food play a substantial role that would encourage consumers buying decisions (Singh & Verma 2017; Guiné *et al.*, 2022).

In summary, to identify and target the consumers of organic food, it is important to understand the factors that affect their outlook (Rana & Paul, 2017). In most of the studies, health and safety insurance were considered the main drivers that motivated consumers to purchase and consume organic food (Madureira *et al.*, 2021). On another hand, price and accessibility are common barriers to the purchase of organic food (Rana & Paul, 2017; Hernández *et al.*, 2019). Several market strategies and actions were outlined to face these barriers which will be presented in the next section.

### **2.3.1 Strategies to face the barriers in the organic food market**

Intending to combat the obstacles previously mentioned and expand the organic food market, some authors explore the elaboration of market strategies (Nasir & Nasir 2017; Chen *et al.*, 2022; Koswatta *et al.*, 2022). Research made by Chen *et al.* (2022) proposes that applying the model of market-led innovation is a sustainable and advantageous business practice that helps grow the organic food market. This model suggests that “system”, “people” and “strategy” are the main three pillars to obtain customer loyalty.

The element “system” is based on how the value of a product is delivered to the customer. As above mentioned, the price premium is a critical block to organic food purchases, nevertheless, the shoppers care for the product value. Therefore, if it is recognized by the customers the importance of the product, they will purchase it even at a higher price (Chen *et al.*, 2022). Buyers must comprehend and value the added costs of organic production and feel that the care for their health and environment justifies the supplementary expense (Mkhize & Ellis, 2020). The delivery of this value is based on three themes: availability, branding, and communication (Chen *et al.*, 2022).

*Availability* is a key factor that impacts customers purchasing behavior and thus, it is necessary to guarantee that the organics can be attainable in all the mainstream outlets. The delivery of products is critical and affects the consumer’s demand. Logistic system formulation and improvement, E-commerce, and other new technologies can help remove availability as an obstacle (Chen *et al.*, 2022). In Portugal, the largest supermarket chains have improved the visibility and placement of organic products in their stores, however, numerous stores do not offer these products due to the high number of small and mid-size enterprises (Matos *et al.*, 2016; Salavisa *et al.*, 2021). The domestic production market is scarce, disorganized, and dispersed. Producers face several constraints namely high certification costs, low margins, lack of structural organization, poor diversity, high transportation costs, and deficient marketing strategies which make their products unsellable (Dentinho, 2016; Matos *et al.*, 2016; Salavisa *et al.*, 2021).

The customer’s decision-making process for organic food purchases is affected by *brand* awareness. A brand’s reputation conditions the relation between the values and stances of buyers: the higher the reputation, the stronger the motivation to purchase organic food. Overall, branding increases the delivery of the product value (Peneda de Oliveira *et al.*, 2020; Chen *et al.*, 2022). In Portugal, the lack of marketing skills is a leading barrier to the expansion of organic agriculture as the market is narrow and frail (Matos *et al.*, 2016). Several communication activities can contribute to creating awareness of a brand or product, “forging” the brand image in customers’ memories and “eliciting” positive brand feelings which ultimately drive sales, customer loyalty, and brand equity (Cant *et al.*, 2017).

The final strategy of the element “system” is *communication*. Communication is a primary strategy to provide value through marketing advertisements that translate the images and concepts to the customers (Chen *et al.*, 2022). One way to overcome consumption barriers and convert a positive attitude into an actual purchase is through creative communication strategies (advertising, storytelling, social media, and formal education) of the benefits of consuming organic products (Mkhize & Ellis, 2020). As previously mentioned, the perceived quality of organics and health concerns influence the consumer's intention to buy. Therefore, the product attributes should be attentively

promoted and associated with healthy consciousness to become more valuable and impacting positively the consumer purchase intention (Hansmann *et al.*, 2020; Teixeira *et al.*, 2022). Marketing planning and strategy should effectively communicate and convince potential buyers that the benefits of opting for organic food outweigh its high price by associating it with healthier lifestyles and highlighting the social, health, and environmental concerns (Singh & Verma 2017; Mkhize & Ellis, 2020; Teixeira *et al.*, 2022).

The “people” pillar of the “market-led innovation” model is regarding the communication of the company’s vision to the customers as well as their understanding of the product with a focus on the education element. *Education* is an important tool to promote comprehensive knowledge of organic products among consumers (Chen *et al.*, 2022) and helps them to make informed purchase decisions (Mkhize & Ellis, 2020). To shift from conventional to organic food consumption is not only through communication strategies but also through consumer education (Mkhize & Ellis, 2020). Greater awareness and information about the problems and processes regarding food production and consumption are particularly important to achieve environmentally friendly food consumption. The increase in individuals’ knowledge about ecological problems will enhance their concerns about the environment and boost their behavioral decisions toward organic food. Through education, the recognition of the ecological, social, and health advantages of organic agriculture can be raised and consequently, increase the value of such products (Torres-Ruiz *et al.*, 2018; Hansmann *et al.*, 2020). Generally, knowledge overcomes some of the obstacles to the consumption of organics, namely lack of buyer’s confidence and higher prices by lowering the uncertainties regarding the characteristics of organics and increasing trust in certification methods (Hidalgo-Baz *et al.*, 2017). Once more, communication through marketing actions and advertisement campaigns helps educate buyers regarding the advantages of opting for organic food and it is recommended to cultivate the growth of this market (Teixeira *et al.*, 2022).

At last, the element of the “strategy” focuses on understanding the dynamic of the current customer by identifying and fulfilling the unmet needs with quality products, constant innovations, and technology. Frequently, organic food shoppers expect high-quality goods that present a vast variety not only in terms of products but also in terms of taste. Thus, companies need to meet these expectations. Moreover, this segment aims to attract the right customer segment for organic food by correctly matching the brand or product images.

Understanding the consumers has been a focus of numerous studies over the decades. With the growing concern about the environment, health, and eating habits, the relationship between consumer behavior and the food industry has never been so crucial (Basha *et al.*, 2019). Overall, the recent literature displays that the attributes for the choice and consumption of organic food have



become more complex and less linear which according to Madureira *et al.*, (2021) is the anticipation of the emergence of a “new consumer” with “new motivations. Even though some key factors influenced positively the consumer demand and the sales of organic food, the market size is still rather narrow (Rana & Paul., 2017; Murphy et al., 2022; Willer *et al.*, 2023). The role of communication and education is crucial to promoting the organic food sector and thus, companies need to design more effective communication strategies to create awareness and increase sales (Nasir & Nasir, 2017). Additionally, the availability and variety of organic products in the main supermarkets and high brand awareness are critical points that affects positively the consumer’s demand.



## Chapter 3- Theoretical Approach

A diverse set of points of view and theories were gathered concerning the green gap in organic food consumption from the literature review elaborated in Chapter 2. As a result, several research questions emerged, which will be addressed in detail in this chapter.

The demand for natural resources in diverse industries has grown due to the rise of the human population and the increase in consumerism (Crenna *et al.*, 2019). One of the largest contributors to the environmental issues faced today is the food system, particularly, the agriculture sector (Rana *et al.*, 2017). This sector affects the biosphere integrity, land systems, biogeochemical flow, climate change, and freshwater use throughout its entire supply chain (Campbell *et al.*, 2017; Poore & Nemecek, 2019; Willett *et al.*, 2019). To face these challenges, scholars and organizations developed theories and policies namely, the UN 2030 Agenda, with the introduction of SDG number twelve, to ensure changes in both consumption and production patterns, while reducing environmental problems and, simultaneously, promoting economic and societal growth (Geels *et al.*, 2015; Esposito *et al.*, 2018; Khan *et al.*, 2020).

The debate about SCP has become a prominent and serious theme in both political and research areas. On one hand, the current environmental crisis has led to a growing concern about consumers' buying habits (Lorek & Fuchs, 2013; Ripple *et al.*, 2020). Scientific papers denote that urgent transitions in human behavior, lifestyles, and diet such as reducing consumption levels and changing purchase patterns are key to achieving sustainable development (Benvenuti *et al.*, 2019; Willett *et al.*, 2019; Khan *et al.*, 2020; Ripple *et al.*, 2020; Glavic, 2021). On another hand, companies also play an important role in achieving sustainability by changing to greener production methods. Over the years, society has been pressuring and criticizing corporations for their unsustainable and unethical behavior. As so, the sustainability concept has become a crucial part of business strategies, activities, and products (Carroll & Shabana, 2010; Ritala *et al.*, 2018).

