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Sustainability in cosmetics: sources of information and their impact on attitudes and behaviours among generation Z

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Master's in Business Administration

Supervisor:

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2021/2022



**BUSINESS
SCHOOL**

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Resumo

Existe uma preocupação crescente entre os consumidores da geração Z, relativamente à sustentabilidade e questiona-se se esta preocupação transparece na compra de produtos cosméticos, pois estes consumidores procuram soluções para as questões ambientais atuais. Simultaneamente, a importância e o impacto das fontes de informação nas decisões de compra tem crescido, aumentando o conhecimento que os consumidores têm relativamente a este tema.

Existe incerteza relativamente ao entendimento do conceito de sustentabilidade na indústria da cosmética e de que forma as fontes de informação melhoram este conhecimento, traduzindo-se em compras de cosmética mais sustentável. Assim, o objetivo desta investigação foi compreender o conhecimento relativamente à sustentabilidade na indústria da cosmética, analisando o impacto das fontes de informação nas atitudes e comportamentos da geração Z no contexto universitário. Consequentemente, foram realizadas 13 entrevistas semiestruturadas com estes consumidores.

Os resultados concluíram que os consumidores reconhecem os problemas da sustentabilidade na indústria da cosmética e salientam que a principal fonte de informação é a internet. Relativamente ao alinhamento entre as intenções e o consumo de cosméticos sustentáveis, verificou-se uma lacuna entre a atitude e o comportamento, prendendo-se com o facto da intenção dos indivíduos não se traduzir no consumo.

As contribuições deste estudo foram essencialmente no sentido de colmatar a lacuna de conhecimento existente na literatura, sobre a ligação entre as fontes de informação e o consumo de cosméticos sustentáveis e perceber a importância da perspetiva dos consumidores, a fim de ajustar as estratégias de comunicação, fornecendo diretrizes sobre como melhor divulgar a informação acerca dos cosméticos sustentáveis.

Palavras-Chave: geração Z; informação sustentável; consumo sustentável; indústria cosmética; comportamento do consumidor

Classificação JEL: L66 Alimentação, Bebidas, Cosméticos, Tabaco, Vinho e Bebidas Espirituosas; M14 Cultura Empresarial, Diversidade, Responsabilidade Social

Abstract

There is a growing concern among Z generation consumers regarding sustainability and it is questioned whether this concern is reflected in the purchase of cosmetic products, as these consumers seek solutions to current environmental issues. Simultaneously, the importance and impact of information sources on purchasing decisions has grown, increasing the knowledge that consumers have regarding this topic.

There is uncertainty regarding the understanding of the concept of sustainability in the cosmetics industry and how information sources improve this knowledge, translating into more sustainable cosmetics purchases. Thus, the aim of this research was to understand the knowledge regarding sustainability in the cosmetics industry, analysing the impact of information sources on the attitudes and behaviours of generation Z within the university context. Consequently, 13 semi-structured interviews were conducted with these consumers.

The results concluded that consumers recognize the sustainability issues in the cosmetics industry and point out that their main source of information is the internet. Concerning the alignment between intentions and consumption of sustainable cosmetics, there was a gap between attitude and behaviour, related to the fact that the intention of individuals is not translated into consumption.

The contributions of this study were mainly to fill in the knowledge gap in the literature regarding the link between information sources and consumption of sustainable cosmetics and to understand the importance of consumers' perspective in order to adjust communication strategies, providing guidelines on how to better disseminate information about sustainable cosmetics.

Keywords: generation Z; sustainable information; sustainable consumption; cosmetic industry; consumer behaviour.

JEL Classification System: **L66** Food, Beverages, Cosmetics, Tobacco, Wine and Spirits; **M14** Corporate Culture, Diversity, Social Responsibility

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CSR – Corporate Social Responsibility Practices

IUCN - International Union for Conservation of Nature

PCE - Perceived Consumer Effectiveness

1. Introduction

Since the inception of the Earth Day ¹ on April 22 of 1970 (Earth Day , 2021), “public concern for environmental issues has gradually increased” (Kim & Choi, 2005, p.592), as ecological, economic, and social calamities have resulted from climate change. As a result of the Earth Day event, many environmental concerns began to surface, which has influenced consumers to pay more attention to environmental issues and have greener purchasing habits and has even prompted governments to reconsider their environmental protection policies (Kim & Choi, 2005; Lin & Niu, 2018)

Sustainability refers to the environmental sphere and the necessity of respecting our resources, ourselves, and our lives, as well as the earth and the next generation (Torelli, 2020). Sustainability began to be a major cause for concern in consumer’s minds between 1970 and 2000, due to climate emergency (Kim & Choi, 2005), however they still seldom use the term and many are unclear about what it entails (Sahota, 2014). But at the same time, consumers are becoming more aware of how their purchase choices directly affect the environment (Sahota, 2014).

Cosmetics Europe (2019) states that the cosmetic industry contributes highly to the European economy. But, according to Statista, with an estimated total sales of around 48.26 billion US dollars as of 2021, the United States is the one with the largest cosmetic marketplaces in the world, and it has grown nonstop in recent years (Gerstell et al., 2020). Despite the contribution of this industry to the economy, the truth is that when it comes to sustainability, cosmetic companies still have much room for improvement (Sahota, 2014). Cosmetics produce a big amount of environmental pollution and a big amount of waste; as an example, “about 23 000 tonnes of toothbrushes end up in landfill in the USA each year” (Sahota, 2014, p.6). As a result, Non-Governmental Organizations and the media have increased their pressure on cosmetic manufacturers to implement sustainable practices and take corrective measures (Sahota, 2014).

Companies have a massive impact on promoting ethical policies (Torelli, 2020) and more sustainable practices (Csorba & Boglea, 2011). It has been proposed that companies’ practices, such as voluntary corporate contribution to sustainable development, can highly increase

¹ Earth day is an annual celebration that honours the environmental movement while raising public awareness and concern about sustainability (Earth Day , 2021).

consumers' loyalty and trust in a company (Islam et al., 2021). But, while the larger share of the responsibility of those practices is arguably on companies, consumers can also have an important role – in pressuring them towards more responsible socially and environmentally responsible practices and rewarding them when they do the right thing (Csorba & Boglea, 2011).

Despite increasing discussion of consumer pressure on companies to become “greener” due to sustainability concerns and their impact on the earth (Csorba & Boglea, 2011), it is well known that consumers exhibit an “attitude-behaviour gap” in what pertains to sustainable consumption (Carrigan & Attalla, 2001; Pelsmacker et al., 2005; Leire & Thidell, 2005; Young et al., 2009; Bray et al., 2010; Terlau & Hirsch, 2015; Zhang et al., 2018). Therefore, although people are aware they need to be more sustainable and they show a willingness to be, this is often not translated into their purchasing decisions (Carrigan & Attalla, 2001).

At the same time, it has been shown that sustainability-related information can help mitigate that gap (Dolan, 2002; Leire & Theidell, 2005; D'Souza et al., 2006; O'Rourke & Ringer, 2015) and as such constitutes an important element in sustainable consumption. Indeed, although there are cases where sustainability information does not appear to affect consumer's purchase, research shows that consumers who previously demonstrated an interest in sustainability, use sustainability related information provided to them in their purchasing decisions (D'Souza et al., 2006). The challenge, however, is that consumers are currently faced with so many sources of information, as well so-called “fake news” stories, that it is often difficult for them to trust and absorb the information they are provided with (Sahota, 2014).

This is especially encountered among generation Z consumers (1995 – 2010), born in the middle of the digital era, who have continuous and fast access to a huge amount of information in many areas (Szymkowiak et al., 2021). As they will soon be the next generation dominating the labour market, it will bring new consumption patterns, and a big change in this relationship between information and sustainable action (Tyson et al., 2021).

Thus, this study will examine the role of information and different information sources on generation Z's attitudes and reported behaviours – within the university context - towards the cosmetics industry and its sustainability, since it is a less studied generation and soon to be the largest cohort of labour and consumers (Priporas et al., 2017) and it is worth studying them now. As a result, this research is meant to understand how Generation Z within the university context, perceive sustainability in cosmetics and how information sources influence this

knowledge and transform it into purchasing actions. Therefore, we intend to answer the following questions: What is Generation Z consumers' understanding of sustainability in the cosmetics industry within the university context? How informed do Generation Z consumers, within the university context, feel regarding sustainability in the cosmetic industry? Where do Generation Z consumers, within the university context, get their information regarding sustainability in the cosmetic industry? What impact do Generation Z consumers, within the university context, think the sustainable information has on their intentions and behaviours? What do Generation Z consumers, within the university context, believe are the main determinants for sustainable consumption regarding the cosmetic industry?

It is hoped that studying this subject will contribute to both theory and practice. It will increase our understanding of generation Z consumers' most common information sources and how they affect their consumption habits, among the university context. Additionally, it will help these information sources comprehend why sustainable cosmetics are bought or not, regarding the communication of that information, as well as it will help firms understand what adjustments they should make in order to more effectively influence the consumer with the sustainable information, in order for them to buy more sustainable cosmetics.

The remainder of this thesis is structured into six parts: chapter two will give an overview of the relevant literature; chapter three will present the methodology used to conduct the investigation; chapter four will present the findings of the data collection; chapter five will analyse the key findings in relation to the theoretical concepts presented earlier; and chapter six will conclude the main results of the investigation as well as the limitations of the study and recommendations for future research.

2. Literature Review

The present chapter provides an outline of the relevant research in this field. First, the concept of sustainability is introduced; followed by a discussion of sustainable consumer behaviour and the attitude-behaviour gap in particular. Then, the role of information on sustainability is discussed; followed by a contextualisation of the sustainability impacts of the cosmetics industry, and a characterization of generation z.

2.1 Origins of the Sustainability concept

Sustainability was defined by the United Nations Brundtland Commission in 1987 as “meeting the needs of the present without compromising the ability of future generations to meet their own needs.” (United Nations, 2022).

Although the Brundtland definition is the most widely used, the concept is much older. It was in the 17th and 18th centuries that the notion of sustainability began to appear, but it was only in the late 20th century that the contemporary concept started to be argued (Lumley & Armstrong, 2004). Thus, this concept of sustainability was created gradually (Purvis et al., 2018), creating discussions about the different dimensions inside sustainability, leading to the concept we know today (Purvis et al., 2018).

Sustainable Development was introduced in the International Union for Conservation of Nature (IUCN) in 1986, where the main goals were to achieve sustainable development through the conservation of social and environmental issues, to achieve the satisfaction of human needs, accomplishment of equity and social justice, promotion of cultural diversity, and conservation of ecological integrity (Jacobs et al., 1987).

Sustainability is thus a complex concept that covers three key dimensions: environmental, social, and economic (Giddings et al., 2002; Hansmann et al., 2012; Sahota, 2014 and Purvis et al., 2018). These three dimensions are known as the “three-circle diagram” - as presented by Barbier in 1987 (Purvis et. al 2018, p.681) (see figure 1 below), the “three pillars” or the “triple bottom line” (Elkington, 1997), and represent a holistic approach of sustainability (Sahota, 2014). Giddings et al., (2002) point to the fact that if the three dimensions are considered separately, this will minimize the essential links between them and there will be limitations in the integrated model, which should be considered as a whole.

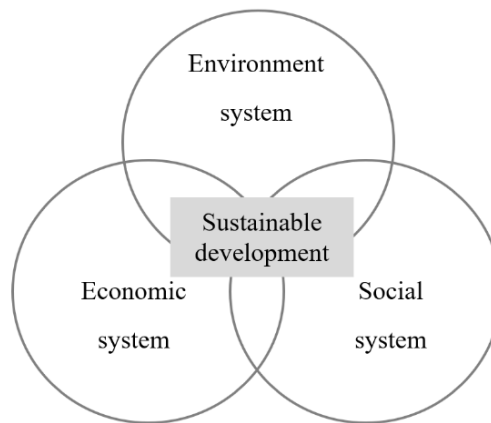


Figure 1 - three circle diagram

Source: adapted from Barbier (1987)

Defining the *economic dimension* within sustainability, it encompasses the actions and activities that promote economic development without negatively affecting the social and environmental aspects (Giddings et al., 2002; Purvis et al., 2018). This dimension brings concerns, however, since it “dominates environment and society” (Giddings et al., 2002, p. 190); that is, in practice, economic priorities are often placed above the other dimensions of sustainability, meaning this that they see the other dimensions dissociated from the economic dimension (Giddings et al., 2002).

After the World War II, the economic development started to be negatively associated with the exploitation of natural resources, as it was realized that the exponential growth of the economy was not sustainable for the planet (Arndt, 1981). According to Giddings et al., (2002) this was in part related to the fact that government priorities lay with economic growth. Thus, a government’s main concern is not how to solve problems such as pollution, biodiversity damage, social inequalities, unemployment, among others; its main concern is to understand how these will affect the economy and how to manage them for the economy’s benefit; how the money will compensate the damages made on the environmental and social dimensions (Giddings et al., 2002).

However, it is believed that the economic dimension should not be dissociated from sustainability and consequently the social and environmental dimension (European Commission, 2022). An example of that is the concept of circular economy, which has gained importance on the agendas of policymakers (Brennan et al., 2015) and aims to turn our throwaway economy into one where waste is minimized, resources are circulated, and nature is restored, providing us with the means to combat climate change and biodiversity loss while also meeting crucial social needs (Ellen Macarthur Foundation, 2022).

When it comes to the *environmental dimension*, it is characterized by the relationship between humans and the nature , encompassing respect for the planet's resources (Giovannoni & Fabietti, 2014; Torelli, 2020). This was the first dimension to be associated with sustainability from the 1970s to the 1990s (Giovannoni & Fabietti, 2014). In fact, in 1972, the UN Conference on Human Environment developed 26 principles, most of them related to the environment (Riddell 1981 as cited in Giovannoni and Fabietti 2014; United Nations , 1972) and in 1980 the World Conservation Strategy (WCS) was created and it identified that development should be sustainable, which would be accomplished by the conservation of human life and natural resources (Giovannoni & Fabietti, 2014; Drexhage & Murphy, 2010).

Finally, the *social dimension* encompasses the addressing of social aspects such as poverty, health and discrimination (Dempsey et al., 2011; Giovannoni & Fabietti, 2014). The sustainability concept's goal of meeting the needs of both the present and future generations can be achieved by fulfilling these aspects, that is, by being able to ensure social sustainability and succeed in fighting poverty, discrimination, and providing health conditions (Dempsey et al., 2011). The social dimension also includes the topic of Corporate Social Responsibility (CSR)³, and in 1978, the social element was incorporated into sustainability as an effort to combine the three dimensions (Glaeser 1984, as cited in Purvis et. al 2018).

Regarding the actual application of the three dimensions, several conferences and plans of action have happened, such as the Earth Summit report in 2002, the World Summit in 2012, and the General Assembly in 2015 (Purvis et al., 2018). Nowadays, we have a more updated plan of action that encompasses the Sustainable Development Goals (SDGs), including 17 objectives that joined the three dimensions (Purvis et al., 2018), being those objectives according to United Nations (2022): end poverty, end hunger, provide healthy lives and well-being, ensure equality in education, accomplish gender equality, ensure clean water and sanitation, provide affordable and clean energy, ensure decent work and economic growth, promote sustainable industrialization and foster innovation, reduce inequalities, create sustainable cities and communities, promote responsible consumption and production, take action to fight climate change, preserve life below water, protect life on land, promote peace

³ Corporate Social Responsibility (CSR) practices stand for a company's self-regulation (Sheehy, 2015), and a corporate behaviour where businesses actively incorporate social and environmental considerations into their company operations and interactions with its stakeholders taking into account human rights and consumer concerns (European Commission, 2011)

and justice and boosting implementation strategies and reviving the Global Partnership for Sustainable Development.

2.2 Sustainable consumer behaviour

According to Dolan (2002), consumption is a somewhat neglected aspect when discussing sustainability and the sustainable development, but the truth is that overproduction and consumption are one of many human actions on earth which are deteriorating biodiversity and causing global challenges (Terlau & Hirsch, 2015). As a consequence, policies and laws have been proposed all over the world to protect the environment, which seek to promote public awareness regarding the existence of “green” labels, the production of excessive waste and the need for recycling (Lin & Niu, 2018).

