Impact of Sustainability in Fashion on Consumer Behavior and Purchasing Habits

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ABSTRACT

Title: Impact of Sustainability in Fashion on Consumer Behavior and Purchasing Habits

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With sustainability becoming one of today's hot topics, people are increasingly committed to a greener lifestyle, with an eco-friendlier consumption and more conscious purchasing decisions. But is people's sustainable commitment also evident in their fashion consumption habits? Thus, this research aims to analyze consumer behavior/attitudes towards sustainable fashion, identify the relevant factors considered in their purchasing decisions and if they are willing to spend more on sustainable fashion products. For such, an online experiment was conducted. Participants were randomly exposed to only one of three possible sustainability claims: *footprint reduction*, *waste reuse* and *sustainability certifications*, to understand if the various claims had a different impact on consumer behavior. Indeed, the results show that the *sustainability certifications* claim has a higher overall impact on consumers' willingness to purchase sustainable fashion products than the other two claims.

The consumers' sustainable character ("Green"/"No-Green") also influences their pro-environmental attitudes; "Greens" seem to be willing to pay more for sustainable products.

The impact of the generational effect on the adoption of sustainable behaviors, addressed in this study, shows that there are practically no differences in the thinking and attitudes of different generations (Z, Millennials, X and Baby Boomers) towards sustainability. Although surprising, given past research on that particular topic, this result may be a starting point for deeper future research across generations.

Nevertheless, one of the main take-aways is that companies must clearly and transparently communicate their sustainability claims, as this can have a positive effect on consumer attitudes towards the brand.

Keywords: Sustainability; Ethical Consumption; Fashion; Sustainability Claims;

SUMÁRIO

Título: Impacto da sustentabilidade na moda no comportamento e hábitos de compra do consumidor

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Sendo a sustentabilidade um dos tópicos da atualidade, cada vez mais as pessoas procuram adotar um estilo de vida mais sustentável, um consumo mais ecológico e tomar decisões mais conscientes. Mas será que este compromisso sustentável também se reflete nas suas escolhas de produtos de moda? Este estudo visa analisar o comportamento/atitudes dos consumidores relativamente à moda sustentável, identificar os fatores-chave considerados nas suas decisões de compra e a sua disponibilidade para pagar mais por produtos de moda sustentáveis. Para tal, foi realizado um estudo experimental online. Os participantes foram expostos aleatoriamente a uma de três possíveis *sustainability claims*: *redução da pegada ecológica*, *reutilização de resíduos* e *certificações de sustentabilidade*, para perceber se as várias *claims* tinham um impacto diferente no comportamento do consumidor. De facto, os resultados mostram que a *claim certificações de sustentabilidade* tem um impacto global superior na sua disposição para comprar produtos de moda sustentáveis.

O caráter sustentável dos indivíduos ("Verde"/"Não-Verde") também influencia as suas atitudes pró-ambientais; Os "Verdes" mostram-se dispostos a pagar mais por produtos sustentáveis.

Quanto ao impacto do efeito geracional na adoção de comportamentos/atitudes sustentáveis, os resultados revelam praticamente não existirem diferenças entre as gerações em estudo (Z, Millennials, X e Baby Boomers). Embora surpreendente face a estudos anteriores, este resultado pode ser um ponto de partida para pesquisas futuras mais aprofundadas entre gerações.

Concluindo, as empresas devem comunicar de forma clara e transparente as suas *sustainability claims*, pois isso pode ter um efeito positivo nas atitudes dos consumidores em relação à marca.

Palavras-Chave: Sustentabilidade; Consumo Ético; Moda; *Sustainability Claims*;

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1. INTRODUCTION

The market is increasingly competitive, with new ideas and innovative products emerging daily, creating an urgent need for companies to differentiate themselves from others (Hall, 1980; Henderson, 1983). Offering something to consumers that allows them to recognize a clear competitive advantage is a way for firms to do this. A potential distinction may be related to the adoption of corporate social responsibility (CSR) policies (Porter and Kramer, 2006), in which firms make important decisions in a more conscious, responsible and sustainable way.

Past studies reveal that a commitment to socially responsible behavior benefits consumers' attitudes towards the company, with a decrease in their price sensitivity and an increase in brand loyalty (Green and Peloza, 2011; Sen and Bhattacharya, 2001). Additionally, a more recent study reveals that a positive impact of CSR may even alter consumer perceptions of the company's product performance (Chernev and Blair, 2015), and this has an influence on their purchase decisions (Newman, Gorlin and Dhar, 2014). Pickett-Baker and Ozaki (2008) state consumers are likely to purchase more from companies that are seen to be displaying CSR.

CSR impacts the firm's sustainable performance both economically, environmentally and socially (Li *et al.*, 2014) and it plays an even more important role in certain industries, including the Textiles, Clothing, Leather and Footwear industry (TCLF), on which this thesis will focus. This industry is one of the most polluting in the world (Pedersen and Andersen, 2015), so it is absolutely urgent that fashion companies adopt more sustainable policies. The global eco-friendly apparel is gaining popularity in the fashion world and increasingly firms are emerging with ecological brands, thus positioning themselves to benefit from the expected growth in this market (Yan, Hyllegard and Blaesi, 2012). In this process of entry and establishment in the market, firms should be aware that the clarity of its message plays an important role, influencing consumer attitudes towards the brand itself (Yan, Hyllegard and Blaesi, 2012).

In addition to claiming that their products are sustainable, it is essential that marketers know exactly who they are communicating to, and understand how emerging target markets are triggered to purchase sustainable products (Heo and Muralidharan, 2017). Millennials and Generation Z have increasingly adopted eco-friendly behaviors due to their environmental knowledge and concerns. The environmentally conscious behavior of these generations is leading to changes in their consumption and purchasing habits. By integrating sustainable

policies throughout their supply chains, firms can differentiate themselves from competitors (Albouy and Adesida, 2018; Heo and Muralidharan, 2017).

1.1. Academic and Managerial Relevance

In terms of managerial application, this study will enable organizations to evaluate the effect of CSR in the fashion industry on consumer purchasing decisions. More specifically, companies will be able to realize whether sustainability impacts, or not, consumer behavior towards a brand and their purchasing decisions. Additionally, players can use insights about the most valued factors in buying a fashion product, as well as how consumers perceive sustainable products compared to traditional ones. Thus, by evaluating the social, environmental and economic impact of implementing a general sustainable policy, firms will be able to assess if the investment is worthwhile.

In terms of academic relevance, this study would contribute to develop knowledge about the impact of sustainability in the fashion industry on consumer behavior and their perception towards sustainable fashion brands, since the academic literature on this topic has not yet been studied and investigated in a particular and in depth way before.

1.2. Problem Statement

The purpose of this thesis is to study the impact of CSR, namely the usage of sustainability claims in the production of products and in their communication, on consumer behavior and purchasing habits, particularly in the fashion industry.

1.3. Aim of the Study

With the aim of structuring the present study in a more precisely way, as well as detailing the Problem Statement into sub-goals, the following Research Questions were developed:

Research Question 1: To what extent are sustainability claims a relevant factor in the consumer purchase decision of a fashion item?

The aim of this research question is to understand if sustainability claims (namely, in this study, reduction ecological footprint, waste reuse and sustainable certifications) are, in fact, a factor

that consumers consider significant and relevant when deciding to buy a fashion product. This question will be studied through quantitative research.

Research Question 2: Are consumers willing to spend more for "sustainable fashion"?

The objective of this research question is to recognize if, in addition to considering sustainability an important factor, consumers are actually willing to pay more for sustainable fashion products. This issue will be assessed through qualitative and quantitative research.

Research Question 3: Do different sustainability practices have a different impact on consumers' behavior and product adoption?

The intention of this question is to perceive how sustainability claims actually influence consumer behavior and product adoption. These factors will be evaluated through primary data.

Research Question 4: Do different generations have different types of behavior and attitudes towards sustainability?

The goal of this question is to realize whether different generations have different perceptions of sustainability and how it influences their behavior, attitudes and purchasing intentions. The influence of this generational factor will be studied by analyzing primary data.

1.4. Scope of Analysis

For this study will be considered people from all age groups, from different generations, who make their own purchases or influence the purchase decision of another person, since the purpose of this thesis is to investigate whether the sustainability factor in a brand affects consumer behavior and decision making in the fashion industry. Additionally, there will be no restrictions of people answering even if sustainability is not an element that they take into account, as their ideas and opinions may add value.

1.5. Research Methodology

In order to get appropriate data and insights to the development of this thesis, both primary and secondary data will be used. The primary data will be collected through qualitative and quantitative research, in which an online experiment will be conducted. Through the secondary

data, it will be possible to gather preliminary information on the topic in question, mainly by reviewing academic articles to support the evidences found during the research phase.

The research method selected, online experiment, will allow to get quantitative data about the impact of fashion sustainability on consumer behavior and generalize, in order to get an overview of the market environment and to answer the Research Questions mentioned above.

1.6. Dissertation Outline

In the subsequent chapter, a Literature Review will be developed through the reading and analysis of existing literature, namely academic articles published in Journals of good quality, related to certain topics of interest for the development of this thesis.

In the third chapter, the methodology adopted in this study to collect and analyze the data that will allow to answer the Research Questions will be described in detail. Then, in chapter 4, the results will be presented and analyzed in order to respond to the aforementioned Research Questions. Finally, in chapter 5, the main conclusions and insights about this dissertation will be highlighted, as well as limitations discovered during the development of this research and also some considerations for future research.

2. LITERATURE REVIEW

This chapter presents a review of the existing literature on the various theoretical concepts related to the topic under study: the impact of applying sustainable measures in the fashion industry on consumer behavior and purchasing decisions. The chapter is divided into five main sections. Firstly, the topic of consumer behavior will be addressed, highlighting the factors that influence consumers' purchasing decision and their attitude towards sustainability. The second section focuses on drivers and barriers that influence a sustainable product consumption. The third topic is dedicated to sustainability claims, which include reducing the carbon, ecological and water footprints, reusing waste and certifying sustainability. The fourth section addresses the theme of sustainability and ethics in the fashion industry, with the two main pillars on which it is based, social and environmental, as well as the importance of transparency in the public disclosure of company information. Finally, the fifth section provides an overview of different generations' behaviors and attitudes towards sustainability.

2.1. Consumer Behavior: The Psychology of Marketing

The study of consumer behavior is crucial for organizations to develop appropriate marketing and communication strategies (Pickett-Baker and Ozaki, 2008). In order to identify factors that influence purchasing decisions, firms should consider specific and relevant information about consumers (Hoyer and MacInnis 2004), including: how they think, feel and choose among different alternatives (brands, products, retailers), how they behave while shopping, as well as how they are influenced by their surrounding environment (culture, values, family, media).

Consumers' behavior is a function of both personal and situational characteristics (Mainieri *et al.*, 1997), and essentially encompasses the decisions and actions that influence their attitude in the act of purchasing. Marketing plays a key role, having the ability to favorably influence consumers' attitudes toward a particular brand. Effective market communication with well-structured marketing campaigns, can persuade people and influence what they buy (Pickett-Baker and Ozaki, 2008). In this sense, studying how people select, buy, use, dispose and make decisions about goods or even lifestyle practices, such as socially responsible and sustainable consumption, can help marketers not only understand the past, but also predict the future (Pickett-Baker and Ozaki, 2008). Consideration of product selection, use and end-of-life phases is a topic of particular interest to marketers. The reasons why consumers choose one product over another (selection phase) may help improve the impact of marketing strategies and better

capture consumers' attention. The product use can also help companies redefine product positioning or understand how they can encourage increased consumption. According to Jungbluth *et al*. (2012), product disposal is an area that also deserves attention, as many of the environmental issues stem from product disposal.

To deeply understand how consumer behavior influences decision-making and marketing, it is critical to perceive the different types of factors that affect consumer behavior: *personal factors*, *psychological factors* and *social factors* (Gifford and Nilsson, 2014).

2.1.1. Factors Influencing Consumers' Purchasing Decision

During the purchasing process, consumers are driven by several factors that affect their decision. By identifying and understanding these factors, marketers can develop a well-planned strategy, a unique value proposition and more efficient advertising campaigns, aligned with the needs of their target consumers (Ramya and Mohamed Ali, 2016).

Personal factors (age, occupation, economic circumstances, lifestyle and personality), have a major influence on consumer's behavior and decision-making process, and may explain why an individual's preferences often change as his/her current life situation changes (Rani, 2014). The process of purchasing goods and services changes over time, and people do not buy the same products at each age. Occupation can also have a significant impact on consumers' behavior as their needs will depend on the type of job they have (Gajjar, 2013). Similarly, economic circumstances are also important, as individuals with a favorable economic situation will be more likely to buy, while people with low incomes will be more likely to save (Rani, 2014).

The buying behavior of consumers is also influenced by *psychological factors* (motivation, perception, learning, beliefs and attitudes). Motivation is linked to the different human needs and differs from person to person. According to Maslow, these needs are organized in a hierarchy: physiological, safety, social, ego and self-actualization needs (Rani, 2014). Regarding perception, it is the process by which an individual selects, organizes and interprets the information to which he/she is exposed. The circumstances to which the person is exposed can be decisive in the perception of the situation and can define if and how he/she will act. The learning process stems from the consumer's perception and also influences the decision-making process as his/her behavior changes with experience and learning (Gajjar, 2013). Beliefs are

developed based on the experience, knowledge and external influences, supporting the cognitive process in the purchase decision (Gifford and Nilsson, 2014).

Finally, *social factors* that influence consumer behavior include: reference groups to which they belong and are likely to share similar values, interests and purchasing decision patterns (Sharma *et al.*, 2010); their family, which according to Jisana (2014) is the group that has the greatest influence on consumers; their social role and social status.

2.1.2. Consumer Behavior Towards Sustainability and Ethics

The global marketplace is evolving towards sustainability (Luchs *et al*., 2011). According to the author and colleagues, consumers are more aware, responsible and informed about the impact their consumption habits may have on both social, environmental and economical levels. In fact, ethical corporate behavior is something valued and taken into account during the buying process (Creyer, 1997). Consumers are increasingly likely to choose eco-friendly brands, stating that they feel good about buying brands that are less environmentally harmful (Pickett-Baker and Ozaki, 2008). They even claim to be willing to pay more for products of companies with ethical behaviors to reward them (Creyer, 1997).

Despite this apparent change in mindset, consumers' beliefs regarding green consumption do not always translate into effectively sustainable behaviors (Luchs *et al.*, 2011). Phipps and colleagues (2013) state that only few consumers actually make an effort to change their actions, whether it is consuming less or consuming differently. In this sense, there is a gap between the possession of environmental knowledge and awareness, and the display of pro-environmental behaviors (Kollmuss and Agyeman, 2002), The true factors behind this gap need to be investigated (Luchs, Phipps and Hill, 2015; Luchs *et al.*, 2011).

Past research suggests that this gap can be explained by perceived product performance, since green products are perceived to be inferior (Oliver, 2013). Other studies propose that this gap is partly due to the idea that opting for a sustainable consumption means reducing benefits at an individual level. Yet, more and more consumers are realizing that it is possible to have more sustainable practices without compromising the individual benefits (Luchs *et al.*, 2011).

Despite the growing buzz around sustainability, not all consumers are still aware of this issue (Heo and Muralidharan, 2017). In this sense, companies play a key role as they may be able to

educate consumers by raising awareness about the topic and demonstrating the benefits associated with its sustainable products (Yan, Hyllegard and Blaesi, 2012).