In the food industry, one of the approaches for diminishing environmental impacts is organic farming, recognized as an eco-friendly manufacturing system (Akaichi *et al.*, 2019). This type of production is perceived by consumers as better for the environment, the well-being of animals, and human health than conventional food (Seufert & Ramankutty, 2017; Feil *et al.*, 2020;). The number of people willing to buy organic food has been increasing over the years, however, the sales of this type of food are still quite limited (Rana & Paul., 2017; Murphy *et al.*, 2022; Willer *et al.*, 2023). There is an inconsistency between the growing concern of consumers about the current ecological issues and their actual actions and behaviors towards them. This phenomenon is recurrently described in the literature as the “green gap” (Elhaffar *et al.*, 2020; Wang *et al.*, 2021). Therefore, to better

comprehend this phenomenon, it is essential to analyze the organic food market by exploring both the awareness and attitudes of the consumers towards it, which led to the first research question:

***(RQ1) What is the consumers' perception and behavior towards organic food?***

Urgent changes in the customers' behaviors and actions are key to the development of environmentally friendly production systems namely, organic farming. Moreover, the demand for organic food is essential to expand the market and ultimately, to green conversion in the food industry (Feil *et al.*, 2020; Hansmann *et al.*, 2020). Nevertheless, consumers' eco-friendly concerns do not convert into actual purchases (the "green gap"), which is one of the main obstacles to the growth of the organic market. Therefore, understanding the determinant factors behind the consumer's purchasing decisions is crucial however, the decision to acquire a good includes numerous reasons that increase the complexity and difficulty of comprehending this behavior (Hansmann *et al.*, 2020; Park & Lin, 2020). To explore the drivers behind the organic food decision-making process and target Portuguese shoppers, the second research question emerged:

***(RQ2) What are the main drivers that lead to the consumption of organic food?***

Throughout the years numerous studies have been carried out to understand and explain the consumer's perspective by exploring the arguments for and against organic food purchase (Basha *et al.*, 2019). Nonetheless, the results from some of the investigations are contradictory because the items and the methods tested were different and prevented the explanation of the "green gap" phenomenon (Testa *et al.*, 2021). In some papers, one of the factors that impact organic food consumption is a motivator and in others a non-significant predictor (Asif *et al.*, 2018; Hansen *et al.*, 2018). Also, another possible reason for these discrepancies can be due to cultural differences in the countries analyzed (Basha *et al.* 2019). Therefore, to further understand the current reasons behind the consumers' behavior in Portugal, it is not only important to search for the drivers but also, for the inhibitors of organic food consumption culminated in the third research question:

***(RQ3) What are the main barriers that prevent organic food consumption?***

Some authors explore the creation of market strategies to face the barriers and expand the organic food market ( Nasir & Nasir 2017; Chen *et al.*, 2022; Koswatta *et al.*, 2022). Chen *et al.*, (2022) propose the model of market-led innovation as a sustainable and advantageous business practice that promotes the growth of the organic food market. According to this model, there are three main pillars to obtain customer loyalty: "system", "people", and "strategy". The element "system" is based on the delivery of the product value to the customer via availability, branding, and communication. The second pillar is "people" which focuses on the commitment and the skills of the staff to achieve organizational effectiveness and thus, the delivery of the company's vision to the buyers. The final element "strategy" is based on the fulfillment of dynamic customer focus by identifying unmet needs

with quality products and constant innovations. In conclusion, since the barriers highlighted in the research are related to organic business marketing strategy (Chen *et al.*, 2022), it is essential to comprehend how companies can overcome those obstacles and promote the organic food market which brought this study to its last research question:

**(RQ4) What is the consumers' perception of the company's role in maximizing the organic food market?**

The table below presents the research objectives and the respective research question, formulated with the support of the literature review.

*Table 1- Relation between Research Objective, Research Questions, and Literature Review*

Objectives	Research Questions	Literature Review
(O1) To analyze the organic food market	(RQ1) What is the consumers' perception and behavior towards organic food?	Silva <i>et al.</i> , 2017 Chen <i>et al.</i> , 2022 Guiné <i>et al.</i> , 2022
(O2) To detect the current determinants behind the consumers' purchasing decisions toward organic food	(RQ2) What are the main drivers that lead to the consumption of organic food?	Hansen <i>et al.</i> , 2018 Basha <i>et al.</i> , 2019 Chekima <i>et al.</i> , 2019 Nunes <i>et al.</i> , 2021 Guiné <i>et al.</i> , 2022
	(RQ3) What are the main barriers that prevent organic food consumption?	Rana & Paul, 2017 Singh & Verma 2017 Madureira <i>et al.</i> , 2021 Chen <i>et al.</i> , 2022 Salavia <i>et al.</i> , 2021
(O3) To understand what companies can do to minimize the "green gap" in the organic food market	(RQ4) What is the consumers' perception of the company's role in maximizing the organic food market?	Torres-Ruiz <i>et al.</i> , (2018 Hansmann <i>et al.</i> , 2020 Mkhize & Ellis, 2020 Chen <i>et al.</i> , 2022 Teixeira <i>et al.</i> , 2022

Source: Self-elaborated



## Chapter 4- Methodology

The fourth chapter of this present thesis will describe the methodology used to proceed with this investigation as well as the steps taken to collect information regarding the subject in the study. Therefore, the following topics will be presented Research model, Data collection method, Interview procedure, and Sample characterization.

### 4.1 Research Model

Tarski (1977) defined research methodology as a discipline derived from logic, with the primary goal of studying the scientific method. This method can be defined as a set of practices accepted by the scientific community that can be used to display and validate a given theory. According to the type of investigation approach, there are two possible types of research methods: quantitative and qualitative. The first type of methodology - quantitative - aims to present and manipulate the numerical observations to describe and explain the phenomenon on which the observations are based. On the contrary, the second approach - qualitative - consists of a non-numerical interpretative observation to discover the underlying explanations and how they interrelate (Vilelas, 2009).

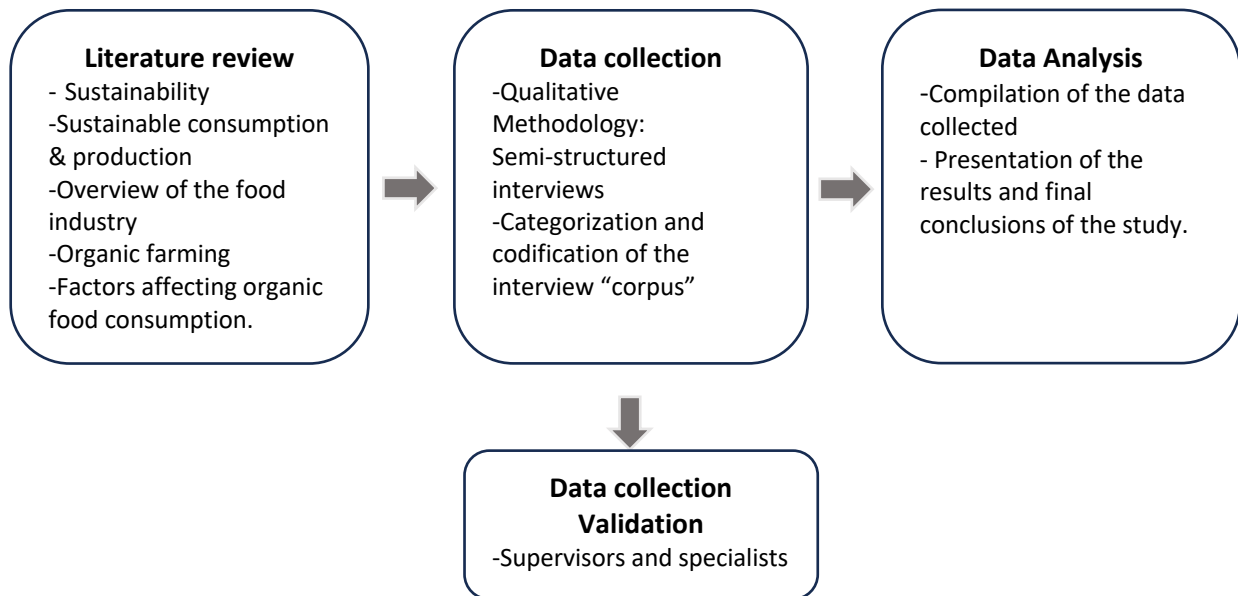
Moreover, this study has an exploratory scope since the “green gap” phenomenon in organic food has still not been fully clarified. The extant literature regarding this topic shows contradictory results for the reasons of the “green gap”. And so, the debate regarding the discrepancy between the consumer's willingness to purchase organic food and their actual buying behavior remains unsolved. Therefore, it presents itself as a solid research topic. Having said this, and with the willingness to contribute to the knowledge building around this topic in the Portuguese market, this study aims to: Comprehend and explain the green gap in organic food in the Portuguese market, as well as find ways to solve or decrease it based on the consumer's perspective.

To achieve the goal of this study, the qualitative methodology was adopted, as it allows an in-depth understanding and interpretation of the problem. As suggested by Vilelas (2017), the primary material of qualitative research is the word that expresses speech. It has the main goal of comprehending the logic of action, beliefs, habits, attitudes, and cultural values that provide guidelines for the members of a group or society on how to act in their daily lives (Vilelas, 2017).

The investigation was divided into three stages, namely: the first phase (literature review), was based on the research and review of the bibliography; the second (data collection) involved the fieldwork and the collection of primary data via interviews and, the final step (data analysis), was the qualitative analysis of the data which resulted in the presentation of results and conclusions of the phenomenon under study which help enrich the work carried out so far, specifically in the

comprehension of the organic food green gap. In the figure below 2, it is presented the research model used in the present study.

*Figure 2- Research Model*



*Source: Self-elaborated*

#### 4.1.1 Data Collection Method

The collection of data to elaborate this study was made through one-to-one semi-structured interviews, the most used method of collecting data in qualitative research. It was conducted using a non-probabilistic convenience sample composed according to both the availability and accessibility of the people approached. As highlighted by Vilelas (2009), this type of sample is typically used when a more in-depth analysis is not feasible, or to obtain general indications of a problem.

The selection of the semi-structured interview technique was based on its flexibility and ability to allow the researcher to refocus the question, or prompt for additional information. Before the interviews, a set of questions was developed and formalized in the form of an interview guide (annex 1). The interview guide was designed to cover the main topics of the study and provide a framework for the interview discussion, thereby ensuring its adaptable and non-rigid nature, which facilitated a fluid conversation process. Nonetheless, the participants are free to present their opinions and perspectives in the direction they consider appropriate. This allowed for a more thorough exploration of specific subjects and the integration of additional questions as the interviews unfolded. Furthermore, interviews were considered the most effective method for capturing consumer behaviors, opinions, desires, attitudes, and expectations (Vilelas, 2017).