Sustainable consumption was actually first addressed in the 1992 Earth Summit where an understanding was reached that consumption practices were affecting the environment (Reisch 1998, as cited in Dolan, 2002).

Sustainable consumer behaviour is defined as a “complex and elusive concept (...) that improves social and environmental performances as well as consumer well-being” (Belz and Peattie, 2009, p.2, as cited in Elhoushy & Lanzini, 2020).

Until the early 2000's, sustainable consumer behaviour was mostly characterized by consumers with greater environmental concerns, considering the environment as the most important factor in their purchase decision (Laroche et al. 2001; Barr and Gilg, 2006). And despite the fact consumer patterns have changed quickly in recent decades, the truth is that the concept of sustainable consumption continues to be more associated with an environmental concern (Haller et al., 2020). However, a sustainable consumer is increasingly concerned with a more holistic perspective that also includes the economic and social sides of purchasing (Haller et al., 2020; Testa et al., 2020). For instance, according to Terlau & Hirsch (2015), a responsible and sustainable consumer is the one that seeks for equality of the economic, environmental, and social attributes upon his consumption.

Thus, the concept of sustainable consumption entails reducing the use of natural resources and pollution emissions (Reisch 1998, as cited in Dolan, 2002), which consequently will avoid a negative impact on the lives and consumption potential of current and future generations (Agenda 21, 1992; Belz et al., 2007; Belz and Peattie, 2009, as cited in Terlau & Hirsch, 2015).

Therefore, sustainable consumption is more appealing to a consumer who already demonstrates a sustainability concern in their daily lives. (Lin & Niu, 2018).

However, sustainable consumption may not always be possible since it depends on a specific context, such as the culture someone is inserted in and social background according to Dolan (2002) and Terlau and Hirsch (2015). Nevertheless, it is considered a flexible concept, as consumption will always depend on social and cultural backgrounds. In fact, there is evidence that shows the impact of certain determinants on sustainable consumer behaviour, which will be explored in more detail below.

2.2.1 Determinants of sustainable consumer behaviour

When purchasing a sustainable product, the consumer has different motives and it is extremely important to understand these, in order to implement pro-environmental policies (Mostafa, 2009). Therefore, it is necessary to consider situational and contextual factors that may obstruct or promote green behaviours (Zhang et al., 2018). For sustainable consumption, there is evidence that some of the most relevant determinants are the following: *Environmental knowledge*⁴ (Dolan, 2002; Kang et al., 2013; Lin & Niu, 2018; Kaufmann et al., 2012); *Environmental concern* (Mostafa, 2009; Kim & Choi, 2005; Kaufmann et al., 2012); *Perceived Consumer Effectiveness* (PCE) (Kim & Choi, 2005; Kang et al., 2013; Kaufmann et al., 2012); *Individualism or Egoistic factors*⁵ (Dolan, 2002; Schultz, 2000; Laroche et al., (2001); *Collectivism or Altruism* (Kim & Choi, 2005; Mostafa, 2009; Schultz 2000; Laroche et al., 2001; Kaufmann et al., 2012) and finally *Cultural context* (Dolan, 2002; Nguyen et al., 2017)⁶: These will be examined in more detail below.

Environmental knowledge: A person's comprehension and perception of a subject is referred to as knowledge, in this case, environmental knowledge is the broad understanding of concepts,

⁴ The “environmental knowledge”, “environmental information” and “sustainable information” will be utilized interchangeably along the text. I am aware they are not strictly the same. However, since in the literature they are in practice often used interchangeably, the same will be done here.

⁵ For simplification purposes Collectivism and Altruism will be considered the same determinant; the same applies to Individualism and Egoistic factors.

facts and interactions relating to the natural world and its main ecosystems (Fryxell & Lo, 2003). Thus, consumer knowledge, which entails familiarity regarding consumption experiences and product knowledge (Kang et al., 2013), is an important factor for environmental actions (Schahn & Holzer, 1990). In fact, consumers with higher environmental knowledge are more likely to demonstrate concern about the environment than those with less knowledge (Kang et al., 2013). Therefore, having knowledge about environmental topics can translate into an increased desire to acquire environmentally friendly products and services, as well as prioritizing businesses that favour environmental practices (Laroche et al., 2001).

Environmental concern: Environmental concerns refers to the extent to which people are aware of environmental issues and demonstrate a readiness to directly contribute to their resolution (Dunlap & Jones, 2002). By having a certain level of environmental concern, people are more likely to care about the environmental impact of the products they are purchasing, which will consequently be reflected into attitudes and behaviours, thus having a greater effect on consumers' decision making (Ellen et al., 1991; Mainieri et al., 1997; Kim & Choi, 2005). Those concerns may be related with nature and empathy for animals and may be personal or altruistic factors, as will be explained below (Schultz, 2000).

Individualism/ Egoistic factors: Individualism refers to how much a person concentrates on his or her own independence (Laroche et al., 2001). Sometimes a more sustainable choice may have personal, even selfish, origins because the person is prioritizing themselves over others (Schultz, 2000). The evolution of self-identity through the years has created more consumption, as purchases represent a chance for the transformation and self-expression of each individual, for the feeling the consumption gives (Dolan, 2002), thus usually individualism is not very propitious to environmental-friendly attitudes. (Laroche et al., 2001)

Collectivism/Altruism: Being a collectivist entails putting one's own desires aside in favour of the greater good; thus, collectivism implies cooperation, helpfulness, thinking about the group's aims rather than one's own (Laroche et al., 2001). Schwartz (1977) suggests that according to the theory of altruism, pro-environmental behaviours are more likely when people are aware of detrimental implications to others, when it comes to the environment impacts. According to a study by McCarty & Shrum (2001), altruistic people are more likely to engage in sustainable practices as they have a more collectivist and cooperative mindset and, as a result, they are eager to achieve a common goal over a personal one.

Perceived Consumer Effectiveness (PCE): is characterized as a consumer's belief that his or her actions can make a difference in the solution of social or environmental problem (Ellen et al., 1991). PCE may influence consumer behaviour if consumers feel their actions will have an impact on the intended outcome, thus, by having environmentally conscious behaviours, consumers are more likely to engage in related purchases, on behalf of those concerns for the environment (Kim & Choi, 2005; Ghvanidze et al., 2016). As a result, consumers with a high PCE are more likely to demonstrate their positive attitudes towards sustainable items and to convert their beliefs into actual purchases (Vermeir & Verbeke, 2006; Kang et al., 2013)

Cultural context: Culture has a significant influence on human behaviour. It is made up of a set of shared behavioural patterns that are passed down and maintained by members of a society through various mechanisms (Arnould & Thompson, 2005). Although there are studies that find cultural context insignificant for sustainable consumption (Laroche et al., 2001; Kim and Choi, 2005), there are others studies that state that there are societies that strongly rely on social norms and thus on cultural background (Nguyen et al., 2017). Even though sometimes this is not a conscious choice of the consumer, cultural values affect consumers' behaviour, (Dolan, 2002; Nguyen et al., 2017) therefore, depending on the situation it is important to consider the following questions: what are the needs of a specific culture? What is ethical and what is not in each culture? What is sustainable consumption in a certain context? (Dolan, 2002).

2.2.2 Attitude-behaviour gap

Although there are a lot of determinants that influence consumers and motivate them to make sustainable purchases, several studies suggest that there is still a major gap when it comes to the alignment of intentions and actual consumption (Carrigan & Attalla, 2001; Pelsmacker et al., 2005; Leire & Thidell, 2005; Young et al., 2009; Bray et al., 2010; Terlau & Hirsch, 2015; Zhang et al., 2018), which is described as the "attitude-behaviour gap" or "values-action gap" (Young et al., 2009). In different surveys, 30% to 50% of consumers say that they have trouble in making sustainable purchases, although they have concerns about environmental issues, which is reflected in the percentage of market share of sustainable related goods, which is less than 5% of the total sales (Young et al., 2009). Thus, there is a certain doubt about how dedicated consumers are to ecologically friendly items in the real market (Kim & Choi, 2005).

The attitude-behaviour gap is influenced by individual, social and situational factors (Terlau & Hirsch, 2015), and these factors are positively correlated with the determinants of

sustainable consumer behaviour described above. Williams & Dair (2007) also point to the fact that the context structures the environment for sustainable consumption and this influence of context on sustainable consumption can be explained by some barriers that exist in consumers' routines and everyday consumption, which impede them from having a sustainable behaviour (Young et al., 2009; Terlau & Hirsch, 2015).

One of the main barriers for sustainable consumption can be, for instance, the *lack of time for research* (Young et al., 2009; Carrigan & Attalla, 2001), since it is time consuming to search for information on companies and their products (Young et al., 2009) specially, when consumers deal with the time pressures of their daily lives – for instance, while hurrying through a supermarket or shopping centre, they just do not have time to consider the ethical aspects of their purchases (Carrigan & Attalla, 2001). To exemplify that, Young et al., (2009) found, through interviews, that consumers who were in the process of moving house and thinking about buying a technology-based product, claimed that the research time on a company and its CSR practices is excessive for the availability they had in their lives at that time; also, the time spent on the decision-making for the most significant sustainability topics related to the products - such as the environmental performance related with energy efficiency, water consumption, fuel consumption; the recycling of product materials; and the second hand availability - was considered a waste of time by the same people.

Besides the lack of time, some other barriers to sustainable consumption are consensual among several authors, namely:

Lack of information (Terlau & Hirsch, 2015; Young et al., 2009; Bray et al., 2010; Pelsmacker et al., 2005; Kaufmann et al., 2012): consumers claim they do not have enough information and knowledge to make ethical consumption decisions (Bray et al., 2010). Hence, they need product information, since they feel inadequately informed about environmentally-friendly products, and this can be associated with a lack of trust in the product and company (which constitutes another barrier) (Terlau & Hirsch, 2015).

Sensitivity to price (Carrigan & Attalla, 2001; Terlau & Hirsch, 2015; Young et al., 2009; Bray et al., 2010; Kaufmann et al., 2012): there is a real price gap between conventional products and “green” products (Terlau & Hirsch, 2015), which may sometimes act as a barrier when buying a product, discouraging consumers from engaging in green purchase practices (Kaufmann et al., 2012).

Lack of transparency– from the companies, labels and retailers (Terlau & Hirsch, 2015; Young et al., 2009; Bray et al., 2010; Kaufmann et al., 2012): information is not always provided to consumers in the best way, such as when it comes to product packaging and pricing because incorrect claims may be included in the package, which may imply untrue information about them, misleading the consumer (Kaufmann et al., 2012). In addition, several authors have addressed that sustainable products' prices are set in an excessive manner, with the majority of them being unfair (Terlau & Hirsch, 2015; Young et al., 2009; Bray et al., 2010; Kaufmann et al., 2012). As a result, this price placement, and false claims on packaging are examples of what can have the potential to dissuade buyers from making environmentally friendly purchases (Kaufmann et al., 2012). Therefore, the more customers notice companies are engaging in unethical behaviours, the less likely they are to engage in sustainable consumption (Carrigan & Attalla, 2001). With this, consumers end up having scepticism regarding environmental claims (Kaufmann et al., 2012), which has a negative influence on their pro-environment behaviours (Ellen et al., 1991).

According to Young et al., 2009, a study made in the UK, where participants were asked to describe their purchasing process, concluded that in general consumers feel the need for constant sustainable incentives and well-defined policies to encourage sustainable consumption (Young et al., 2009). Terlau & Hirsch (2015) add that to close the attitude-behaviour gap and improve sustainable consumption the following measures should be applied: create encouragement and raise awareness among consumers and offer incentives to enable a behavioural change; improve communication regarding the attributes of the products, namely their impact on the environment and animal safety; and create more transparency and trust for the consumers to rely more on certifications and labels, encouraging sustainable development.

2.3 The role of information on sustainability

For many years, several studies were made trying to understand the relationship between sustainable information and sustainable behaviour (Schahn & Holzer, 1990).

A society's degree of concern about a certain issue depends on the level of knowledge it has (Thøgersen, 2006); thus a concrete amount of information is essential in order to have a successful relationship between attitudes and behaviour (Schahn & Holzer, 1990). Leire and Thidell (2005) for instance, discuss that environmental information has proved to have a

potential for consumer guidance and it is received and used by the consumers as a condition for sustainable consumption; therefore, it has a valuable role for sustainability, as it will help individuals to make more informed life choices. However, Dolan (2002) states that although knowledge and action are deeply associated, information may not be enough, since to create a deep change in consumption there is the need for a cultural shift. Tukker et al., (2006) and O'Rourke & Ringer (2015) also add that merely providing information is not enough to actually change consumer behaviour, although it still is the main strategy of governments, international agencies, academics and nongovernmental organizations to promote a more sustainable lifestyle. Thus, although there are still discussions on whether information is necessary for sustainable behaviour, there is no doubt that having information leads to more awareness, which substantially impacts purchase decisions (D'Souza et al., 2006).

2.3.1 Sources of information

Types and formats of information are some of the characteristics that influence a consumer differently when receiving sustainable information (Solér, 2001). Those types and formats of information vary according to distinct sources and may be a trigger for positive or negative reactions towards that information (Solér, 2001).

Source credibility is characterized by two elements: expertise and trustworthiness; expertise refers to the beliefs that the source is capable of making right assertions, whereas trustworthiness refers to the validity perceptions of the communicator's message (Sternthal et al., 1978). Source credibility is an important element that will dictate a person's response to a message (McCallum et al., 1991), in this case, a sustainable message, since "the source of the message influences its ability to persuade or influence" (McCallum et al., 1991, p.351).

Thus, we can consider companies, the media and (green) word-of-mouth the main sustainability sources of information that consumers are exposed to (D'Souza et al., 2006; Guerreiro & Pacheco, 2021; García-Salirrosas & Rondon-Eusébio, 2022), as further analysed below.

Companies play an important part in communicating sustainability, because they produce and provide information on their products and labels (D'Souza et al., 2006). Social and Environmental Reporting (SER) has been a good instrument to promote and communicate sustainability in a truthful way, since it has pushed companies to become more sustainable (Torelli, 2020). Green marketing - also known as ecological, environmental and responsible marketing, is characterized by the "transformative change that creates value for individuals and society, as well as for the natural environment" (Polonsky, 2011, p. 1311) - has also been a

good approach to promote sustainability. If used in a transparent way, it integrates environmental issues into the core marketing activity (Polonsky, 2011) - that helps to generate positive effects on the business performance of a company, meaning that customers are buying environmental-friendly products upon the green advertising (Lin & Niu, 2018).

However, some companies may use the SER in a bad way, namely through green washing (Torelli, 2020)- which is characterized as company's behaviour or activities that lead people to assume the firm is doing more for the environmental protection than it actually is (Cambridge Dictionary, 2022). This greenwashing can lead a company to omit and/or provide misleading information which may sometimes lead to a false positive perception of sustainability (Torelli, 2020). Thereby deceiving people about a company's environmental performance or the benefits of a product or service to the environment (Delmas & Burbano, 2011).

Media, such as the internet, newspapers, magazines, television, among others can also be fundamental to shape the public's opinions and priorities. In fact, Brown & Deegan (1998) argue that increasing media attention exacerbates community worries about environmental issues. Especially in the 21st century, we have experienced a big influence of social media which has provoked a high impact on consumer behaviour, as it is a major source of information shaping people's opinions and attitudes (Mangold & Faulds, 2009). Thøgersen (2006) notes that the mass media had a significant impact on how environmental issues evolved, due to its clear and fast communication and points to the fact that the less direct experience an individual has with a certain issue, the more he or she will trust the news media as the source of the information about that same issue, which demonstrates the extreme influence from the media.

(Green) word-of-mouth, which is known as the process of telling something to someone about a given product or service (Cambridge Dictionary, 2021) is also another important source of environmental information since recommendations from others are likely to influence customers' consumption preferences and decision-making (Zhao & Xie, 2011). Thus, word-of-mouth is the way individuals sometimes are informed and then educated, by friends, relatives or colleagues about a certain issue (Söderlund, 1998). Social media is in fact, an extension of traditional word-of-mouth since it has a tremendous impact on consumer-to-consumer conversations providing constant interactions among people (Mangold & Faulds, 2009). In the present case, if the environment is the issue, customers that are delivering positive feedback on a certain firm, product or brand, can contribute to future green actions and attract more green consumers (Zhang et al., 2018).