2.2. Sustainable Consumption: Drivers and Barriers

Factors influencing the consumption of sustainable products are related to the values, beliefs, norms and habits of consumers (Pickett-Baker and Ozaki, 2008). Past research proposes that green behaviors seem to be rooted in the traditional heritage of savings and frugality, suggesting that the factors that drive consumers from positive intentions to the actual adoption of green behaviors are based on *social* and *personal norms*, *personal beliefs*, greater *perceived trust* and a sense of *control over costs* (Carrete *et al.*, 2012).

Social norms are created by the reference groups, which play a major role in the consumer's way of thinking, behaving and acting (Childers and Rao, 1992). However, this influence also depends on the product itself, the importance of the group and the susceptibility of the person (Pickett-Baker and Ozaki, 2008). Consumers act according to their *personal norms*, which includes what they feel they should do, when confronted with a certain consumption situation. These personal norms derive from social norms, leading individuals to act in accordance with the beliefs of the groups they identify with (Gleim *et al.*, 2013).

An individual's *personal beliefs* are also important in the purchasing decision. Consumers who are aware of the environmental and social impact of their actions believe that more sustainable habits can have a positive impact on the planet, and act accordingly. However, many consumers believe that even by adopting more sustainable behaviors, their actions alone will not make a difference on the environment (Gleim *et al*., 2013). Laroche and colleagues (2001) state that even when ecological concern is expressed, individuals are reticent to engage in sustainable consumption, since they believe that responsibility is not solely up to them, but from governments and large organizations.

In this sense, when analyzing a sustainable product, *perceived trust* is absolutely crucial and directly influences consumers' perception of the product (Gleim *et al.*, 2013), since they generally rely on well-known brands to produce effective products (Pickett-Baker and Ozaki, 2008). In order to build trust, the product features must meet the company's sustainable commitment (Wagner, Lutz and Weitz, 2009).

Control over costs is another factor that should be considered and analyzed when it comes to sustainable goods, as consumers often perceive these products as being more expensive (Chang, 2011). Moreover, Hamzaoui Essoussi and Linton (2010) suggest that the lack of knowledge, involvement and familiarity with this topic makes it difficult for consumers to understand the impact of using alternative materials (such as recycled materials) on the production.

In this regard, companies should make efforts to reach consumers and encourage them to adopt more eco-friendly practices. By clearly communicating its purpose and the social and environmental impact of its actions, the company conveys the trust that are crucial to the consumer's perception of brand value (Yan, Hyllegard and Blaesi, 2012). However, to promote new habits alongside environmental responsibility, companies must rethink their cost policies and provide affordable alternatives to all market segments.

2.3. Sustainability Claims

At a time marked by an excessive general consumption, when humanity is using resources faster than it can be replenished, it is critical that companies come together to empower and drive changes on consumers' behavior (BBMG, 2019). With the provision of effective sustainability claims, consumers can make decisions that preserve the planet's natural resources and mitigate environmental impacts (Cho, 2015). However, the same author states that the provision of sustainability claims, without adequate supporting information, may not have the desired impact on consumers.

A sustainability claim is a message used to promote a product, process, business or service in relation to at least one of the three pillars of sustainability: social, environmental and economic. Sustainability claims along with providing information regarding the environmental impact of a company's actions could improve the brand's image and value, as well as consumers' attitude towards that firm (Yan, Hyllegard and Blaesi, 2012). According to the 2019 BBMG report, consumers' perception that the brand is sustainable may influence their intentions and willingness to pay a higher price for its products.

Engels, Hansmann and Scholz (2010) claim that consumers generally prefer full information on product disclosures, in particular to better understand the extent of sustainability, including the environmental impact and contribution to the planet's wealth. If information is transparent and fully accessible throughout the purchasing process, the sustainability factor may impact

consumer behavior. When confronted with relevant data, consumers may be aware of the environmental consequences of their actions (Cho, 2015). Borin and colleagues (2011) even suggest that if traditional products (unsustainable) disclose not only their constituents but also the harmful effects associated, consumers would prefer green products over traditional ones.

There are several claims that may impact sustainable consumers behaviors, three of which will be further developed in the following section: *reduction of environmental footprint*, *waste reuse* and *sustainability certifications*.

2.3.1. Reduction of Carbon, Ecological and Water Footprints

According to Wiedmann, Lenzen and Barrett (2009), the sustainable performance of a company is determined based on its compliance with certain requirements and the analysis of various factors, including the analysis of its *carbon*, *ecological* and *water footprints*. To this end, the direct impacts of its processes and indirect impacts from its supply chains must be considered. Once all environmental impacts are examined, a company's *ecological footprint* can be defined as the total area of land needed to support the business in terms of the resources it consumes and the waste it produces (Barrett and Scott, 2001).

Initially designed as an indicator of the environmental impact of countries, individuals or populations, the ecological footprint is increasingly used as an indicator of corporate environmental performance, or even as an indicator of the sustainability of a brand's products (Wiedmann and Barrett, 2010). Thus, the ecological footprint is a useful and understandable measure that shows how close or far a company is from being sustainable, identifying the actions that have the greatest ecological impact (Barrett and Scott, 2001).

Regarding *carbon footprint*, it measures the CO_2 emissions associated with the use of fossil fuels, caused directly or indirectly by an activity or accumulated over the life stages of a product (Wiedmann and Minx, 2008; GFN, 2019). In an attempt to reveal the carbon footprint of products and raise public awareness, a number of initiatives have been launched. Providing quantitative information about the impact of personal lifestyle on natural resources can encourage significant pro-environmental behavioral changes from consumers (Lambert and Cushing, 2017). Farther, it could help direct firms' attention to the production of eco-efficient goods (Jungbluth *et al.*, 2012).

Globally people are consuming more natural resources than the planet can provide (Running, 2012), but this is particularly worrying about potable water. Water is at the heart of sustainable development, essential to human survival and a healthy ecosystem, as well as for socio-economic development and for energy and food production. In this sense, *water footprint* is an important indicator of water use in relation to people's consumption. A country's water footprint shows the volume of water needed to produce the goods consumed by the country's inhabitants (Chapagain and Hoekstra, 2004).

2.3.2. Waste Reuse

Waste reuse can reduce the need for energy and natural resources, as well as the need for land area to extract resources or landfill. Unused materials flows are extremely wasteful and inefficient, causing resource scarcity and waste problems compared to a circular system, designed to enhance resource efficiency (Park and Chertow, 2014).

Increased sensitivity to environmental issues has led consumers to recycle more post-consumer product waste, but the possibility of reuse depends on knowing where and how to use it. Park and Chertow (2014) claim that beyond the inherent value, some materials are disposed of in landfills simply because people do not know how to reuse them. Textile waste, for example, is a largely untapped material with strong potential for reuse and recycling (Domina and Koch, 1999), which is particularly important as the textile industry is facing huge environmental and resource challenges (Sandin and Peters, 2018). Some authors have proposed that the rapid pace of consumption in today's world has led to an increase in discarded clothing and textiles, and currently less than half of used clothes are collected for reuse or recycling (Ekström and Salomonson, 2014; Šajn, 2019).

As mentioned by Sandin and Peters (2018), the use and disposal of synthetic fiber-based textiles have created significant environmental concerns, as most of these materials are derived from petrochemicals, whose production and fate give rise to large CO_2 emissions. Additionally, most of these synthetic fibers are not biodegradable under natural environmental conditions, so when disposed of in landfills they can remain intact for long periods of time, making the land unusable for any other use (Lewis *et al.*, 2017).

Lewis and colleagues (2017) proposed that one of the alternatives to consider for the full use of post-consumer textile waste is the reuse of second-hand clothing through design and

production processes. This initiative has several advantages, namely: eliminates the need to obtain new materials that consume water and fossil fuel resources; eliminates the need to use health-damaging chemicals in the dyeing and finishing processes; repurposed garments are diverted from entering a landfill or being incinerated (Lewis *et al.*, 2017).

2.3.3. Sustainability Certifications

With more and more brands advertising their sustainable initiatives as part of their brand stories, consumers are having difficulties distinguishing brands that are effectively committed to the environment. According to Moore (2019), to overcome this issue fashion retailers are looking to several sustainability certifications for their brands as a way of proving their commitment.

Sustainability certifications are norms and standards related to environmental quality, social equity and economic prosperity, adopted by companies to demonstrate their performance and commitment in these areas. Independent entities, which focus on setting and enforcing environmental quality standards, evaluate the measures taken by firms and, if all requirements are met, they issue the respective sustainability certificate. This will allow companies to include a seal of approval on their products and packaging, as a proof of their efforts (Moore, 2019).

Despite similarities in the main objects and requirements for certification, there are significant differences in terms of target groups, geographic diffusion and main focus on environmental, social or economic issues. In *Table 1* (Exhibit-1) three particularly important sustainability certifications in the fashion industry will be addressed: Global Organic Textile Standard, Standard 100 by OEKO-TEX and Fairtrade International.

2.4. Sustainability and Ethics in the Fashion Industry

The concepts of sustainable and ethical fashion have been emerging as the latest fashion trends. According to Joergens (2006), ethical fashion refers to clothing produced under fair trade principles, in proper labor conditions and with efforts to reduce the environmental impact of the manufacturing process.

The ethical issues raised around the fashion industry have drawn public attention (Shen *et al.*, 2012). Consumers are increasingly interested in the origin and constituent raw materials of the clothing they buy, valuing transparent brands. Shen *et al.* (2012) suggested that consumer

perceptions of human rights and environmental conditions may influence their support for companies that follow socially and environmentally responsible manufacturing practices.

Driven by these consumer concerns, firms are becoming increasingly aware of the need to be eco-friendly and socially conscious (Wiedmann, Lenzen and Barrett, 2009). From luxury brands to fast fashion, managers are more aware that their current business model will not be viable for the future due to the strong environmental impact of the fashion industry (Shen *et al.*, 2012). Thus, in an attempt to make their companies greener, managers are starting to pay attention to how they design and get eco-friendly materials to make their collections, benefiting society while minimizing environmental impact.

Ethical and sustainable fashion is fundamentally based on two main pillars, *social* and *environmental*, with various purposes, namely: fighting fast and cheap production with damaging patterns of fashion consumption; avoiding the use of pesticides and toxic chemicals by using eco-friendly materials; minimizing water use; recycling waste; promoting the adoption of sustainable policies and developing initiatives that raise public awareness (Šajn, 2019). Thus, ethical fashion can be divided into socially and environmentally responsible fashion, two distinct focuses that will be explored in the following section.

2.4.1. Socially Responsible Fashion

According to Eurostat (2018), around 5% of household expenditure in the EU is spent on clothing and footwear. The purchase of clothes has increased significantly in recent times and, under the current scenario, this trend tends to continue. Several facts have contributed to this increase in consumption, including the general fall in clothing prices and the increase in fast fashion consumption (Šajn, 2019).

However, with the growing social and environmental concerns recently raised and the constant calls for more sustainable lifestyles, consumers are becoming more worried about the social consequences of their purchases, particularly with regard to human rights violations in sweatshops (factories where manual workers are employed at very low wages for long hours and under poor conditions) (Dickson, 2001). Consumers care about CSR and they are willing to pay a higher price for socially responsible products (Ha-Brookshire and Norum, 2011).

In this sense, *socially responsible fashion* can be defined by the practices and efforts made by fashion companies to address social issues, such as sweatshop labor and fair trade (Dickson, 2000). Supply chains are becoming increasingly global, so knowing all the players involved in the supply chain, as well as their values and their practices, is essential for a sustainable supply chain management. As proposed by Carter and Rogers (2008), managing a sustainable supply chain involves the strategic and transparent integration of a company's social, environmental and economic goals in the coordination of key business processes between organizations, to improve the long-term economic performance of the company and its supply chains.

Gillespie and Rogers (2016) claim that investing in a sustainable supply chain management will not only have favorable social and environmental effects, but will also positively affect the company's financial returns through increased sales. The adoption of sustainable policies by companies will lead consumers to have a more favorable perception of the brand, showing greater purchase intentions. On the other hand, unethical supply chain management practices will cause consumer psychological discomfort with the brand.

2.4.2. Environmentally Responsible Fashion

According to Watson, Eder-Hansen and Tärneberg (2017), the EU's environmental footprint caused by textile consumption is 4%-6%, which shows the relevance of investing in *environmentally responsible fashion*. This concept can be defined by the practices and efforts made by fashion companies to address environmental issues, such as the use of organic fibers, the production of eco-fashion or the reduction of pollution (Cetindamar, 2007; Shen *et al.*, 2012). The origin and production of raw materials, particularly the growing crops for natural fibers, are responsible for much of the environmental impact caused by the fashion industry (Šajn, 2019). Cotton, for example, is one of the widely used fibers in the EU, which is considered problematic as this plant requires large amounts of soil, water, fertilizers and pesticides during its development.

Processes commonly used during clothing manufacturing, such as spinning, weaving and dyeing, also have serious environmental consequences. These processes are energy intensive and require large amounts of water and chemicals (Šajn, 2019), some of which are classified by the EU as hazardous to health or the environment. This is even more alarming in developing countries, where most of the production takes place, as environmental legislation is not as strict

as in the EU and the wastewater from production processes is often discharged unfiltered into waterways, which is a risk to public health and the environment (GFA and BCG, 2017).

The consumer use phase is, according to a study on the Environmental Improvement Potential of Textiles (Beton *et al.*, 2014), the phase with the largest environmental footprint in the lifecycle of clothing due to water, energy and chemicals (especially detergents) used in washing, drying and ironing. By implementing some measures, firms can significantly reduce the negative impacts of their production processes. Reducing the use of chemicals and replacing them with enzymes, using dye controllers and dyeing machinery that require less water, as well as recycling water are all examples of actions to take (Beton *et al.*, 2014).

2.4.3. Importance of Transparency in the Public Disclosure of Company Information

Today consumers are more aware of the fashion industry's impact, expecting full transparency throughout the company's supply chain (Chan and Wong, 2012). They demand to know from where and how products are made, to the origin, properties and quality of the materials used.

Radical transparency is, according to the State of Fashion Report (Amed *et al.*, 2018), one of the biggest trends currently shaping the fashion industry. Transparency can be defined as credible, understandable and comparable public disclosure of information about fashion supply chains, business practices and the impacts of these practices on workers, communities and the environment (Fashion Revolution, 2019). In this sense, according to Shen and colleagues (2012), transparency can lead companies to act more responsibly, seeking to know more carefully all players involved in its supply chain. However, this is a difficult and challenging process that requires companies to monitor the journey of their products to the level of raw materials and measure the outcomes and impacts of their actions (Shen *et al.*, 2012).

Hartmann and colleagues (2005) propose that one of the effective brand positioning strategies is active and transparent communication with consumers through advertising. More recent studies even show that consumers develop positive attitudes towards a brand when the advertising message clearly communicates information about its eco-friendly fashion products (Chang and Jai, 2015). Therefore, marketers can take advantage of this information and positioning the brand as "green" in ads, explicitly communicating its purpose and sustainable product characteristics (Yan, Hyllegard and Blaesi, 2012).

Transparency is not the goal itself, but a tool towards a broader systemic adjustment for a safer, fairer and cleaner global fashion industry (Shen *et al.*, 2012). Consumers do not want to buy clothes made by people working in danger and polluted environments, and when they are truly informed about the social and environmental impacts of brands, they can make more thoughtful buying decisions. Consequently, transparency leads consumers to build trust in these brands.

2.5. Behaviors and Attitudes of Different Generations Towards Sustainability

As purposed by Portolese Dias (2003), different generations have different perceptions and behaviors towards sustainability, so understanding these generational differences is essential for marketers to develop strategies to reach each group. The author also suggests that a company that can understand these differences will be able to create better targeted products, as well as learn how to better advertise and communicate with each generation.