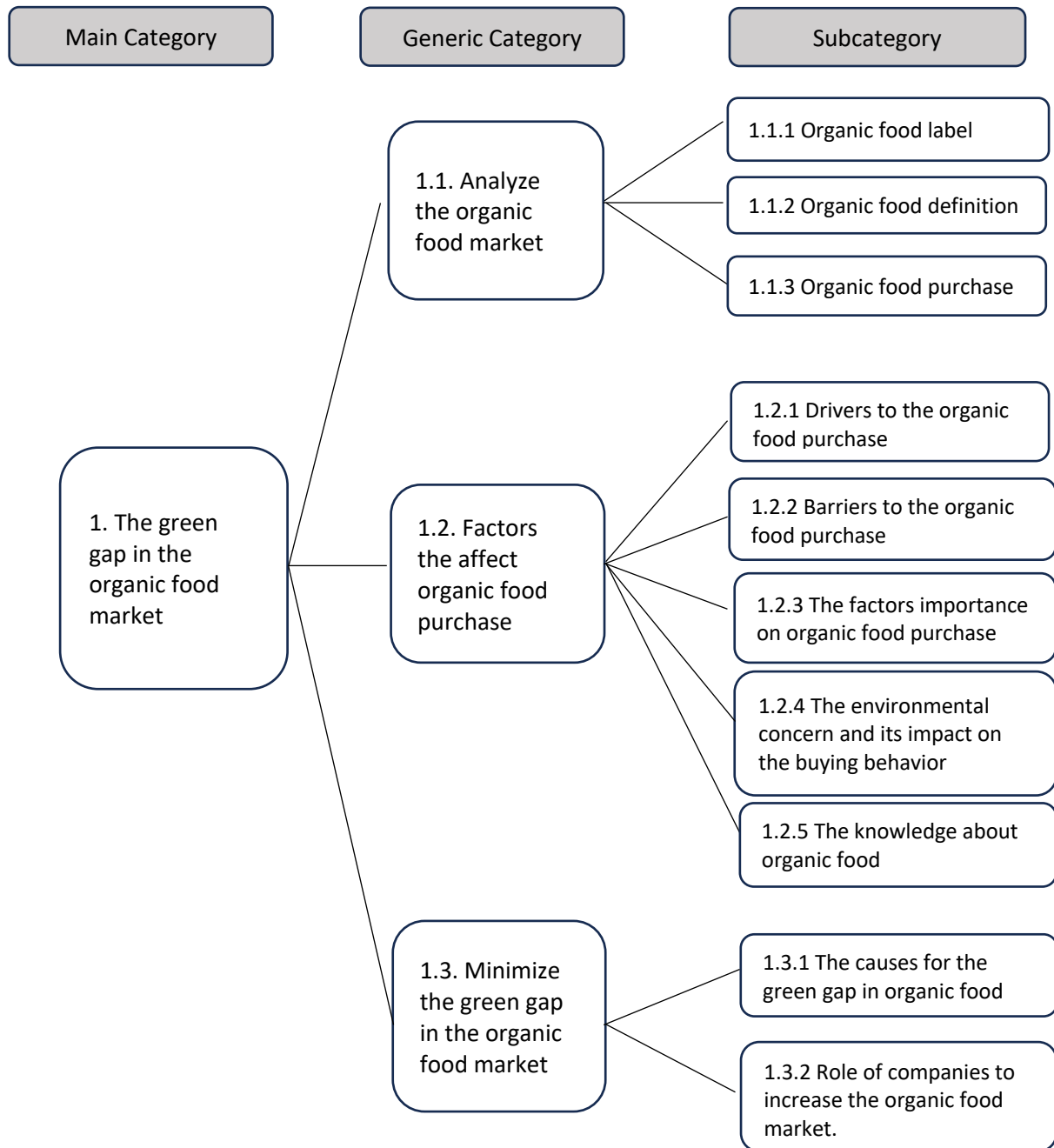
For a study to be considered credible, Vilelas (2020) suggested that a range of 15 to 20 interviews should be conducted. With careful examination, it became apparent that there was a recurrence of ideas among the participants after conducting 14 interviews. Considering this observation along with Vilela's recommendation, no additional interviews were carried out after reaching the 17th interview. Nonetheless, it is crucial to acknowledge that due to the limited sample size, the findings of this investigation should be cautiously interpreted.

The approach adopted to interpret the data was by the examination of the collected information in the interviews. This content analysis aimed to go beyond common sense and subjectivity in data interpretation and critically evaluate and analyze the content presented by the interviewees, as suggested by Vilelas (2017). The data analysis includes the execution of three integral phases, initially with the pre-analysis stage when the interviews are methodically organized and systematized. Thereafter, starts the examination of the content, followed by the coding and categorization of the interviewees. Lastly, the treatment of the results and their interpretation should be made (Bardin 2018).

Accordingly, in this analysis, the initial stage of the interview analysis involved transcribing all 17 audio recordings in a comprehensive written text, the *corpus*. This corpus served as the foundation for the subsequent content analysis. Once the corpus had been assembled, the next step involved in defining categories was undertaken. Vala (2005) asserts that categories can be determined in advance (*priori*), after data collection (*posteriori*), or by combining both approaches. In this investigation, the categories of the *corpus* were defined by using a combination of these methodologies. Some categories were initially defined based on the literature review conducted (*a priori*), whereas the subcategories were determined later based on the data collected from the interviews (*a posteriori*). Initially, the analysis of the interviews underwent a process of codification of the corpus, and afterward, it was organized into categories, subcategories, and sub-subcategories, which can be observed in Figure 3.

Lastly, the final results are exposed to meticulous treatment, and their interpretation is accomplished which will be presented in the next chapter. The research adopted a pragmatic or inductive approach, where the emphasis was not on deriving true or false conclusions, but rather on analyzing a collection of phenomena and facts to facilitate comparisons and investigate correlations among them. In this study, the data obtained from the interviews was subjected to content analysis using MAXQDA 2020.1, a sophisticated software designed for qualitative data analysis, enabling transcription and analysis of the interviews. The software also facilitated the organization of pertinent information through code categorization.

Figure 3- Categorization and codification of the interview for qualitative analysis



Source: Self- elaborated

#### 4.1.2 Interview procedure

One of the key stages in the research process was the planning of the interview script, which was guided by two different groups (annex 1). The first group of questions aimed at characterizing the sample through socio-demographic information such as name, age and level of education, among

others. The second part of the script was based on the literature review and focused on understanding the green gap in organic food in Portugal, specifically by investigating the drivers and barriers to purchase decision process and examining the role of the companies in expanding this market.

The interviewees were contacted personally via telephone or e-mail to participate in the investigation and the goal was to understand their point of view as a consumer of the organic food Portuguese market. This included their perceptions of the factors that influence the purchase decisions, their level of knowledge about organic food, their environmental concerns, and their explanations regarding the green gap.

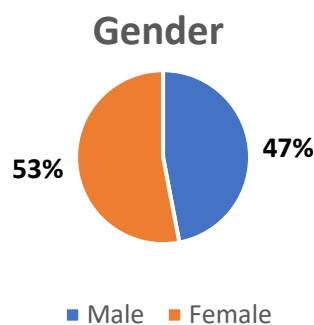
All interviews were conducted through Google Meet and were audio recorded with the participant's consent. Measures were taken to ensure the confidentiality of the personal data of the participants. The interviews last approximately 20-30 minutes and were conducted between July 31<sup>st</sup> and August 11th, 2023. At the start of each interview, the participants were provided with a brief explanation of the phenomena being studied and the importance of understanding their consumer perspective to better comprehend the problem and identify potential solutions.

## 4.2 Sample characterization

As previously mentioned, this study is based on primary data obtained from 17 semi-structured interviews with consumers of varying ages, genders, academic qualifications, professional backgrounds, and places of residence to have a wider range of perspectives on the organic market. By including the consumers who buy organic food and those who do purchase it, the study was able to gain a more comprehensive understanding of the subject matter, thereby enriching the findings.

As shown in Figure 4, the distribution of participants in terms of gender is nearly equal. Of the total 17 participants interviewed, 9 individuals identify as female, corresponding to 53% of the sample, while 7 participants identify as male, representing 47% of the collected sample.

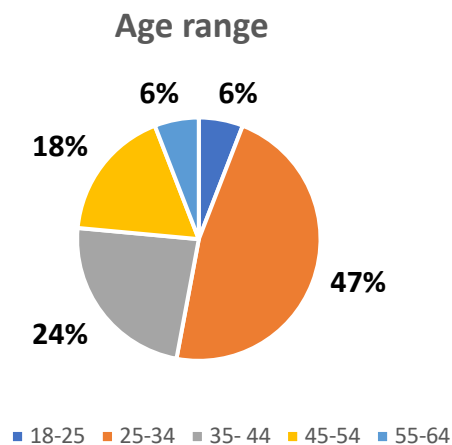
*Figure 4- Gender distribution of the interviewees*



*Source: Self-elaborated*

This investigation includes a sample of consumers across various age groups, ensuring a comprehensive representation, as seen in Figure 5. Among the participants, 6% fall within the 18-24 age range, while the largest proportion, constituting 47%, falls within the 25-34 age range. Furthermore, 24% of the sample falls within the 35-44 age range, followed by 18% between 45-54 years old. Lastly, 6% of the participants are between the ages of 55-64.

