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SUSTAINABILITY IN LUXURY FASHION: INSIDERS' OPINIONS AND PEOPLE PERCEPTION

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Abstract

Environmental sustainability is a current widespread concern of many consumers and businesses. The purpose of this thesis is to analyze if consumers give value to environmental sustainability in their luxury fashion purchases. Additionally, this research explores consumers' current knowledge on the sustainability efforts in this industry, mainly of known brands such as Gucci, Versace, Brunello Cucinelli, Dolce & Gabbana and Stella McCartney. To do so, methodologies such as perceptual mapping, conjoint and cluster analyzes were performed. Our main findings indicate an active want from consumers of more sustainable luxury fashion items, particularly those made out of eco-friendly materials.

Keywords

Market Research, Perceptual Mapping, Conjoint Analysis, Willingness To Pay, Cluster Analysis, Implicit Association Test, Consumer Behavior, Luxury Fashion, Sustainability, Environment.

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1 Introduction

In today's world, sustainability is key. Now more than ever, as consumers have become conscious and actively critical of enterprises' harmful impact against the environment, society, and human rights, companies have started to shift *en masse* towards more sustainable practices. Hence, sustainability reporting has come to be mandatory in more and more organizations (Zrnić, Starčević and Crnković 2020).

Many companies claim to devote a percentage of their profits to organizations that promote sustainability, but only a few of them change their processes and materials to improve their sustainable standing. However, year over year the number of companies in several sectors of the economy that embrace sustainable practices has grown significantly. One example of successful green marketing campaigns was made by Starbucks, that not only embraced it but continues to do it, with remarkable success. They use mostly solar energy to power their businesses, and every outlet is built with eco-sustainable materials. Additionally, they use only recyclable cups and recyclable packaging for their food, having now more than 1300 greener shop in US and Canada, aiming to have more than 10000 by 2025 (Starbucks 2022) . Another example of big efforts for green marketing comes from Ikea. The Swedish furniture company has started a program called People and Planet Positive" that supports eco-friendly practices, solar energy, and regenerative environmental activities. Ikea aims to power all its factories and stores with 100% renewable energy and to reduce the waste from its products as much as possible (IKEA 2022). In fact, there are many more evidence of green marketing from smaller to bigger companies that make it clear that sustainability is the future we are all moving towards.

Across all industries, new ways of doing business have emerged in order to transition to greener business models. Still, in their usual way of business, most industries promote unsustainable

practices. In particular, the fashion industry stands out, as it is based on the launching of new collections every season and thus tends to produce waste and encourage overconsumption, becoming one of the industries in the center of debate around sustainability. To fight this matter, many fashion brands have implemented their own sustainability goals in order to become greener brands. Many have made agreements to cut down their carbon emissions, promising to become carbon neutral in the near future, as seen by the UN's 2018 Fashion Industry Charter for Climate Action (United Nations 2022). Moreover, efforts to improve supply chains have been put into place, increasing transparency and traceability of the materials and labor used. Companies have also transformed their operational side through the implementation of circular economy business models, while introducing upcycling and recycled materials into their manufacturing chains.

Still, this industry is not anywhere near becoming sustainable. According to a report by The Eco Experts, fashion is the sixth most polluting industry globally (Howell 2022), having been responsible for 2.1 billion tons of Greenhous Gas emissions in 2018 – about as much as the economies of France, Germany, and the U.K. combined (Berg, Granskog and Lee 2020). However, causing high gas emissions is not this industry's only problem: the production of garments, as well as the fabrics necessary to manufacture them, negatively impacts the environment in many ways. Starting from the beginning of the cycle, the manufacturing of fabric and other raw materials demands a substantial amount of water and energy. Moreover, chemical processing, such as dyeing, causes over 20% of global water pollution (Hudd 2022). And, once the clothes are produced, more water and energy are consumed in order to maintain them during their use (Nayak, et al. 2019).Finally, when clothes are no longer useable or desired, they are discarded, and, for the most part, either end up in a landfill or burned (Beall 2020).

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Fast fashion in itself is a big culprit, as this segment relies on using cheap manufacturing, creating low durability garments, instigating a culture of over-consumption, and fueling it by constantly flooding the market with new products. A very worrying statistic for the environment is the practices applied to the big number of unsold items companies have. Every year an average of 30% of the clothes produced are not sold (Elven 2018) by fast fashion companies, leading to the creation of waste disposal of clothes in perfect condition.

However, another side of the fashion industry is also to blame – the luxury fashion industry. Luxury brands also partake in environmentally destructive practices. For instance, in order to preserve their image and status quo, luxury brands have been found to make the conscious decision to destroy unsold items, rather than putting them back on the market at a lower price, donating, reusing, or employing other techniques to avoid waste. Moreover, most materials used by luxury brands in their fashion pieces are not sustainable or eco-friendly.

In terms of social sustainability, while these brands might have the reputation of being expensive because their garments are created in ateliers by well paid professionals, some luxury brands have been accused of using the same sweatshop system that is commonly used by fast fashion brands. For instance, big brand names such as Dior and Saint Laurent have been using Indian embroiderers to produce part of their products, while providing little to no employment conditions and protection (Schultz, Paton and Jay 2020). This fact is quite unsettling given how much revenue this industry makes.