In this study, the generation classification was based on *Table 2* in Appendix (Robinson, 2019). From all consumer groups of green products, Baby Boomers (55-73 years old) began to be the main target for green marketers, however, as Millennials (or Generation Y) are beginning to have more purchasing power today, they are seen as emerging green consumers (Fry, 2015). This group has become a high priority target for marketers as older Millennials (30-39 years) are part of the current workforce and, although younger Millennials (25-29 years) are entering the job market or may still be in college, they directly or indirectly influence their family's buying decisions. In addition, they are potential future sustainable consumers (Fry, 2015).

Previous studies show that younger are less committed to environmentally responsible behavior than older Millennials (Debevec *et al*., 2013). However, according to Rogers (2013), this generation is increasingly environmentally conscious, and about 36% are willing to buy eco-friendly products. In this way, marketers will have to find compelling strategies to persuade them to opt for greener products (Heo and Muralidharan, 2017).

Older Generation Z (18-24 years old) is another particularly interesting group for marketers because as they become independent consumers, their consumption habits will also impact the environment. Nevertheless, young Generation Zers, as they have access to greater environmental education, are more likely to be influenced by their environmental knowledge when buying green products (Albouy and Adesida, 2018).

Regarding Generation X (40-54 years), they are more price conscious but still buy based upon their motivations to fit in and have an identity, although this is not at the forefront of their minds (Portolese Dias, 2003). In order to reach Generation X, marketers must take into account price, value for money and ease of use.

Based on the secondary data, it can be concluded that further study of the behaviors and attitudes of different generations, in particular towards sustainability, is needed.

3. METHODOLOGY

3.1. Research Goals

The present research aims to assess the impact of sustainability claims on consumer purchasing decisions regarding fashion products, analyzing whether different sustainable practices cause different consumer responses and, ultimately, whether consumers are willing to pay more for "sustainable fashion". Additionally, this research also intends to study the impact of the generational effect, investigating if different generations have different perceptions, behaviors and attitudes towards sustainability.

3.2. Methodology

In order to answer the research questions, an online experiment was conducted. Each data collection method has its own advantages and disadvantages, and the way data is collected has a major impact on how the research is performed (Wilcox *et al.*, 2012). According to Curtis (2008), online survey is one of the fastest methods of getting answers at lower costs, however, it also has its downsides, namely: participants may be skeptical about providing personal data over the internet; people may respond to surveys in an uninformed way; there is no possibility of clarifying questions; and often the sample is not representative of the population.

3.3. Online Survey

The online survey was conducted through *Qualtrics* software. The questionnaire was divided into several sections in order to know the participants, their environmental beliefs and their consumption habits, as well as to understand the impact of different sustainability claims on consumers' purchasing decisions and behaviors (Appendix, Exhibit-4).

The first section of the survey aimed to get an **overview of consumer behavior and buying habits in fashion**, through three questions focused on the main topics: frequency of purchase, average amount spent monthly and personal involvement in shopping.

Section two was intended to **evaluate consumer purchase involvement**. For that, some questions adapted from Mittal (1989) were made using a five-point scale, such as: "When selecting from the many types and brands of a certain fashion product, would you say that: "1-I wouldn't care which one I buy" to "5-I would care a lot which one I buy".

In the third section, the goal was to understand the **factors valued by consumers when buying a fashion product**. For such, respondents ranked seven different factors on a scale from "1-Not at all important" to "5-Extremely important", four of which (e.g., "*Quality*") were adopted from Aiswarya and Krishnan (2017).

Section four was intended to investigate the **reasons that may lead people to buy new fashion products**, when they already have others that can be used for the same purpose. Four reasons were presented, and respondents were asked to select a maximum of two, in order to assess which are the main reasons for buying (e.g., "*The one I own doesn't fit me*").

In section five, in order to understand their **general attitudes towards ethical consumption**, four items from the Ethically Minded Consumer Behavior (EMCB) scale (Sudbury-Riley and Kohlbacher, 2016) were used. Using a five-point Likert scale (1-"Strongly disagree" to 5-"Strongly agree"), respondents were asked to indicate their degree of agreement/disagreement with four sentences (e.g., "*When there is a choice, I always choose the product that contributes to the least environmental damage*" and "*I have switched products for environmental reasons*").

Section six focused primarily on **general environmental beliefs**. To measure environmental concern, two items were adapted from the New Environmental Paradigm (NEP) scale (Dunlap and Van Liere, 1978), widely used in other studies (Pickett-Baker and Ozaki, 2008), and the other two items were adopted from the Cho (2015) and Koch and Domina (1997) scales.

In the seventh section, the measure for **consumers' eco-active behavior** was adopted from the Koch and Domina (1997) scale. A total of four items, including for example "*I do recycling*" and "*Compared with people I know I make a greater effort to recycle*", were evaluated using a five-point Likert scale (1-"Strongly disagree" to 5-"Strongly agree").

Section eight aims to understand the perception of the respondent's own role and **effectiveness in preserving the environment**, through four items adapted from previously developed scales: three items from the Koch and Domina (1997) scale and one item from Heo and Muralidharan (2017) scale. Similar to the previous questions, respondents were asked to indicate their degree of agreement/disagreement with four statements using a five-point Likert scale.

Section nine is the core section of this survey. Its purpose is to test the **impact of different sustainability claims on consumer behavior and habits**. For such, after reading a brief

description of LUS, a Portuguese sustainable fashion brand, respondents were exposed to the stimuli that would guide their answers to the next questions: a commercial/ad from LUS focused on its sustainability claim. Three different commercials were created, each one with a distinct sustainability claim: **1-reduction of ecological footprint**, **2-waste reuse** and **3-sustainability certifications** (*Figures 1, 2 and 3*). Respondents were randomly exposed to one of the three commercials. In this way, it was possible to assess the impact of different sustainability claims on consumers' behaviors and attitudes by checking whether, for example, one claim has more impact on their answers than another.

After each individual was exposed to only one of the claims, they all answered the same questions. Several variables were rated by respondents using a five-point Likert scale (1-"Strongly disagree" to 5-"Strongly agree"), namely: *willingness to purchase*, *willingness to pay*, *interest in the company* and *perceived brand equity*. The scales used to measure these variables were adapted from previous studies: *willingness to purchase*, *willingness to pay* items were adapted from Hou, Du and Li (2008) and Cho (2015); *interest in the company* items from Bhattacharya and Sen (2003); and *perceived brand equity* item from Yoo and Donthu (2001).

Figure 1: *Commercial with sustainability claim - reduction of ecological footprint*

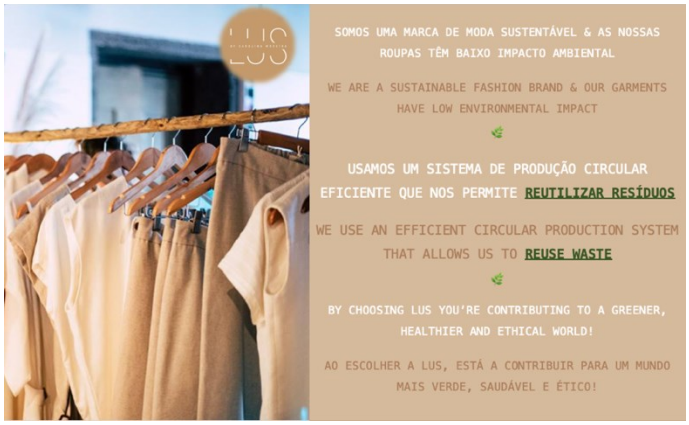
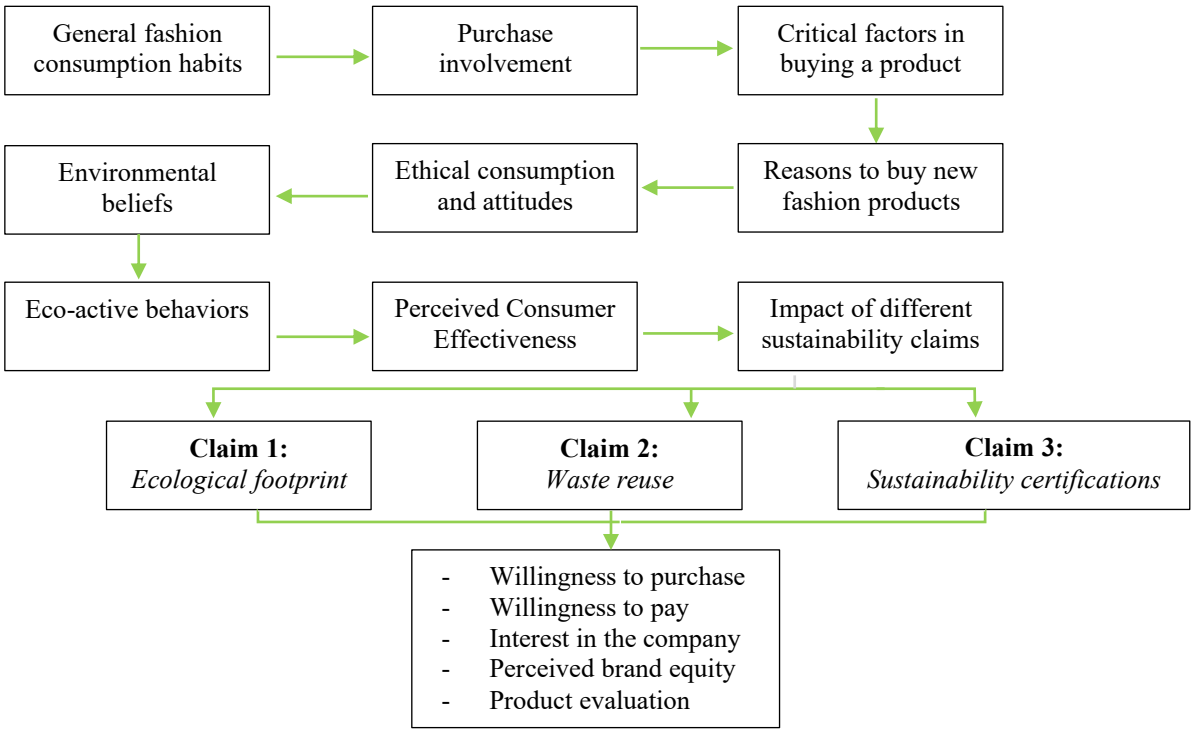


Figure 2: *Commercial with sustainability claim - waste reuse*

Figure 3: *Commercial with sustainability claim - sustainability certifications*

Thereafter, participants were asked to compare LUS products (sustainable) with similar conventional products (unsustainable), based on the initial description of the company and the products images in the commercial they were exposed. Thus, respondents compared sustainable and unsustainable products as "inferior" or "superior" in relation to various factors, such as: performance, quality, durability, style/design and comfort.

To finalize the questionnaire, some demographics questions were asked, particularly in relation to gender, age, professional situation, academic qualification, nationality and purchasing power. Regarding "purchasing power" indirect questions were made, such as "*Do you own a house or rent one?*", "*Do you have your own car?*" and "*How many times a month do you go out to dinner?*", as this is usually a sensitive topic for respondents. The following scheme illustrates the general structure under which the survey was developed.



4. RESULTS' ANALYSIS

This chapter starts with a secondary data analysis of some social and environmental brands, currently operating in the market, and some measures taken by them to reduce their impact on the fashion industry. Then begins the quantitative research, where the results of the online experiment presented in the previous chapter will be analyzed. At a preliminary stage, the data was cleaned, screened and reliability was verified. Thereafter, a more in-depth analysis was carried out, in which the research questions were answered in accordance to data results.

4.1. Secondary Data Analysis

The fashion industry is carefully exploring options on how to improve its social and environmental impact while successfully operating in a highly competitive market (Shen *et al.*, 2012). Nowadays, there are several brands recognizing these issues and adapting their business to make a difference and create change. Some of these brands (e.g. Saint Basics, Patagonia, H&M e C&A), as well as their environmental and social contributions to lessen their impact on the industry are mentioned in the Appendix (*Table 3*).

In environmental terms, the measures implemented by these brands to reduce their footprint include: the use of organic, recycled and sustainable materials; the non-use of chemicals, pesticides and animal fibers; as well as the efficiency of their production processes totally or almost zero-waste. Many of these brands have already launched collections or lines made exclusively from organic and recycled materials.

Regarding the social side, these brands pay attention to the working conditions provided to the workers in the production chains, as well as to the payment of fair wages. Many of them launched unused clothing collection initiatives for later recycling or reuse, while others buy and resell old products, so customers can buy used products for a lower cost. Some of them have implemented innovative social programs, namely, to enhance workers' commitment and to support and empower women in this industry.

4.2. Online Experiment

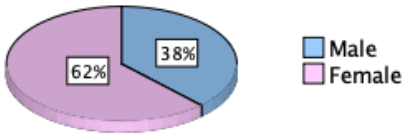
4.2.1. Data Collection and Data Cleaning

During the data collection period (November 12th to November 24th), 201 participants started the survey, however, only 172 respondents fully completed the questionnaire. It was followed

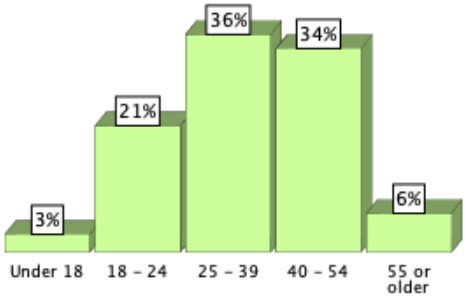
a three group-design, based on three sustainability claims: environmental footprint reduction, waste reuse, sustainability certifications. Participants were exposed to a LUS commercial (sustainable fashion brand) with one of the brand's main sustainability claim. There were three commercials (each one with a different claim), and each participant was randomly allocated to one of them. From 172 respondents, three groups were formed based on the claim seen by each individual: **Group 1** with 66 individuals (38.4%) was exposed to the claim "*environmental footprint reduction*"; **Group 2** with 47 participants (27.3%) observed the claim "*waste reuse*"; and **Group 3** with 59 respondents (34.3%) saw the claim "*sustainability certifications*".

4.2.2. Sample Characterization

From the 172 individuals who fully completed the survey, 62% were female participants and 38% were male. Those aged 25-39 and 40-54 were the largest contributors with 36% and 34% of respondents, respectively. The remaining participants were between 18 and 24 years old (21%), over 55 (6%) and the youngest were below 18 years old (3%).

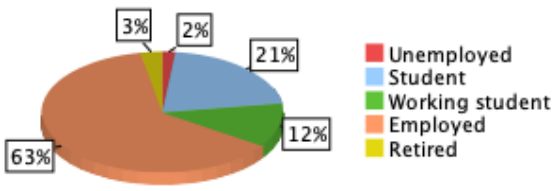


Graphic 1: Gender

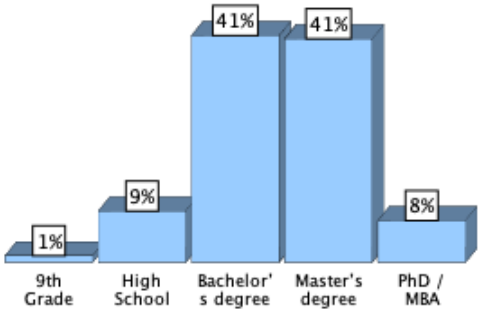


Graphic 2: Age

In terms of professional situation, 63% of the participants were employed, 21% were students, 12% were working students and the remaining were either retired (3%) or unemployed (2%). Regarding academic qualifications, the same percentage of respondents already have or are taking their bachelor (41%) or master's degree (41%), 9% only have high school level, 8% have PhD's and only 1% have the 9th grade.