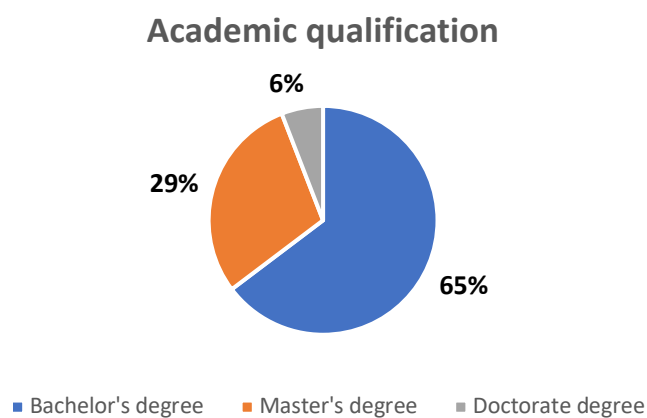
Figure 5- Age range



Source: Self-elaborated

In terms of the academic qualifications of the participants, as presented in the chart below, the majority, corresponding to 65%, possess a bachelor's degree. Following this, 29% hold a master's degree, and finally, 6% have a doctoral degree.

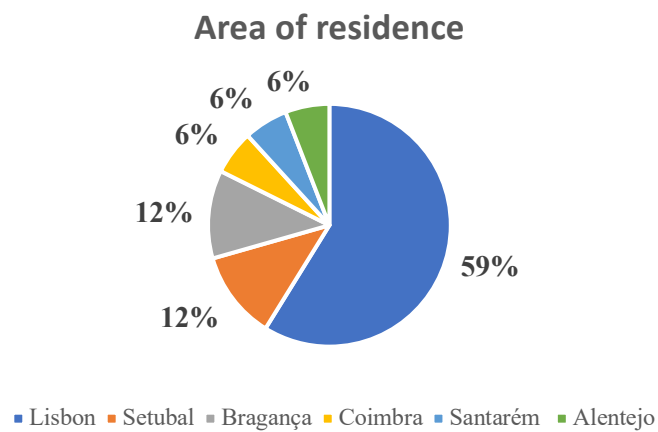
Figure 6- Academic qualification



Source: Self-elaborated

Finally, concerning the participants' area of residence, it was observed that they were located in various districts across Portugal shown in Figure 7. The majority of the interviewees, comprising 59%, resided in Lisbon. Furthermore, 12% of the participants lived in Sétubal and an additional 12% were situated in Bragança. Coimbra accommodated 6% of the participants, while Santarém and Alentejo each constituted 6% of the residential distribution.

*Figure 7- Area of residence*



*Source: Self-elaborated*



## **Chapter 5- Data Analysis and Discussion**

The fifth chapter of the present study will analyze the data gathered from the qualitative methodology used in this study. Thus, the following main topics will be discussed: organic food market, factors that affect organic food purchase, and ways to minimize the green gap of the organic food market.

### **5.1 Organic food market**

The first research category of this investigation, aimed to explore the organic food market by focusing on understanding the participants' awareness regarding organic food. It is expected that these introductory questions provide insights into the level of knowledge as well as consumption patterns of organic food among the interviewees.

#### **5.1.1 Organic food symbol**

To assess if the interviewees were able to recognize the organic food certificate, the label was presented to them without context, and it was asked if they were able to say what it stood for. Most of the participants 9 out of 17 (53%) were unable to identify organic food certificates. Some participants had never seen the organic food label (12%), while others had previously noticed it but were unable to interpret its meaning (24%). There was even a case where one participant confused the organic label with another certification (trade fair). This correlates with the findings of a study conducted by Silva (2017) which revealed that most of the customers overlooked ecological certifications and therefore, there is a great necessity for the propagation of these labels and their meanings.

#### **5.1.2 Organic food definition**

To assess the level of knowledge around the concept of organic food, it was asked to the participants of the study to define of what they characterize organic food by. Later their definitions were compared with the formulation of the European Parliament and Council (2018) "Organic production is an overall system of farm management and food production that combines best environment practices, a high level of biodiversity, the preservation of natural resources and the application of high animal welfare." Moreover, organic farming in the EU is based on key principles: banning the use of chemical pesticides and fertilizers; restricting the use of antibiotics; prohibiting the use of GMOs, and rotating the crops.

In Table 2, it is presented the answers of the interviewees regarding the definition of organic food. The most mentioned component by the participants (82%) was the absence of artificial fertilizers

or pesticides in the organic food. Additionally, 9 interviewees (53%), acknowledged that the preservation of the ecosystem is a principle within organic agriculture. The preservation of natural resources in organic farming was referred by 4 participants (24%) and the restricted use of antibiotics was pointed out by 3 interviewees (18%). The less commonly referred attributes of organic food were animal welfare and biodiversity by 2 (12%) and 1 (6%) interviewees respectively.

Even though, the definition provided by the EU of organic food is based on eight pillars, most of the participants were able to identify two of them, namely, the prohibition of using chemical pesticides and fertilizers and the best environmental practices, as seen in Table 2. Other characteristics such as crop rotation and the prohibition of using GMOs were not referred by any of the interviewees. Furthermore, one consumer (6%) exhibited a lack of understanding towards organic food by admitting to being uncertain about the distinction between organic and artificial food. Similarly, in a study conducted by Chen *et al.*, 2022, when it was asked to the respondents about their understanding of organic food, the most common replies were "Organic food is natural, healthier and good for the environment." According to the same author, this definition is correct but not sufficient.

Below in Table 2, it can be seen in the "times mentioned" column, the importance of the drivers mentioned above by number of referrals.

*Table 2- Organic food definition by Interviewees*

Text	Times mentioned	Interviewees
Organic farming is a type of farming that does not use pesticides or other non-natural substances	14	2,3,4,5,6,9,10,11,12,13,14,15,16,17
Organic food is grown and produced in a sustainable way that respects the environment	9	2,4,7,8,9,12,14,15,16
Promotes the proper use of the existing resources	4	2,9,16,17
It is food produced without any type of additives to grow faster (hormones)	3	2,3,4
Organic food is food that respects animal welfare	2	7,10
It maintains the biodiversity	1	9

*Source: Self-elaborated*



### 5.1.3 Organic Food Purchase Behavior

To understand the behavior regarding the purchase of organic food, it was asked to the participants if they usually purchase organic food. Our findings revealed that most of the participants, 10 of 17 (59%), did not consume organic food. On the other hand, the remaining 7 participants (41%) mentioned that they typically purchased certain types of organic food, particularly "fresh products" such as fruits and vegetables. Within this sample (people who regularly buy organic food), some participants (12%) mentioned that they occasionally bought organic products without even knowing it, while others (12%) stated that their purchasing decision is often dependent on the price difference between organic and "conventional" food products. On the contrary, a study with Portuguese participants made by Guiné *et al.*, 2022 showed that the majority of their interviewees consume organic food about 2 a 3 meals per week. Moreover, the results of that study defend that, in general, the most commonly purchased organic foods are fruits and vegetables, equivalently to the findings of the present investigation.

In conclusion, it was observed that out of the 9 interviewees (53%) who were unable to recognize the organic food symbol, 6 of them (35%) did not purchase this type of food. This suggests a possible correlation between lack of knowledge and purchasing behavior.

## 5.2 Factors that affect organic food purchase

The second research objective aimed to identify the current determinants behind the consumer's purchasing decisions towards organic food, being it drivers or barriers. Additionally, it was explored in more depth two different factors, the environmental concern and knowledge of organic food to further understand the consumers' consumption behaviors.

### 5.2.1 Drivers of organic food purchase

To ascertain the factors influencing consumption decisions, participants were asked to identify the drivers of organic food purchases. Table 3 presents the key arguments expressed by the interviewees on the reasons that motivate their consumption of organic food.

The *health concern* can be defined as an individual's propensity to act toward the protection of their health, including in their food choices, and is one of the main factors that affect organic food purchases (Hansen *et al.*, 2018). Most of the participants (59%), also cited that health concern is the main reason for buying organic food, as one of the subjects stated, "*I honestly feel that the main reason (for buying organic food) is health, to have a better life quality and start to realize that what*

*we eat has a lot of influence on our bodies*". The consumers believe that organic food is more natural, safer, and healthier for the body compared to other products since it is free from harmful chemicals, as Chekima *et al.*, (2019) and Nunes *et al.*, (2022) defended.

As time passed, society has become more aware of the ecological endangerment which led to the concern of both the environmental and animal safeguard. Thereupon, several investigations have revealed that consumers' *environmental concerns* are positively associated with their attitudes toward purchasing organic food (Hansen *et al.*, 2018; Prakash *et al.*, 2018; Guiné *et al.*, 2022). As can be seen in Table 3, almost half of the participants (47%) also mentioned the factor of environmental protection as a driver of organic food purchases.

Furthermore, a few participants (24%) emphasized their concern regarding *food safety*, stating that conventional products are often contaminated with various substances such as fertilizers, additives, and hormones, which many people may not be aware of. Thus, customers choose organic products that are safer for their health to minimize the risks adjacent to syntenic food as also observed in the literature by Basha *et al.*, (2019) and Molinillo *et al.*, (2020).

Additionally, the *perceived quality* of organic food plays a significant role in motivating its consumption. Intrinsic characteristics such as taste, freshness, nutritional value, lower environmental impact, and the absence of pesticides are significant factors that shape consumers' decisions to purchase organically produced foods (Chekima *et al.*, 2019; Escobar-López *et al.*, 2017; Guiné *et al.*, 2022). Data from the interviews revealed that organic food is perceived by some (18%) as superior regarding the overall quality, particularly in terms of taste when compared to "conventional" products which motivates customers' choices to purchase organic food.

At last, society has become more conscious of the conditions and treatment of animals, leading them to prefer products that are cruelty-free (Basha *et al.*, 2019). Organic agriculture, known for its prominence on environmental protection and the well-being of animals, aligns with individual's concerns about animal welfare (Teng & Lu, 2016). Consequently, *animal welfare* serves as a significant determinant and motive for the purchase of organics (Wee *et al.*, 2014; Lee *et al.*, 2015). Notwithstanding, it is worth noting that in this investigation, only one interviewee (6%) mentioned the importance of animal welfare, which suggests that this driver may not be a primary consideration in organic food purchases as defended by Basha *et al.*, (2019).