2.3.2 Impact of information on consumers' purchase behaviour

Lack of credible and understandable information has been identified as being one of the factors staying between sustainable preferences and sustainable purchasing decisions (Bray et al., 2010). When receiving information, the consumer automatically becomes more aware of the environmental issues of products, thus, in general, if a consumer has the information and knowledge, this will promote either a positive attitude towards green products or negative attitudes towards the regular product (D'Souza et al., 2006). Depending on each source of information a consumer has, their acceptance and consequent purchase behaviour will be different (D'Souza et al., 2006).

For instance, if we are referring to information coming directly from companies there is uncertainty on how environmental labels in general influence consumers and how they understand the information when provided by the product labels (D'Souza et al., 2006; Lee & Cho, 2020). Because, companies have the responsibility to inform their customers regarding the level of sustainability of their activities, processes, and operations (Torelli, 2020), such as their eco-friendliness, the ingredients they use, tests on animals and packaging (Csorba & Boglea, 2011). Yet, they also have the power to manipulate social and environmental practices and consequently the communication of these practices, losing their credibility and legitimacy sometimes, running the risk of disintegrating all the CSR process, since what they communicate may be viewed as fictitious from the consumer point of view and the consumer will start to have troubles believing the information received and transform that information into actions (Torelli, 2020)

When it comes to the dissemination of information through various media channels, the promotion of a "greener" lifestyle typically results in positive outcomes to acquire an environmentally friendly product (Lee & Cho, 2020). In fact, consumer media exposure improves attention to sustainable messages since the information conveyed is simple for consumers to absorb, thus they intend to engage more in sustainable purchases (Thøgersen, 2006; Huang, 2016; Lee & Cho, 2020). Although the way in which each media channel (including television, radio, newspapers, social media, and websites) presents information always varies (Lee & Cho, 2020), and as a result, consumer sustainable behaviours will differ depending on how much trust they place in each of these channels (Ardevol-Abreu & Gil de Ziga, 2017).

Referring to the information source (Green) word-of-mouth, it can bring a degree of credibility and trustworthiness, as consumers are knowing about the information through a shared experience (either from friends or from other consumers online) which can promote sustainable consumption among them (Zhang et al., 2018). In fact, the power of word-of-mouth has grown significantly as social media and digital channels have developed, thus, clear and successful content marketing motivates internet users or clients to spread "green word of mouth" among their peers (Al-Gasawneh & Al-Adamat, 2020) . Consequently, face-to-face communications and recommendations will also be made among friends, which can be a great way to persuade consumers to consume sustainably due to each person's network and shared interests (Allen & Spialek, 2018)

According to a study made by O'Rourke & Ringer (2015), assessing 40,000 online purchases involving a variety of product categories, direct users (who intentionally wanted sustainability information) were more influenced by this information contributing to an increase of their purchase intention; yet this type of information had little impact on non-direct users (consumers who were not already looking for information on how their choices affect sustainability), whose behaviour did not significantly change. The authors conclude that many consumers are not affected by sustainability information, but that consumers who have a previous commitment to sustainability make use of the information in their purchasing process. This may be because individuals who are less engaged in environmental matters do not use the information they receive in the same way, and for instance, may not know how to act upon it (Stern, 1992 as cited in Mostafa, 2009). However, consumers' awareness levels may rise and, as a result, might potentially encourage a favourable attitude towards "green" products if they were knowledgeable about the environment, its causes, and its effects (D'Souza et al., 2006). That is why it is fundamental for information to be increasingly accessible, credible, and relevant for consumers in order for them to actually engage in a sustainable purchase (Leire & Thidell, 2005).

2.4 Sustainability in the cosmetic industry

Nowadays, the use of cosmetics is an essential element in lives across the globe, which has been appreciated since the Egyptian, Greek and Roman eras (Kumar, 2005). Cosmetics are defined by the European Commission (2015, p.1) as "any substance or preparation intended to be placed in contact with the various external parts of the human body". They are included among the products typically referred to as "personal care products" under the law (European

Commission, 2015). Skin moisturizers, perfumes, lipsticks, fingernail polishes, eye and facial makeup preparations, shampoos, permanent waves, hair colours, toothpaste, and deodorants are examples of these products (FDA, 2016). They are perceived as vanity products that help improve people's appearance and may be considered non-essentials; however, the fact that cosmetics include products such as anti-acne creams, anti-inflammatory lotions, or others with specific health purposes makes them sometimes into basic needs of hygiene and cleanliness (Sahota, 2014).

According to Kumar (2006) market growth for cosmetics has changed from the Western hemisphere to emerging markets in South America, Asia and Eastern Europe. The largest market for cosmetic products in Europe is currently Germany (Cosmetics Europe, 2019) and L'Oréal Paris has been a global leader in cosmetics through the years (Kumar, 2005) and it was the brand leader of personal care worldwide in 2020, according to Statista (2020).

According to Sahota (2014) several studies describe the effects of cosmetic ingredients and cosmetic packaging on the environment, thus the safety of such ingredients has been subject of attention. The fact is that this industry is closely related to the chemical industry (Sahota, 2014), which is often not healthy for consumers or the environment. Some examples of potentially dangerous substances are Parabens, Phthalates, Lead, Petroleum, Mercury, Fragrance, Formaldehyde, Propylene Glycol, Para-aminobenzoic acid, among others (Csorba & Boglea, 2011).

In the 19th century, chemicals were utilized to replace more expensive natural substances, allowing cosmetics to become more commonly used (Kumar, 2005; Matic & Puh, 2016). Cosmetics manufacturing innovations and technology pushed the business forward in the 20th century, raising concerns about health, safety, the environment, and animal testing and as a result, "green" products started to be brought to the market place (Kumar, 2005).

Thus, there is a growing environmental awareness of the cosmetic industry's impact, regarding health, packaging, ingredients (Kim & Seock, 2009; Sahota, 2014) and consequently an interest in sustainable and natural cosmetics has grown among consumers (Sahota, 2014; Matic & Puh, 2016).

In fact, this awareness increases the amount of demand of sustainable cosmetics, and consequently the cosmetic companies are compelled to adapt their business and integrate products with natural and organic characteristics (Kim & Seock, 2009). In this way, natural and organic ingredients in cosmetics have grown in popularity as the environmental concerns have

increased as well (Csorba & Boglea, 2011; Sahota, 2014). The utilization of natural ingredients, cruelty-free (or non-animal testing products) and recyclable packaging have been some of the most famous attempts and measures to be sustainable in the cosmetic industry (Kumar, 2005; Csorba & Boglea, 2011).

However, there is still a long path to pursue when it comes to the sustainability of cosmetics and there are still some challenges in its integration, especially for companies (Bom et al., 2019). Companies find this sustainable integration a difficult process, as they should consider several segments such as the ecological footprint, the range and pricing of products, relationship with partners, information, communication, relationship with employers, among others (Sahota, 2014). And then, to achieve a sustainable state, cosmetic companies must be concerned about all of the steps in the life cycle of products as each of the phases have a certain impact (Bom et al., 2019).

Csorba and Boglea (2011) state that overall, the industry has the potential to grow in sustainable matters, and Sahota (2014) justifies this potential to grow with the fact that the lack of resources, pressure from the media, non-governmental organizations, and the supply chain have and continue to encourage companies to become more sustainable, promoting green practices and influencing people for this sustainable lifestyle. So, nowadays, sustainability has taken the top spot for many companies, including those in the cosmetics industry (Acharya et al., 2021). Besides, greater conditions and development for the natural cosmetics market are offered as a result of a better understanding of customers' attitudes and behaviour towards those products (Matic & Puh, 2016).

2.5 Generation Z

Although there is not absolute consensus, most authors agree that Generation Z are born between 1995 and 2010 (Bassiouni & Hackley, 2014; Seemiller & Grace, 2017; Chicca & Shellenbarger, 2018; Francis & Hoefel, 2018; Szymkowiak et al., 2021; Sakdiyakorn et al., 2021)

Where there is agreement is that generation Z consists of young people, the majority of whom are currently students in primary and secondary schools, with the oldest members being undergraduate university students (Szymkowiak et al., 2021), who are now giving their first steps in the labour market (Schroth, 2019).

Generation Z were born in the digital era (Berkup, 2014). Thus, some of their common characteristics are the fact that members of this generation are enthusiastic users of technology or even digital “addicts” (Berkup, 2014). In fact, they are familiarised to interacting, sometimes primarily, in the digital environment as they are the only generation raised exclusively with a technology influence (Chicca & Shellenbarger, 2018). Therefore, given that they have been using various technologies since a young age, it is evident that these are an unquestionably important part of their lives, so they often have a poor tolerance to being without digital resources (Szymkowiak et al., 2021); and it has also been said that they present a short attention span as a result of their digital habits (Chicca & Shellenbarger, 2018).

They interact globally and consume information from around the world, as they can be online at any time (Berkup, 2014; Turner, 2015; Wiedmer, 2015). Thus, unlike earlier generations, Generation Z prefers digital media to traditional media and is constantly on the lookout for new and diverse sorts of information and they use it to find data in many areas, including education (Szymkowiak et al., 2021). Furthermore these young individuals will soon be the next generation to dominate the labour market, which consequently will bring new consumption patterns.

In addition, those born in this generation have always felt and seen the effects of the climate crisis, such as the loss of human and animal life, destruction of natural habitats, changes in the oceans, among others (Verplanken et al., 2020) and those concerns have implications and consequences, such as extreme worry and fear, that may even lead to eco-anxiety - an increasingly discussed concept nowadays - which is characterized as a distress brought on by climate change (Verplanken et al., 2020) and which may be linked to general anxiety and depression (Clayton & Karazsia, 2020). But, on the positive side, this eco-anxiety can push these young individuals to be more active in trying to find solutions for the environmental issues the world face, making them have “greener” choices in their lives and even make them participate more in climate activism (Tyson et al., 2021).

Thus, the fact that this generation is surrounded by a lot of information, having a quicker access to it, makes them know about global issues (such as the negative impacts of climate on earth or even the climate activism) in the moment it happens (Berkup, 2014; Turner, 2015; Wiedmer, 2015). Therefore, by growing up with this level of technology and with the sustainability embedded into their lives, makes them an appealing generation to study as well.

3. Methodology

The present study was developed based on a qualitative approach, which was considered for this research, as the aim of it was to deeply understand the level of knowledge regarding sustainability in the cosmetics industry and to analyse the impact of different sources of information on the attitudes and behaviours of generation Z within the university context. In order to better comprehend the attitude behaviour gap phenomenon and the complexity of the impact of information sources on this sustainable cosmetics consumption, this method seemed to be the most appropriate because it allows for a better analysis of consumer experiences and beliefs and their effects on consumption.

This qualitative research consists of open-ended and observation-based information that is gathered on the personal experiences and stories of the participants (Yilmaz, 2013). Thus, qualitative data enables numerous interpretations, meanings, and richness of the results, since it allows a more descriptive and exploratory approach to the data, and where individual experiences are considered (Strauss & Corbin, 1998), which in this case, facilitates the understanding of consumers' processes and backgrounds.

Following an interpretivist paradigm - which is openly subjective and aims to develop new and stronger understandings and interpretations of social contexts (Saunders et al., 2016), - semi-structured interviews were chosen for the data collection. Interviews allow participants to reflect on events without having to write anything down, allowing them to comment on their experiences in ways that surveys, for example, would not allow (Saunders et al., 2016). Thus, the ease and freedom to talk that is ideally created in interviews was a very strong reason for choosing this method, especially speaking in the context of the attitude behaviour gap. Semi-structured interviews in specific, allow a guidance and a structure but at the same time a more flexible approach to each participant, allowing adaptation from interview to interview and granting a deeper interpretation of the qualitative results (Saunders et al., 2016). Thus, they are based on a script but allow a more fluid communication, without losing focus on the core research topics (Magaldi & Berler, 2020).

3.1 Participants

The criteria for participation on the interviews was to have people from Generation Z within the university context above 18 years of age, thus born between 1995 and 2004. This study was conducted in Portugal and we had a convenience sampling since the selection process was done by private message or in person (since most of the people considered were friends, friends of friends or colleagues).

In addition, individuals ended up being excluded, being that we used the following selections question: "From 1 to 10 (1 being not at all interested and 10 being very interested) how interested are you in sustainability in the cosmetic industry? Regardless of whether you buy or not these products". Therefore, only people who indicated an interest level of above six were included in the interviews, since we were not interested in those consumers to whom this topic or this industry does not say anything, but those who are already awake to the topic and its implications. Therefore, the numbers from six to ten on the scale of zero to ten were considered representative of interest in the topic.

Furthermore, within the possible choice of population for the study, the objective would be to obtain participants from diverse educational backgrounds, which was expected to attain a more varied range of viewpoints and enriching conclusions, to have a more diverse sample in these aspects.

A total of 13 interviews were carried out, based on a saturation logic of the process, which basically implies that data saturation is being reached when we start to hear the same responses repeatedly (Saunders, et al., 2017) ; 11 of them were made face-to-face and two of them were made via zoom meeting. ⁷ These interviews were carried out between 28th January 2022 and 4th April 2022. The shortest interview lasted 15 minutes and the longest lasted 51 minutes. ⁸

Four of the Participants were members of a junior enterprise ⁹– Lisbon PH – which is a non-profit organisation that provides services and organizes events, sells e-learning courses, and provides consultancy to the pharmaceutical industry. Lisbon PH is very guided by aspects of sustainability, as well as social, corporate and environmental responsibility. They have an internal sustainability department that aligns with the sustainable development goals of the UN

⁷ This information can be seen in detail on table 1, page 23

⁸ This information can be seen in detail on table 1, page 23

⁹ This information can be seen in detail on table 1, page 23

and impacts 15 of the 17 Sustainable Development Goals (SDGs) (Lisbon PH, 2022). It is important to bring up this point because these individuals actually showed that they had more knowledge about the subject.

In the end, the final sample was composed by 13 people from different fields of study and/or jobs, with predominantly female representation, thus there were 11 females and 2 males and that are mostly from Lisbon. In table 1, the sample characterization is presented.

Table 1 - participants' characterization

	Age	Gender	Level of education	Education field	Employment	Area of residence	Interview date	Interview duration	Interview format	Member of Lisbon PH?
Interv. 1	23	Female	Bachelor degree	Medicine	-	Lisbon	28/01/2022	17:19	Presential	-
Interv. 2	23	Female	Bachelor degree	Management	-	Lisbon	02/02/2022	19:05	Presential	-
Interv. 3	23	Female	Bachelor degree	Psychology	-	Lisbon	03/02/2022	51:42	Presential	-
Interv. 4	24	Female	Bachelor degree	Marketing	Marketing	Lisbon	08/02/2022	23:05	Presential	-
Interv. 5	24	Female	Bachelor degree	Psychology	-	Lisbon	04/03/2022	51:36	Presential	-
Interv. 6	22	Female	Bachelor degree	Pharmaceutical sciences	-	Loures	09/03/2022	14:19	Presential	Yes
Interv. 7	20	Female	Bachelor degree	Pharmaceutical sciences	Babysitting	Lisbon	16/03/2022	17:09	Presential	Yes
Interv. 8	20	Female	Bachelor degree	Pharmaceutical sciences	-	Setúbal	17/03/2022	19:05	Presential	Yes
Interv. 9	23	Female	Bachelor degree	Management	Marketing and Sales	Leiria	23/03/2022	40:03	Online	-
Interv. 10	24	Male	Bachelor degree	Finance	Finance	Loures	25/03/2022	18:44	Presential	-
Interv. 11	24	Female	Master degree	Finance	Consultancy and Finances	Lisbon	27/03/2022	30:36	Online	-
Interv. 12	20	Female	Bachelor degree	Pharmaceutical Sciences	-	Loures	30/03/2022	15:08	Presential	Yes
Interv. 13	20	Male	Bachelor degree	Marketing	-	Setúbal	04/04/2022	21:30	Presential	-

3.2 Procedures and data collection

As already mentioned, data was collected through semi-structured interviews. These interviews essentially addressed issues related to the impact of information regarding the sustainability in the cosmetic industry on consumers and relevant facts about their consumption in this industry were found. Those characteristics can be seen on Annex A, which contains the interview script with all the questions that were made to the participants. In this sense, the script followed the following logic: We started to ask about the general criteria that participants considered important when buying a cosmetic, then we asked about the type of information they look for when buying a cosmetic and then we asked in specific about the sustainability topic regarding cosmetic consumption. We also asked about the sustainability issues they associate with the cosmetic industry and how well informed they feel about this topic. In addition, we asked about their specific sources of information they use to know more about the sustainability in the cosmetic industry and their influence on their consumption habits. Finally, we asked about the perception of their responsibility regarding the sustainability impact on the cosmetic industry.