Graphic 3: Professional Situation



Graphic 4: Academic Qualifications

As for nationality, the vast majority of respondents were Portuguese (83%), with only 17% belonging to other nationalities. Purchasing power was measured indirectly and in general it can be concluded that most respondents have purchasing power. More than half have their own house (66.3%) and the remaining have a rented house. Additionally, 66.3% have their own car. Most go out to dinner 1-3 times a month (62.8%) and there is still a high percentage of people (31.4%) who go out to eat at least four times a month. Only 5.8% say they never dine out.

4.2.3. Data Screening

In this section, univariate and multivariate outliers' analysis were performed. It is important to refer that the analysis of outliers was done by experimental groups, i.e. taking into account the sustainability claim presented to each respondent. Thus, both z-scores (in univariate outliers) and Mahalanobis distances (in multivariate outliers) were calculated by experimental group.

Univariate Outliers

The purpose of univariate outliers' analysis is to identify extreme values in the variables that make up the database. For this, all single variables that compose the various scales were screened by the same process in the SPSS. The principle is to convert the scores of each variable into standardized z-scores. Descriptive statistics were run, and z-scores were analyzed. Cases with z-scores higher than 3.29 or lower than -3.29 are potential outliers.

After analyzing the results, ten potential univariate outliers were found. Since removing outliers leads to the loss of a large amount of observations, especially in databases with many variables when all univariate outliers are removed for each variable, in this first analysis the potential univariate outliers were kept in the database. Then, the multivariate analysis was performed.

Multivariate Outliers

Multivariate outliers are a combination of uncommon scores in two or more variables, and they can be identified by calculating the Mahalanobis distance for each regression. The distances are interpreted using a $p<.001$ and the corresponding chi-square value with the degrees of freedom equal to the number of variables. So, cases in which $p<.001$ should be eliminated so that the model can be as accurate as possible.

Multivariate analysis was performed by experimental group for each variable, and the results show the existence of fourteen outliers. These fourteen cases were eliminated from the database and the final sample considered was composed by 158 respondents: 58 from Group 1 (those who saw the claim "*ecological footprint reduction*"), 44 from Group 2 (claim "*waste reuse*") and 56 from Group 3 (claim "*sustainability certifications*").

4.2.4. Data Reliability

Since most of the scales used in the survey were adapted from previous literature, it was crucial to analyze its reliability. Thus, for scales with three or more items, reliability can be assessed using the Cronbach's alpha. According to Nunnally and Bernstein (1994), the acceptable level of this coefficient should stand between 0.7 and 0.8 for the scale reliability to be high. Thus, for each scale with three or more items, Cronbach's alpha was calculated (*Table 4*).

Scale	Initial number of items	Cronbach's ∝	Cronbach's ∝ if item deleted	Number of items deleted	Final number of items
Purchase involvement	3	**0.633**	**0.687**	1	2
Critical factors in buying a fashion item	7	**0.745**	**0.757**	-	7
Ethical consumption	4	**0.862**	**-**	-	4
Environmental beliefs	4	**0.797**	**-**	-	4
Eco-active behavior	4	**0.828**	**-**	-	4
Perceived effectiveness	4	**0.728**	**0.779**	-	4
Willingness to purchase	3	**0.841**	**-**	-	3
Interest in the company	4	**0.860**	**-**	-	4

Table 4: Scale reliability analysis

By analyzing the results, it was found that in five of the scales ("ethical consumption", "environmental beliefs", "eco-active behavior", "willingness to purchase" and "interest in the company"), Cronbach's alpha has a value greater than or almost 0.8, so the scales are reliable. The scales "critical factors in buying a fashion item" and "perceived effectiveness" could still be improved by removing one item, but as the value is already greater than 0.7, it was decided to keep their initial number of items. The remaining scale ("purchase involvement") has a low level of internal consistency. By removing one item, Cronbach's alpha was slightly improved, although its value is still below 0.7 (0.687).

For dimensions with only one item ("willingness to pay", "perceived brand equity", "likelihood of purchase" and "likelihood of recommending"), the reliability analysis did not apply.

Once reliability is analyzed, the scales described above will be used hereinafter as aggregated. Thus, for some sets of variables with two or more items, the respective construct was calculated by averaging the scores of the various items (variables). Note that in the "eco-active behavior" scale, one of the items was previously recoded because it was reversed scored.

4.2.5. In-depth Analysis

This section will be dedicated to answering Research Questions as well as developing an extra analysis, important in the context of this study. All SPSS outputs relevant to the resolution of the questions are in Appendix (Exhibit-5) for possible consultation.

4.2.5.1. Research Questions

RQ 1: To what extent are sustainability claims a relevant factor in the consumer purchase decision of a fashion item?

To answer this question, it was considered important to study the effect of the individual's *sustainable character*, so it was necessary to create a new variable that would identify the individuals as "*Green*" or "*No-Green*". An individual is considered to be "Green" if the corresponding value of the Ethical Consumption construct is at least 3.5. Thus, in the total sample considered for the study (n=158), there are 102 "Green" and 56 "No-Green" individuals.

In order to evaluate if the sustainability claim (a variable that identifies the claim seen by the individual) and if the individuals' sustainable character significantly affect their willingness to purchase, a two-way ANOVA was performed followed by Scheffe's post-hoc tests, to verify which groups differ from each other. Scheffe's tests were chosen because they allow the use of samples with different sizes: n_1=58; n_2=44; n_3=56 (Reis *et al.*, 1999) and according to Maroco (2007), these tests can be used when comparing a small number of groups.

From now on, the three sustainability claims under study (*ecological footprint reduction*, *waste reuse* and *sustainability certifications*) will be called "*footprint*", "*waste*" and "*certifications*.

Table 5: Two-factor (Sust. Claim and Sust. Character) impact on Willingness to Purchase

Willingness to Purchase	**Sustainability Claim**			**Sustainable Character**	
	footprint	*waste*	*certifications*	*Green*	*No-Green*
n	58	44	56	102	56
Means	3.787	3.826	4.238	4.065	3.762
Sustainable Character	**Green**			**No-Green**	
Sustainability Claim	*footprint*	*waste*	*certifications*	*footprint*	*waste*	*certifications*
n	39	32	31	19	12	25
Means	3.949	3.875	4.409	3.456	3.694	4.027
Two-Way ANOVA	Test Statistics and Significance (*p<.05, **p<.01, ***p<.001)					
Main Effect Sustainability Claim	$F_{(2,152)}$=12.626***					
Main Effect Sustainable Character	$F_{(1,152)}$=13.322***					
Interaction Sust. Claim*Sust. Character	$F_{(2,152)}$=0.804					

Analyzing the results of the *Table 5*, it can be concluded that:

- There are significant differences in the willingness to purchase sustainable fashion products for individuals who see the three types of sustainability claims ($F_{(2,152)}$=12.626, p<.001), which means that the sustainability claim factor has a significant effect on the willingness to purchase. Scheffe's tests (*Table 5.1*-Appendix) indicated that participants in the *certifications* claim seem to rate willingness to purchase higher than participants in the *footprint* claim ($M_{footprint}$=3.787; $M_{certifications}$=4.283; *Scheffe statistics*[1]=4.285, p<.001) and than participants in the *waste* claim (M_{waste}=3.826; $M_{certifications}$=4.238; *Scheffe statistics*=3.645, p<.01). There was no significant difference between participants' willingness to purchase in the *footprint* and *waste* claims (*n.s.*).

[1] Note that Scheffe's test statistics is the quotient between *Mean Difference* and *Standard Error*.

- There are also significant differences in the willingness to purchase sustainable products between the "Green" and "No-Green" individuals, from which it can be inferred that the individual's sustainable character has a significant effect on the willingness to purchase; indeed, as expected, "Green" individuals seem to be more willing to buy such products ($M_{No\text{-}Green}$=3.762; M_{Green}=4.065; $F_{(1,152)}$=13.322, p<.001).
- It can be further stated that there is no significant interaction between the sustainability claim and sustainable character factors ($F_{(2,152)}$=0.804, p>.05), i.e. the sustainability claim factor does not influence the response of the dependent variable (willingness to purchase) to the sustainable character factor.

In addition, it is intended to assess whether there are significant differences between the willingness to purchase sustainable fashion products for "Greens" exposed to different sustainability claims, through an one-way ANOVA followed by multiple comparison tests. Thereafter, the same analysis will also be performed for "No-Greens". It can be concluded that:

- For "Green" individuals, there are at least two sustainability claims for which the individuals' willingness to purchase is significantly different ($F_{(2,99)}$=10.085, p<.001). Scheffe's tests (*Table 5.2*-Appendix) have shown that individuals exposed to the *certifications* claim seem to be more willing to buy sustainable fashion products than those exposed to the *footprint* claim ($M_{footprint}$=3.949; $M_{certifications}$=4.409; *Scheffe statistics*=3.714, p<.01) and than those exposed to the *waste* claim (M_{waste}=3.875; $M_{certifications}$=4.409; *Scheffe statistics*=4.114, p<.001).
- "No-Green" individuals belonging to the three claims do not have the same desire to buy sustainable fashion products ($F_{(2,53)}$=4.379, p<.05). In this case, from the Scheffe's tests (*Table 5.3*-Appendix) it can be said that only individuals in the *certifications* group reveal a higher willingness to purchase than individuals in the *footprint* group ($M_{footprint}$=3.456; $M_{certifications}$=4.027; *Scheffe statistics*=2.931, p<.05).

RQ 2: Are consumers willing to spend more for "sustainable fashion"?

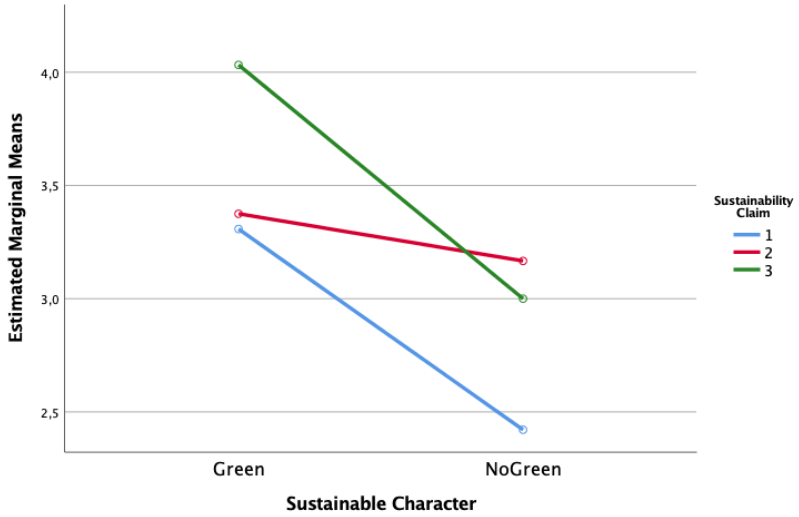
Similarly to the previous test, a two-way ANOVA was performed to understand whether the sustainability claim and sustainable character factors significantly affect individuals' willingness to pay more for sustainable fashion products. Subsequently, multiple comparison tests were executed to notice differences between groups.

Table 6: Two-factor (Sust. Claim and Sust. Character) impact on Willingness to Pay

Willingness to Pay	**Sustainability Claim**			**Sustainable Character**	
	footprint	*waste*	*certifications*	*Green*	*No-Green*
n	58	44	56	102	56
Means	3.020	3.320	3.570	3.550	2.840
Sustainable Character	**Green**			**No-Green**	
Sustainability Claim	*footprint*	*waste*	*certifications*	*footprint*	*waste*	*certifications*
n	39	32	31	19	12	25
Means	3.310	3.380	4.030	2.420	3.170	3.000
Two-Way ANOVA	Test Statistics and Significance (*p<.05, **p<.01, ***p<.001)					
Main Effect Sustainability Claim	$F_{(2,152)}$=10.436***					
Main Effect Sustainable Character	$F_{(1,152)}$=31.230***					
Interaction Sust. Claim*Sust. Character	$F_{(2,152)}$=3.547*					

Analyzing the results of the *Table 6*, it can be concluded that:

- The sustainability claim factor has a significant effect on the willingness to pay for sustainable fashion products ($F_{(2,152)}$=10.436, p<.001), as individuals belonging to different claims demonstrate different willingness to pay for such products. Indeed, from the Scheffe's tests (*Table 6.1*-Appendix), it can be seen that individuals exposed to *certifications* seem to rate willingness to pay higher than individuals exposed to *footprint* ($M_{footprint}$=3.020; $M_{certifications}$=3.570; *Scheffe statistics*=3.957, p<.001)
- Sustainable character factor has a significant effect on the willingness to pay; "Greens" seem to be willing to spend more for sustainable products than "No-Greens" ($M_{NoGreen}$=2.840; M_{Green}=3.550; $F_{(1,152)}$=31.230, p<.001).
- Looking at the following graph, it can be observed that there is interaction between the factors sustainability claim and sustainable character, which can be confirmed by the corresponding ANOVA result ($F_{(2,152)}$=3.547, p<.05).



Graphic 5: Sustainability Claim*Sustainable Character Interaction

As in the previous question, it is also intended to know if there are significant differences in the willingness to pay for "Greens" who see the different claims. A similar analysis was done for "No-Greens". Thus, two one-way ANOVA were performed followed by Scheffe's tests. Analyzing the results, it can be concluded that:

- "Green" individuals belonging to groups *footprint*, *waste* and *certifications* do not have the same willingness to pay for sustainable fashion products ($F_{(2,99)}$=12.722, p<.001). Scheffe's tests (*Table 5.2*-Appendix) indicated that participants in the *certifications* group reveal a willingness to spend more on sustainable products higher than participants in the *footprint* group ($M_{footprint}$=3.310; $M_{certifications}$=4.030; *Scheffe statistics*=4.708, p<.001) and than participants in the *waste* group (M_{waste}=3.380; $M_{certifications}$=4.030; *Scheffe statistics*=4.056, p<.001).
- For "No-Green" individuals, it can be stated from the ANOVA that there are significant differences in the willingness to pay on at least two of the sustainability claims ($F_{(2,53)}$=3.292, p<.05). However, Scheffe's tests (*Table 5.3*-Appendix) do not allow to identify these differences (p>0.5 for all cases). In fact, according to Maroco (2007), it may happen that the conclusions of ANOVA and the multiple comparison tests are different, and this occurs because ANOVA is a more powerful test.

RQ 3: Do different sustainability practices have a different impact on consumers' behavior and product adoption?

In order to understand the potential impact that some variables have on *consumer behavior* and *product adoption*, multiple regressions were performed for two different dependent variables ("Interest in the Company" related to *consumer behavior* and "Likelihood of Purchase" related to *product adoption*). Three multiple regressions per dependent variable were made, one for each sustainability claim (*footprint*, *waste* and *certifications*).

1. Analysis of "Interest in the Company" to measure *consumer behavior*

To study *consumer behavior*, the dependent variable "Interest in the Company" and the following independent variables were chosen: Perceived Brand Equity, Willingness to Purchase and Willingness to Pay. These three independent variables were chosen to include in the model because they were the ones that best correlated individually with the dependent variable and are not significantly correlated with each other.