Below in the table, it can be seen on the "times mentioned" column, the importance of the drivers mentioned above by number of referrals.

Table 3- Drivers of Organic food purchase

Text	Times mentioned	Interviewees
For the impact on our health, a more positive impact. It is more natural and healthier for us, for our bodies	10	1,3,4,5,9,11,12,15,16,17
Due to greener thinking and caring about the environment, buying organic food becomes a means of helping to combat the environmental problems we are experiencing	8	1,3,4,7,11,15,16,17
So many things are put into food these days, so many hormones in the meat, so many fertilizers	4	5,9,12,16
Because they do not contain chemicals, the quality of the food is better	3	1,14,16
The concern with the animal's welfare	1	16

Source: Self-elaborated

## 5.2.2 Barriers to organic food purchase

To determine the reasons behind consumption decisions, it was requested that the participants identify the barriers to organic food purchase. These findings are presented below in Table 4.

Almost all of the surveyed (88%) recognize that the price difference between organic vs. “conventional” products is the main inhibitor for consumption, as seen in other studies from Rana & Paul, (2017) and Nunes *et al.*, (2021). Some of the participants (24%) stated that it was the only block for not buying organic *“I identify with the group of people that have this concern (with the environment) and do not put it into practice because of the price. Right now, when I go shopping my deciding factor is the price”*. Another interviewee mentioned why the price is a deal-breaker in the buying moment, *“Due to phenomena such as inflation and the loss of income, the budget allocated to the supermarket is affected. People try to buy as many products/goods as possible with the same or less money. So, the factor of whether you can buy or not is always the price.”*

One other factor pointed out by eight interviewees (47%) was the *lack of availability and variety* of organic food. Matos *et al.*, (2016) and Salavia *et al.*, (2021) highlighted that even though the leading Portuguese supermarket chains have increased both the position and visibility of the organic food products, still several of their stores do not sell this type of product. The consumers are aware of

this problem as one of them mentioned *"You can either make an effort to go to a store like "celeiro", where you have a wide range of products, or you can go to a "normal" store like "continente". Though it has a section for organic products, you will end up with a smaller range, especially if the stores are more local or smaller."* On the contrary, if the goods are easy to access it positively impacts purchasing behavior (Singh & Verma 2017), as stated by one of the participants *"the bigger the range and its availability, the more options it gives us, and the more we want to buy."* Additionally, other (24%) participants mentioned that the section of organic products in the supermarket is a small island without a large range of products, making it less attractive to consumers.

Another barrier that was often discussed in the interviews was the *lack of information* regarding the concept of organic food and, more specifically its benefits. The participants (24%) think that the consumers are aware that organic food has a higher quality, but it is a very superficial idea. There is a weak explanation and communication of the benefits of this type of product when compared to the "conventional" one. Consequently, one of the surveyed explained *"I do not think there is any communication, or information about the concept of organic food. Therefore, if the people are not properly informed, do not understand the benefit, and on top of that, they have to pay more, it is only natural that they will not buy it"*. This obstacle is also referred by Singh & Verma (2017) and Koswatta *et al.*, (2022), the awareness and knowledge of organics are limited among consumers which is unfavorable to their buying intention.

Organic food is a credence good due to its intangible features, hence it is difficult to identify and distinguish them from "conventional" goods, which may bring a lack of *trust* or confidence regarding green food claims (Vega-Zamora *et al.*, 2018; Madureira *et al.*, 2021). This difficulty in believing that in fact, the product is organic was the central apprehension of one of the surveyed (6%), *"It is the confidence that the product is organic, and that is a concern that I feel other people have. These concepts should be clear, so people can make a choice that is in line with their intentions. I do not believe people do not want to pay the difference (between organic and conventional products). But they want to feel that they are buying, what they think they are buying"*. The consumers' distrust of organic products has a negative effect on their beliefs and thus, decreases their desire to purchase this food as defended by Silva *et al.*, (2017), Nuttavuthisit & Thøgersen, (2017), and Mkhize & Ellis, (2020). However, the factor of trust was identified as a barrier by only one person (6%) which may be considered as a minor obstacle in the consumption.

At last, another aspect cited in one interview (6%) was the importance of the *brand*. According to the opinion of the participant, in general, organic food brands are unknown to the public, and thus, consumers are not able to recognize them in the stores, and even if they do, most likely, will not buy from a brand that is unknown and more expensive. In fact, according to Peneda de Oliveira *et al.*,

(2020) and Chen *et al.*, (2022), brand awareness influences the decision-making process of a shopper; a higher brand reputation leads to a stronger incentive to purchase organically produced food. Nevertheless, only of interviewee (6%) mentioned this factor which can be considered a minor barrier to the purchase.

In Table 4 below, it can be seen in the "times mentioned" column, the importance of the drivers mentioned above by number of referrals.

*Table 4- Barriers to Organic Food Purchase*

Text	Times mentioned	Interviewees
I feel that there is a very high price point on organic vs. "normal" products	15	1,2,3,4,5,6,7,8,9,11,12,13,14,15,17
There is not as much variety and availability of organic food as there is with the other products	8	3, 5,6,9,11,12,16,17
I think there is poor communication in terms of explaining the benefits of organic products	7	1,2,6,9,10,13,14
Because brands are unknown to the public and consumers are not loyal to them.	1	9
It is the trust that organic food is in fact organic	1	10

*Source: Self-elaborated*

### **5.2.3 The importance of the factors on organic food purchase**

To further explore the topic of organic food purchases, a table (annex 1) was presented to the participants with a list of factors that impact consumption based on the literature review. They were asked first to identify the factors as either barriers or drivers and second, to order them based on their perceived importance. Thereupon, this analysis aims to comprehend which are the reasons that have higher importance and the ones that are considered less significant in customers' perspective to better understand their motivations behind the purchase decision. To determine the ranking of the factors in the analysis, it was calculated the mode, the value that is repeated most often in a set of data values. The scale of importance for the drivers was determined by the number of factors (1-9). Having said this, the higher the number the more importance it assumes for the interviewees. The same logic was applied to the barriers with the exception that there were only identified 3 factors, scale (1 to 3).

In terms of the drivers, most of the participants selected the “Health concern” as the factor with the highest importance in their consumption of organic foods. As seen previously, one of the attributes of organics is that it is free from harmful chemicals, a characteristic that consumers highly appreciate and take into consideration when shopping. Consequently, the health concern is the main driver of the purchase as also cited in other studies from Chekima *et al.*, (2019) and Nunes *et al.*, (2022).

Secondly, it is the incentive “Environmental concern”. The environmental concern due to being an altruist motive, in some studies of the literature review, was not considered to predict the consumption of organics. And that, the health concern, and egoistic motive, is a better indicator (Asif *et al.*, 2018; Fleseriu *et al.*, 2020; Hansmann *et al.*, 2020; Teixeira *et al.*, 2022). Even though, in this study, the health concern is the primary incentive, the concern for the environment is also considered a substantial factor, as it was chosen as the second most important driver of the consumption of organic food.

The “Food safety” factor is ranked in third place. This element is commonly designated by several authors namely Rana & Paul, (2017) and Madureira *et al.*, (2021), and is one of the leading points to motivate customers to consume organic food, which is also proven in this analysis.

In fourth position is the “Quality of the product” driver. One of the interviewees commented, “*These (organic food) are high-quality products that use fewer pesticides and are healthier*”. Equivalently, as examined by Chekima *et al.*, (2019); Escobar-López *et al.*, (2017), the taste, nutritional value, and low ecological effect, are some of the organic food qualities that persuade the shopper attitude.

The “Trust” element is in fifth place. The consumer must trust that the products are organically produced, otherwise, it reduces their motivation to purchase them (Nuttavuthisit & Thøgersen, 2017). Overall, most of the respondents trust the products. Nevertheless, 5 participants (29%) considered this factor as a barrier because they believe that there is still ambiguity about organic food which negatively affects their decision to buy it.

Sixthly, is the “welfare of animals” motivation. Over the years, the awareness for protection of the animals has been growing and therefore, it is an influential motive in the consumption of organics as some studies detected by Wee *et al.*, (2014) and Lee *et al.*, (2015).

In seventh place is the “Information of the product” factor. The greater part of the interviewees considered that having information about the product is essential, whether if it is organic or not. However, 2 participants (12%) mentioned that there is a poor explanation or information about organic food, namely its difference from the other products, and thus, they identified it as a barrier. One of the participants explained “*The more information we have on any subject, the more it benefits*

us. Nevertheless, I think there is little information (regarding organic food).” The literature review corroborates this opinion and considers that there is a lack of information and knowledge which causes an obstacle to organic food consumption (Singh & Verma, 2017; Mkhize & Ellis, 2020).

The “Social consciousness” driver is ranked eighth. Social behavior is often a motive for consuming local food which helps the regional farms, as recognized in several studies Rana & Paul, 2017; Bojnec *et al.*, 2019. Even though social consciousness is considered a driver by the sample analyzed, it is a factor with less importance to the purchase decision in the sample analyzed.

In final place is the “Certification” factor. The participants had two opinions about this factor, ones believe that *“It is not an important factor in my purchase, I do not check that often if a product has a certificate or not”*, and others think that *“Many certificates are even fed or paid for by corporations, so I am not going to say it a tractor because it's not”*. The first opinion is also defended by the study of Silva (2017) and thus, it is necessary to spread these labels and their definition to increase the intention of consumption. Regarding the second point of view, the lack of trust in the labels or the characteristics of the products is going to negatively influence the motivation to purchase organic products, as previously mentioned.