Therefore, we have decided to devote our thesis to the analysis of sustainability in the luxury fashion market. This decision was taken as our group feels connected to the values of sustainability and how empirical it is to promote advances on such matters. The proposed analysis of the luxury fashion industry specifically was taken due to how particular and unique

this industry is. In its own mechanisms, the luxury fashion industry has built itself up on brand identity and consumer perceptions, that have consequently evolved into culture and values that no other industry shares. Moreover, this is an industry that has been experiencing a somewhat recent growth that is worth analyzing, only suffering a decline in the years 2020 and 2021 due to the Covid-19 pandemic. Compared to the entire fashion sector, its predicted to be the only one not affected by the current inflation and is expected to grow between 5 and 10 percent in 2023, driven by strong momentum in China and the United States (McKinsey 2022).

Hereby, the aim of this thesis is to discover if sustainability is valued by consumers of luxury fashion goods. In other words, we wish to understand if customers specifically value an environmental ecological virtuosity in luxury clothes and are they ready to shift their purchases to more sustainable items. With this intent, we propose the following three research questions:

- RQ1: What perception do consumers have of the level of sustainability of luxury fashion brands?
- RQ2: What sustainable factors do consumers value more in the luxury industry?
- RQ3: Are consumers willing to pay more for sustainable luxury products?

In addition to the core of our thesis, we will address the following as a bonus component of our thesis: “Is luxury fashion compatible with sustainability?”. We a limited study about this topic will be provided, with the suggestion that future research expands it.

The scope of this the thesis includes both consumers and non-consumers who are enthusiasts of the luxury fashion industry. In our analysis, five main luxury fashion brands were studied: Gucci, Stella McCartney, Brunello Cucinelli, Dolce & Gabbana and Versace.

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In order to answer the proposed research questions, both qualitative and quantitative methods were used. Firstly, in order to gain insights into the market, interviews with experts were conducted, as well as a consumer preliminary survey. Afterwards, a perceptual map was constructed, followed by a conjoint and cluster analysis. Moreover, additional marketing data analysis such as the marginal willingness to pay and a scenario simulation were conducted in order to understand the data collected thoroughly and create improved conclusive insights. Through these methods, we hope to provide an understanding of the value consumers give, and the perception that they have, on sustainability factors of luxury fashion brands, particularly environmentally focused ones.

Moving forward, we expect our research work to fill in a current knowledge gap on the topic of environmental focused sustainability and the luxury fashion industry. This stems from the fact that existing literature on this topic is still scarce, proving that not much developed information is found on the topic proposed, especially regarding consumer behavior. Most available papers explore the connection of sustainability efforts and consumer's perception and decision-making process of fast fashion retail chains due to the larger concern on how harmful this segment of the industry is to the environment. Yet, the luxury fashion industry has been kept in the background of this discussion, exposing a lack of data collection and analyses over the topic of sustainability. The particular papers that can be found mostly discuss the topic through qualitative data on the overall idea that consumers have of sustainability in the luxury fashion industry. There is a particular lack of depth in the analysis of the brands and goods' perceptions by consumers, that we, therefore, wish to explore in higher detail in this thesis. In other words, we intend to quantify the effects that environmentally sustainable efforts have on consumer behavior in the luxury fashion industry.

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Various arguments can be explored to justify the current lack of detailed research on the topic of sustainability and the luxury fashion industry. In one hand, this might be due to the perceived higher value this industry portrays, making it "untouchable" to a certain degree over topics that might promote brand image damage through scandals or bad word-of-mouth marketing. Another common reason given is the fact that traditionally the industry of luxury has not been associated with environmental concerns (Winston 2016), even though many before have "inherently considered luxury brands to be sustainable by nature" (Caïs 2021), portraying the discussion of sustainability in luxury as unnecessary or redundant. Finally, one can also argue that the conversation around sustainability, especially the new wave of concern over environmental sustainability, has mainly been longing to impact mainstream companies and products. As luxury in itself promotes exclusivity, we might conclude that this industry has been swiped under the radar in relation to sustainability concerns.

Nevertheless, as explored further in this thesis, the luxury fashion industry is currently facing the effects of massification, being now more of a reference to the mainstream consumers than before. Firstly, a new upcoming trend is rising to the surface, with many luxury fashion brands exploring a new kind of luxury, known as affordable luxury. Secondly, luxury brands are also becoming more exposed and attractive to the middle-class population of developed countries, and to the new emerging wealth created in Asian and Middle Eastern countries. This transformation of the industry will consequently promote penalties for its sustainability levels, as higher levels of production are being fostered, and therefore, higher levels of pollution as well.

Hence, we found it relevant to bring more attention to the topic of luxury fashion and its relationship with sustainability, in the eyes of the consumers, as it is still an uncharted territory of research.

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2 Background

In order to contextualize this paper, we will begin by defining relevant concepts and topics of discussion around sustainability and luxury fashion. This step is vital to understand the relevancy of the subject being studied.