Model I (for each sustainable claim):

$$\text{Interest in the Company} = \beta_0 + \beta_1 * \text{Perceived Brand Equity} + \beta_2 * \text{Willingness to Purchase} + \beta_3 * \text{Willingness to Pay} + \varepsilon$$

Table 7: Impact of some constructs on "Interest in the Company" (to measure *consumer behavior*)

Sustainability Claims	***Footprint***	***Waste***	***Certifications***
n	58	44	56
	Estimated Model Coefficients (β_i) and Significance (*p<.05, **p<.01, ***p<.001)		
(Constant)	1.864***	2.216***	1.898***
Perceived Brand Equity	-0.121	0.073	0.179*
Willingness to Purchase	0.589***	0.221	0.590***
Willingness to Pay	0.084	0.232*	-0.122*
Regression ANOVA Test Statistics and Significance	$F_{(3,54)}$=18.979***	$F_{(3,40)}$=12.495***	$F_{(3,52)}$=33.067***
Adjusted R Square	0.486	0.445	0.636

Analyzing the results of the model in *Table 7*, it can be concluded that:

- The three models (one per sustainability claim) are significant, observing the values of the *F*-statistics.
- Looking at the Adjusted R Square values, it can be stated that for the *footprint* model about 49% of the total variability of "Interest in the Company" is explained by the independent variables in the adjusted regression model. For the *waste* model, independent variables explain about 45% of the total variability of "Interest in the Company", and for the *certifications* model explain about 64%.
- For the *footprint* model, only the variable Willingness to Purchase has a significant positive effect on the "Interest in the Company".
- In the *waste* model, there is also only one independent variable (Willingness to Pay) that positively influences "Interest in the Company".
- Finally, in the *certifications* model, all independent variables have a significant effect on the dependent variable. For the Willingness to Pay variable this effect is negative, meaning that individuals are unwilling to pay more for sustainable fashion products. However, the Perceived Brand Equity and Willingness to Purchase variables contribute positively to explain the "Interest in the Company", being the contribution of the second variable higher.

2. Analysis of "Likelihood of Purchase" to measure *product adoption*

Product adoption is closely linked to the variable "Likelihood of Purchase", so it will be used as dependent variable in the multiple linear regression models. The independent variables selected were: Perceived Brand Equity, Willingness to Purchase, Likelihood of Recommending, Ethical Consumption and Willingness to Pay.

Model II (for each sustainable claim):

$$\text{Likelihood of Purchase} = \alpha + \beta_1 * \text{Perceived Brand Equity} + \beta_2 * \text{Willingness to Purchase} + \beta_3 * \text{Likelihood of Recommend} + \beta_4 * \text{Ethical Consumption} + \beta_5 * \text{Willingness to Pay} + \varepsilon$$

Table 8: Impact of some constructs on "Likelihood of Purchase" (to measure *product adoption*)

Sustainability Claims	***Footprint***	***Waste***	***Certifications***
n	58	44	56
	Estimated Model Coefficients (β_i) and Significance (*p<.05, **p<.01, ***p<.001)		
(Constant)	0.083	-0.920	-0.534
Perceived Brand Equity	0.101	0.155	0.011
Willingness to Purchase	-0.152	0.777***	0.405*
Likelihood of Recommending	0.695***	0.342	0.538***
Ethical Consumption	0.195*	0.179*	0.154
Willingness to Pay	0.182	-0.230	0.014
Regression ANOVA Test Statistics and Significance	$F_{(5,52)}$=31.365***	$F_{(5,38)}$=22.352***	$F_{(5,50)}$=16.857***
Adjusted R Square	0.727	0.713	0.590

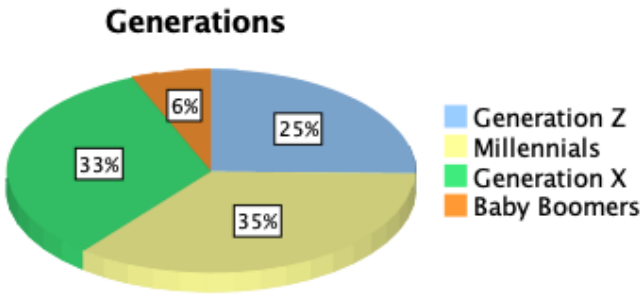
Analyzing the results of the model in *Table 8*, it can be concluded that:

- In this case, the three models are also significant, according to the values of the *F*-statistics.
- For this dependent variable, the Adjusted R Squared of the three models are higher than in the previous study, which means that the independent variables explain better the total variability of the "Likelihood of Purchase" (73% for *footprint*, 71% for *waste* and 59% for *certifications*).
- In the *footprint* model, the variables Likelihood of Recommending and Ethical Consumption contribute positively to explain the dependent variable, with the first one contributing the most.

- In the case of *waste* model, there are also two variables (Willingness to Purchase and Ethical Consumption) that have a significant positive effect on the "Likelihood of Purchase", and the first one also has the greatest effect.
- For the *certifications* model, the variables Willingness to Purchase and Likelihood of Recommending are the only ones that contribute positively and similarly to the explanation of the dependent variable.

RQ 4: Do different generations have different types of behavior and attitudes towards sustainability?

Before answering this question, the various generations under study will be characterized. Observing *Graphic 6*, it can be stated that in the considered sample, most individuals belong to Millennials (35%) and Generation X (33%). Only 6% of respondents are Baby Boomers.



Graphic 6: Percentages of individuals per generation

Table 9: Characterization on generations by sustainable character and gender

%	Sustainable Character		Gender	
Generations	Green	No-Green	Male	Female
Generation Z	57.5	42.5	30.0	70.0
Millennials	67.9	32.1	53.6	46.4
Generation X	65.4	34.6	21.2	78.8
Baby Boomers	70.0	30.0	40.0	60.0

Analyzing *Table 9*, it can be said that:

- Within each generation, the percentage of "Greens" is always higher than "No-Greens".
- Generations Z, X and Baby Boomers have a higher percentage of female respondents, while in the case of Millennials the number of male participants is slightly superior.

Now, in order to answer the research question, four variables were considered relevant to study the behavior and attitudes of different generations towards sustainability: Ethical Consumption, Environmental Beliefs, Eco-active Behavior and Perceived Effectiveness. For each one, a one-way ANOVA was performed, however, only for Eco-active Behavior multiple comparison tests were needed to analyze the differences between the four generations.

Table 10: Impact of the generational effect on behavior/attitudes towards sustainability

Variables		**Ethical Consumption**	**Environmental Beliefs**	**Eco-active Behavior**	**Perceived Effectiveness**
Generations	**n**	**Means**			
Generation Z	40	3.594	4.369	4.263	2.875
Millennials	56	3.790	4.424	4.277	3.005
Generation X	52	3.750	4.548	4.591	2.784
Baby Boomers	10	3.950	4.175	4.425	3.175
One-way ANOVA Test Statistics and Significance (*p<.05, **p<.01, ***p<.001)		$F_{(3,154)}$=0.584	$F_{(3,154)}$=2.142	$F_{(3,154)}$=3.469*	$F_{(3,154)}$=1.102

Analyzing the results of the *Table 10*, it can be concluded that:

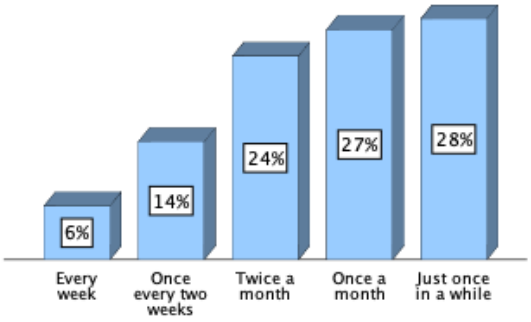
- For the variables Ethical Consumption, Environmental Beliefs and Perceived Effectiveness, there are no significant differences in attitudes towards sustainability between the generations ($F_{(3,154)}$=0.584, $F_{(3,154)}$=2.142, $F_{(3,154)}$=1.102, respectively).
- There are at least two generations that differ in Eco-active Behavior ($F_{(3,154)}$=3.469, p<.05). Scheffe's tests (*Table 10.1*-Appendix) show that only Generation X individuals seem to have slightly more eco-active behaviors than Millennials ($M_{Millennials}$=4.277; $M_{GenerationX}$=4.591; *Scheffe statistics*=2.822, p<.05).

4.2.5.2. Extra Analysis

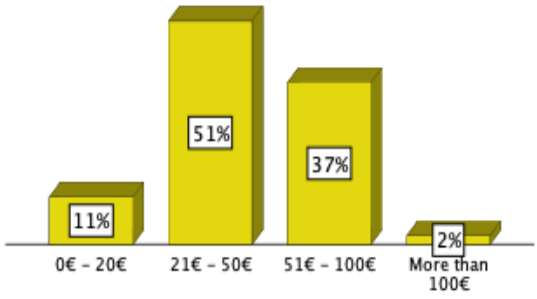
1.General Fashion Consumption

In order to draw the profile of the participants in terms of their general fashion consumption habits, some questions were analyzed and the following conclusions were taken:

- The vast majority of respondents state they buy fashion products infrequently: 28% just once in a while, 27% once a month and 24% twice a month (*Graphic 7*). There is still a considerable percentage of respondents (20%) who buy this type of products regularly.
- Regarding the amount spent on average per month buying fashion products, the majority (51%) say they spend between 21€-50€, but still 37% of participants spend between 51€-100€ per month (*Graphic 8*).

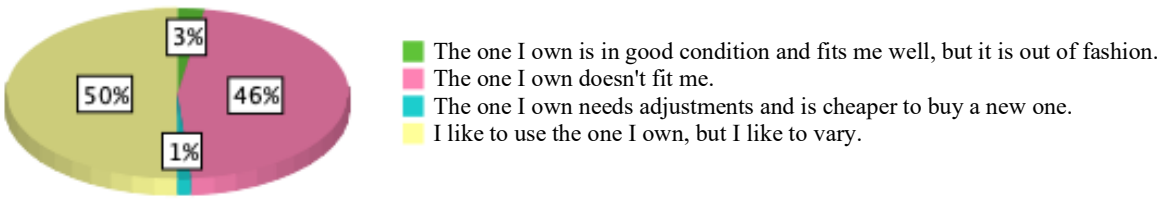


Graphic 7: How frequently do you buy a fashion product?



Graphic 8: On average, how much do you spend each month buying fashion products?

- When selecting among the several types and brands of a certain fashion product, many respondents (85%) state that they care a lot about the product they buy. Additionally, most consider it important or extremely important to make the right choice when buying fashion items (91%).
- Regarding the reasons given by consumers for buying a new fashion product, when they already have another one that can be used for the same purpose, "*The one I own doesn't fit me*" (46%) and "*I like to use the one I own, but I like to vary*" (50%) were the most chosen options (*Graphic 9*).



Graphic 9: Reasons to buy new fashion products

2.Critical Factors in Buying a Fashion Product for "Green" and "Non-Green" Consumers

To study the most relevant critical factors in buying a sustainable fashion product, a t-test was performed for each factor, to compare its importance to the "Greens" and "No-Greens".

From the tests results (*Table 11.1*-Appendix), it can be concluded that:

- "Green" and "No-Green" individuals do not give the same importance to the following factors: Brand ($t_{(156)}$=-5.285, p<.001), Quality ($t_{(156)}$=-6.418, p<.001), Comfortable Fitting ($t_{(156)}$=-5.247, p<.001), Environmental Impact ($t_{(156)}$=-8.630, p<.001), and Country of Manufacture ($t_{(156)}$=-10.447, p<.001). "Greens" consider all these factors more important than "No-Greens" (*Table 11*).

Table 11: Means of critical factors for "Green" and "No-Green"

Means	Brand	Quality	Recent Trend	Comfortable Fitting	Style/Design	Environmental Impact	Country of Manufacture
Green (n=102)	3.61	4.55	3.19	4.68	4.04	3.93	3.90
No-Green (n=56)	2.88	3.80	3.05	4.21	3.93	2.86	2.52

- For Recent Trend and Style/Design factors, the individuals´ sustainable character does not interfere with their opinion on these factors ($t_{(89)}$=-0.677, p>.05, $t_{(91)}$=-0.789, p>.05).

3.Perception of LUS products against traditional ones regarding some factors for "Green" and "Non-Green" consumers

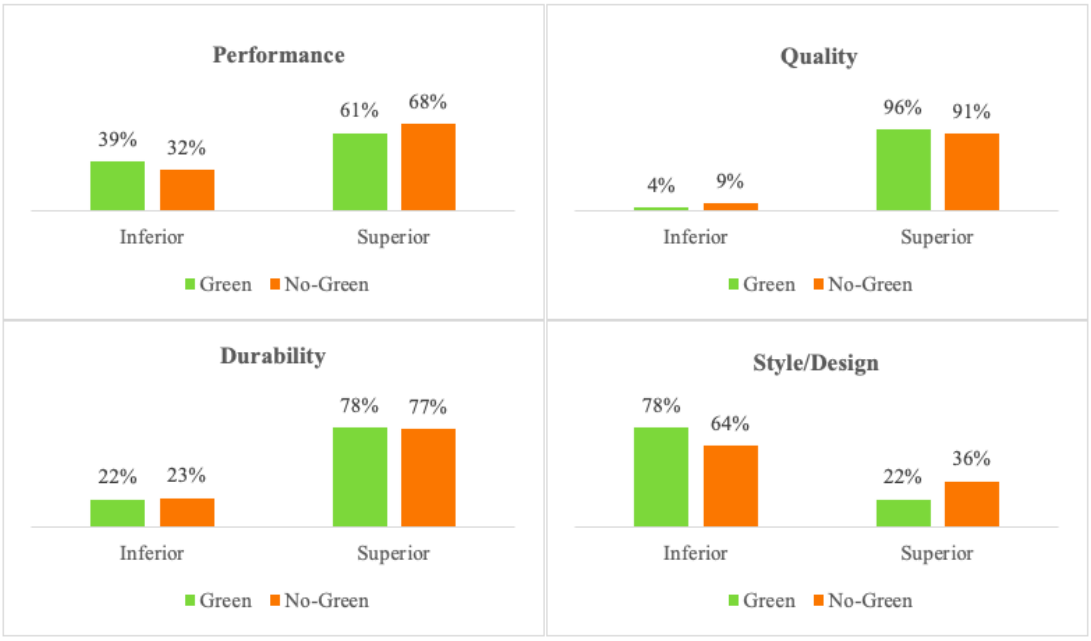
In order to assess whether the opinion of "Greens" and "No-Greens" about LUS sustainable products, compared to conventional ones, is identical in relation to several factors (Performance, Quality, Durability, Style/Design and Comfort), contingency tables were constructed and Chi-square tests were performed for each of the factors.

Table 12: Crosstabs for Product evaluation vs. Individuals' sustainable character

	Factors				
Crosstabs *Factor**Sustainable Character	*Performance*	*Quality*	*Durability*	*Style/Design*	*Comfort*
Pearson Chi-Square and Significance (*p<.05, **p<.01, ***p<.001)	0.778	1.687	0.009	3.163	5.669*

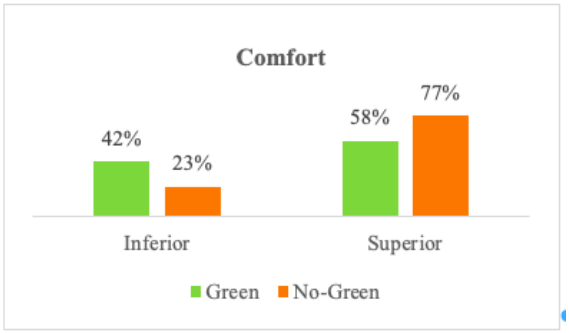
Observing the *Table 12*, it can be stated that:

- There is no association between each one of the first four factors (Performance, Quality, Durability and Style/Design) and the individuals' sustainable character ("Green" or "No-Green"). Looking at *Graphics 10,* it can be seen that individuals consider LUS products to be superior to conventional ones in terms of Performance, Quality and Durability, regardless of whether they are "Green" or "No-Green". However, they think they are inferior in Style/Design.