*Table 5- Importance of the organic food consumption drivers*

Drivers	Importance
Health Concern	1
Environmental Concern	2
Food Safety	3
Quality of the Product	4
Trust	5
Welfare of Animals	6
Information of the product	7
Social Consciousness	8
Certification	9

*Source: Self-elaborated*

In terms of the barriers, the participants identified in the first place the price as the element that most impact adversely their intention to buy. As mentioned by one interview (6%), organic

product is “Excessively *expensive for the average middle-class income*”, and probably one of the main obstacles to purchase. Similarly, the bibliography states that due to the high prices, only a minority of the population can have access to this type of food (Basha *et al.*, 2019; Jánská *et al.* 2020).

In second position is the “Variety” factor. In the general opinion of the participants, the variety of organic food is low in terms of the number, range, and type of products offered, thus, it discourages the act of acquiring (Rana & Paul, 2017; Chen *et al.*, 2022;).

In the last place is the “Availability” barrier. As mentioned by one participant, “*It is often a barrier because they are (organic food) not as easily found as other types of products. If there are no products, there is no way to buy it*”. Besides, the interviewees reported that in the case that the supermarket close to them does not have organic products, they will not go to another only to buy this food, as confirmed by other researchers such as Teixeira *et al.*, 2022.

Table 6- Importance of the organic food consumption barriers

Barriers	Importance
Price	1
Variety	2
Availability	3

Source: Self-elaborated

Furthermore, it was asked to the interviewees if any other factors could impact the organic food purchase intention, besides the ones that were already presented. From that question emerge four different points, as seen in Table 7.

A couple of the interviewees (12%) considered *brand and marketing* an important part of the decision-making process of buying an organic product. One of them (6%) mentioned the following “*Organic is an attribute of the product that customers are beginning to recognize, but the product needs to be marketed (...) The name organic should start to have more brand equity*”. Matos *et al.*, (2016) study also verified that in Portugal, the principal obstacle to the development of the organics market is inadequate marketing skills.

Thereafter, other two participants (12%) mentioned the impact that family and friends have on the purchase and consumption decisions of an individual. One of the surveyed (6%) said “*If your community, the people around you, also consume this type of food, that will be an incentive for you to consume it too. The influence of our social involvement, social circle, or circle of friends*”. Also, in the



opinion of another interviewee (6%), *“It is not only the people around you that impact our food choices but also the social media networks, for example, the influencers”*. Some people might feel the pressure or want to eat a healthier diet or consume organic food because others around them, in real life or virtually, are doing the same. In this study, the *social influence* was nominated as a factor that affects organic food consumption which was not present in the referred investigations on the literature review (chapter 2).

According to Rana & Paul, (2017), shoppers often buy products for their tangible and intangible characteristics namely, to support *local production*, as shown in two participants (12%) of this study. One of them (6%) even stated that *“At least for me (local products), it is something I tend to value more and more and, it is a decisive factor when buying a product or choosing between two products”*.

The last couple of factors identified by other two participants (12%) that influence on the purchasing patterns of food produced organically are *food education and habits*. According to the interviewees, eating habits and education are firmly linked. If in a person’s household or school, it is common to eat organic food, then, more likely, they will end up continuing with this eating habit. Thus, to shift the pattern of consumption from “conventional” to organic food is not only through marketing and communication but also through consumer education, as previously mentioned and defended by several authors Torres-Ruiz *et al.*, (2018); Hansmann *et al.*, (2020). With increased awareness and knowledge about the ecological, social, and health advantages that derive from organic agriculture, it may increment the value and ultimately grow the market of such products (Teixeira *et al.*, 2022).

*Table 7- Other factors that affect Organic food purchase*

Text	Times mentioned	Interviewees
It is marketing the organic products, create brand equity	2	3,13
The influence of our social involvement, social circle	2	3,8
Origin of the product, made in Portugal	2	7,14
Changing food education and habits	2	2,6

*Source: Self-elaborated*

#### **5.2.4 The environmental concern and its impact on the purchase behavior**

To prevent or reduce the impact caused by unsustainable consumption, changes in consumer behavior are needed namely, the adoption of sustainable consumption (Crenna *et al.*, 2019; Wijekoon & Sabri,

2021). And so, over the years, the number of consumers willing to buy green products has been growing, including organic food. Notwithstanding, these attitudes do not convert into actual behaviors and thus, the sales of this food are quite narrow (Rana & Paul., 2017, Murphy *et al.*, 2022). The extant literature shows a discrepancy between consumers growing care for ecological problems and their actual actions towards it, the so-called green gap (Elhaffar *et al.*, 2020). To better comprehend this gap, it was asked the interviewees their opinions regarding peoples' concerns about the environment and how those concerns affect buying behavior. These findings can be observed in the Table below, 8.

The perspective of some of the interviewees (47%) is that ecological problems are not a concern for Portuguese society. One of the interviewees said, *"I think it is total cynicism, I think deep down they (society) do not care about the environment, at least what they say is not in line with their actions"*. Another participant (6%) mentioned that consumers care for the ecosystem in a moral context, but only on a superficial level. The reason for individuals disregarding the environment is that they still have not gone through the effects of ecological deterioration.

Furthermore, the participants explained the reasons the Portuguese consumers overlook environmental protection in their consumption moment, as seen in Table 8. Many of the interviewees (53%), explained that the *price* is the main factor for the lack of care towards the ecosystem in the act of buying. As one interviewee (6%) mentioned *"I think there is a small niche of people who are aware of the environmental impact and cost of their purchases in general. I think people are sensitive to the issue if it does not mean an increase in cost, and generally, it does, so sensitivity is low"*. Additionally, the surveyed (35%) mentioned that in their perspective socio-economic factors play a crucial role in the consumption decision. Green products are usually more expensive and so, individuals with higher income status can acquire them and put into practice their environmental concerns. On another hand, individuals with a lower income, even if they have an interest in protecting the ecosystem, cannot afford to buy green products, namely organic food as defended in the literature by Chen *et al.*, (2022) and Guiné *et al.*, (2022).

The *reduced information or knowledge* of the ecological problems is also mentioned by the respondents (24%) as an element that impacts environmental care. On the contrary, if consumers are more aware of the negative impacts of their consumption behaviors, they will make more informed decisions (Mkhize & Ellis, 2020). An interviewee (6%) gave the following example *"Concerning the avocados, I learned that they consume a lot of water and cause problems in the deforestation. So, maybe today I do not always buy avocados as much as I like it, I reduce my consumption because I know this information but, if this information had never reached me, I would never have known"*.

Another point raised by one of the participants (6%) was that individuals think is sufficient to adopt a few sustainable behaviors and thus, will not be aware of other important green practices.

*Overconsumption* was another point referred by 4 respondents (24%) as one of the reasons consumers show disregard for the environment. As defended by Crenna *et al.*, 2019, the demand for natural resources has increased because of the rise of the human population as well the consumerism which led to incremental ecological issues (Crenna *et al.*, 2019). One of the surveyed commented “*The concern with the environment is a very relative thing (...) I have serious doubts because the rest of the human activities and consumption continues to grow.*”

Additionally, as revealed by 2 participants (12%), another characteristic of the consumers that affects the environmental concern is *conformity*. The reluctance to make efforts to change consumer habits is an impediment to ecological change. The interviewees of this study proposed that the consumer’s conformism is a factor that influences the consumption of organic food, however, this reason was not mentioned in the research discussed in the literature review (Chapter 2).

Finally, an interviewee (6%) mentioned that the *culture* of the country impacts the individual’s way of think and act. This participant also considers that in Portuguese society green behaviors are not commonly practiced because it is not embedded in the culture. In the biography (Glavic, 2021), it is highlighted that culture is one of the pillars of achieving sustainability through changes in terms of habits, behaviors, and lifestyles. Nevertheless, the cultural factor was not detected in the research regarding the reasons that affect organic food presented in the literature review (Chapter 2).

*Table 8- Reasons for the lack of concern about the environment*

Text	Times mentioned	Interviewees
I think people are sensitive to the ecological issue if it does not mean an increase in cost, and it usually does	9	3,4,6,8,9,10,11,12,13
There is a basic lack of knowledge, and I think we should invest a lot on information about the environment	4	2,5,7,16
They are (society) completely consumerist, they buy lots of clothes and technology, nothing is reused, nothing is fixed	4	2,10,12,17
It is difficult for individuals to change their consumer habits, which can be associated with bad environmental practices	2	2,16
People are not aware of or concerned with the ecological problems because it is not embedded in society	1	3

*Source: Self-elaborated*

### 5.2.5 The knowledge about organic food

Insufficient information and knowledge about organic food is one of the main barriers to its consumption, as defended by several authors (Nasir & Nasir 2017; Singh & Verma 2017; Koswatta *et al.*, 2022). Hence, it is important to explore this obstacle and understand Portuguese society's awareness of the meaning of organic food and its characteristics that differ from other products. To do so, the interviewees were asked to express their opinions regarding the level of knowledge about organic food in the Portuguese market.

More than half of the respondents (71%), think that the Portuguese do not have sufficient knowledge regarding organic food. Also, in other studies, it was observed that the awareness of organic aliments is narrow, and consequently, negatively impacts the buying intention (Singh & Verma 2017; Chen *et al.*, 2022). Even though, over the years, there has been more communication around organic products, it still is not fully comprehended by the public. As one surveyed (6%) commented *"I do not think it is clear what organic food is, its definition and benefits are not clear to the public"*.