The script was previously written, although it suffered some adaptations in each interview, as sometimes the questions were not asked exactly as presented in the script and so other lines of thought were introduced in order to explore various themes in the same type of questions, if this was favourable. We also wanted to let the conversation flow and make it a natural thing for the participants.

Each participant received and signed a consent form before participating in the interviews. Then, on the day of the interviews, we began by recalling the ethical aspects of the consent form. This can be seen in more detail in Annex B.

At the start of the interview itself, the objective of the study was reminded and a small introduction to the topic was made, namely defining the cosmetic industry, in order to avoid misunderstandings about the concept of a cosmetic product. At the end of the interviews, the participants answered some socio-demographic questions.

The data collection process started with a “test” interview, which was carried out to make sure the questions were clear and to obtain a sense of the approximate length of the interview. Because this first interview was quite short, two additional questions were prepared for subsequent interviews, which then became part of the script. Since in practice the first interview was found to be similar in terms of the content of the answers to the remaining interviews, it

was considered for analysis and included in the final sample as it demonstrated to be relevant for the final results.

3.3 Data analysis

We used a thematic analysis to carry out the investigation. The thematic analysis seemed the most suitable analysis for this investigation since it is flexible and provides detailed and richer data due to its ability to report patterns (Braun & Clarke , 2006).

The 13 interviews were transcribed using the Microsoft Word dictate feature, and they were corrected afterwards. The transcriptions were then uploaded to the MAXQDA - a software for qualitative and mixed methods data analysis that analyse many types data including texts, photos, audio and video files, focus group discussions and survey results (MAXQDA, 2022) - to begin the analysis. This program allows the user to create multiple categories/themes, and once these categories are assigned by the user, the program helps to develop relationships among categories, or counts data points, for instance.

We started with a categorization based on a priori themes and from the literature in the background, which were reflected in the script, namely: Sustainability cosmetics concept ; Sustainability issues in the cosmetic industry; Sustainable and non sustainable brands; ; Level of information; Information search; Information sources; Most trustable sources; Impact of information on sustainable purchases; Impact of company behaviour on sustainable purchases; Determinants of sustainable cosmetics purchases; Criteria for cosmetics purchases; Responsibility for the impacts of the cosmetic industry.

Some emerging themes also came up, such as: Complexity of sustainability; Context influence on sustainable purchases; Dissemination of information problem; Getting out of comfort zone. Which were later grouped to other categories to which they were related in order in order to better answer the research questions.

In figure 2 below it is possible to see these main themes within the topics of the research questions. Being that subcategories were also created and in Annex C is represented a more complete list of the categories and their correspondent subcategories.

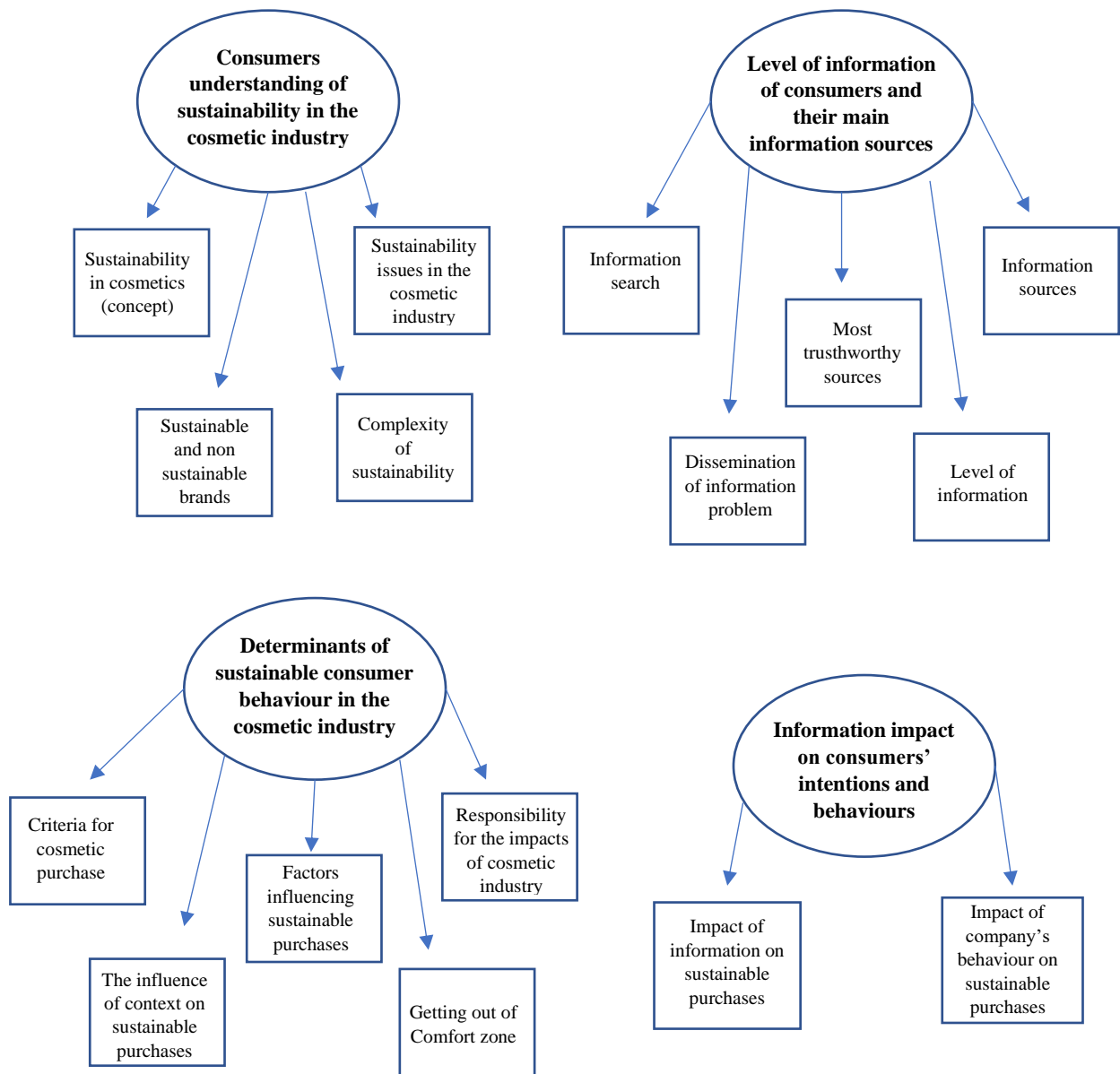


Figure 2 - Thematic map of the main themes

4. Findings

Taking into account the uncertainty that exists regarding the understanding of the concept of sustainability in the cosmetic industry, this research aimed to find out how generation Z consumers perceive sustainability in the cosmetic industry and how the information sources influence this knowledge, namely we wanted to understand what's their understanding of sustainability regarding the cosmetic industry, how informed do they feel about this topic and where they get the information, what impact they believe this information has on their purchasing actions, and what are the main determinants for sustainable consumption in the cosmetic industry. Below, we can find the investigation results based on the interviews conducted concerning these themes.

4.1 Consumers' understanding of sustainability in the cosmetic industry

We wanted to know the generation Z consumer's understanding of sustainability within the cosmetic industry context and the categories presented on Table 2 were therefore, created in order to easily fulfil that purpose. Based on the interview data, we were able to consolidate four key categories in this regard: 1. Sustainability in cosmetics (concept); 2. Sustainability issues in the cosmetic industry, 3. Sustainable and non sustainable brands and 4. Complexity of Sustainability. Within the second category, six subcategories were inserted: 2.1 company behaviour and transparency; 2.2 packaging; 2.3 animal testing; 2.4 pollution and climate change; 2.5 price and 2.6 others¹¹.

Table 2 - categories on the understanding of sustainability in the cosmetic industry

Order	Categories and subcategories on thematic analysis
1.	<i>Sustainability in cosmetics (concept)</i>
2.	<i>Sustainability issues in the cosmetic industry</i>
2.1	Company behaviour and transparency
2.2	Packaging
2.3	Animal testing

¹¹ When subcategories were created within categories, the subcategory "others" was always created, since it includes subjects that did not fit into the other subcategories. This will also be seen in other following tables within this chapter.

2.4	Pollution and climate change
2.5	Price
2.6	Others
3.	<i>Sustainable and non sustainable brands</i>
4.	<i>Complexity of Sustainability</i>

Given the exposure to the topic of sustainability today, we wanted to understand if there was a general consensus about the concept of sustainable cosmetics among our respondents. And there was indeed a convergence in the participants' understanding of the topic, specifically, there was an understanding among the participants that sustainability is not related to a single aspect of the product or stage of production. Rather, the participants referred that sustainability in the cosmetic industry was present in different areas and that it must be seen as a whole, as every part of the process counts. Sustainability topics highlighted by the participants included the assurance of good labour conditions for the workers, the impact of the extraction of natural resources, as well as the impact of packaging on the environment. For instance, Participant 1 (female, field of Medicine) said that a cosmetic *“is sustainable if the production process is fair to the workers, if there is no exploitation and if the natural resources used are obtained in a way that does not harm the environment or future users.”*

Participants were also asked what they thought the main problems associated with sustainability in the cosmetics industry were, and again there was a lot of convergence among the answers. While in defining the concept, participants touched on a variety of sustainability issues related to the production and distribution of cosmetics, when asked for the main problems, most respondents zeroed in on the issue of company honesty and transparency. Many felt that company communications were not always the most honest, and greenwashing was a recurring theme. For instance, Participant 4 (female, field of Marketing) noted that some brands *“do greenwashing, where they basically have a completely commercial positioning and launch some more sustainable products, leading consumers to believe they are consuming sustainably, when they are not, because a product does not save a brand from its positioning”*. This perspective was echoed by Participant 2, who noted that:

The lifestyle [cosmetic] companies sell are unsustainable [in the sense that] there is always this tendency to deceive the consumer, [to say that] the product will give an X or Y result and it is not very sustainable in the sense that it will force us to buy more products more

often and we have more expenses [then] transparency is not always achieved by brands claiming to be sustainable. (Participant 2, female, field of Management)

Around half of the participants also mentioned that packaging is a problem in cosmetic industry, whether in terms of waste or recycling. For instance, Participant 7 (female, from Pharmaceutical Sciences) mentioned that she believes that *“instead of replacing everything that is plastic with cardboard, I believe it is necessary for the industry to consider the reuse and recycling of plastics. And not advertise the fact there is no plastic in order to sell more.”* Animal testing was also emphasized by half of participants as being one of the main issues in the industry; for example, Participant 8 (female, field of Pharmaceutical Sciences) mentioned the following : *“the biggest problem is animal testing, many things still need change in the cosmetic industry because there are still several associated problems [...] and companies are unwilling to change in order to help the industry change as well”*.

It was also verified that participants were able to easily identify brands they consider to fulfil the sustainability concept (the most mentioned were Lush and L’Oréal), and the same applies to non-sustainable brands (the most mentioned were Nivea and L’Oréal). But even though they were easy to identify, there was a clear division around the brand L’Oréal. Some referred that they consider it very sustainable due to its attempts to integrate more environmentally friendly ranges in their products. Others claimed that for that same reason, the brand is trying to show off what is actually a “false sustainability”, taking into account that in other areas of activity they are still not aligned with sustainability, and that the sustainable lifestyle cannot be present in only part of the company, but has to permeate it as a whole. For instance Participant 7 (female, from Pharmaceutical Sciences), who saw L’Oreal’s activities in a positive light, noted their *“annual reports on sustainability and [...] lately their marketing is very focused on sustainability, also [...] their Garnier’s range of solid shampoo bars”*. Participant 4 (female, field of Marketing), on the other hand, was far more sceptical:

In terms of animal testing, it is a brand that is present in China and conducts animal testing there, but does not conduct animal testing in Europe, which I find to be a major inconsistency and quite antagonistic, and despite positioning itself as sustainable, I believe sustainability is also a lifestyle and I don't believe a sustainable brand can earn that name by testing animals. For example, I think it's great that they now have solid shampoos on the Garnier range, and I like to give opportunities, but I'm having a hard time buying from the brand

again since I believe they've had the chance to pursue a different path, but they didn't.
(Participant 4, female, field of Marketing).

Finally, although there was an agreement before on the concept of sustainability and the existing problems of the cosmetic industry, we can find a feeling of confusion among the participants, regarding sustainability in general. They claim it is a complex and tricky topic, that the sustainability is confusing and that they find themselves lost in the topic, they find it hard to know what real sustainability is. For instance, Participant 5 (female, field of Psychology) said that she has “*a major problem with the complexity of sustainability [...] and it's difficult to look at a product and to understand if it is sustainable or not*”

4.2 Level of information of consumers and their main information sources

We wanted to know if the consumers felt informed about sustainability in cosmetics and which were their main sources regarding this topic. Therefore the categories presented on Table 3 were created in order to easily fulfil that purpose. Based on the interview data, we were able to consolidate five key categories in this regard: 5. Information search; 6. Level of information; 7. Information sources; 8. Most trustworthy sources; 9. Dissemination of information problem. Within the fifth category, six subcategories: 5.1 Reviews/Word of mouth; 5.2 Sustainability; 5.3 Company behaviour and transparency; 5.4 Price; 5.5 Product characteristics; 5.6 Others. Within the seventh category, seven subcategories: 7.1 Internet in general; 7.2 Social media/influencers; 7.3 brands/companies; 7.4 Friends; 7.5 Articles; 7.6 Field specialists; 7.7 Others. And within the eight category, six subcategories: 8.1 Field specialists; 8.2 Brands; 8.3 Social media/influencers; 8.4 Friends; 8.5 Articles; 8.6 Others.

Table 3 - categories on the level of information of consumer and their main information sources

Order	Categories and subcategories on thematic analysis
5.	<i>Information search</i>
5.1	Reviews / Word of Mouth
5.2	Sustainability
5.3	Company behaviour and transparency
5.4	Price
5.5	Product characteristics
5.6	Others
6.	<i>Level of information</i>

7.	<i>Information sources</i>
7.1	Internet in general
7.2	Social Media/ influencers
7.3	Brands/companies
7.4	Friends
7.5	Articles
7.6	Field specialists
7.7	Others
8.	<i>Most trustworthy sources</i>
8.1	Field specialists
8.2	Brands
8.3	Social media/influencers
8.4	Friends
8.5	Articles
8.6	Others
9.	<i>Dissemination of information problem</i>

Regarding the level of information, the answers were quite diverse, and there was no clear consensus: while some participants said they felt informed about sustainability in the cosmetic industry, others said they were not informed, and others yet felt they had some information, but not enough.

The participants who did not feel informed were quick to note that this was not due to lack of information: they acknowledge that the information is out there – they had simply not taken the time to look for it or found the topic too complex. Those who did feel informed, notwithstanding felt that they still have much room for improvement in terms of their sustainability awareness. For instance, Participant 6 (female, field of Pharmaceutical Sciences) said *“I’m not well-informed, but in this case because I don’t want to be. I don’t want to, because I’ve never looked into it or spent a lot of time doing study on it. Not because I don’t have the information at hand, but rather because I haven’t committed myself to seeking for it.”* while Participant 11 (female, field of Finances) said that sustainability in cosmetics is *“something I pay attention to before buying products, I always come across the subject, therefore I feel informed [...] but I clearly feel that there is information that has not yet been explored by me”*.