Graphics 10: Perception of LUS products *vs.* traditional ones regarding some factors for "Greens" and "Non-Greens"

- On the other hand, there is an association between the Comfort factor and the individuals' sustainable character ($X^2_{(1)}$=5.669, p<.05). Although both "Green" and "No-Green" individuals consider LUS products to be more comfortable than traditional ones, the proportion of "No-Greens" having this opinion is higher (*Graphic 11)*.



Graphic 11: Perception of LUS products *vs.* traditional ones regarding Comfort for "Greens" and "Non-Greens"

5. CONCLUSIONS

In this final chapter the main conclusions of this study will be drawn, linking to what has been found in the existing literature. In addition, an overview will be given about consumer habits and behaviors in the fashion industry, as well as consumers' perceptions of sustainable fashion brands and the impact that communicating their claims has on consumer behavior. Lastly, the major limitations of this work will be mentioned as well as suggestions for future research.

5.1. Conclusions

According to several authors, the world is evolving towards sustainability and people are more aware of the environmental and social consequences of their actions (Luchs *et al.*, 2011), which is corroborated by the study results. Indeed, in the sample considered, the number of individuals demonstrating a "Green" sustainable character (n=102) is much higher than those demonstrating a "No-Green" sustainable character (n=56).

Recently, the ethical issues surrounding the fashion industry have caught the public attention (Shen *et al.*, 2012). Past studies have shown that consumers are more interested in factors such as the origin and constituent raw materials of their clothing, as well as the working conditions provided in manufacturing countries (Dickson, 2001), demonstrating that ethical issues are increasingly present in their minds and influence their purchasing decisions. The results support these assumptions and go further, demonstrating that the individuals' sustainable character ("Green"/"No-Green") also influences the importance given to some factors in buying a fashion product, namely: choice of the brand, quality and comfort of the products, as well as their environmental impact and country of manufacture. Although both consider these factors relevant, "Greens" assign more importance to all of them than "No-Greens". The products' style/design is considered very important, regardless of the individuals' sustainable character.

Despite the growing environmental concerns, there is still a gap between consumers' environmental awareness and the effective implementation of pro-environmental actions (Kollmuss e Agyeman, 2002). Although some authors proposed that this gap may be explained by the perceived product performance, as consumers perceive sustainable products as inferior (Oliver, 2013), the current results indicate that individuals rate sustainable products as superior to conventional ones, not only in performance but also in quality, durability and comfort. This

might be explained by the fact that people are buying more sustainable products, confirming their benefits by themselves, rather than forming opinions without even trying these products.

According to Yan, Hyllegard and Blaesi (2012), brands must communicate their sustainability claims clearly and transparently, as this can have a positive impact on consumer attitudes. If they realize that the brand is sustainable, they may be more willing to buy and pay a higher price for its products. The impact of a brand's sustainability claims on consumer behavior was an important topic in this research, so an online experiment with three different claims was conducted: *footprint reduction*, *waste reuse* and *sustainability certifications* (called *footprint*, *waste* and *certifications*). Each respondent was randomly exposed to only one of the claims, in order to detect any differences between the three groups. Research findings demonstrate, for example, that individuals exposed to *certifications* claim reveal more willingness to purchase sustainable fashion products than those exposed to the other two claims.

Pickett-Baker and Ozaki (2008) suggest that consumers are increasingly choosing to buy sustainable options and are willing to pay more for products of ethical companies as a way to reward them. Our results support these assumptions, and further analyzing the impact of the different sustainability claims on individuals' willingness to pay, it can be concluded that consumers exposed to *certifications* claim are willing to spend more on sustainable fashion products than those exposed to *footprint* claim.

The same authors also propose that marketing is crucial and can favorably influence consumers behavior and their interest in the company. They even claim that an effective market communication, can persuade consumers and influence their willingness to buy the company's products. Also in this study, it was intended to investigate the factors that influence consumer behavior and his/her interest in a particular company (LUS), taking into account the sustainability claim to which they were exposed. Results show that in the *footprint* group, individuals' interest in the company is positively influenced by their willingness to purchase, i.e. when they are more eager to buy, their interest in the company is higher. In the *waste* group, interest in the company is positively influenced by their willingness to spend more on sustainable products. For individuals in the *certifications* group, interest in the company is positively affected by perceived brand equity and willingness to buy, and negatively affected by their willingness to pay more for these products, i.e. individuals exposed to *certifications* claim are unwilling to spend more on sustainable fashion products.

Besides studying the interest in the company, it was also considered relevant to understand the factors that condition the consumers' adoption of sustainable products. From the results, it can be seen that in the *footprint* group, the likelihood of people buying these products is positively influenced by their concern with an ethical consumption and the likelihood of recommending it to a friend, i.e. they are more likely to buy a product when they would also recommend it. In the *waste* group, individuals' ethical consumption and their willingness to buy sustainable products have a positive effect on the likelihood of purchase. For individuals in the *certifications* group, the product adoption is significantly affected not only by their desire to buy sustainable products, but also by the likelihood of recommending it to a friend.

The impact of the generational effect on the adoption of sustainable attitudes/behaviors was another topic under study. According to Portolese Dias (2003), Generation X is more price sensitive, but still buy based on their motivations, so if sustainability is part of their concerns, Generation Xers will be willing to invest in sustainable products. Regarding Generation Z, Albouy and Adesida (2018) proposed that as they have access to more environmental education, they are more willing to buy and spend more on sustainable products than older generations. However, the current results indicate that there are practically no significant differences in the attitudes of the various generations (Baby Boomers, X, Millennials and Z) towards sustainability. Only Generation Xers appear to behave more eco-actively than Millennials. This may be explained by the fact that, regardless of their generation, nowadays consumers are more willing to engage in sustainable behaviors.

5.2. Limitations and Future Research

This thesis is a relevant contribution to the study about the impact of sustainability on consumer behavior and consumption habits, particularly in the fashion industry, as this is a relatively unexplored topic within the academic and scientific community. However, there are some limitations and possible future topics to explore in this study.

Regarding the limitations, it should be noted that in the online experiment only one brand was used (LUS) to represent sustainable fashion brands, which may have biased the results. In fact, respondents may have been influenced by the fact that they already know the brand or, if not, the product images presented may not be properly illustrative of the brand concept as well as the products characteristics. In this sense, product images should have been presented in a way that respondents could clearly visualize the products they were evaluating.

Another limitation is related to the composition of the sample considered in this research. In fact, the sample could be more diverse with respect to generations, in order to better understand the insights and perspectives of the different generations towards sustainability. The majority of respondents were Millennials (35%) or Generation Xers (33%), and only 6% were Baby Boomers, which is indeed a small percentage to draw conclusions about the behavior and attitudes of this generation towards sustainability. Additionally, the number of participants exposed to each sustainability claim: *footprint*, *waste* and *certifications*, was not as high as desired. Thus, if the sample were larger and more diverse, the reliability of the results could certainly be improved. Finally, this research focused primarily on the impact of sustainability on the fashion industry, however, and in order to gain a broader perspective on consumer behaviors towards sustainability, the results found should be validated in other industries.

Concerning future research, there are still several topics to explore. Firstly, a more thorough study with more sustainable fashion brands is recommended, in order to gain insights about the main pros and cons for a fashion company to adopt a sustainable policy along its supply chain, not only socially and environmentally, but also economically (a topic not so explored in this research). In this way, fashion companies that are considering implementing a general sustainable policy will be able to ponder if the investment is worthwhile.

Secondly, it is important to understand why individuals' actions and consumption habits do not always reflect this apparent general change in mindset towards sustainability. There is a gap between consumers' environmental awareness and their effective pro-environmental actions, so it is absolutely essential to investigate the reasons behind this gap. In fact, realizing the main reasons that lead some people to not act in accordance with their environmental awareness is also a topic of high interest for future research.

Thirdly, based on secondary data, it can be concluded that further study is needed in order to get an overview of how different generations think, behave and act on sustainability, as well as their environmental and social awareness. Thus, to study more deeply the influence of this generational effect, face-to-face interviews with people from different generations could be conducted. This could be a suitable method since it allows a more accurate exploration of the individual’s personal thoughts about this topic.

Possible themes have been mentioned for future development, but there are many others, as sustainability is an increasingly contemporary and global topic.

APPENDIX

Exhibit 1 - *Table 1*: Sustainability Certifications (Turquoise Istanbul, 2019)

Sustainability Certifications	GOTS	Oeko-Tex Standard 100	Fairtrade International
Organic Farming (no harmful chemical pesticides, controlled water usage)	•		
Controlled chemical usage in the production process	•	•	•
No harmful chemical residues in the production process	•	•	
Quality testing	•		
Social care throughout the production process	•		•
Main sustainability pillar	Holistic approach ecological and social criteria	Emphasis on ecological criteria	Emphasis on social criteria

Exhibit 2 - *Table 2*: Generation Characterization (Robinson, 2019)

Generation Name	Births Start	Births End	Youngest Age Today	Oldest Age Today
Baby Boomer Gen.	1946	1964	55	73
Generation X	1965	1979	40	54
Millennials/Gen. Y	1980	1994	25	39
Generation Z	1995	2012	7	24
Generation Alpha	2013	2025	1	6

Exhibit 3 - *Table 3*: Examples of socially and environmentally responsible fashion brands and their ranks

*

Brand	Business Core	*Rank a Brand* Label*	Environmental Measures	Social Measures	Awards & Recognitions
Saint BASICS	Lingerie and underwear	A	• Only uses organic cotton • No harmful chemicals, pesticides and water spill • The whole production process is zero waste	• Materials are used in a clean and fair production chain in Portugal • No sweatshops, child labor and unfair trade • Sells directly online, without physical stores and with the money saved supports charity	• *GOTS* certification • *OEKO-TEX* certification • *EU sustainability award*
patagonia	Sports and outdoor clothing	B	• Uses more green materials and less chemicals • Implements several actions to reduce its footprint	• Buys and resells old products, so customers can buy used products for a lower cost • Member of *Fair Labor Association*, so the brand is constantly improving the labor conditions and pays fair wages	• *GOTS* certification • *Fair Trade* certification • *Bluesign* certification
H&M	Apparel, cosmetics and housewares	C	• Every year launches the *H&M Conscious Exclusive Collection*, made of organic materials • The Group uses 57% of recycled or sustainably sourced fibers, aiming to reach 100% by 2030	• Launched a global collection initiative that enables customers to deliver unused clothing • Works with *Ethical Trading Initiative*, to improve the labor conditions in its supply chain	• *Avant-Garde* status from *Greenpeace*
C&A	Apparel and footwear	C	• Around 25% of C&A's total collection is made of sustainable cotton • First brand to produce *cradle-to-cradle* certified items, made from 100% organic cotton • Implements several actions to reduce its footprint	• C&A annually reports about the improvements and problems regarding the working conditions at its suppliers • Works with *Ethical Trading Initiative*, to improve the labor conditions in its supply chain	• *Evolution Mode* status from *Greenpeace*
ZARA	Apparel, accessories and footwear	C	• Uses raw materials, such as organic cotton, in some of its garments • Launched in 2016 the *Join Life Initiative*, a collection of sustainably produced clothing • Implements several actions to reduce its footprint	• It is setting up donation boxes in all stores, encouraging people to leave their used clothing for recycling or reuse • Works with *Ethical Trading Initiative*, to improve the labor conditions in its supply chain	
STELLA McCARTNEY	Luxury apparel	C	• Does not use leather, skin, fur or feathers • Uses natural resources and alternative materials: silk created through biotechnology, vegetarian leather or regenerated cashmere	• Provides workers with good labor conditions and fair wages • Works with a whole network of NGO's which help the brand reach its sustainability goals and ambitions for a circular economy	
NIKE	Sports, outdoor clothing and shoes	C	• Around 75% of its shoes and clothing contain recycled materials • It is striving to create a totally waste-free and carbon neutral system • Created *Nike Grind*, a sustainable initiative that collects used shoes for recycling or reuse	• Works with suppliers who share the brand commitment: respect for employees and the environment, giving them a safe workplace • Implemented programs that enhance workers commitment and increase compensation	
asos	Apparel, accessories and footwear	D	• Launched the *Design Recycled Underwear* line, made from old plastic bottles and fishing nets • Recently launched the first collection of sustainable jeans, made from 100% cotton	• Invests in craftsmanship and suppliers that support the local communities • Works with *Ethical Trading Initiative*, to improve the labor conditions in its supply chain	
GAP	Apparel and accessories	D	• Integrates sustainability into a circular design and production to reduce the environmental impacts of its garments; • Implements several actions to reduce its climate impact, aiming to reduce the global greenhouse gas emissions of its facilities by 50% by 2020	• Launched in 2007 an innovative program that supports and empowers women in this industry: P.A.C.E. (Personal Advancement & Career Enhancement) • Works with *Ethical Trading Initiative*, to improve the labor conditions in its supply chain	

* ***Rank a Brand*** is an independent website that compares and rates brands on four main points: climate impact, environmental impact, working conditions and transparency. Based on the scores on these points, the brand receives a label ranging from *A-label* (brand with great ethical and sustainable principles) to *E-label* (brand not recommended in ethical and sustainable terms), giving the consumer an overview of the brand in terms of sustainability and social responsibility.

Exhibit 4 - Survey

Dear Participant,

I would like to thank you in advance for filling in this survey for my Master Thesis at Católica-Lisbon School of Business and Economics.

Please note that the answers provided are totally anonymous and there are no right or wrong answers, so please be as honest as possible. The main purpose of this questionnaire is to study the impact of environmental concerns on consumer habits. For further questions, you can send me an e-mail (mafalda.aleixo12@gmail.com) and I will answer as soon as possible.

Thank you for your time and collaboration,

Mafalda Aleixo

Fashion encompasses the style of dress and personal adornment of each individual. For the purposes of this research, please consider that fashion products include clothing, shoes, bags and accessories, from everyday dresses to jeans and essentials.

Section 1 – General fashion consumption habits

We will now ask you to complete a set of questions about your fashion buying behavior.

Q1: How frequently do you buy a fashion product?

- Every week
- Once every two weeks
- Twice a month
- Once a month
- Just once in a while

Q2: On average, how much do you spend each month buying fashion products?

- 0€ - 20€
- 21€ - 50€
- 51€ - 100€
- More than 100€

Q3: How important is it for you to buy fashion products?

- 1= Not at all important
- 2
- 3
- 4
- 5= Extremely important

Section 2 – Purchase involvement

Now the goal of the next section is to realize your involvement during the purchasing process.

Q4: When selecting from the many types and brands of a certain fashion product, would you say that:

- 1= I would not care which one I buy
- 2
- 3
- 4
- 5= I would care a lot which one I buy

Q5: Do you think that the various types and brands of a certain fashion product are all very alike or are all very different?

- 1= They are alike
- 2
- 3
- 4
- 5= They are very different

Q6: How important would it be to you to make a right choice of a certain fashion product?

- 1= Not at all important
- 2
- 3
- 4
- 5= Extremely important

Section 3 – Critical factors in buying a fashion product

Now we will ask you to answer a couple of questions regarding factors that you value when buying a fashion product.

Q7: How important would the following factors be to you when selecting a fashion product? Please rate each factor from 1 (not at all important) to 5 (extremely important).