From the perspective of a few interviewees (47%), customers might be aware of the meaning of organic food, however, its impacts on health, animal welfare, environment, and society, remain unknown. One participant (6%) said, *"I think you often know that it is (organic food) important in a qualitative way, but you do not know why it is important in a quantitative way. I think that just knowing that it is better ends up not being that differentiating in your range of information, because then you do not have much of a choice when it comes to making decisions"*. According to Chen *et al.*, 2022, education regarding the issues in both food production and consumption is important to achieve sustainable consumption. By being more conscious of environmental issues, individuals will be prone to change their purchase behaviors towards green food. Lastly, knowledge about organic food and its advantages brings positive impacts such as raising the value of this type of product and gaining the consumer's confidence in how this product is made (Hidalgo-Baz *et al.*, 2017).

### 5.3 Minimize the organic food green gap

The third research category of this study intends to understand how to surpass the barriers of organic food consumption to solve the green gap and, consequently, expand this food market. To do so, it is important to explore some topics namely, the causes that lead to the green gap and at last, the role of the companies in increasing the market.

### 5.3.1 The causes that led to the green gap in organic food

One of the barriers to organic food purchase is the green gap phenomenon - the inconsistency between what individuals say regarding their concern for the environment and what they do to reduce the effects of these problems. Additionally, the market of organic food is based on consumer demand, and thus, it is crucial to understand the reasons behind shoppers' attitudes that are not translated into green purchase behavior (Wijekoon & Sabri, 2021). To that end, it was asked the participants what were the reasons behind the green gap in the Portuguese organic food market.

As presented in Table 9, the general opinion of the interviewees (88%) is that the price is the main reason for this gap to occur. The *high price* of organic foods associated with the low level of income of the Portuguese, causes the discrepancy between what consumers want to buy and what they buy, as also seen in Matos *et al.*, (2016).

Furthermore, according to some of the participants (35%), the *lack of information* is another factor for the organic food gap. In this interviewee's opinion, there is an overall unfamiliarity regarding organics, especially in some fragments of the Portuguese population, such as the elderly. Moreover, one of the surveyed (6%) commented that the lack of information is not only towards the concept of organic food but also on the harmful effects that the food industry causes.

One other reason for the green gap in the organic food market is the *conformist* behavior of the individuals. To decrease environmental problems, changes in the consumers' behavior are needed as defended by Glavic (2021). Nevertheless, as was highlighted by the interviewees (35%) of this study changing consumption patterns is not an easy process. As stated by one participant (6%) "*Although, today there is more knowledge and information (about environmental concern) it is still not easy to put these routines and small differences into practice*".

Lastly, a few of the interviewees (18%), think that there is a *lack of availability and variety* of organics in the main supermarkets which is an obstacle for the green gap. According to these participants, individuals do not have the time or the possibility of going to specific organic food stores, or to the farmers market to obtain this type of product. The decentralization of the products, meaning consumers are not able to find everything they need in one place, is a barrier to the purchase.

On a final note, the reasons mentioned by the participants for the green gap are aligned with the previous finding of the barriers to organic food consumption (section 5.2.2) as well as the effects of environmental concern on consumption (section 5.2.4).

Table 9- Reasons for the green gap in the Portuguese organic food market

Text	Times mentioned	Interviewees
The high price and the low level of income of the Portuguese	15	1,2,3,4,6,7,8,9,10,11,13,14,15,16,17
I think it is due to the lack of information, people not being aware of the harmful effects on the environment	6	2,5,6,7,10, 16
It is not so easy to put new routines into practice	6	2,3,6,12,16
I think it is due to the lack of availability of green products	3	3,9,17

Source: Self-elaborated

### 5.3.2 The role of companies to expand the organic food market

To promote and increase the organic food market, it is important to understand how companies can overcome the barriers related to organic food purchases. To that end, the participants were asked to provide their perspectives on what enterprises can do to improve and expand the organic food market. These results can be observed in Table 10.

In the general opinion of the interviewees (76%), with *communication and education*, companies can persuade customers to buy organic food. By educating the customers about the concept of organic and its benefits, especially the health advantages, it can positively influence their behavior decisions as also defended by Torres-Ruiz *et al.*, (2018) and Hansmann *et al.*, (2020). According to the participants, shoppers need to comprehend which are the impacts of buying an organic vs. “conventional” product, to be able to make a more conscious choice. Moreover, another important point in the organic products communication is the label because as one interviewee mentioned “*I pick up a product and read in the label that it has a European organic certificate, but deep down I do not know what it means*”. Also, as previously seen in section 5.3.1, most of the participants (53%) were unable to identify the organic food certificate. Thus, this symbol and its meaning should be explained and publicized, so all the consumers are aware of it (Silva *et al.*, 2017).

Additionally, it was also pointed out by most of the participants (59%), that communication through *marketing and advertisement campaigns* could help grow the organics market, as also stated by (Teixeira *et al.*, 2022). As one interviewee said, (6%), “*Information is key, and the way it is presented*

*is crucial. That is when marketing comes in*". The organic marketing campaigns should include information about this type of food that catches the attention of the people and that is supported by scientific evidence, to increase the trust and credibility of the campaign. In addition, as suggested by one interviewee, (6%), it is important to create marketing activations in which the consumer tastes organic foods to understand the difference, especially in terms of flavor, between other products. In consequence, shoppers might be more willing to pay a higher price for organic food products because they comprehend that these products have higher quality.

Some of the surveyed (47%) mentioned that a *more accessible price* could increase the sales of organic products. In these participants' perspectives, one of the strategies that companies could implement to attract consumers to purchase organic products is through the creation of vouchers, coupons, promotions, and discounts. As one interviewee (6%) states, *"In the beginning the consumers should be informed (about organic food). But to make consumers buy organic products, especially the "normal" consumer that is price sensitive, it would be interesting to offer them a voucher or a discount for them to try these products"*. According to the interviewees, these price initiatives could be a strategy to grow the organic food market, nonetheless, this type of initiative was not observed in the research presented in the literature review (chapter 2).

A few of the participants (35%), discussed that it was not only the responsibility of companies but also of the government to expand this market. The companies could *partner with the government* and create incentives for both consumers and producers of organic food as one interviewee (6%) mentioned, *"The government created environmental incentive programs to the population such as switching to solar panels, new generation boilers, but I do not see any campaigns regarding nutrition"*. One other participant, (6%), said that the government could help reduce the prices of organic food by lowering the taxes applied to this type of food. Moreover, two other subjects, (12%), refer to the importance of a food education program in schools, as one interviewee, (6%) mentioned *"I think the government can create a policy to encourage a new way of eating by including organic food in the school canteens. If we teach our young generation to practice an organic diet, then we can more easily educate and change ways of thinking regarding food habits."* The interviewees of this investigation proposed the participation of the government to help increase the sales of organic food, however, this initiative was not mentioned in the studies discussed in the literature review (chapter 2).

At last, 4 participants (24%), refer to the importance of both *variety and availability* to increase the organic food market. Companies need to invest more in the variety of products without losing quality and, guarantee their availability in the main Portuguese supermarkets as defended by Chen *et al.*, 2022. The availability of products is critical and highly affects the customer's demand. Therefore,

if consumers want to start to consume organic products, they must have easy access to these types of products.

*Table 10- Initiatives that companies can do to expand the organic food market*

Text	Times mentioned	Interviewees
It would be important to educate and inform the customer about what is organic food to persuade the customer to spend a little more of their income	13	1,3,4,5,6,7,8,9,10,13,14,15,16
Making marketing campaigns that provide more information to the consumers	10	1,3,5,6,7,8,9,10,15,16
Try to reduce the price difference between organic and conventional food	8	3,7,8,9,12,14,15,17
It should not be just the responsibility of the companies, but also of the government to encourage organic consumption	6	2,4,5,11,13,16
Companies must invest in more variety and availability without losing the quality of the products	4	2,4,16,17

*Source: Self-elaborated*



## Chapter 6 – Conclusions

In the final chapter of the present study, a summary of the results from the data analysis will be presented, detailing the main findings of this investigation. Thus, the following topics will be discussed ahead: final considerations, research's main contributions, limitations of the study, and suggestions for future research.

### 6.1 Final considerations

The growth of the world population and consumerism led to several environmental problems such as pollution, climate change, and global warming (Crenna *et al.*, 2019). One of the main responsible of these issues is the food industry, due to the current diets and production processes. Among the solutions to decrease the ecological pressures, is organic agriculture, a green approach to farming that aims to preserve the environment, the natural resources, and the individuals' health (Nicholls & Altieri, 2018; Gomiero, 2018). Over the years, the organic movement became popular and the number of individuals willing to acquire this type of food increased. Nonetheless, the sales of these products remain limited. One of the barriers to the consumption of organic food is a phenomenon, commonly known in the literature, as the "green gap". This gap is described as the discrepancy between the individuals' positive attitudes regarding green consumption and their behaviors towards it (Elhaffar *et al.*, 2020; Wang *et al.*, 2021).

Having said this, the present study aims to explore the green gap of organic food consumption in Portugal. To do so, an analysis of the organic food market (first research question), an investigation of the reasons behind the consumer purchasing decisions on organic food (second research objective), and solutions for companies to overcome the green gap to expand this market (third research objective) was made. To collect data for the elaboration of this study, one-to-one semi-structured interviews were made, aiming to understand the different points of view of Portuguese consumers on the focused topic.