Although there is this division in participants’ opinions, there is definitely a pattern among them when it comes to searching for information about sustainable cosmetics. Participants were first asked if before buying a cosmetic product they looked for information about it (without

specifying the sustainability factor) and the participants mentioned that it is undeniably an important determinant before their purchase and they acknowledge they look for information before buying a cosmetic product, mainly looking for other people's reviews of products, mostly on social media. For instance, Participant 13 (male, field of Marketing) said *"I usually look for reviews and opinions from other people who have already tried it. I see, for example, some vlogs or any information I have about the product"*.

However, since our specific interest was to understand if the participants considered sustainability when searching for information on cosmetic products, even for those who did not mention sustainability in the information search question, we asked them specifically whether or not this topic was something they took into account, and we found that all the participants consider it significant. Some participants mentioned that although sustainability is not the first topic they look for, if it comes up in their research, it is important for them. Participant 8 (female, field of Pharmaceutical Sciences) said that *"When it comes to sustainability, I don't generally look too hard because I don't use many cosmetics, but if I come across any information about it, I'm immediately fascinated and want to learn more."*

So, overall, the participants acknowledge the importance of the role of information in general as they look for it and it matters to them. It is interesting to note that however minimal the information (whether from those who feel informed or those who do not), they use what they have access to. When it comes to actively seeking for sustainability information in specific, however, there is definitely a significant difference. Despite the fact that the participants think this topic is relevant, some of them don't really have initiative and prefer to wait for the sustainable information to surface in their more general research rather than taking the effort to look into the sustainability aspects of cosmetic products.

Regarding participants' specific sources of information on sustainability within the cosmetic industry, they were asked directly about this and two sources clearly stood out in the responses: the internet in general, and once again, social media. In describing their sources of information, most participants referred some kind of search browser; Participant 9 (Female, field of Marketing and Sales) refers for instance that she would *"search on the internet for a certain product or a brand, and see what results came up in the browser. I would then visit the websites to determine if the product I was looking for was sustainable."* With regard to social media, participants referred that they usually look up influencers, giving examples of people they follow as their ultimate source of information. For instance, Participant 5 (female, field of Psychology) expressed that *"Instagram profiles like Catarina Barreiros, who even has a*

sustainable business, gives me trustworthiness, since I know she is committed to doing much more for a better world rather than just trying to sell me stuff.” Other sources commonly mentioned by the participants were: brands/companies, since they like to know company policies and how the website presents the company’s sustainability information - for instance, Participant 3 (female, from Psychology) said she likes to understand *“how brands present information and even at a visual level, understand their history and the choices they make.”* ; and friends, in the sense that the participants reach out to peers that are already familiarised with sustainable cosmetics, which is the situation of Participant 2 (female, field of Management) who said that *“without doubt, I use certain friends as a source of information, friends who have the same concerns I do regarding these issues”*. Aside from these, there are a few others that are less mentioned such as: articles and cosmetic field specialists.

When it comes to how much trust the participants have in these sources, the results were quite different. Field specialists came first in terms of trustworthiness among the participants, and they try to find these experts on the internet, social media, in events or in lectures they attend. For instance, Participant 9 (female, field of Marketing and Sales) says that she trusts *“more on feedback from people who have knowledge of the cosmetic area because they present me the facts, characteristics and the results”* The participants ended up being quite evenly distributed regarding the trust they have in other sources, namely: brands/companies; social media/influencers; friends and articles, being those the ones they trust more after the field specialists.

A trend among participants can be verified, when it comes to mention the sources they trust the most and it is was interest to find that they always mention more than one source, feeling the need to double check their information. For instance, Participant 10 (male, field of Finances) says *“The most reliable sources would be a combination of two - internet and friends - because I have sceptical nature so when I'm told something I need confirmation, unless the other person is really knowledgeable on the subject.”*. And even though there are people who do not feel that informed about sustainability in the cosmetic industry, they did not struggle to mention sources of information and could also automatically mention sources they would go for more information.

While the participants easily mention the sources they use to stay informed about sustainability in the cosmetics industry, there is a pattern of response regarding information dissemination; in general, these young consumers believe that in other areas (such as the fashion

and the food industry) there is more information spreading and that there is not much information available in this specific area of sustainability-related cosmetics. For instance Participant 8 (female, field of Pharmaceutical Sciences) expresses the following: *“I don’t think there is that much information out there”*.

4.3 Information impact on consumers’ intentions and behaviours

We wanted to understand the perception of generation Z consumers, regarding the impact the information has on their attitudes, and we created the categories presented in Table 4 to help organize this data better. We were able to arrive at two key points in this regard: 10. Impact of information on sustainable purchases; 11. Impact of company’s behaviour on sustainable purchases.

Table 4 - categories on the information impact on consumers intentions and behaviours

Order	Categories on thematic analysis
10.	<i>Impact of information on sustainable purchases</i>
11.	<i>Impact of company’s behaviour on sustainable purchases</i>

We asked the participants to what extent they felt that the information that they get from the sources of information they identified, influence their purchase of cosmetic products. There was a clear trend among participants of feeling that information has a huge impact on their sustainable purchases, whether positively (considering that the information makes them feel influenced, curious about the products and willing to try a buy them) or negatively (because the information helps them be aware that some allegedly sustainable products can still have a damaging impact on environment or have poor quality). Participant 4 (female, field of Marketing) for instance expresses that information influences her *“a lot, since there are times when I’m hesitant between products and I really need to have a backup before purchasing [i.e. have information to support their purchase] because I’ve tried items like this [products claiming to be sustainable] before and they were not good, despite being sustainable.”*

Even though there were people who said they did not feel informed, they mentioned that they thought if they had more information about sustainability in the cosmetic industry it would influence their purchases. Participant 8 (female, from Pharmaceutical Sciences), for instance admits: *“it would influence me a lot, of course depending on how the information would be*

communicated, the impact it would cause. But if I was told about the negative aspects [...] I would definitely be influenced."

There were also respondents who said that sustainability information has a partial impact on their actions, since there are also other aspects to consider, which sometimes outweigh sustainability information, as is the case of the price. For instance, Participant 3 (female, field of Psychology), referred that *"depending on certain characteristics of my skin, hair and so on, if the information is suitable, it influences me a lot. Then I also weigh the price factor. Because there are products that are not in my budget."*

We also wanted to understand how the participants understood the information disseminated by cosmetics companies regarding sustainability, so we asked them what they thought about their behaviour. Specifically, if they ever started to or stopped buying a certain cosmetic product or brand because of its sustainability behaviour. The pattern of response was that the companies' behaviour regarding sustainability in the cosmetics field certainly influences their purchases. For instance, Participant 2 (female, field of Management) said that when she heard the following: *"Colgate toothbrushes have beeswax"*, she *"just didn't buy them anymore, because they say they are super sustainable and made of bamboo, but they forget to say that bees are endangered species, and they use them to make this products and it's misleading advertising"*.

Some participants also said that they sometimes think cosmetic brands are disseminating misleading information since, despite their promotion of sustainable practices, their main objective is always to make sales.

Participants were also asked about their actions upon receiving sustainability information, and the results clearly show the gap, previously identified in the literature (e.g.: Carrigan & Attalla, 2001; Pelsmacker et al., 2005; Leire & Thidell, 2005; Young et al., 2009; Bray et al., 2010; Terlau & Hirsch, 2015; Zhang et al., 2018) between attitudes and behaviour. In effect, although they are quite interested about sustainability in the cosmetic industry, few of the participants indicated they fully act on the information they have. Rather, participants indicated that they are trying to act on the information and make more sustainable choices, but recognised that there were still a lot of behaviours they could improve. The participants were therefore very aware of this lack of action and disconnection between their attitudes or beliefs and their actions (as reflected in their purchase decisions). They were conscious of the gap, and it results from the fact that they think they can do more, research more. At the same time, participants also

passed part of the blame for their inaction on the lack of information they have from companies and brands, for not feeling this dissemination of sustainable information in cosmetics.

Notwithstanding, they were open in admitting that sustainability in cosmetics is not a top priority in terms of their purchases, although they are very interested in the subject. For instance, Participant 10 (male, field of Finances) says: *“I don’t act upon the information I receive [...] I could be more proactive in that sense, I’m aware of that, but the truth is that there is no much action.”* In their perspective, this posture was reflective of their age cohort in general. In fact, their perception was that in general Generation Z consumers, not only do not act on sustainability information in the field of cosmetics, but also are likely to not even be that interested in the subject. Participant 9 (female, field of Management) adds that she doesn’t see *“many people interested in the subject. Because within sustainability there are other categories such as food, fashion and cosmetic is not a topic of conversation.”*

4.4 Determinants of sustainable consumer behaviour in the cosmetic industry

We wanted to perceive what type of determinant factors generation Z has when it comes to sustainable cosmetic consumption. We were able to arrive at three key points, present in Table 5: 12. Criteria for cosmetic purchase; 13. The influence of context on sustainable purchases; 14. Factors influencing sustainable purchases. Within the twelfth category, seven subcategories: 12.1 price; 12.2 product characteristics; 12.3 brand/product loyalty; 12.4 reviews/ worth of mouth; 12.5 quality; 12.6 animal testing; 12.7 others. And within the fourteenth category, five subcategories: 14.1 price; 14.2 more information; 14.3 effectiveness; 14.4 offer; 14.5 others.

Table 5 - categories on determinants on sustainable consumers behaviour in the cosmetic industry

Order	Categories and subcategories on thematic analysis
12.	<i>Criteria for cosmetic purchase</i>
12.1	Price
12.2	Product characteristics
12.3	Brand / product loyalty
12.4	Reviews / Word of mouth
12.5	Quality
12.6	Animal Testing
12.7	Others

13.	<i>The influence of context on sustainable purchases</i>
14.	<i>Factors influencing sustainable purchases</i>
14.1	Price
14.2	More information
14.3	Effectiveness
14.4	Offer
14.5	Others
15.	<i>Responsibility for the impacts of cosmetic industry</i>
16.	<i>Getting out of comfort zone</i>

Thus, we asked the participants about their purchase criteria for cosmetics, as well as if sustainability was one of them; but it was mentioned unprompted by only a few of the participants. Instead, there is a clear pattern pointing to price as being the most important criteria for participants. As Participant 12 (female, field of Pharmaceutical Sciences) puts it: *“the first criteria is always the price, I don’t buy very expensive things”*. Two other criteria very mentioned were the product effect/characteristics on their body, as Participant 9 (female, field of Marketing) says: *“according to what I’m looking for, for example, I really wanted a shampoo that would treat oiliness and I really wanted this factor to be present”*; and the brand/product loyalty, where participants often describe that their loyalty to a brand or product is important as they already know what to expect. For instance, one participant noted that:

I think that an important criteria is whether I have used a product before, if it is a product that I use often and which I already know that it works well for me. This is more specifically in relation to the skin, for example, if I already know that that one product works for my skin, which is very sensitive and I am afraid of going out of the pattern, this is a factor that will make me buy the same product again. (Participant 3, female, field of Psychology)

From the interviews, emergent themes also appeared regarding potential barriers to the purchase of sustainable cosmetic products. And in general, participants highlighted the fact that an individual’s specific context has a huge influence on sustainable cosmetic purchases, no matter how informed they are on the subject. Thus, the contextual influence on sustainable purchases ended up being one of the emergent themes, as throughout the interviews we started to perceive that it was an important aspect to consider regarding their determinants, because depending on each context, the criteria ended up having a different influence on each person.

This suggests that having sustainable actions may not be as easy as it seems as it is not available to all citizens. For instance, Participant 10 (male, field of Finances), expresses: *“I*

believe that the social class to which a person belongs is extremely important, because even with sustainable information, a person with a less favourable and economic conditions, will not have as many possibilities to buy sustainable cosmetics.” So, price comes into focus again, but this time as a barrier, which coincides perfectly with people's purchasing criteria since a determinant can easily become an obstacle.

Participants were also questioned about what could make them buy more sustainable cosmetics and most of the responses were aligned and once again mainly related to price, because they think sustainable cosmetics are still very expensive. For instance, Participant 7 (female, field of Pharmaceutical Sciences) said: *“I think what would make me take the next step now would be the price. Sometimes there are things that are high-priced”*; and related to the need to have more information about sustainability in the cosmetic industry. Participant 6 (female, field of Pharmaceutical Sciences) said for instance that she thinks that:

This is not something commonly known, it's not well transmitted and discussed, even in advertising and marketing levels. So if this component of sustainability was more prominently discussed, If I could link the sustainability symbol to a cosmetic brand, I would more willing to choose this type of product over another. (Participant 6, female, field of Pharmaceutical Sciences)

The participants were also asked about the responsibility they believe they have for the impacts of cosmetic industry and for the most part they considered that they have a responsibility. They identify that as consumers they have a major power to take action, since by supporting or boycotting a brand they are communicating to the main company whether or not they want certain products in the market, which is an important information to make a big change in the cosmetic industry. One participant for instance stated that:

I believe that by purchasing sustainable items, I am contributing to the environment and benefiting the world in some manner . [...] When we consume, we are telling brands that we want this thing, and vice versa. Because when we buy, we are basically providing statistics to brands... they have access to the most sold goods, the most desired thing, so they come up with a strategy and think "sustainable items aren't yet being purchased, let's raise what people buy more" (Participant 13, male, field of Marketing)

Finally, another pattern found in the interviews pertains to scepticism. These generation Z consumers were sceptical about sustainable products versus “traditional” ones, in the sense that they feared such products would not have the same level of quality or effectiveness, and so they

would rather not risk trying a new sustainable product, despite knowing the benefits it has over the “traditional” product, having this way a fear of getting out of their comfort zone. For instance, Participant 3 (female, field of Psychology), says:

It's difficult for us humans to step outside of our comfort zones, and we often prefer to stick with what we know works. Cosmetics is an industry that is becoming increasingly concerned with sustainability, but it has not been on the market for a long time, so I believe it is difficult for people to internalize it and go from a less sustainable product to a more sustainable product.

5 Discussion

In the present chapter, the main results of the investigation will be discussed and an analysis reflecting on the possible connections between the findings will be presented, as well as their connection with the existing literature presented in chapter two.

The primary aim of this dissertation was to understand the role of information and different information sources on generation Z consumers' – such as attitudes and reported behaviours towards the cosmetics industry. Thus, it was necessary to firstly detect what their understanding of sustainable cosmetics was.

Participants associated this concept with the environmental and social dimensions, as per the literature, where social and environmental dimensions have always been the most considered since sustainability began to be talked about (Purvis et. al 2018).

According to the results, about half of the sample did not feel informed about sustainability in the cosmetic industry, and even those who feel informed do not feel fully informed, as they state there are still many things they need to know about. This is likely connected with the fact that participants feel that, in general, there is a lack of information regarding sustainability in the cosmetics industry and consider that the topic is not as present as it is for other industries, such as fashion or food.

It is interesting to note that despite this division between the “informed participants” and the “non informed participants”, the results show that all of them consider, for instance, sustainability characteristics important in each product they come across, and recognize the sustainability characteristics of the products they intend to buy. This apparent paradox may be related to the information consumers have about sustainability and in particular the way it is delivered to them.

For instance, throughout the interviews, participants refer to companies' behaviour and transparency as a big issue of the cosmetic industry when it comes to communication with the public, one which ends up affecting them (both positively and negatively) in their consumption process. This is consistent with the literature, in what pertains to a negative effect, since one of the most impactful barriers for sustainable consumption identified in the literature is in fact, the lack of brand transparency (Terlau & Hirsch, 2015; Young et al.,2009; Bray et al.,2010; Kaufmann et al., 2012).

Although we can verify a consensus among participants regarding the definition of sustainable cosmetics, there is a certain sense of confusion as a result of the complexity of the concept, which was mentioned by the consumers in the interviews. Although participants have brands as sources of information, they also say they end up getting a lot of information from other people's reviews and using friends and social media as sources of information, which is consistent with the literature, where there is evidence that (green) word of mouth (Mangold & Faulds, 2009; Zhao & Xie, 2011; Zhang et al., 2018) and media (Brown & Deegan, 1998; Thøgersen, 2006; Mangold & Faulds, 2009) are significant sources of information for sustainable consumption, along with companies (D'Souza et al., 2006; Sahota, 2014).