- Brand
- Quality
- Recent trend
- Comfortable fitting
- Style/design
- Environmental impact
- Country of manufacture

Section 4 – Reasons to buy new fashion products

Now we would like to know the reasons that may lead you to buy new fashion products.

Q8: What are the main reasons that might lead you to buy a fashion product when you already have another one that can be used for the same purpose (work, casual, outdoor, party, etc.)? Please select a maximum of 2 options.

- o The one I own doesn't fit me.
- o The one I own needs adjustments and is cheaper to buy a new one.
- o The one I own is in good condition and fits me well, but it is out of fashion.
- o I like to use the one I own, but I like to vary.

Section 5 – Ethical consumption and attitudes

In the next section, I will ask you some questions to understand your attitudes and your opinion on ethical consumption in general.

Q9: On a scale from 1 (strongly disagree) to 5 (strongly agree), please indicate to what extent do you agree or disagree with the following statements.

- When there is a choice, I always choose the product that contributes to the least environmental damage.
- I have switched products for environmental reasons.
- I do not buy products from companies that I know use sweatshop labor, child labor or other poor working conditions.
- I have paid more for sustainable products when there is a cheaper alternative.

Section 6 – General environmental beliefs

This section focuses primarily on your general environmental beliefs.

Q10: On a scale from 1 (strongly disagree) to 5 (strongly agree), please indicate to what extent do you agree or disagree with the following statements.

- Humans must live in harmony with nature in order to preserve the environment.
- The earth is like a spaceship with only limited room and resources.
- My actions impact the environment.
- I am extremely worried about the state of the world’s environment.

Section 7 – Consumers' eco-active behavior

Now the goal is to know some of your daily eco-active actions.

Q11: On a scale from 1 (strongly disagree) to 5 (strongly agree), please indicate to what extent do you agree or disagree with the following statements.

- I do recycling.
- Compared with people I know I make a greater effort to recycle.
- I make an effort to find and use recycling bins.
- Recycling is too much trouble. (reverse coded)

Section 8 – Perceived consumer effectiveness

The following section aims to understand your perception of your own role and effectiveness in preserving the environment.

Q12: On a scale from 1 (strongly disagree) to 5 (strongly agree), please indicate to what extent do you agree or disagree with the following statements.

- I feel personally helpless to have much impact on a problem as large as the environment.
- I don't feel I have enough knowledge to make well-informed decisions on environmental issues.
- Recycling will not be enough to save the environment.
- Since one person cannot have any effect upon pollution and natural resource problems, it doesn't make any difference what I do.

Section 9 – Impact of different sustainability claims on consumer behavior

In this section, you will be introduced to a Portuguese fashion brand.

LUS by Carolina Moreira is a sustainable fashion brand based in the Azores. It's about **L**ightness, **U**niqueness and **S**implicity. As an ethical and eco-friendly brand, LUS chooses to focus on natural fibers and zero waste practices, through a manufacturing process that is ethic, responsible, transparent and fair in all its stages. All of its garments are produced in Portugal by local manufacturers and made of quality materials, such as linen, bamboo and certified organic cotton, which are biodegradable and harmless to the environment.

Now I would like you to evaluate the LUS commercial, focused on its sustainable cause.

1st Option: Claim 1 "Reduction of ecological footprint"

2nd Option: Claim 2 "Reuse waste"

3rd Option: Claim 3 "Sustainability Certifications"

In this section, we would like you to keep in mind the LUS commercial shown previously.

Q13: On a scale from 1 (strongly disagree) to 5 (strongly agree), please indicate to what extent do you agree or disagree with the following statements.

- I am eager to learn more about sustainable products from LUS.
- I would be willing to purchase products from LUS.
- It is very likely that I will consider buying a product from LUS, the next time I intend to buy a fashion product.
- I would be willing to pay a higher price for a product from LUS than for other similar fashion products.

Q14: On a scale from 1 (strongly disagree) to 5 (strongly agree), please indicate to what extent do you agree or disagree with the following statements.

- I want to know more about LUS.
- I have a positive feeling towards LUS.
- I like what LUS stands for.
- LUS has an attractive identity.
- If there is another brand which products are as good as LUS, I would prefer to buy LUS.

Q15: Please compare LUS sustainable products and similar conventional (unsustainable) products towards the following factors.

"LUS sustainable products are **inferior / superior** in (*factor*) to similar conventional products".

- Performance (inferior / superior)
- Quality (inferior / superior)
- Durability (inferior / superior)
- Style/design (inferior / superior)
- Comfort (inferior / superior)

Q16: On a scale from 1 (very unlikely) to 5 (very likely), please indicate how likely you would buy and/or recommend a LUS product to a friend.

- How likely would you buy a product from LUS? (1=very unlikely; 5 =very likely)
- How likely would you recommend a product from LUS to a friend? (1=very unlikely; 5 =very likely)

Section 10 – Demographics

Finally, I wanted to ask you some questions about yourself.

Q17: What is your gender?

- Male
- Female

Q18: How old are you?

- Under 18
- 18-24
- 25-39
- 40-54
- 55 or older

Q19: What is your professional situation?

- Unemployed
- Student
- Working Student
- Employed
- Retired

Q20: What is the highest academic qualification obtained or currently obtaining?

- 9th Grade
- High School
- Bachelor's degree
- Master's degree
- PhD/MBA

Q21: What is your nationality?

- Portuguese
- Other, please indicate which

Q22: Do you own a house or rent one?

- I own a house.
- I rent a house.

Q23: Do you have your own car?

- Yes
- No

Q24: How many times a month do you go out to dinner?

- None
- 1-3 times
- At least 4

Exhibit 5 – Results' Analysis

Research Question 1 and 2

Two-Way ANOVA – *Willingness to Purchase*

Tests of Between-Subjects Effects

Dependent Variable: Willingness to Purchase

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	12,255[a]	5	2,451	7,776	,000
Intercept	2067,066	1	2067,066	6558,247	,000
Sustainable_Character	4,199	1	4,199	13,322	,000
Sustainability_Claim	7,959	2	3,979	12,626	,000
Sustainable_Character * Sustainability_Claim	,507	2	,253	,804	,449
Error	47,908	152	,315		
Total	2535,111	158			
Corrected Total	60,163	157			

a. R Squared = ,204 (Adjusted R Squared = ,178)

Table 5.1: **Post-Hoc Tests** – *Willingness to Purchase*

Multiple Comparisons

Dependent Variable: Willingness to Purchase

Scheffe

(I) Type of sustainability claim viewed by respondent	(J) Type of sustainability claim viewed by respondent	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	-,0384	,11224	,943	-,3159	,2391
	3	-,4507*	,10518	,000	-,7107	-,1907
2	1	,0384	,11224	,943	-,2391	,3159
	3	-,4123*	,11310	,002	-,6919	-,1327
3	1	,4507*	,10518	,000	,1907	,7107
	2	,4123*	,11310	,002	,1327	,6919

Based on observed means.
The error term is Mean Square(Error) = ,315.

Two-Way ANOVA – *Willingness to Pay*

Tests of Between-Subjects Effects

Dependent Variable: Willingness to Pay

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	33,945[a]	5	6,789	12,422	,000
Intercept	1405,407	1	1405,407	2571,475	,000
Sustainable_Character	17,069	1	17,069	31,230	,000
Sustainability_Claim	11,408	2	5,704	10,436	,000
Sustainable_Character * Sustainability_Claim	3,878	2	1,939	3,547	,031
Error	83,074	152	,547		
Total	1835,000	158			
Corrected Total	117,019	157			

a. R Squared = ,290 (Adjusted R Squared = ,267)

Table 6.1: **Post-Hoc Tests** – *Willingness to Pay*

Multiple Comparisons

Dependent Variable: Willingness to Pay

Scheffe

(I) Type of sustainability claim viewed by respondent	(J) Type of sustainability claim viewed by respondent	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1	2	-,30	,148	,129	-,67	,06
	3	-,55*	,139	,000	-,90	-,21
2	1	,30	,148	,129	-,06	,67
	3	-,25	,149	,239	-,62	,11
3	1	,55*	,139	,000	,21	,90
	2	,25	,149	,239	-,11	,62

Based on observed means.
The error term is Mean Square(Error) = ,547.

*. The mean difference is significant at the

Green

One-Way ANOVA (2) - *Willingness to Purchase and Willingness to Pay*

ANOVA[a]

		Sum of Squares	df	Mean Square	F	Sig.
Willingness to Purchase	Between Groups	5,342	2	2,671	10,085	,000
	Within Groups	26,222	99	,265		
	Total	31,564	101			
Willingness to Pay	Between Groups	10,479	2	5,240	12,722	,000
	Within Groups	40,775	99	,412		
	Total	51,255	101			

a. Green

Table 5.2: **Post-Hoc Tests** – *Willingness to Purchase and Willingness to Pay*

Multiple Comparisons[a]

Scheffe

Dependent Variable	(I) Type of sustainability claim viewed by respondent	(J) Type of sustainability claim viewed by respondent	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Willingness to Purchase	1	2	,07372	,12275	,835	-,2314	,3788
		3	-,45988*	,12384	,002	-,7676	-,1521
	2	1	-,07372	,12275	,835	-,3788	,2314
		3	-,53360*	,12970	,000	-,8559	-,2113
	3	1	,45988*	,12384	,002	,1521	,7676
		2	,53360*	,12970	,000	,2113	,8559
Willingness to Pay	1	2	-,067	,153	,908	-,45	,31
		3	-,725*	,154	,000	-1,11	-,34
	2	1	,067	,153	,908	-,31	,45
		3	-,657*	,162	,000	-1,06	-,26
	3	1	,725*	,154	,000	,34	1,11
		2	,657*	,162	,000	,26	1,06

*. The mean difference is significant at the 0.05 level.

a. Green

No-Green

One-Way ANOVA (2) - *Willingness to Purchase and Willingness to Pay*

ANOVA[a]

		Sum of Squares	df	Mean Square	F	Sig.
Willingness to Purchase	Between Groups	3,583	2	1,792	4,379	,017
	Within Groups	21,686	53	,409		
	Total	25,270	55			
Willingness to Pay	Between Groups	5,255	2	2,628	3,292	,045
	Within Groups	42,298	53	,798		
	Total	47,554	55			

a. No-Green

Table 5.3: **Post-Hoc Tests** – *Willingness to Purchase and Willingness to Pay*

Multiple Comparisons[a]

Scheffe

Dependent Variable	(I) Type of sustainability claim viewed by respondent	(J) Type of sustainability claim viewed by respondent	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Willingness to Purchase	1	2	-,23830	,23587	,603	-,8324	,3557
		3	-,57053*	,19469	,019	-1,0609	-,0802
	2	1	,23830	,23587	,603	-,3557	,8324
		3	-,33222	,22464	,342	-,8980	,2336
	3	1	,57053*	,19469	,019	,0802	1,0609
		2	,33222	,22464	,342	-,2336	,8980
Willingness to Pay	1	2	-,746	,329	,087	-1,58	,08
		3	-,579	,272	,114	-1,26	,11
	2	1	,746	,329	,087	-,08	1,58
		3	,167	,314	,869	-,62	,96
	3	1	,579	,272	,114	-,11	1,26
		2	-,167	,314	,869	-,96	,62

*. The mean difference is significant at the 0.05 level.

a. No-Green

Research Question 3

Regression – *Interest in the Company* (dependent variable)

Claim *Footprint*

Model Summary[a]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,716[b]	,513	,486	,36612

a. Type of sustainability claim viewed by respondent = 1

b. Predictors: (Constant), Willingness to Pay, Perceived Brand Equity, Willingness to Purchase

ANOVA[a,b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7,632	3	2,544	18,979	,000[c]
	Residual	7,238	54	,134		
	Total	14,871	57			

a. Type of sustainability claim viewed by respondent = 1

b. Dependent Variable: Interest in the company

c. Predictors: (Constant), Willingness to Pay, Perceived Brand Equity, Willingness to Purchase

Coefficients[a,b]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1,864	,413		4,516	,000		
	Perceived Brand Equity	-,121	,079	-,153	-1,533	,131	,903	1,108
	Willingness to Purchase	,589	,131	,622	4,488	,000	,470	2,129
	Willingness to Pay	,084	,082	,146	1,023	,311	,441	2,266

a. Type of sustainability claim viewed by respondent = 1

b. Dependent Variable: Interest in the company

Claim *Waste*

Model Summary[a]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,696[b]	,484	,445	,33262

a. Type of sustainability claim viewed by respondent = 2

b. Predictors: (Constant), Willingness to Pay, Perceived Brand Equity, Willingness to Purchase

ANOVA[a,b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4,147	3	1,382	12,495	,000[c]
	Residual	4,425	40	,111		
	Total	8,572	43			

a. Type of sustainability claim viewed by respondent = 2

b. Dependent Variable: Interest in the company

c. Predictors: (Constant), Willingness to Pay, Perceived Brand Equity, Willingness to Purchase

Coefficients[a,b]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2,216	,343		6,456	,000		
	Perceived Brand Equity	,073	,108	,096	,673	,505	,630	1,587
	Willingness to Purchase	,221	,127	,296	1,741	,089	,446	2,244
	Willingness to Pay	,232	,103	,385	2,243	,030	,439	2,279

a. Type of sustainability claim viewed by respondent = 2

b. Dependent Variable: Interest in the company

Claim *Certifications*

Model Summary[a]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,810[b]	,656	,636	,29443

a. Type of sustainability claim viewed by respondent = 3

b. Predictors: (Constant), Willingness to Pay, Perceived Brand Equity, Willingness to Purchase

ANOVA[a,b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8,599	3	2,866	33,067	,000[c]
	Residual	4,508	52	,087		
	Total	13,107	55			

a. Type of sustainability claim viewed by respondent = 3

b. Dependent Variable: Interest in the company

c. Predictors: (Constant), Willingness to Pay, Perceived Brand Equity, Willingness to Purchase

Coefficients[a,b]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	1,898	,279		6,813	,000		
	Perceived Brand Equity	,179	,077	,249	2,320	,024	,575	1,738
	Willingness to Purchase	,590	,091	,751	6,511	,000	,497	2,012
	Willingness to Pay	-,122	,061	-,212	-2,012	,049	,596	1,677

a. Type of sustainability claim viewed by respondent = 3

b. Dependent Variable: Interest in the company

Regression – *Likelihood of Purchase* (dependent variable)

Claim *Footprint*

Model Summary[a]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,867[b]	,751	,727	,440

a. Type of sustainability claim viewed by respondent = 1

b. Predictors: (Constant), Willingness to Pay, Perceived Brand Equity, Ethical_Consumption, Likelihood of recommending to a friend, Willingness to Purchase

ANOVA[a,b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30,402	5	6,080	31,365	,000[c]
	Residual	10,081	52	,194		
	Total	40,483	57			

a. Type of sustainability claim viewed by respondent = 1

b. Dependent Variable: Likelihood of Purchase

c. Predictors: (Constant), Willingness to Pay, Perceived Brand Equity, Ethical_Consumption, Likelihood of recommending to a friend, Willingness to Purchase

Coefficients[a,b]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	,083	,503		,166	,869		
	Perceived Brand Equity	,101	,097	,077	1,042	,302	,873	1,145
	Willingness to Purchase	-,152	,169	-,098	-,904	,370	,411	2,434
	Likelihood of recommending to a friend	,695	,101	,640	6,858	,000	,549	1,820
	Ethical_Consumption	,195	,078	,224	2,484	,016	,588	1,700
	Willingness to Pay	,182	,111	,192	1,640	,107	,350	2,854

a. Type of sustainability claim viewed by respondent = 1

Claim *Waste*

Model Summary[a]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,864[b]	,746	,713	,420

a. Type of sustainability claim viewed by respondent = 2

b. Predictors: (Constant), Willingness to Pay, Ethical_Consumption, Perceived Brand Equity, Willingness to Purchase, Likelihood of recommending to a friend