The first research goal aimed to explore the organic food market by focusing on understanding the interviewee's awareness and behavior regarding organic food. Firstly, it was shown without context the organic food label to the participants to assess if they were able to recognize it. Most of the participants (53%) were not able to identify the certificate; some of them had never seen the organic food label (12%), while others had previously seen it but were unable to interpret its meaning (24%). Subsequently, to understand the level of knowledge of the organic food concept, the participants were asked to provide a general definition of this type of food. The definitions given were compared to the official description of the EU which includes eight main elements and overall, the

participants were able to identify two of these eight pillars. At last, in terms of purchasing behavior, most of the participants do not consume organic food (59%). The other remaining interviewees (41%) said that they typically buy fresh organic products namely, fruits and vegetables. Also, according to some surveyed (12%), their buying behavior depends on the price difference between organic vs. “conventional” food products.

To determine the second research goal, participants were asked to identify the factors that impact organic food purchasing, be it drivers or barriers. In what concerns the drivers, it was possible to determine that the majority of the participants (59%) perceived health concerns as the main driver for organic food consumption, since this type of food is free from chemicals and, therefore, healthier. The second most mentioned factor (47%) was the environmental concern. One of the key principles of organic farming is safeguarding the ecosystem, which is a relevant aspect in the purchasing decisions of consumers. Additionally, the risk of products being contaminated with fertilizers, pesticides, additives, and hormones is a safety concern for the participants (24%) which also generates a motivation to buy organic food.

In the opinion of the interviewees two other relevant characteristics of organic food are quality (18%) and animal welfare (6%). Regarding the first feature - food quality - the participants consider that organic food has higher quality when compared to “conventional” products, especially in terms of taste. Regarding the second feature - animal welfare - one participant referred the importance of the living conditions and the treatment of animals, and the organic farming method is aligned with that animal welfare concern. Lastly, the origin of the product is a decisive factor in the purchasing decision as stated by two participants (12%). The fact that a product is from national production is a valuable aspect to these interviewees, motivating them in the purchase moment.

In what concerns the barriers, most of the interviewees (88%) recognized that the high price of organic food is the main obstacle to its consumption. The current economic conditions led to a loss of income which negatively impacts consumption. Considering this, some of the participants (24%) mentioned that the price is the only constraint for not buying organic food. Even though they care for the environment, that concern is not converted into actual behaviors due to the high price of the products. The other two barriers presented in the study were the lack of availability and variety of organic food. Almost half of the interviewees (47%) mentioned that the products are not available in all the stores, particularly in local supermarkets, and that the range of the goods is limited, making them less attractive to shopper.

Also, a few of the interviewees (24%) believe that the information and knowledge of the organic food concept is narrow and consequently, impacts the purchase of such goods. In the opinion of a few participants (12%), to shift the purchasing patterns from “conventional” to organic food,

changes in education and habits are key. Furthermore, when it was asked the participants if they considered that Portuguese society had enough understanding regarding organic food, the majority (71%) answered no. Some of these participants (47%) think that consumers may be aware of the concept of organic food, nevertheless, the effects on health, the environment, and animal welfare are not completely understood.

At last, two more barriers were emphasized by the interviewees, namely the lack of trust and brand awareness. Regarding trust, one participant (6%) revealed that has difficulties in believing that a product is organically made, and this lack of confidence affects their purchasing behavior. Regarding brand awareness, another interviewee (6%), considers that organic brands are, in general, unknown to the consumers, and for this reason, they will not buy from a high-priced and unrecognized brand.

Furthermore, one other factor that affects organic food purchase was raised in the interviewees, and which, was not part of the presented literature review on the topic. This factor was the influence that family and friends have on individual consumption decisions. As stated by a couple of interviewees (12%), some people might feel either the want or the pressure to eat organic food, if others around them, in real life (family or friends) and/or virtually (influencers) are consuming it.

Still, regarding the second research objective, in the interviewees it was explored in depth the environmental concern factor to further understand the consumers' consumption behaviors. Almost half of the interviewees (47%) think that ecological issues are not a worry to society and so, it does not change their purchasing decisions for several reasons such as price, knowledge, consumerism, conformism, and culture. Factors such as high price (53%) and lack of knowledge (24%) regarding green products were, as previously seen, an inhibitor to consumption. In terms of consumerism, in the opinion of a few respondents (24%), there is an unbridled consumerism that continues to grow which shows the consumers disregard for the protection of the environment. Moreover, the conformism of individuals, meaning the reluctance to change unsustainable consumption habits, is pointed out by the participants (12%) as an obstacle to environmental transactions. Ultimately, according to one participant (6%), in Portugal, green practices are not commonly applied because it is not entrenched in the culture. From this study, two factors, conformism, and culture, that influence consumer behavior arose which were not referred to in the presented literature review of this topic.

The third and final research goal aimed at exploring how companies can face the barriers that impact the consumption of organic goods, solve the green gap, and expand this market. In the general view of the interviewees (76%), communication and education are some of the strategies that companies can implement to persuade shoppers to purchase organics. As previously seen, the lack of information is one of the main barriers to consumption. Therefore, informing the consumers regarding the concept of organic and its benefits, especially the health advantages, can positively influence their

perceived value of this food and incentivize its purchase. This information should be communicated through marketing and advertising campaigns to attract the individual's attention and help grow the organic food market. Some of the participants (47%) cited that a more accessible price of organic food may increase the sales of such products. The price is the main barrier to consumption, and if companies created vouchers, coupons, promotions, and discounts could attract more customers.

Additionally, it was discussed in the interviews (35%) that it was not only the responsibility of companies but also the government to expand the organic food market. The participants suggest that companies collaborate with the government to create different actions, namely, the creation of programs that incentive both consumers and producers of organic food; reducing the price by lowering the taxes applied to this type of food, and forming a food education program in schools by including organic food in the school canteens and teaching the young generation to create different food habits. These different actions allow to combat several of the barriers before highlighted such as the high price, lack of knowledge, consumer conformism, and culture. These initiatives were proposed by the interviewees and were not present in the presented literature review regarding this topic.

Lastly, the participants (24%) stated that the lack of variety and availability were also one of the obstacles to not purchase organic food. Thus, companies must invest in a higher range of products and ensure that they are available in all the leading Portuguese supermarkets.

## **6.2 Research's main contributions**

The present study arises from the objective of understanding the green gap phenomenon of organic food in the Portuguese market. The consumption of organic food is intensifying, resulting in a widened academic interest. However, the literature review revealed contradictory results since the items, the methods, and the countries tested were different and prevented the explanation of the "green gap" phenomenon.

In this sense, and to guarantee the relevance of the problem studied about the existing literature in this area, this research aims to contribute to the development of the Portuguese organic food market in five different ways: (1) Presentation and discussion of the current literature about the environmental impacts of the food industry and sustainable solutions to solve these problems namely, organic farming. Additionally, the importance of consumers' demands for organic food as well as their drivers and barriers of consumption. Lastly, understand the green gap and how a company' role can decrease it to expand the organic food market; (2) Create the interview guide that aims to better explain the "green gap" phenomenon of organic food in the Portuguese market. Afterward, conduct the interviews with different consumers to have a wider range of perspectives on the organic food market; (3) Analyze the results of the interviews and conclude the main drivers and barriers of organic

food consumption as well as strategies that provide new and useful insights for both companies and marketers to align their business strategies according to consumers expectations and needs, and ultimately, increase the organic food domestic market; (4) The investigation provided further support for existing theories on the green gap of organic food consumption, enhancing the potential to conduct future contextual analyses across different countries. By reinforcing the external validity of its findings, this study enables comparisons between diverse contexts and samples, contributing to a deeper understanding of this research field.

### **6.3 Limitations of the study**

The main limitation of this study is regarding the size of the sample analyzed. Despite the satisfactory response rate and participation in the interviews, it is essential to approach the findings of this study with caution due to its reliance on a relatively small sample size. The sample is neither probabilistic nor large enough to be able to extrapolate its characteristics to the Portuguese population.

Consequently, even though the results of this study have corroborated some of the existing theories regarding the organic food green gap, it is not possible to generalize these conclusions. These findings must be approached judiciously which is also another limitation of this research.

Lastly, it should be noted that this study was not designed for that purpose, it was an exploratory investigation that aimed to capture perceptions of consumers regarding the drivers and barriers of organic food consumption as well as possible ideas to expand this market to contribute to the academic content to the work carried out to date and cannot serve as a representative of a more macro perspective.

### **6.4 Suggestions for future research**

The first suggestion for future research would be to meet the principal limitation of this investigation, the small sample size. It would be beneficial to investigate this green gap in the Portuguese organic market on a large scale.

Additionally, it would also be fruitful to study the point of view of companies that sell organic food on the topic under analysis and compare the opinions of both consumers and companies.

At last, it would be interesting to explore the same topic but on other green products namely clothes, shoes, and furniture, among others to comprehend the similarities and contradictions between the different sectors and try to find solutions to increase the eco-friendly products market.

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## Annex 1- Interview Script

1) Do you recognize this symbol?



2) Do you know what is organic food?

3) Do you usually buy organic food?

3.1) Why you buy it? / Why don't you buy it (if said yes/no previously)?

4) In your opinion which are the factors that affect the purchase organic food?

4.1) From the factors presented below please identify which are the drivers and which are the barriers to purchase organic food and rate them according to importance (1- more important, 12- least important)

Factors	Drivers	Importance	Barriers	Importance
Health concern				
Food safety				
Product quality				
Trust				
Certification				
Information about the product				
Environmental concern				
Social consciousness				
Animal welfare				
Availability				
Variety				
Price				

4.1.1) Is there any factor that you consider should enter this list?

5) Do you think people care about the environment? If so, do you think it affects their purchase behaviour?

6) Do you believe that the Portuguese society has a sufficient understanding regarding organic food?

7) As previously described, there is a gap between the consumer ecological intentions and their actual actions. Why do you think that happens in the case of the organic food market?

8) What do you think that companies can do to improve/ expand the organic food market?