Nevertheless, in terms of trust, the consumers in this study indicate they trust articles and cosmetic experts more than brands. Thus, what we find is that paradoxically, the source they most use is not the one they think is the most trustworthy. It appears to be a trade-off between information trustworthiness/expertise and its availability/accessibility, with the latter often being the deciding factor in terms of information use.

Indeed, one of the characteristics most valued by the sample seems to be ease of access, not only to products, but also to information itself. As a result, marketing and advertising are more easily identified as major sources of information for these consumers, but the same does not happen with other sources of information recognized by participants to be more credible - such as scientific articles and experts in the field, who do not have as their main objective the dissemination of information with the commercial goal.

It is also interesting to find that these Generation Z participants value having reliable people to follow on social media, when it comes to these sustainability concerns in the cosmetics industry. For example, the influencer Catarina Barreiros was frequently cited as a source of information for these young people. This basically confirms the strong evidence in the literature that social media appears to be a basic part of this generations' experiences and that they are particularly attached to technology (Berkup, 2014; Chicca & Shellenbarger, 2018; Szymkowiak et al., 2021). Therefore, it is plausible to say the audience views these online influencers as role models, looking to them for expertise in specific areas, in order to be more quickly informed and having all in one - an entertainment and education tool, an information and advice provider.

It was observed that some themes are consistent throughout the interviews as being important determinants of sustainable consumption when it comes to cosmetics.

Price is one of the key aspects of this research in such sense, since it is not only one of the most important criteria for purchasing cosmetic products, but also one of the most outstanding barriers to sustainable cosmetics purchases identified by the participants. When asked what would encourage them to purchase more sustainable cosmetics, participants cite price because they believe this characteristic is still an aspect that needs to be taken into account in order for these sustainable cosmetics to be widely consumed. And as Carrigan & Attalla (2001), Terlau & Hirsch (2015), Young et al., (2009), Bray et al., (2010) and Kaufmann et al., (2012) examined, price sensitivity is in fact one of the most well-known consumer barriers to sustainable consumption.

Another element frequently discussed among the participants is packaging, which is also thought to be one of the most important criteria for the purchase of cosmetics; specifically, whether the packaging is recyclable and/or recycled. At the same time, this is also considered by the participants to be one of the major issues facing the cosmetics industry when it comes to its sustainability, due to the materials used in the packaging and consequent waste generated. In fact, recyclable packing has been one of the most common attempts at being more sustainable in the cosmetic industry as Kumar (2005) and Csorba & Boglea (2011) defend.

Brand/product loyalty is another factor that is frequently brought up, specifically as a criteria for sustainable consumption in the context of cosmetics. However, this element may be problematic as far as sustainable choices go, since people find it difficult to get out of their comfort zone and try new products. Thus if they stick to a product or brand due to their loyalty it makes change difficult as they would rather stick with the "traditional" cosmetic product, than take a chance on a sustainable one.

Therefore, it can be assumed that price, packaging and brand/product loyalty are aspects widely considered by generation Z consumers - at the moment of deciding whether to buy a sustainable cosmetic product. These factors eventually influence them before and after the information delivered, being used as determinants on their purchase.

Moreover, when the participants are asked about the responsibility they believe they have for the sustainability impacts of the cosmetic industry, they appraise they have a significant impact and that they are willing to change their behaviours for a greater good. This is aligned with the literature regarding the determinants of sustainable consumption, namely the concept of Perceived Consumer Effectiveness (Vermeir & Verbeke, 2006; Kang et al., 2013), which is defined as a consumer's conviction that his or her actions can have an impact on the resolution

of a larger issue, in this case, sustainability, as studied by Ellen et al., (1991); Kim & Choi (2005) and Ghvanidze et al., (2016).

Notwithstanding, participants also refer the role of companies when it comes to the responsibility of the cosmetic industry regarding sustainability, specifically in regard to the significance they have in communicating issues to consumers in a transparent way, which they believe is currently lacking. Thus, the participants conclude that in order for them to act, information must be transmitted bottom-up, from the company to the consumer. This perception is consistent with the literature (Terlau & Hirsch, 2015; Young et al., 2009; Bray et al., 2010; Kaufmann et al., 2012), since there is evidence that consumers have lack of trust in companies due to absence of information about them, which ends up also being a barrier to acting on sustainability information related to the cosmetic industry. Thus, it appears that while consumers are aware of their responsibility, they also believe that companies should be the ones to move first, share knowledge, take appropriate action, and accept responsibility for the damage caused to the cosmetics industry. In reality, there seems to be a constant justification for their individual actions and those of society in general, which comes down to the fact that consumers end up holding a larger entity accountable for actions that themselves do not take.

Therefore, regarding the determinants on sustainable consumption in the cosmetic industry, there is a dissonance in which people believe in the consequences of their actions, but at the same time, they end up putting other aspects, with perhaps stronger short term effects, ahead of sustainability. For instance, people may believe that their choices as consumers have an impact on the cosmetics industry and its sustainability, but this impact often becomes diluted when price considerations come into play.

As a result, there is an attitude-behaviour gap when it comes to purchasing sustainably in the cosmetics industry, and consumers appear quite aware of this gap. This is consistent with the literature, which reveals that sustainable purchases lag well behind, despite consumers' expressed worries about environmental issues (Young et al., 2009; Kim & Choi, 2005). Based on our results, it seems plausible that this gap may result, in part, from the fact sustainability information regarding cosmetics is perceived as confusing and complex.

The attitude behaviour gap is also demonstrated in the results, for instance, when the participants list the obstacles to purchasing sustainable cosmetics and claim that a variety of circumstances prevent them from doing so - such as the social context and lack of availability to people in general. This is also consistent with the literature, which shows that context,

structures the environment for a sustainable consumption (Young et al., 2009; Terlau & Hirsch, 2015).

However, overall, the literature and the participants' perception is: their generation is more environmentally aware than previous ones, having willingness to be more active, as studied by Gregory (2022). Thus, despite an existing attitude behaviour gap - regarding sustainable consumption of cosmetics - the participants say they have noticed a change in recent years, expressing generation Z taking more action, which can be perceived as, they are buying more sustainable cosmetics under the influence of sustainable information, primarily taking into account the influences they receive, the information spread through the media or through their peers, and the advertising brands have done.

Then the lack of action still existing can be due to the lack of well-communicated information. Consumers recognize there is some information available, but they feel the need to have more incentives for sustainable consumption, in a proper and transparent way - by companies, for example, as already mentioned - which, if present, would be helpful and put them under pressure to act even more.

Summing up, the participants state that having more sustainable information would make them act and mention this type of information has an impact on their cosmetic purchases. This turns out to be quite dissonant with the fact that when we ask them directly if they act upon this information, they recognize that they do not act 100%. Therefore, it is plausible to say there is a lot of contradiction in the responses of the participants, regarding sustainable information and as already described before, they feel that sustainability in this industry is also very confusing and tricky.

6 Conclusions, Limitations and Suggestions for further research

This study was carried out because it was pertinent to understand the impact of information on the consumption of sustainable cosmetic products, since not only do information sources have a significant impact on changing the mindset and behaviour of consumers (Leire and Thidell, 2005; D'Souza et al., 2006; Lee & Cho, 2020), but also sustainability per se is a topic of increasing concern among Generation Z (Verplanken et al., 2020; Tyson et al., 2021), and one which consumers appear to increasingly try to include in their daily lives (Kim & Choi, 2005; Verplanken et al., 2020; Haller et al., 2020; Testa et al., 2020; Tyson et al., 2021). We decided to explore this in the cosmetics industry, because in terms of sustainability, it is an industry that still has a lot of growing to do (Bom et al., 2019); and taking into account information nowadays is so plentiful and easily accessible, particularly for those who grew up in a digital environment, like Generation Z (Szymkowiak et al., 2021). The aim was to explore how different sources of information influence these consumers, within the university context, and their decision making regarding sustainable cosmetics. With this goal in mind, interviews were conducted in order to try to more deeply understand consumers' thoughts and experiences, regarding what is ultimately a very complex topic.

Overall, the results of this investigation suggest there is a growing concern among generation Z consumers within the university context, regarding sustainability in the cosmetic industry. In addition, it was also perceived that these consumers would be more careful with their purchases if they were more exposed to information. However, a gap still exists when looking at their consumption patterns, since positive attitudes and a willingness to be more proactive in information search do not necessarily translates into behaviours. Although consumers express great interest in the topic, there is still a significant gap when it comes to behaviours and actually buying sustainably in the cosmetics industry.

Another conclusion which can be drawn is that the generation Z consumers interviewed, when looking for sustainable cosmetics and receiving information about them, avoid trusting information that appeals to the consumption of the products (i.e., information from the brands themselves), influencers and others. So, although they do indeed use these sources, the ones they trust the most are in the majority field specialists. Then, we can conclude they prefer a more organic passage of information, without enticing to sales or without having advertising purposes. They prefer a viewpoint supported by evidence gathered through expert research, because they know it will be 100% accurate and free of motives to make them consume.

In addition, it was also found that each social context of these young individuals is important to outline what kind of consumption they have, even after having received sustainable information related to cosmetics. People who already have a minimally sustainable lifestyle are more likely to practice sustainability in cosmetics and be more receptive to sustainability information. This does not mean, however, they are not demanding with regard to sustainable information, because the results indicate that all the participants are indeed. Either because the cosmetic products are used on their skin and they end up being more careful with them, or because they know some information sources are just not reliable.

Moreover, from a theoretical perspective, this study is relevant since it shows how generation Z is currently affected by different information sources regarding the sustainability of cosmetics and consequently their consumption, a subject which has not previously received as much attention. It also contributes to the literature in terms of our understanding of consumers' exposure to different sources of information and their levels of trust of various sources.

This dissertation additionally makes contributions in the sense of closing the knowledge gap that exists in the literature about the connection between informational sources and the consumption of sustainable cosmetics. This academic contribution is especially pertinent in the context of cosmetics, where literature in regard to this subject is still lacking, especially among Generation Z consumers.

In terms of practice, this investigation may be of particular significance for those providing information regarding sustainability in the cosmetics industry, be they cosmetics brands or the media. In particular, it is important to note that the results suggest certain actions and initiatives (such as promoting sustainable practices when the whole is not sustainable, or launching allegedly sustainable lines to attract sales) may have the opposite effect to that intention which is, to attract the consumers. Instead, since information is frequently seen as unreliable, contradictory, and only serves to raise consumer suspicious, it is therefore crucial to hear consumer feedback in order to adjust communication strategies, and in this way provide guidelines on how to better disseminate and organize the information provided to consumers.

In any research project, there are certain limitations, which should be mentioned so that they can be taken into account and overcome in future research.

One of the limitations was the sample size, as only thirteen participants were interviewed and it would have been interesting to use a larger sample, to have even more variety of contexts

and to have a more diverse group translating to a more reliable and extensive representation of consumers.

A related limitation was the small number of men in this study. Although this is reflective of the cosmetics market at this moment, it is known this phenomenon is changing, and it would be interesting to have the male perspective as well, in particular because they may face different challenges regarding the use of cosmetic products, in light of the still strong association of skincare and cosmetics use with a female public, as mentioned by one of the male participants.

An issue that was encountered and might be researched in the future is that most studies center their attention almost exclusively on the environmental aspect, failing to properly connect it to sustainability's economic and social components as often as environmental ones. This was even a dilemma in the literature review, as most studies focus on the environmental dimension when looking for sustainability and even sustainable cosmetics. So the problem on the social side, for example, was not very addressed, and consequently, It would be interesting to study more about the social and economic component in order to understand the impact of these dimensions on consumers in a deeper way, and not only the environmental and nature concern that are so often mentioned.

Another recommendation for future studies is the study of the issue of information overload, which was recurrently mentioned by the participants, that on one hand they feel the need of more information on sustainability in the cosmetics industry and on the other they say that there is too much information and that it is very confusing.

Considering nowadays generation Z consumers use social media platforms on a daily basis, and that there are algorithms behind these platforms determining what is shown to them, it would be of interest to study the impact of these algorithms, and how they might be used to promote more sustainable choices. The fact these recommendations of pages, brands and advertisements are based on users' previous choices is very positive for people who are already interested in sustainable cosmetics, but can become a barrier for people who do not consume this kind of content, as the information will not "come to them" unless they searching for it directly.

It would also be of interest for future research to investigate the reasons for the attitude-behaviour gap beyond information. For instance, if consumers are shown that their actions have an effect, it may be more likely this gap will be reduced. So concepts such as the diffusion of responsibility (Latané & Darley, 1969) or the drop in a bucket (Bandura, 1977) or even

Maslow's pyramid (Maslow, 1943), could be a way to understand and potentially close this gap regarding sustainability in the cosmetic industry.

It would also be of interest to compare the impact of different sources of information regarding sustainable cosmetics on different generational cohorts, in order to understand whether there are generational differences in the types of information used and trusted, and their impact on behaviour.

In conclusion, there is more work to be done on this issue, but we are making some progress. Despite the attitude behaviour gap, consumers are very aware of it, and they feel their choices have an influence, and view themselves moving into a direction of making increasingly sustainable choices regarding cosmetics and its sustainability.

7 Bibliography

- Acharya, S., Bali, S., & Bhatia, B. (2021). Exploring Behavior towards Sustainability of Green Cosmetics. *International Conference on Advances in Electrical, Computing, Communication and Sustainable Technologies (ICAECT)*, 1-6. doi:10.1109/ICAECT49130.2021.9392538
- Al-Gasawneh, J., & Al-Adamat, A. (2020). The mediating role of e-word of mouth on the relationship between content marketing and green purchase. *Management Science Letters*, 1701-1708. doi:10.5267/j.msl.2020.1.010
- Allen, M., & Spialek, M. (2018). Young millennials, environmental orientation, food company sustainability, and green word-of-mouth recommendations. *Journal of Food Products Marketing*, 24(7). doi:10.1080/10454446.2017.1415827
- Ardevol-Abreu, A., & Gil de Zúñiga, H. (2017). Effects of Editorial Media Bias Perception and Media Trust on the Use of Traditional, Citizen, and Social Media News. *Journalism and Mass Communication Quarterly*, 94(3), 703-724. doi:10.1177/1077699016654684
- Arndt, H. (1981). Economic development: a semantic history. *Economic Development Cultural change*, 29(3), pp. 257-466. doi:10.1086/451266
- Arnould, E., & Thompson, C. (2005). Consumer Culture Theory (CCT): Twenty Years of Research. *Journal of Consumer Research*, 31(4), 868-882.
- Bandura, A. (1977). *Social learning theory*. New Jersey: Cliffs, Englewood.
- Bansal, P., & Song, H.-C. (2017). Similar but not the same: differentiating corporate sustainability from corporate responsibility. *Academy of Management Annals*, 11 (1), pp. 105-149. doi:10.5465/annals.2015.0095
- Barbier, E. (1987). The Concept of Sustainable Economic Development. *Environmental Conservation*, 14(2), 101-110.
- Barr, S., & Gilg, A. (2006). Sustainable lifestyles: Framing environmental action in and around the home. *Geoforum*, 37, 906-920. doi:10.1016/j.geoforum.2006.05.002