2.1 Defining Luxury

Before beginning the research for this thesis, it is necessary to define what we mean by luxury, and the luxury fashion market. Finding a clear conclusive definition of luxury, however, has been an ongoing battle for many researchers. One might even argue that the word itself engages in some type of metamorphosis, transforming itself into different meanings in accordance with different applications. For instance, if we focus on the brands and goods, luxury might be defined as exceptional quality, craftsmanship, exclusivity and tradition (Kapferer and Laurent 2016). In contrast, a luxury consumer might define the concept of luxury as a signal of their own wealth, power and financial comfort, while a non-luxury consumer might be more inclined to define luxury as an extravagant, non-accessible and excessive kind of behavior. This particular discussion over the definition of what seems to be a simple word, shows how imperative it is to not look into luxury with tunnel vision. If someone based their idea of luxury simply over, let's say, the economic definition of a luxury good – a good for which the increase in demand is higher than the increase in income (Nasrudin 2020) – their definition would become too dull and simplistic. In fact, many luxury goods are also denominated as Veblen goods. This type of goods was named after Thorstein Veblen, author of the book *The Theory of the Leisure Class* (1899), who illustrated the phenomenon of conspicuous consumption as the purchase of goods simply for their increase in status and social-economic stance, rather than additional utility. Therefore, Veblen goods became defined as those for which demand increases as their price increases. This is a common phenomenon and definition that is used to

describe luxury consumption and goods, as the materialistic benefits' threshold is surpassed, and the additional emotional and phycological benefits of possessing the goods begin to take place in the consumer's behavior.

Therefore, it makes perfect sense to ask ourselves "why would anyone have an increased desire for a good, the more expensive it is?". An individual with a short-sighted vision of what luxury entails will not be able to provide a fulfilling and logical answer to such a question.

On the other hand, looking at the bigger picture, combining hypotheses such as performance, envy and lifestyle, one is able to begin paving a path to a more accurate representation of what brings such a distinct interest and excitement around this concept. Undeniably, luxury goes beyond itself; it goes beyond its practicality. Luxury moves towards and blends into culture, feelings, and desires. It is not a concept stuck in the material world, but rather an entire entity on its own.

Moreover, just as the concept of luxury shows an astonishing sense of broadness and depth, it has also begun to separate itself into different categories. Danielle Allérès, author of the book *Luxe-Stratégies marketing* (1990), in an attempt to demystify the complex idea of luxury, divided the luxury market in accordance with different social classes. Allérès created three distinct classes: inaccessible luxury, intermediate luxury and affordable luxury. Inaccessible luxury is placed at the head of the pyramid, denoted as the supreme luxury. It's based on very limited edition, highly exclusive, premium priced items, that are usually personalized or custom-made. Intermediate luxury lays at the middle part of the pyramid, accounting for the still exclusive but not so unique items, that are distributed through a particular set of selected channels. Finally, at the bottom of the pyramid lays the accessible luxury. This type of luxury item is provided in unusually higher quantities at comparatively lower prices to a wider variety

of consumers that want to experience the feeling of owning a premium good. The latter is a type of luxury that will be explored furthermore on this thesis, when acknowledging the current trend of the massification of luxury fashion.

2.2 The Luxury Fashion Market

Luxury has been around for as long as there has been society, and, in some way or another, many have always felt drawn to it. This, of course, has led to the creation of an entire industry around it. Sectors from luxury experiences such as hotels and food, to luxury items such as cars and houses, have been created as a response to the wants of individuals to indulge in a higher valued market. In 2022, the luxury goods market amounted to a total of US$ 312,60 B, from which US$ 69.520,00 M were generated in the United States, the primary player of the market (Statista 2022).

In this thesis, the focus will be on the luxury fashion sector, which we define as clothes and accessories (shoes, watches, and bags). This particular segment of the luxury industry is the largest in terms of revenue volume, with US$ 97,23 B being generated as of 2022 (Statista 2022). The market is expected to grow 5,62% annually (CAGR 2022-2027), with the United States as the biggest player with US$ 25.000 M revenue in 2022 (Statista 2022). Louis Vuitton is positioned as the most valuable luxury fashion brand at US$ 33,60 B (Simpson Group 2022). Other big players of this market include names such as Gucci, Versace, Dior, Prada and Chanel. Most players are either from Italy or France.

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2.3 Marketing in Luxury Fashion: The Phycological Trill of Luxury

As we define what is meant by luxury and the luxury fashion market, it becomes necessary to understand how the prime connection between luxury and consumers is made, and how consumers behave in this particular sector. The answer lays in the power that marketing has brough to luxury fashion brands, in order to distinguish themselves within their industry, and move away from the retail fashion market.

As previously mentioned, luxury products and services go way beyond their materialist functionality. In fact, studies have shown that psychological factors are the main drivers of the appeal of luxury (Murray 2016). Therefore, it is plausible to argue that in this market, consumers have a strong emotional focus rather than a logical focus in their behaviour.