ANOVA[a,b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19,725	5	3,945	22,352	,000[c]
	Residual	6,707	38	,176		
	Total	26,432	43			

a. Type of sustainability claim viewed by respondent = 2

b. Dependent Variable: Likelihood of Purchase

c. Predictors: (Constant), Willingness to Pay, Ethical_Consumption, Perceived Brand Equity, Willingness to Purchase, Likelihood of recommending to a friend

Coefficients[a,b]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	-,920	,501		-1,835	,074		
	Perceived Brand Equity	,155	,151	,117	1,023	,313	,514	1,945
	Willingness to Purchase	,777	,189	,594	4,103	,000	,318	3,141
	Likelihood of recommending to a friend	,342	,174	,316	1,969	,056	,259	3,867
	Ethical_Consumption	,179	,077	,200	2,318	,026	,895	1,117
	Willingness to Pay	-,230	,134	-,217	-1,722	,093	,419	2,386

a. Type of sustainability claim viewed by respondent = 2

Claim *Certifications*

Model Summary[a]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,792[b]	,628	,590	,536

a. Type of sustainability claim viewed by respondent = 3

b. Predictors: (Constant), Willingness to Pay, Likelihood of recommending to a friend, Perceived Brand Equity, Ethical_Consumption, Willingness to Purchase

ANOVA[a,b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24,199	5	4,840	16,857	,000[c]
	Residual	14,355	50	,287		
	Total	38,554	55			

a. Type of sustainability claim viewed by respondent = 3

b. Dependent Variable: Likelihood of Purchase

c. Predictors: (Constant), Willingness to Pay, Likelihood of recommending to a friend, Perceived Brand Equity, Ethical_Consumption, Willingness to Purchase

Coefficients[a,b]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	-,534	,557		-,959	,342		
	Perceived Brand Equity	,011	,142	,009	,075	,941	,562	1,779
	Willingness to Purchase	,405	,168	,301	2,417	,019	,480	2,084
	Likelihood of recommending to a friend	,538	,109	,521	4,956	,000	,675	1,481
	Ethical_Consumption	,154	,121	,156	1,268	,211	,490	2,040
	Willingness to Pay	,014	,149	,014	,094	,925	,325	3,078

a. Type of sustainability claim viewed by respondent = 3

b. Dependent Variable: Likelihood of Purchase

Research Question 4

One-Way ANOVA (4) – *Ethical Consumption, Environmental Beliefs, Eco-active Behavior and Perceived Effectiveness*

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
Ethical_Consumption	Between Groups	1,442	3	,481	,584	,627
	Within Groups	126,783	154	,823		
	Total	128,225	157			
Environmental Beliefs	Between Groups	1,523	3	,508	2,142	,097
	Within Groups	36,499	154	,237		
	Total	38,023	157			
Eco-active Behavior	Between Groups	3,486	3	1,162	3,469	,018
	Within Groups	51,588	154	,335		
	Total	55,074	157			
Perceived Efectiveness	Between Groups	2,081	3	,694	1,102	,350
	Within Groups	96,946	154	,630		
	Total	99,027	157			

Table 10.1: **Post-Hoc Tests** – *Ethical Consumption, Environmental Beliefs, Eco-active Behavior and Perceived Effectiveness*

Multiple Comparisons

Scheffe

Dependent Variable	(I) Generation	(J) Generation	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Ethical_Consumption	Generation Z	Millennials	-,19643	,18784	,779	-,7274	,3345
		Generation X	-,15625	,19082	,880	-,6956	,3831
		Baby Boomers	-,35625	,32079	,745	-1,2630	,5505
	Millennials	Generation Z	,19643	,18784	,779	-,3345	,7274
		Generation X	,04018	,17474	,997	-,4537	,5341
		Baby Boomers	-,15982	,31149	,967	-1,0403	,7207
	Generation X	Generation Z	,15625	,19082	,880	-,3831	,6956
		Millennials	-,04018	,17474	,997	-,5341	,4537
		Baby Boomers	-,20000	,31330	,939	-1,0856	,6856
	Baby Boomers	Generation Z	,35625	,32079	,745	-,5505	1,2630
		Millennials	,15982	,31149	,967	-,7207	1,0403
		Generation X	,20000	,31330	,939	-,6856	1,0856
Environmental Beliefs	Generation Z	Millennials	-,05536	,10078	,960	-,3402	,2295
		Generation X	-,17933	,10239	,384	-,4687	,1101
		Baby Boomers	,19375	,17212	,737	-,2928	,6803
	Millennials	Generation Z	,05536	,10078	,960	-,2295	,3402
		Generation X	-,12397	,09376	,627	-,3890	,1410
		Baby Boomers	,24911	,16713	,529	-,2233	,7215
	Generation X	Generation Z	,17933	,10239	,384	-,1101	,4687
		Millennials	,12397	,09376	,627	-,1410	,3890
		Baby Boomers	,37308	,16810	,182	-,1021	,8482
	Baby Boomers	Generation Z	-,19375	,17212	,737	-,6803	,2928
		Millennials	-,24911	,16713	,529	-,7215	,2233
		Generation X	-,37308	,16810	,182	-,8482	,1021
Eco-active Behavior	Generation Z	Millennials	-,01429	,11982	1,000	-,3530	,3244
		Generation X	-,32885	,12172	,067	-,6729	,0152
		Baby Boomers	-,16250	,20463	,889	-,7409	,4159
	Millennials	Generation Z	,01429	,11982	1,000	-,3244	,3530
		Generation X	-,31456	,11146	,051	-,6296	,0005
		Baby Boomers	-,14821	,19870	,906	-,7099	,4134
	Generation X	Generation Z	,32885	,12172	,067	-,0152	,6729
		Millennials	,31456	,11146	,051	-,0005	,6296
		Baby Boomers	,16635	,19985	,875	-,3986	,7313
	Baby Boomers	Generation Z	,16250	,20463	,889	-,4159	,7409
		Millennials	,14821	,19870	,906	-,4134	,7099
		Generation X	-,16635	,19985	,875	-,7313	,3986
Perceived Efectiveness	Generation Z	Millennials	-,12946	,16425	,891	-,5938	,3348
		Generation X	,09135	,16687	,960	-,3803	,5630
		Baby Boomers	-,30000	,28052	,767	-1,0929	,4929
	Millennials	Generation Z	,12946	,16425	,891	-,3348	,5938
		Generation X	,22081	,15280	,556	-,2111	,6527
		Baby Boomers	-,17054	,27238	,942	-,9405	,5994
	Generation X	Generation Z	-,09135	,16687	,960	-,5630	,3803
		Millennials	-,22081	,15280	,556	-,6527	,2111
		Baby Boomers	-,39135	,27397	,565	-1,1658	,3831
	Baby Boomers	Generation Z	,30000	,28052	,767	-,4929	1,0929
		Millennials	,17054	,27238	,942	-,5994	,9405
		Generation X	,39135	,27397	,565	-,3831	1,1658

Extra Analysis 1

Frequency Tables

How frequently do you buy a fashion product?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Every week	10	6,3	6,3	6,3
	Once every two weeks	22	13,9	13,9	20,3
	Twice a month	38	24,1	24,1	44,3
	Once a month	43	27,2	27,2	71,5
	Just once in a while	45	28,5	28,5	100,0
	Total	158	100,0	100,0	

On average, how much do you spend each month buying fashion products?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0€ - 20€	17	10,8	10,8	10,8
	21€ - 50€	80	50,6	50,6	61,4
	51€ - 100€	58	36,7	36,7	98,1
	More than 100€	3	1,9	1,9	100,0
	Total	158	100,0	100,0	

When selecting from the many types and brands of a certain fashion product, would you say that: - I would not care which one I buy:I would care a lot which one I buy

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	,6	,6	,6
	2	2	1,3	1,3	1,9
	3	20	12,7	12,7	14,6
	4	76	48,1	48,1	62,7
	5	59	37,3	37,3	100,0
	Total	158	100,0	100,0	

How important is it for you to make the right choice of a certain fashion product? - Not at all important: Extremely important

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2	4	2,5	2,5	2,5
	3	9	5,7	5,7	8,2
	4	86	54,4	54,4	62,7
	5	59	37,3	37,3	100,0
	Total	158	100,0	100,0	

Reasons_To_Buy_New_Products

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	good_fits_well_but_out_fashion	4	2,5	2,5	2,5
	like_use_one_I_own_but_like_va	73	46,2	46,2	48,7
	needs_adjust_cheaper_buy_new	2	1,3	1,3	50,0
	one_I_own_does_not_fit_me	79	50,0	50,0	100,0
	Total	158	100,0	100,0	

Extra Analysis 2

Table 11.1: **Independent Samples Tests**

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Brand	Equal variances assumed	,124	,725	-5,285	156	,000	-,733	,139	-1,007	-,459
	Equal variances not assumed			-5,110	102,752	,000	-,733	,143	-1,017	-,448
Quality	Equal variances assumed	2,084	,151	-6,418	156	,000	-,745	,116	-,975	-,516
	Equal variances not assumed			-6,023	94,394	,000	-,745	,124	-,991	-,500
Recent trend	Equal variances assumed	4,944	,028	-,738	156	,462	-,133	,180	-,488	,222
	Equal variances not assumed			-,677	88,718	,500	-,133	,196	-,522	,257
Comfortable fitting	Equal variances assumed	,563	,454	-5,247	156	,000	-,462	,088	-,636	-,288
	Equal variances not assumed			-4,964	96,515	,000	-,462	,093	-,647	-,277
Style / design	Equal variances assumed	7,815	,006	-,850	156	,397	-,111	,130	-,368	,146
	Equal variances not assumed			-,789	91,412	,432	-,111	,140	-,389	,168
Environmental impact	Equal variances assumed	2,750	,099	-8,630	156	,000	-1,074	,124	-1,320	-,828
	Equal variances not assumed			-8,271	100,155	,000	-1,074	,130	-1,332	-,817
Country of manufacture	Equal variances assumed	3,613	,059	-10,447	156	,000	-1,384	,132	-1,646	-1,122
	Equal variances not assumed			-10,374	111,092	,000	-1,384	,133	-1,648	-1,120

Extra Analysis 3

Crosstabs

Performance * Sustainable Character

Crosstab

			Sustainable Character		
			NoGreen	Green	Total
Performance	Inferior	Count	18	40	58
		% within Performance	31,0%	69,0%	100,0%
		% within Sustainable Character	32,1%	39,2%	36,7%
		% of Total	11,4%	25,3%	36,7%
	Superior	Count	38	62	100
		% within Performance	38,0%	62,0%	100,0%
		% within Sustainable Character	67,9%	60,8%	63,3%
		% of Total	24,1%	39,2%	63,3%
Total		Count	56	102	158
		% within Performance	35,4%	64,6%	100,0%
		% within Sustainable Character	100,0%	100,0%	100,0%
		% of Total	35,4%	64,6%	100,0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,778[a]	1	,378		
Continuity Correction[b]	,504	1	,478		
Likelihood Ratio	,786	1	,375		
Fisher's Exact Test				,395	,240
N of Valid Cases	158				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 20,56.

b. Computed only for a 2x2 table

Quality * Sustainable Character

Crosstab

			Sustainable Character		
			NoGreen	Green	Total
Quality	Inferior	Count	5	4	9
		% within Quality	55,6%	44,4%	100,0%
		% within Sustainable Character	8,9%	3,9%	5,7%
		% of Total	3,2%	2,5%	5,7%
	Superior	Count	51	98	149
		% within Quality	34,2%	65,8%	100,0%
		% within Sustainable Character	91,1%	96,1%	94,3%
		% of Total	32,3%	62,0%	94,3%
Total		Count	56	102	158
		% within Quality	35,4%	64,6%	100,0%
		% within Sustainable Character	100,0%	100,0%	100,0%
		% of Total	35,4%	64,6%	100,0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	1,687[a]	1	,194		
Continuity Correction[b]	,884	1	,347		
Likelihood Ratio	1,605	1	,205		
Fisher's Exact Test				,281	,173
N of Valid Cases	158				

a. 1 cells (25,0%) have expected count less than 5. The minimum expected count is 3,19.

b. Computed only for a 2x2 table

Durability * Sustainable Character

Crosstab

			Sustainable Character		
			NoGreen	Green	Total
Durability	Inferior	Count	13	23	36
		% within Durability	36,1%	63,9%	100,0%
		% within Sustainable Character	23,2%	22,5%	22,8%
		% of Total	8,2%	14,6%	22,8%
	Superior	Count	43	79	122
		% within Durability	35,2%	64,8%	100,0%
		% within Sustainable Character	76,8%	77,5%	77,2%
		% of Total	27,2%	50,0%	77,2%
Total		Count	56	102	158
		% within Durability	35,4%	64,6%	100,0%
		% within Sustainable Character	100,0%	100,0%	100,0%
		% of Total	35,4%	64,6%	100,0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	,009[a]	1	,924		
Continuity Correction[b]	,000	1	1,000		
Likelihood Ratio	,009	1	,924		
Fisher's Exact Test				1,000	,537
N of Valid Cases	158				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 12,76.

b. Computed only for a 2x2 table

Style_Design * Sustainable Character

Crosstab

			Sustainable Character		
			NoGreen	Green	Total
Style_Design	Inferior	Count	36	79	115
		% within Style_Design	31,3%	68,7%	100,0%
		% within Sustainable Character	64,3%	77,5%	72,8%
		% of Total	22,8%	50,0%	72,8%
	Superior	Count	20	23	43
		% within Style_Design	46,5%	53,5%	100,0%
		% within Sustainable Character	35,7%	22,5%	27,2%
		% of Total	12,7%	14,6%	27,2%
Total		Count	56	102	158
		% within Style_Design	35,4%	64,6%	100,0%
		% within Sustainable Character	100,0%	100,0%	100,0%
		% of Total	35,4%	64,6%	100,0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	3,163[a]	1	,075		
Continuity Correction[b]	2,534	1	,111		
Likelihood Ratio	3,097	1	,078		
Fisher's Exact Test				,093	,057
N of Valid Cases	158				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 15,24.

b. Computed only for a 2x2 table

Comfort * Sustainable Character

Crosstab

			Sustainable Character		
			NoGreen	Green	Total
Comfort	Inferior	Count	13	43	56
		% within Comfort	23,2%	76,8%	100,0%
		% within Sustainable Character	23,2%	42,2%	35,4%
		% of Total	8,2%	27,2%	35,4%
	Superior	Count	43	59	102
		% within Comfort	42,2%	57,8%	100,0%
		% within Sustainable Character	76,8%	57,8%	64,6%
		% of Total	27,2%	37,3%	64,6%
Total		Count	56	102	158
		% within Comfort	35,4%	64,6%	100,0%
		% within Sustainable Character	100,0%	100,0%	100,0%
		% of Total	35,4%	64,6%	100,0%

Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	5,669[a]	1	,017		
Continuity Correction[b]	4,872	1	,027		
Likelihood Ratio	5,877	1	,015		
Fisher's Exact Test				,023	,013
N of Valid Cases	158				

a. 0 cells (,0%) have expected count less than 5. The minimum expected count is 19,85.

b. Computed only for a 2x2 table

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