- Bassiouni, D., & Hackley, C. (2014). "Generation Z" children's adaptation to digital consumer culture: A critical literature review. *Journal of Customer Behaviour*, 13(2), 113-133. doi:10.1362/147539214x14024779483
- Berkup, S. B. (2014). Working With Generations X And Y In Generation Z Period: Management Of Different Generations In Business Life. *Mediterranean Journal of Social Sciences*, 5(19), 218-229. doi:10.5901/mjss.2014.v5n19p218
- Bom, S., Jorge, J., Ribeiro, H., & Marto, J. (2019). A step forward on sustainability in the cosmetics industry: A review. *Journal of Cleaner Production*, 225, 270-290. doi:10.1016/j.jclepro.2019.03.255
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77-101.
- Bray, J., Johns, N., & Kilburn, D. (2010). An Exploratory Study into the Factors Impeding Ethical Consumption. *Journal of Business Ethics*, 98 (4), 597-608. doi:10.1007/s10551-010-0640-9
- Brennan, G., Tennant, M., & Blomsma, F. (2015). Business and production solutions: closing the loop in. Em H. Kopnina, & E. Shoreman-Ouimet, *Sustainability: Key Issues* (pp. 219-239). Routledge: EarthScan.
- Brown, N., & Deegan, C. (1998). The public disclosure of environmental performance information - a dual test of media agenda setting theory and legitimacy theory. *Accounting and Business Research*, 29(1), 21-41.
- Cambridge Dictionary . (2021). *MEDIA* / Significado, definição em Dicionário Inglês. Retrieved August 2, 2021, from Cambridge Dictionary: <https://dictionary.cambridge.org/pt/dicionario/ingles/media>
- Cambridge Dictionary . (2022). *GREENWASHING* / Significado, definição em Dicionário Inglês. Retrieved January 24, 2022, from <https://dictionary.cambridge.org/pt/dicionario/ingles/greenwashing>
- Carrigan, M., & Attalla, A. (2001). The myth of the ethical consumer - Do ethics matter in purchase behaviour? *Journal of Consumer Marketing*, 18(7), 560-578. doi:10.1108/07363760110410263

- Chicca, J., & Shellenbarger, T. (2018). Connecting with Generation Z: Approaches in Nursing Education. *Teaching and Learning in Nursing*, 13(3), 180–184. doi:10.1016/j.teln.2018.03.008
- Clayton, S., & Karazsia, B. (2020). Development and validation of a measure of climate change anxiety. *Journal of Environmental Psychology*, 69(101434).
- Cosmetics Europe. (2019). *Socio-Economic Contribution of the European Cosmetics Industry*. Retrieved 30 september 2021, https://www.cosmeticseurope.eu/files/4715/6023/8405/Socio-Economic_Contribution_of_the_European_Cosmetics_Industry_Report_2019.pdf
- Csorba, L. M., & Boglea, V. A. (2011). Sustainable cosmetics: A major instrument in protecting the consumer's interest. *Regional and Business Studies*, 3, 167-176.
- Delmas, M., & Burbano, V. (2011). The Drivers of Greenwashing. *California management review*, 54(1). doi:10.1525/cmr.2011.54.1.64
- Dempsey, N., Bramley, G., Power, S., & Brown, C. (2011). The social dimension of sustainable development: defining urban social sustainability. *Sustainable Development*, 19, 289–300.
- Dolan, P. (2002). The Sustainability of "Sustainable Consumption". *Global Policy and Environment: Journal of Macromarketing*, 170-181. doi:10.1177/0276146702238220
- Drexhage, J., & Murphy, D. (2010). *Sustainable development: from Brundtland to Rio 2012*. International Institute for Sustainable Development (IISD). New York: United Nations Headquarters.
- D'Souza, C., Taghian, M., & Lamb, P. (2006). An empirical study on the influence of environmental labels on consumers. *Corporate Communications: An International Journal*, 11(2), 162-173. doi:10.1108/13563280610661697
- Dunlap, R., & Jones, R. (2002). Environmental Concern: Conceptual and Measurement. Em R. Dunlap , & W. Michelson, *Handbook of Environmental Sociology* (pp. 482-524). Greenwood Press.
- Earth Day . (2021). *The History of Earth Day*. Retrieved 4 december 2021, <https://www.earthday.org/history/>

- Elhoushy, S., & Lanzini, P. (2020). Factors Affecting Sustainable Consumer Behavior in the MENA Region: A Systematic Review. *Journal of International Consumer Marketing*, 33(3), 256-279.
- Elkington, J. (1997). *Cannibals with forks: the triple bottom line of 21st century business*. Oxford: Capstone.
- Ellen Macarthur Foundation. (2022). *Ellen Macarthur Foundation*. Retrieved 15 de July 2022, What is a circular economy?: <https://ellenmacarthurfoundation.org/topics/circular-economy-introduction/overview>
- Ellen, P. S., Wiener, J. L., & Cobb-Walgren, C. (1991). The Role of Perceived Consumer Effectiveness in Motivating Environmentally Conscious Behaviors. *Journal of Public Policy and Marketing*, 10(2), 102-117.
- European Commission. (2011). *Corporate Social Responsibility: a new definition, a new agenda for action*. Brussels. Retrieved 15 July 2022, https://ec.europa.eu/commission/presscorner/detail/en/MEMO_11_730
- European Commission. (2015). Glossary and Acronyms Related to Cosmetics Legislation.
- European Commission. (2022). *European Commission*. Retrieved 15 July 2022, Corporate sustainability due diligence: https://ec.europa.eu/commission/presscorner/detail/en/ip_22_1145
- FDA. (2016). *Are all "personal care products" regulated as cosmetics? / FDA*. Retrieved 3 de August 2021, FDA U.S. Food & Drug Administration : <https://www.fda.gov/industry/fda-basics-industry/are-all-personal-care-products-regulated-cosmetics>
- Francis, T., & Hoefel, F. (2018). *True Gen: Generation Z and its implications for companies*. São Paulo: McKinsey & Company.
- Freeman, R. (2010). *Strategic Management: A Stakeholder Approach*. Cambridge University Press.
- Fryxell, G., & Lo, C. (2003). The Influence of Environmental Knowledge and Values on Managerial Behaviours on Behalf of the Environment: An Empirical Examination of Managers in China. *Journal of Business Ethics*(46), 45-69.

- García-Salirrosas, E. E., & Rondon-Eusébio, R. F. (2022). Green Marketing Practices Related to Key Variables of Consumer Purchasing Behavior. *Sustainability*, 14(8499). doi:10.3390/su14148499
- Gerstell, E., Marhessou, S., Schmidt, J., & Spagnuolo, E. (2020). *How COVID-19 is changing the world of beauty*. McKinsey & Company. Retrieved 30 september 2021, <https://www.mckinsey.com/~/media/McKinsey/Industries/Consumer%20Packaged%20Goods/Our%20Insights/How%20COVID%2019%20is%20changing%20the%20world%20of%20beauty/How-COVID-19-is-changing-the-world-of-beauty-vF.pdf>
- Ghvanidze, S., Velikova, N., Dodd, T., & Oldewage-Theron, W. (2016). Consumers' environmental and ethical consciousness and the use of the related food products information: The role of perceived consumer effectiveness. *Appetite*, 107, 311-322.
- Giddings, B., Hopwood, B., & O'Brien, G. (2002). Environment, economy and society: fitting them together into sustainable development. *Sustainable Development*, 10(4), pp. 187–196. doi:10.1002/sd.199
- Giovannoni, E., & Fabietti, G. (2014). What Is Sustainability? A Review of the Concept and Its Applications. *Integrated Reporting*, pp. 21-40. doi:10.1007/978-3-319-02168-3_2
- Gregory, A. (2022). “Eco-anxiety”: fear of environmental doom weighs on young people. Retrieved 2 march 2022, The Guardian: <https://www.theguardian.com/society/2021/oct/06/eco-anxiety-fear-of-environmental-doom-weighs-on-young-peo>
- Guerreiro, J., & Pacheco, M. (2021). How green trust, consumer brand engagement and green word-of-mouth mediate purchasing intentions. *Sustainability*, 13(7877). doi:10.3390/su13147877
- Haller, K., Lee, J., & Cheung, J. (2020). *Meet the 2020 consumers driving change: why brands must deliver an omnipresence, agility and sustainability*. Armonk: IBM Corporation.
- Hansmann, R., Mieg, H., & Frischknecht, P. (2012). Principal sustainability components: empirical analysis of synergies between the three pillars of sustainability. *International Journal of Sustainable Development & World Ecology*, 19:5, 451-459. doi:10.1080/13504509.2012.696220

- Huang, H. (2016). Media use, environmental beliefs, self-efficacy, and pro-environmental behavior. *Journal of Business Research*, 69(6), 2206-2212. doi:10.1016/j.jbusres.2015.12.031
- Islam, T., Islam, R., Pitafi, A. H., Xiaobei, L., Rehmani, M., Irfan, M., & Mubarak, M. S. (2021). The impact of corporate social responsibility on customer loyalty: The mediating role of corporate reputation, customer satisfaction, and trust. *Sustainable Production and Consumption*, 25, 123-135.
- Jacobs, P., Gardner, J., & Munro, D. (1987). Sustainable and equitable development: an emerging paradigm. In *Conservation with equity: Strategies for Sustainable Development* (pp. 17-21). Gland: IUCN.
- Kang, J., Liu, C., & Kim, S.-H. (2013). Environmentally sustainable textile and apparel consumption: the role of consumer knowledge, perceived consumer effectiveness and perceived personal relevance. *International Journal of Consumer Studies*, 37, 442-452. doi:10.1111/ijcs.12013
- Kaufmann, H., Panni, M., & Orphanidou, Y. (2012). Factors Affecting Consumers' Green Purchasing Behavior: An Integrated Conceptual Framework. *Amfiteatru Economic Journal*, 14(31), 50-69.
- Kim, S., & Seock, Y.-K. (2009). Impacts of health and environmental consciousness on young female consumers' attitude towards and purchase of natural beauty products. *International Journal of Consumer Studies*, 33, 627-638. doi:10.1111/j.1470-6431.2009.00817.x
- Kim, Y., & Choi, S. M. (2005). Antecedents of Green Purchase Behavior: an Examination of Collectivism, Environmental Concern and Pce. *Advances in Consumer Research*, 32, pp. 592-599.
- Korten, D. (1996). *When Corporations Rule the World*. Oakland : Berrett-Koehler.
- Kuhlman, T., & Farrington, J. (2010). What is Sustainability. *Sustainability*, 3436-3448. doi:10.3390/su2113436
- Kumar, S. (2005). Exploratory analysis of global cosmetic industry: major players, technology and market trends. *Technovation*, 25, pp. 1263-1272. doi:10.1016/j.technovation.2004.07.003

- Laroche, M., Bergeron, J., & Barbaro-Forleo, G. (2001). Targeting consumers who are willing to pay more for environmentally products. *Journal of consumer marketing*, 18(6), 503-520.
- Latané, B., & Darley, J. (1969). Bystander "Apathy". *American Scientist*, 57(2), 244-268.
- Lee, J., & Cho, M. (2020). The effects of consumers' media exposure, attention, and credibility on pro-environmental behaviors. *Journal of Promotion Management*, 26(3), 434-455. doi:10.1080/10496491.2019.1699629
- Leire , C., & Thidell, Å. (2005). Product-related environmental information to guide consumer purchases - a review and analysis of research on perceptions, understanding and use among Nordic consumers. *Journal of Cleaner Production*, 13, 1061-1070. doi:10.1016/j.jclepro.2004.12.004
- Lin, S.-T., & Niu, H.-J. (2018). Green consumption: Environmental knowledge, environmental consciousness, social norms, and purchasing behavior. *Business Strategy and the Environment*, 1-10. doi:10.1002/bse.2233
- Lisbon PH. (2022). *Sustentabilidade e Responsabilidade Social Corporativa na Lisbon PH*. Retrieved 6 june 2022, <https://lisbonph.pt/sustentabilidade/>
- Lumley, S., & Armstrong, P. (2004). Some of the nineteenth century origins of the sustainability concept. *Environment, Development and Sustainability*, pp. 367-378. doi:10.1023/B:ENVI.0000029901.02470.a7
- Luo, B., Sun, Y., Shen, J., & Xia, L. (2020). How does green advertising skepticism on social media affect consumer intention to purchase green products? *Journal of Consumer Behaviour*, 19(4), 371-381. doi:10.1002/cb.1818
- Magaldi, D., & Berler, M. (2020). Semi-structured Interviews. Em V. Zeigler-Hill, Shackelford, & Todd (Edits.), *Encyclopedia of Personality and Individual Differences* (pp. 4825-4830).
- Mainieri, T., Barnett, E., Valdero, T., Unipan, J., & Oskamp, S. (1997). Green Buying: The Influence of Environmental Concern on Consumer Behavior. *The Journal of Social Psychology*, 137(2), 189-204. doi:10.1080/00224549709595430
- Mangold, W., & Faulds, D. (2009). Social media: the new hybrid element of the promotion mix. *Business Horizons*, 52, 357-365. doi:10.1016/j.bushor.2009.03.002

- Maslow, A. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370-396.
doi:10.1037%2Fh0054346
- Matic, M., & Puh, B. (2016). Consumers' purchase intentions towards natural cosmetics. *Ekonomski vjesnik/Econviews*, 53-64.
- MAXQDA. (2022). *All-In-One Tool for Qualitative Data Analysis & Mixed Methods* .
Retrieved september 17, 2022, from : <https://www.maxqda.com/homepage-3>
- McCallum, D., Hammond, S. L., & Covello, V. (1991). Communicating about Environmental Risks: How the Public Uses and Perceives Information Sources. *Health Education Quarterly*, 13(3), 349-361.
- McCarty, J., & Shrum, L. (2001). The Influence of Individualism, Collectivism, and Locus of Control on Environmental Beliefs and Behavior. *Journal of Public Policy & Marketing*, 20 (1), 93-104.
- Mostafa, M. (2009). Shades of green: A psychographic segmentation of the green consumer. *Expert Systems with Applications* 36, 11030–11038. doi:10.1016/j.eswa.2009.02.088
- Nguyen, T., Lobo, A., & Greenland, S. (2017). The influence of cultural values on green purchase behaviour. *Marketing Intelligence & Planning*, 35(3), 377-396.
- O'Rourke, D., & Ringer, A. (2015). The Impact of Sustainability Information on Consumer Decision Making. *Journal of Industrial Ecology*, 20(4), 882–892.
doi:10.1111/jiec.12310
- Pelsmacker, P., Driesen, L., & Rayp, G. (2005). Do Consumers Care About Ethics? Willingness to Pay for Fair-Trade Coffee. *The Journal of Consumer Affairs*, 39(2), 363-385.
- Perkins, T. (2021). *Toxic 'forever chemicals' widespread in top makeup brands, study finds*.
Retrieved 06 15, 2021, from <https://www.theguardian.com/fashion/2021/jun/15/pfas-makeup-forever-chemicals>
- Perkins, T. (2021). *Toxic 'forever chemicals' widespread in top makeup brands, study finds*.
Retrieved 06 15, 2021, from <https://www.theguardian.com/fashion/2021/jun/15/pfas-makeup-forever-chemicals>

- Polonsky, M. (2011). Transformative green marketing: Impediments and opportunities. *Journal of Business Research*, 64(12), 1311-1319. doi:10.1016/j.jbusres.2011.01.016
- Priporas, C.-V., Stylos, N., & Fotiadis, A. (2017). Generation Z consumers' expectations of interactions in smart retailing: A future agenda. *Computers in Human Behavior*, 77, 374-381. doi:10.1016/j.chb.2017.01.058
- Purvis , B., Mao, Y., & Robinson, D. (2018). Three Pillar of sustainability: in search of conceptual origins. *Sustainability Science (2019)*, 681–695. doi:10.1007/s11625-018-0627-
- Sahota, A. (2014). *Sustainability: How the Cosmetics Industry is Greening up*. United Kingdom: Wiley .
- Sakdiyakorn, M., Golubovskaya, M., & Solnet, D. (2021). Understanding Generation Z through collective consciousness: Impacts for hospitality work and employment. *International Journal of Hospitality Management*, 94(102822).
- Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., ... Jinks, C. (2017). Saturation in qualitative research: exploring its conceptualization and operationalization. *Quality & Quantity*, 52(4), 1893–1907. <https://doi.org/10.1007/s11135-017-0574-8>
- Saunders, M., Lewis, P., & Thornhill, A. (2016). *Research Methods for Business Students* (Vol. 17). Edinburgh: Pearson Education Limited.
- Schahn, J., & Holzer, E. (1990). Studies of individual environmental concern: The role of knowledge, gender, and background variables. *Environment and Behavior*, 22, pp. 767-786. doi:10.1177/0013916590226003
- Schroth , H. (2019). Are You Ready forr Gen Z in the Workplace? *California Management Review*, 61(3), 5-18. doi:10.1177/0008125619841006
- Schultz, P. (2000). Empathizing With Nature: The Effects of Perspective Taking on Concern for Environmental Issues. *Journal of Social Issues* , 56 (3), 391-406.
- Schwartz, S. (1977). Normative influences on altruism. Em *Advances in experimental social psychology* (L. Berkowitz ed., pp. 221-279). New York: Academic Press.