Furthermore, an important aspect of the emotional connection that consumers have to luxury comes from the brands and their transmitted values. Consequently, luxury products have been defined as "the purest examples of branding, because the brand and its image are often key competitive advantages" (Kotler and Keller 2000). Luxury brands are the ones that provide the consumer with the sense of what it means to own a luxury product. Therefore, marketing in luxury fashion is all about creating a unique and exclusive experience for the customer, while tapping into their own values and the psychological thrill that comes with purchasing luxury goods. This psychological thrill comes from the feeling of exclusivity and status that arrives with owning a luxury brand's product. Luxury fashion consumers might even value the brand more than the quality or design of the product because the brand itself has a certain cache and prestige attached. This exclusivity and prestige are often associated with a sense of luxury and opulence, which can be incredibly appealing to consumers.

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For sustainability, however, this emotional focus on brand and status can actually promote negative repercussions if followed by conspicuous consumption. As previously mentioned, this type of consumption happens when consumers practice buying goods and services purely to display their wealth, rather than for the functionality of the item. This could promote unsustainable practices such as overconsumption and waste, which then lead to a lack of consideration for the environment and the impact of the fashion industry on the planet. As Hammad et.al (2019) affirms, "conspicuous and sustainable consumption are commonly understood as being in contradiction (…), as materialism is believed to impede pro-social and public welfare dispositions as well as sustainable consumption and environmentalist efforts".

However, as luxury fashion brands are beginning to shift their focus towards sustainability, an interesting marketing approach can be taken on this matter as well. Sustainability in itself can also become quite a phycological and emotional matter, just like luxury. In fact, emotional reactions, especially towards environmental and social sustainability, have been showed to play a central role in peoples' behaviours and judgments towards sustainable actions (Brosch and Steg 2021). Therefore, luxury brands might use the emotional bond that has been created with consumers through the values of luxury, and leverage to promote responsible consumption and sustainable values. Moreover, by highlighting the sustainable practices of the brand, luxury fashion marketers can appeal to consumers who are looking for environmentally friendly options. This can be a great way to differentiate the brand from competitors and tap into the growing demand for sustainable fashion.

Overall, the psychological thrill of luxury fashion is an important factor in the success of the industry. However, it is important for luxury fashion marketers to consider the impact of this thrill on sustainability and to incorporate sustainable practices into their marketing strategies.

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By doing so, they can create a unique and exclusive experience for customers while also being mindful of the environment.

2.4 Defining Sustainability

Sustainability is defined by the act of meeting the present needs without compromising the ability of future generations to meet their own needs (United Nations 2022). It embodies three interdependent spheres of knowledge – environmental, social and economic – that should be carefully balanced in order to provide true sustainable development (Rising Sun 2022). Therefore, a fully sustainable good is a good that does not provoke harm to any of the sustainability spheres.

Although the three sustainability spheres do not imply any hierarchy of importance between them, environmental sustainability has arguably gained the most attention in recent years. As various environmental issues have risen to almost irreversible levels (Climate-KIC 2022), there is a growing concern from consumers, companies and governmental organizations to fight such changes and promote a global care for environmental sustainability and greener practices. According to a survey performed by Forbes, 93% of participants indicated a concern for the environment, primarily over topics such as plastic pollution (40,1%), biodiversity loss (39,1%) and climate change (38%) (Ellsmoor 2019). Moreover, as previously mentioned, the entire fashion industry is one of the most pollutant industries in the world, indicating that it currently has a major impact on the environmental sustainability sphere.

Therefore, our thesis will have a focus on environmental sustainability. Meaning, we wish to analyze the impact, positive or negative, that the fashion luxury industry in particular has on natural resources and global ecosystems. We will explore factors such as the type of materials (eco-friendly vs synthetic), site of production (local vs abroad) and sustainability certification.

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2.5 Sustainability as a Competitive Advantage

Besides the motivation of improving their practices for the sake of the environment, luxury brands may be incentivized to engage in sustainability efforts by recent changes in consumer attitudes towards this matter. Indeed, now more than ever, consumers are becoming aware of the damage that luxury brands are causing to the environment (AFP-Relaxnews 2016). An interesting insight expressed by Kim (2012) is that luxury values such as brand name, intrinsic quality and rarity of luxury products seem to be losing their ability to attract and retain customers. Luxury brands are finding themselves in need to portray humane and environmental values in order to connect with consumers, especially those of newer generations, in order to create lifelong customer-bases.

Therefore, sustainability does not simply imply a set of values to follow, as it can also become a competitive advantage when effectively blended with the business model of the brand. Competitive advantage refers to the ability of a company to create value for its customers through its products or services in a way that surpasses all of its competitors in the market ((Peteraf 1993). Kauffeld, Malhotra and Higgins (2009) defined three areas where sustainability can take place in a company value chain (1) responsibility; (2) efficiency; and (3) differentiation. A "responsible" company will only engage in sustainability as much as required by the regulatory standards imposed by governments, while an "efficient sustainability" focused company will search to improve the efficiency of their processes to reduce its environmental footprint. Finally, the highest level uses sustainability as a differentiation factor. A company doesn't only try to improve the efficiencies of its value chain, but also to harness sustainability by introducing sustainable products to the market in order to differentiate itself from competitors.

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Nevertheless, while sustainability can be an advantage, it may also sometimes be considered a liability: in an effort to become sustainable without a strong plan correctly implemented into the business model, firms may end up generating extra costs and reducing their processes' efficiency, placing themselves at a disadvantage against competitors. However, when sustainable principles are applied correctly into a business, a successful eco-product innovation can result in a firm gaining the first mover's advantages, allowing it to differentiate itself in the market which will ultimately help the firm to improve its market position and to get access to new markets (Peattie 2001; Hansen 2009).

2.6 Luxury Fashion and Sustainability

After providing a better understanding of the luxury fashion industry and how sustainability can be applied to a business, we will now go over the current relationship that environmental sustainability has within this particular industry. Moreover, we will expose the ways in which luxury fashion brands are bringing sustainability into their businesses.

In the overall fashion industry, consumers are growing more conscious on their purchases by "reducing the number of new (…) items, fixing clothes, buying second hand/refurbished clothes, and choosing brands based on their sustainability and ethical practices" (Deloitte 2022). Nevertheless, the fashion industry stands as the sixth most polluting industry globally (Howell 2022). Additionally, this industry is the second largest water supply consumer, while also contributing to the pollution of the oceans with microplastics, with 85% of textiles getting dumped as waste (McFall-Johnsen 2019). Furthermore, despite the growing environmental concerns from consumers, the fast fashion market specifically is still growing at a rapid pace, with a new upcoming trend of online fast fashion retailers such as Shein.

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As the luxury fashion industry, no numerical data was found on the negative contributions to the environment by such brands. As already stated, this might be due to either a conscious secrecy from the industry in order to avoid backlash or simply for not being a priority of analysis. Nevertheless, some of their harmful business practices have been uncovered and highlighted by the media. For instance, in 2018 Burberry faced a massive outrage scandal when it was revealed that the brand was actively burning unsold stock of around US$ 37 M in value (Rauturier 2022). This fact in itself though, should not be surprising, as many other big luxury brands such as Louis Vuitton and Michael Kors are rumored to practice the same destruction of stock. It's therefore assumed that this practice has a specific meaning for luxury brands. It is a simple and effective way to not only maintain the brand's exclusivity, but also fight against counterfeit items - a justification that has been previously used by some brands to excuse this harmful behavior.

To respond to the increasing environmental concern of consumers and stakeholders, luxury brands have taken a number of measures long term and short term to make their brands more sustainable. One of the largest collective efforts taken by the industry was the Fashion Pact in which 150 of the world most successful fashion brands have made a commitment to achieve zero carbon emission by 2050 (The Fashion Pact 2022). Moreover, a current sustainable focused movement in the industry is the abolishment of the use of animal sourced materials, most notably fur, in the production of clothing items. For example, brands such as Armani, Givenchy, Gucci, Hugo Boss, Ralph Lauren and Tom Ford have all transitioned to only fur-free designs. Lastly, many luxury brands have actually began innovation processes in order to integrate materials that are more sustainable and friendly to the environment. Examples of newly invented alternatives are Prada's ECONYL - a recycled nylon made from fishing nets (Econyl 2022) - and Stella McCartney's Mylo, which is as the brand describes it "an innovative

new material that looks and feels like leather, but is vegan and grown from mycelium, the underground root structure of mushrooms" (Stella McCartney 2021).

2.7 The Massification of Luxury Fashion and what it means for Sustainability

Just like any other industry, the luxury fashion industry has shifted and transformed itself throughout time. Though long-term values such as heritage and tradition have been embedded in luxury for a long time, nowadays luxury fashion is becoming more widespread, and this sector has suffered a somewhat recent change: now, there is indeed an apparent massification of the luxury fashion industry and what is now called accessible luxury or neo-luxury – offering high-quality products/services at more affordable prices to the majority of middle-class consumers (Cabigiosu 2020). This phenomenon can be observed from two sides of the spectrum. On one side lay brands that are pushing their prices up in an attempt to become a premium, but still affordable brand, while on the other side we find luxury brands creating more affordable lines of products to cater to the masses.

In fashion especially, an interesting trend that restructured the peoples' idea of luxury is the collaborations between luxury fashion brands and designers with retail fashion brands. The pioneer retail brand of this business idea was H&M when it partnered in 2004 with Karl Lagerfeld, creative director of Chanel and Fendi, in a collection of around 40 pieces all under 200€ (AFP-Relaxnews 2016). Some other iconic collaborations done more recently are JW Anderson and Converse (2019), Gap and Balenciaga (2022) and Burberry and Supreme (2022),

The rising quality of life and income from the middle-class population has also translated into a higher willingness to pay for premium quality crafted goods (Fiske and Silverstein 2003). Additionally, the new wave of wealth being created in Asia and the Middle East has also

increased the demand for luxury fashion goods. It is then expected that luxury brands will start acting similarly to fast fashion brands in order to expand and fulfil demand.

In sustainability terms, it can be assumed that this change in the luxury industry is causing more harm environmentally. In order to keep up with demand and trends while increasing their margins, multiple brands, such as Prada, Dolce and Gabbana and Hugo Boss, have started offshoring their production in order to produce more items for a lower cost. Additionally, as production of luxury fashion goods is expected to increase over time, so is the usage of resources and pollution levels.