- Seemiller, C., & Grace, M. (2017). Generation Z: Educating and Engaging the Next Generation of Students. *About Campus*, 22(3), 21-26. doi:10.1002/abc.21293
- Sheehy, B. (2015). Defining CSR: problems and solutions. *Journal of Business Ethics*, 131 (3), 625-648. doi:10.1007/s10551-014-2281-x
- Söderlund, M. (1998). Customer satisfaction and its consequences on customer behaviour revisited. *International Journal of Service Industry Management*, 169-188. doi:10.1108/09564239810210532
- Solér, C. (2001). *Communication of product related environmental information. User requirement studies of Environmental Product Declaration, EPD, systems*. Report from the NIMBUS project. CPM 2001:4.
- Spangenberg, J., Pfahl, S., & Deller, K. (2002). Towards indicators for institutional sustainability: lessons from an analysis of Agenda. *Ecological Indicators*, 21, pp. 61-77. doi:10.1016/S1470-160X(02)00050-X
- Statista. (2020). *Brand value of the leading personal care brands worldwide in 2020*. Retrieved 3 August 2021, Statista: <https://www.statista.com/statistics/273236/brand-value-of-the-leading-personal-care-brands-worldwide/>
- Statista. (2021). *Cosmetic industry growth* . Retrieved 21 september 2021, <https://www.statista.com/statistics/297070/growth-rate-of-the-global-cosmetics-market/>
- Sternthal, B., Phillips, L., & Dholakia, R. (1978). The Persuasive Effect of Source Credibility: A Situational Analysis. *Oxford University Press*, 42(3), 285-314.
- Stone, G., Barnes, J., & Montgomery, C. (1995). Ecoscale: A scale for the measurement of environmentally responsible consumers. *Psychology and Marketing*, 12(7), pp. 595-612. doi:10.1002/mar.4220120704
- Strauss, A., & Corbin, J. (1998). *Basics of qualitative research: Techniques and Procedures for developing grounded theory*. California: Sage Publications, Inc. .
- Szymkowiak, A., Melovic, B., Dabic, M., & Kundi, K. J. (2021). Information technology and Gen Z: The role of teacher, the internet, and technology in the education of young people. *Technology in Society*, 65(101565). doi:10.1016/j.techsoc.2021.101565

- Terlau, W., & Hirsch, D. (2015). Sustainable Consumption and the Attitude-Behaviour-Gap Phenomenon - Causes and Measurements towards a Sustainable Development. *International Journal on Food System Dynamics* 6(3), pp. 159-174.
- Testa, F., Pretner, G., Iovino, R., Bianchi, G., & Tessitore, S. (2020). Drivers to green consumption: a systematic review. *Environment, Development and Sustainability*. doi:10.1007/s10668-020-00844-5
- Thøgersen, J. (2006). Media Attention and the Market for 'Green' Consumer Products. *Business Strategy and the Environment*. doi:10.1002/bse.521
- Torelli, R. (2020). Sustainability, responsibility and ethics: different concepts for a single path. *Social Responsibility Journal*. doi:10.1108/SRJ-03-2020-0081
- Tukker, A., Cohen, M., Zoysa, U., Herwich, E., Hofstetter, P., Inaba, A., . . . Stø, E. (2006). The Oslo Declaration on Sustainable Consumption. *Journal of Industrial Ecology*, 10(1-2), 9-14.
- Turner, A. (2015). Generation Z: Technology and Social Interest. *The Journal of Individual Psychology*, 71(2), 103-113. doi:10.1353/jip.2015.0021
- Tyson, A., Kennedy, B., & Funk, C. (2021). *Pew Research Center*. Retrieved 17 de july 2022, Gen Z, Millenials Stand Out for Climate Change Activism, Social Media Engagement With Issue: <https://www.pewresearch.org/science/2021/05/26/gen-z-millennials-stand-out-for-climate-change-activism-social-media-engagement-with-issue/>
- United Nations . (1972). *Report of the United Nations Conference on the human environment*. Stockholm: United Nation Publication. Retrieved 22 september 2021 , <http://www.un-documents.net/aconf48-14r1.pdf>
- United Nations. (2002). *Report of the World Summit on Sustainable Development (A/CONF.199/20)*. United Nations, New York.
- United Nations. (2021). Retrieved 22 september 2021, Sustainability | United Nations: <https://www.un.org/en/academic-impact/sustainability>
- United Nations. (2022). *United Nations*. Retrieved 12 july 2022, Sustainability | United Nations: <https://www.un.org/en/academic-impact/sustainability>

- United Nations. (2022). *United Nations*. Retrieved 12 July 2022, The 17 goals | Sustainable Development: <https://sdgs.un.org/goals#goals>
- Vermeir, I., & Verbeke, W. (2006). Sustainable Food Consumption: Exploring the Consumer "Attitude-Behavioral Intention" Gap. *Journal of Agricultural and Environmental Ethics*, 19, 169-194.
- Verplanken, B., Marks, E., & Dobromir, A. (2020). How constructive or unconstructive is habitual worry about global warming? *Journal of Environmental Psychology*, 72(101528).
- Wiedmer, T. (2015). Generations Do Differ: Best Practices in Leading Traditionalists, Boomers, and Generations X, Y, and Z. *The Delta Kappa Gamma bulletin*, 82(1), 51.
- Williams, K., & Dair, C. (2007). A framework of sustainable behaviours that can be enabled through the design of neighbourhood-scale development. *Sustainable Development*, 15(3), 160-173. doi:10.1002/sd.311
- World Commission on Environment and Development . (1987). *Our Common Future* . Oxford (UK): Oxford University Press.
- Yilmaz, K. (2013). Comparison of Quantitative and Qualitative Research Traditions: epistemological, theoretical, and methodological differences. *European Journal of Education*, 48(2). doi:10.1111/ejed.12014
- Young, W., Hwang, K., McDonald, S., & Oates, C. (2009). Sustainable Consumption: Green Consumer Behaviour when Purchasing Products. *Sustainable Development*, 18, pp. 20-31. doi:10.1002/sd.394
- Zhang, L., Li, D., Cao, C., & Huang, S. (2018). The influence of greenwashing perception on green purchasing intentions: The mediating role of green word-of-mouth and moderating role of green concern. *Journal of Cleaner Production*, 740-750. doi:10.1016/j.jclepro.2018.03.201
- Zhao, M., & Xie, J. (2011). Effects of social and temporal distance on consumers' responses to peer recommendations. *Journal of Marketing Research*, 48(3), 486-496.

Annexes

Annex A – Interview script

Interviewer: *Before starting the interview, I wanted to introduce the topic a bit, to give some contextualization. The focus of this study is the cosmetics industry, and the study aims to understand what consumer choices are and what are their sources of information regarding this industry and its sustainability. And for that reason, I think it is also relevant to define the cosmetics: basically, any product or substance intended to be placed in contact with various external parts of the human body (whether skin, hair, ...) is a cosmetic product. These products are usually called “hygiene products”, “beauty products”, “personal care products” and even “makeup products”, therefore face creams, body creams, shampoos, shower gels, hair styling oils and creams, facial cleansers, perfumes, nail polish, toothpaste, deodorants, lipsticks, mascara, foundation and other makeup products are all considered cosmetics.*

After this elucidation, I will then begin the interview questions:

1. Can you describe which 3 main criteria are important for you when you buy a cosmetic product?
2. Before buying a cosmetic product do you usually look for information about that product? If yes, what type of information you look for?
 - a. If the answer is no, suggest that it can be any type of information, about the brands, the characteristics of the product, the price, etc.
 - b. If the answer is sustainability, ask about what sustainable information.
 - c. If none of the information is sustainable related, ask if they are interested about sustainable information.
3. What comes to your mind when we speak about sustainable cosmetic products? How would you define sustainable cosmetics?
4. What do you think are the main sustainability issues and problems associated with the cosmetics industry?
5. How well informed do you feel on the topic of sustainability in the cosmetic industry?
6. Option 1 for those who feel they are informed: What are your main sources of information for you to be informed about the sustainability in the cosmetic industry?
Option 2 for those who do not feel informed: If you wanted to look for more information about the sustainability in the cosmetic industry, where would you do it?

7. Regarding the sources you identified, which are the most reliable for you?
8. To what extent do you feel that the information you get from these sources influences somehow your purchase of cosmetic products?
9. Have you ever bought or stopped buying a certain cosmetic product or brand due to its behaviour in terms of sustainability?
 - a. If yes, how did you know about that behaviour?
10. What would influence you to buy more sustainable cosmetics?
11. Do you think that people of your age, having information about sustainability in the cosmetics industry, act upon it?
 - a. What about you? Do you act upon that information?
12. Can you think of any labels or brands that you automatically associate with sustainable cosmetics and others that you associate with no sustainable cosmetics?
13. Do you consider that you carry responsibility for the impacts of the cosmetic industry?
If yes, in what way?
14. Is there any subject you would like to address that my questions didn't cover?
15. In order to end the interview I would like to ask you the following information:
 - a. Year of birth
 - b. Gender
 - c. Level of education
 - d. Education field
 - e. Employment (if any)
 - f. Area of residence

Portuguese and original version:

Entrevistadora: Antes de começar a entrevista queria introduzir um pouco o tema de modo a dar algum contexto. O foco deste estudo é a indústria da cosmética, e o estudo tem como objetivo perceber quais são as escolhas do consumidor e quais as suas fontes de informação relativamente a esta indústria e à sustentabilidade da mesma. E por isso mesmo, acho relevante também definir a indústria da cosmética: qualquer produto ou substância destinada a ser colocada em contacto com as várias partes externas do corpo humano (seja pele, cabelo...) é um produto cosmético. Esses produtos são chamados normalmente de “produtos de higiene”, “produtos de beleza”, “produtos de cuidado pessoal” e até “produtos de maquilhagem” e por

isso cremes de rosto, de corpo, shampoos, gel de banho, óleos e cremes de pentear o cabelo, produtos de limpeza facial, perfumes, vernizes de unhas, pasta de dentes, desodorizantes, batons, rimmel, base e outros produtos de maquilhagem... são todos considerados produtos de cosmética.

Após este esclarecimento vou então dar início às perguntas:

- 1) Podes descrever os teus 3 principais critérios quando compras um produto de cosmética?
- 2) Antes de comprares um produto de cosmética procuras informação sobre ele? E que tipo de informação procuras?
 - a) Se disserem que não procuram sugerir que pode ser qualquer tipo de informação, por exemplo sobre as marcas, sobre o preço, sobre as funcionalidades do produto.
 - b) Se responderem sustentabilidade perguntar que tópicos lhes interessam sobre a informação de sustentabilidade
 - c) Se não disserem nada acerca da sustentabilidade perguntar se têm interesse na sustentabilidade.
- 3) O que te vem à mente quando se fala em produtos de cosmética sustentável, ou seja, como definirias cosmética sustentável?
- 4) Quais achas que são as principais questões/problemas em termos de sustentabilidade que se associam à indústria da cosmética?
- 5) Quão bem informado sentes que estás acerca da sustentabilidade na indústria da cosmética?
- 6) Opção 1 para quem sente que está bem informado: Quais são as tuas principais fontes de informação para estares informado acerca da sustentabilidade na indústria da cosmética?

Opção 2 para quem sente que não está informado: Se quisesse procurar mais informação sobre a sustentabilidade, onde o farias?
- 7) Destas fontes que enumeraste, em quais confias mais?
- 8) Até que ponto sentes que a informação que obténs dessas fontes influencia a tua compra de produtos cosméticos?
- 9) Alguma vez passaste a comprar ou deixaste de comprar um certo produto de cosmética ou marca devido ao seu comportamento em termos de sustentabilidade?
 - a) Se sim, como soubeste desse comportamento?
- 10) O que achas que te influenciaria a comprar mais produtos de cosmética sustentável?

- 11) Achas que os jovens da tua idade, tendo informação acerca da sustentabilidade na indústria da cosmética, agem sobre ela?
- a) E tu ages sobre essa informação? Relacionas-te com o que os outros jovens fazem?
12. Há alguma marca que associas a cosmética sustentável e há alguma que associas a práticas menos sustentáveis?
13. Consideras que deténs responsabilidade pelos impactos da indústria da cosmética? Se sim, de que maneira?
14. Há algum assunto que gostasse de abordar e que as minhas questões não tenham contemplado?
15. De modo a finalizar esta entrevista gostaria de saber os seguintes dados:
- a. Ano de nascimento
 - b. Género
 - c. Nível de educação
 - d. Área de estudo
 - e. Área de trabalho (se aplicável)
 - f. Área de residencia

Annex B – Informed consent

O presente estudo para o qual solicito a sua colaboração pretende contribuir para o aprofundamento do conhecimento sobre as fontes de informação dos consumidores acerca da indústria da cosmética, as suas tomadas de decisão e a sustentabilidade na indústria. Este estudo é realizado por Margarida Rodrigues e decorre no âmbito da tese de Mestrado em Gestão de Empresas, no Iscte-Instituto Universitário de Lisboa.

A sua participação neste estudo, a qual implica uma entrevista, terá a duração de cerca de 1h e é estritamente **voluntária**: pode escolher livremente desistir a qualquer momento. Para além de voluntária, a participação também é **anónima e confidencial**.

Será feito um registo de áudio da entrevista, apenas realizado mediante o seu consentimento.

Para esclarecimentos adicionais ou se desejar obter informações sobre resultados gerais da investigação, poderá solicitar informação através do endereço eletrónico: mnrss@iscte-iul.pt

Declaro ter compreendido os objetivos do que me foi proposto e **aceito** participar no estudo, bem como **aceito** a gravação de áudio da entrevista.

Data: ____/____/____

Assinatura: _____

Obrigada pela sua colaboração.

Annex C – Categories and subcategories of the thematic analysis (*)

Order	Categories and subcategories on thematic analysis
3.	<i>Sustainability in cosmetics (concept)</i>
4.	<i>Sustainability issues in the cosmetic industry</i>
2.1	Company behaviour and transparency
2.2	Packaging
2.3	Animal testing
2.4	Pollution and climate change
2.5	Price
2.6	Others
3.	<i>Sustainable and non sustainable brands</i>
4.	<i>Complexity of Sustainability</i>
5.	<i>Information search</i>
5.1	Reviews / Word of Mouth
5.2	Sustainability
5.3	Company behaviour and transparency
5.4	Price
5.5	Product characteristics
5.6	Others
6.	<i>Level of information</i>
7.	<i>Information sources</i>
7.1	Internet in general
7.2	Social Media/ influencers
7.3	Brands/companies
7.4	Friends
7.5	Articles
7.6	Field specialists
7.7	Others
8.	<i>Most trustworthy sources</i>
8.1	Field specialists
8.2	Brands
8.3	Social media/influencers
8.4	Friends
8.5	Articles
8.6	Others
9.	<i>Dissemination of information problem</i>
10.	<i>Impact of information on sustainable purchases</i>
11.	<i>Impact of company's behaviour on sustainable purchases</i>
12.	<i>Criteria for cosmetic purchase</i>
12.1	Price
12.2	Product characteristics

12.3	Brand / product loyalty
12.4	Reviews / Word of mouth
12.5	Quality
12.6	Animal Testing
12.7	Others
13.	<i>The influence of context on sustainable purchases</i>
14.	<i>Factors influencing sustainable purchases</i>
14.1	Price
14.2	More information
14.3	Effectiveness
14.4	Offer
14.5	Others
15.	<i>Responsibility for the impacts of cosmetic industry</i>
16.	<i>Getting out of comfort zone</i>

(*) Note that within several categories, there are a few subcategories named “others” which imply some occurrences that do not fit into any of the other subcategories.