One interesting approach to this change in the luxury industry and its relationship with sustainability is brought by Kapferer and Michaut (2015). They argue that, as the process of massification of luxury increased around the 1990s, older and younger generations will portray a different understanding of what luxury is and its relationship with sustainability. The researchers argue that "younger customers are 'born' with a more ambiguous representation of luxury", as they perceive it to be farther from the sustainability ideals than older generations. This happens because the older generations understood that luxury was based on principles such as rarity and exclusivity, which in itself promotes sustainability. This association is now lost to younger generations, as they see the real-life effects of the massification of luxury, and its incoherency with sustainable values.

Daniele Gamberoni

2.8 Interviews with experts

Getting information from consumers was crucial; however, in order to be sure of the choices that were made during this study, it was also important to seek the opinions of experts in the field. For this reason, interviews with experts of the luxury fashion industry were conducted.

2.8.1 Methodology

During the preliminary analysis phase, it was decided to interview experts in luxury fashion: in particular, to collect answers from models, influencers, and professionals with great knowledge of the industry and people involved in the production phase. It was essential to better understand which points were important to include in the actual analysis phase, i.e., during the perceptual maps analysis and the conjoint analysis.

The interview method used was the open method, in which the respondent can freely indicate an answer. Recorded telephone interviews and online meetings through Zoom were conducted with the consent of the respondents so that the answers given could be analyzed as best as possible. Moreover, the questions were divided according to the type of respondent.

With models and influencers, we tried to extrapolate information about the current state of the industry, in particular trying to understand how sustainability is used within their work both on a personal level but also and especially by the brands they work with. The questions are shown in the table below.

Daniele Gamberoni

Question for the models / influencers
Do you think that luxury fashion was/is sustainable?
As a model/influencer, are you more willing to sponsor a brand that has a sustainable virtuosity?
Do you think that luxury fashion could have an impact on customers mentality towards sustainable clothes and therefore influence the whole market?
Have you ever been asked to sponsor and highlight the sustainable side of a clothing item?

Table 2-1: Questions asked to the models and influencers.

As for the industry experts, the questions asked were about how the topic of sustainability is used within the production chain. The goal was to better understand which aspects are most taken into account, how this topic is changing the industry and which sustainability factors are the most interesting from both a consumer and producer perspective. The questions are shown in the table below:

Daniele Gamberoni

Question for experts
In recent years we hear more and more about sustainability. In your sector, is this increase in interest reflected only on a communicative level or also on a production level?
Has the focus on sustainability led to changes in your work? If so, how?
Which of the different types of sustainability (environmental, social, labor…) has the most economic impact in general? And which one has the most impact on your production experience?
In your experience, which sustainability factor do you consider most valuable for the customer and the manufacturer?
Do you think that sustainability will become a trend in your market?

Table 2-2: Questions asked to the experts

2.8.2 Results for models / influencers

Two models and an influencer were interviewed. The two models work for some of the most important agencies in Italy, collaborating with the best Italian luxury fashion brands. The influencer has a user base that exceeds one hundred thousand followers on Instagram and is often contacted by luxury fashion brands for collaborations and sponsorships. From the answers collected, it seems to be evident that, in their perception, luxury fashion has not been

sustainable in the past and is now starting to take the first difficult steps to become sustainable in the future. The real effort of the industry on sustainability issues, however, seems to be directed only at those steps that have the greatest impact on communication and marketing, without making a major impact on all those processes that are not taken into account by consumers and public opinion.

The garments that remain unsold each year represent a very high percentage of the total production and are not reintroduced in subsequent years, generating a major problem in terms of environmental impact. Experiments to improve sustainable impact are therefore rare and very limited. For example, in London, where one of the influencers and models interviewed lives, in some shopping centers there are shops that rent luxury fashion clothes, which could be an interesting way of reducing the environmental impact of the sector.

In general, the approach of models and influencers to the issue is positive. In fact, all our interviewees answered that, when faced with a choice, they would always choose to sponsor a brand that uses more sustainable production processes. In the absence of this choice, however, they are often forced to accept jobs for brands that are less thoughtful to the topic in order to avoid being out of work.

The investment that the entire market makes in sustainability, therefore, is of central and vital importance. If the change is not embraced by the entire sector, the situation will hardly improve in the future, as the individual players working in the market are too vulnerable and often find themselves in a situation where there is no choice. Therefore, as long as the topic of sustainability remains a niche, it is unlikely that the consumers' approach to it will also change. In fact, the luxury fashion market has the task of influencing and creating the new fashions and

trends of the moment. From this prerogative, we tried to find out whether those interviewed thought that the inclusion of sustainability in luxury fashion would really change the mindset of consumers. In this case, the answers were mixed. Although it is generally believed that luxury fashion can play a role in this respect, there are different perceptions as to the centrality of the role. For some, it is the luxury fashion market itself that can play a key role, for others it is the influencers who hold the key to changing consumer mindsets. Another limitation underlined by all interviewees is related to the fact that the price of sustainable products is clearly higher than average. This would slow down the process of changing mindsets on the subject.

2.8.3 Results for experts

Two industry experts were also interviewed. In particular, information was gathered from a founder of a luxury summit even in Portugal and an owner of a shop selling luxury clothes in Italy. Both of them have a perception towards the luxury fashion market that differs from that of the influencers, whose interview results are reported in the section above. In particular, they firmly believe that the luxury fashion market has been paying a lot of attention to social and ecological issues for a long time.

The green communication of *haute couture* brands reflects a sustainable and conscious production process that is considered really important by luxury fashion brands. In contrast, chains such as Zara, H&M and SHEIN are often found partaking in greenwashing: lying to their audience to appear sustainable, whilst these sustainability efforts are not reflected at the production level.

Neither experts have noticed any particular changes in their work since the topic of sustainability has become so relevant. In fact, the founder of the luxury summit passively suffers this renewed interest in sustainability, as he has been personally interested in sustainability for

a long time. The type of sustainability that is most talked about at the production level is social, but above all environmental. The most important focus is on minimizing waste during the production process by using high-quality materials. This does not apply to all brands, for example, one of the interviewees defined that the Kering Group (which includes Gucci and Stella McQueen among others) has a real interest in sustainability but the materials they use are not of the highest quality.

According to the interviewees, luxury fashion consumers see environmental impact as the most important sustainable factor. Given the target group, however, it is very difficult for consumers to buy luxury clothes made from recycled or second-hand materials. What they demand is a production process that is careful to avoid waste. The common view is that the sustainability trend will increasingly become a normality and above all a necessity and that the luxury fashion industry will continue to lead the way in changing the clothing industry in general.

3 Perceptual Map

Having gathered the knowledge of consumers, industry insiders, and experts, in this chapter, the quantitative analyses will begin with the creation of a perceptual map. The goal is to attempt to map consumer perceptions of luxury fashion brands and sustainability. Through perceptual mapping, we will be able to understand how the customers perceive each brand and gain insight about them. With this tool we search to answer our first proposed research question: RQ1: What perception do consumers have of the level of sustainability of luxury fashion brands?

3.1 Methodology

After the previously presented debate in the Literature Review section, over which method to apply, the Principal Component Analysis technique was the chosen one to develop the perceptual map.

Principal Component Analysis is a multivariate procedure for studying data sets comprising several interrelated, correlated dependent variables. It produces a set of new independent variables, known as principal components, which summarizes the important data. The patterns of correlations among individuals and variables are visualized as points on maps by using these variables. Once the Principal Component Analysis is carried out, it is possible to create a visual map that illustrates the opposite ends of two vertical and horizontal axes. The vertical axis of this map compares the quality of the first component, with premium quality of the summarized attribute at one end and low quality at the other. The horizontal axis, on the other hand, reflects high quality on one end and low quality on the other.

Customers' perceptions of brands' products in these categories are reflected by the positioning

of the firms on the map. If brands are positioned close to one another, consumers believe that they have many similar characteristics. If they are distanced, consumers believe them to be distinct.

Survey Structure and Design

Our questionnaire was divided into two main parts: questions about the respondents and perceptions questions on the fashion industry and its sustainability. The demographic questions were carried out at the end of the questionnaire. In the perceptual questions, respondents were asked to rate brand characteristics from 1 to 5. In they did not have any perceptions related to the brand or characteristic in question, the opportunity to answer with a not applicable answer ("N/A") was also available. The "N/A" observations were not counted in the analysis.

The focus was on two main groups of characteristics of the brands: six questions were about the sustainability of the brands (Sustainable Materials, Green Washing, Sustainable Production Processes, and Communication of Sustainable Practices) and six questions were about typical characteristics of luxurious brands (Price, Brand Identity, Quality, Exclusivity, and Sophistication). Therefore, in the end, 9 total dimensions were available, which were too many to be represented on a graph. Therefore, the next step was to reduce the dimensions.

Dimensionality Reduction

There were two ways to accomplish dimensionality reduction. The first one was to aggregate within the two groups of variables (sustainability and luxuriousness), intuitively assign a higher average to a better result and having as a result a 2 components graph, in which a higher value on the components would have meant a better effort on sustainability and a higher luxurious image. The second way, more statistically complex, was to perform a dimensional reduction

through component analysis. The second method, being based in numbers rather than intuition, would have brought more significant results. Therefore, we proceed with a PCA (principal component analysis) to reduce the nine variables into two, in order to be able to plot them on a map.

Demographic Questions

At the end of the survey, we asked a set of demographic questions to understand the social distribution of the population that we interviewed. The scope was to understand if there were any biases in the results derived from the sample of the population that was available. Furthermore, we wanted to be able to recognize if there were some substrates of the population missing from our analysis. One of the demographic questions asked was whether the respondent is a luxury fashion customer. Afterwards, questions such as Gender, Age, Nationality, Educational Level, Occupation and Annual Income, were also examined. Since the luxury fashion customers are a small percentage of the population, the questionnaire was directed to all the people, and we accepted answers from both luxury fashion consumers and non-consumers. Age was a multiple-choice question, divided by segment corresponding to the generations (gen Z, millennials, gen X and older), nationality was also a multiple-choice question, in which we put as alternatives the country that we knew we could reach from our data collection. The educational level was also a multiple-choice question (High School, Bachelor's Degree, Master's Degree, Doctorate Degree, and Prefer Not to Say.), as well as the annual income, while the occupation was an open question.

Data Collection

After completing all the design parts of the survey, the next fundamental step was to send it around to people in order to collect as much data as possible. Collecting data for a perceptual

map can be a challenging task, but with the right approach it can be done effectively. In our case, we used multiple channels to reach out to a diverse group of people and encourage them to participate in our survey. We sent the survey to various Facebook groups, WhatsApp groups, and Reddit forums that were relevant to the topic of our perceptual map. Additionally, the survey was also sent through personal connection links.

The data collection period for our survey was between the 22nd of October and the 30th of October. During this time, we made sure to regularly remind people about the survey and encourage them to participate. We also provided clear instructions on how to complete the questionnaire.

Thanks to our efforts, we were able to gather a significant amount of data from a diverse group of people. In total, 108 people responded to our questionnaire, providing us with valuable information that we could use to create a perceptual map. The average time to complete it was of 7 minutes, underlying the complexity of the survey. All the features that we asked to review for each brand were relevant, and 108 respondents are enough (even if not perfect) to have significant statistical results.

3.2 Results

3.2.1 Demographic results

The first demographic question aimed to understand if the respondent was a luxury fashion customer or not. Even if we were interested in both chunks of the populations, knowing what percentage of respondent's shop for luxury clothes will help the result analysis. Out of the 108 respondents, 60 % do not consider themselves to be luxury fashion customers.

Figure 3.1 Luxury Fashion Customers (screenshot from form office)

This means that if we wanted to analyze only the customer population, the result would probably change a lot. Another interesting analysis of our population comes from the age question. As we can see from Figure 5.2, most respondents are between age 18 and 25, which is both less inclined to be a luxury fashion customer (young people tend to have less money) and more inclined to care about the environment (the new generations are usually the most sensible to climate change and environmental causes).

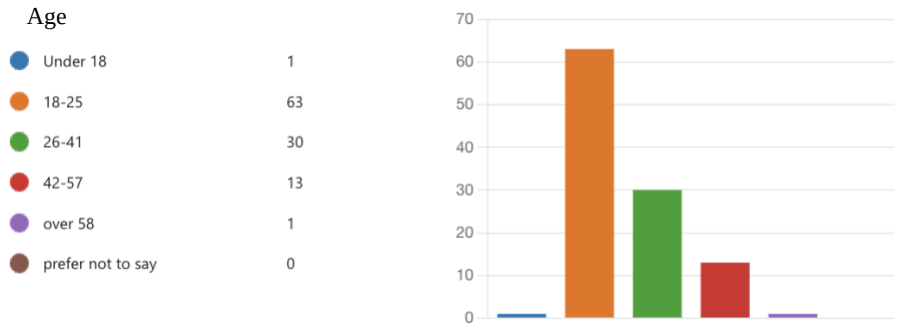


Figure 3.2 Age Demographic (screenshot from form office)

From the demographic questions, it was also possible to understand that a big part of the respondents were students or working students. Almost every respondent had a salary that was below 100.000 € per year and they mostly live in European countries.

3.2.2 Perceptual Analysis Results

To carry out the analysis of the results, we begin by building a table with all the aggregate measure of the averages, obtaining the following result, which was rounded to two decimal places for better visualization:

Brand \ Variable	**Qua-lity**	**Pri-ce**	**Exclusive -ness**	**Sophisti-cation**	**Persona -lity**	**Sustainable Materials**	**Green-washing**	**Sustainable Processes**	**Communi-cation**
Versace	4,23	4,41	3,48	3,94	4,19	2,60	3,94	2,48	2,93
Brunello Cucinelli	4,39	4,37	2,89	4,33	3,24	2,45	2,94	2,41	2,48
Stella McCartney	3,83	3,63	4,15	3,45	3,32	2,78	3,15	3,30	3,60
Dolce e Gabbana	3,75	3,54	3,93	3,93	4,28	2,30	3,19	2,67	2,86
Gucci	4,19	4,27	3,59	3,77	4,49	3,45	3,29	3,40	2,68

Table 3-1: Aggregate measure of average answers.

On this table, a PCA (Principal Component Analysis) was then performed using SPSS. The output dimensions were forced to be 2 (usually this is set using the elbow rule, selecting the minimum number of variables necessary to describe the maximum variability) and no rotation was applied to the results. The most interesting outputs of the PCA are of course the two new variables, but also the weight that each of the 9 former variables has on the new ones. To analyze the latter, we looked at the component matrix and at the graph associated with it. This matrix shows us the weights (either positive or negative) of each variable on component 1 (x-axis) and on component 2 (y-axis).

Feature	Component 1	Component 2
Quality	-0,874	0,339
Price	-0,814	0,503
Exclusiveness	0,978	-0,013
Sophistication	-0,931	-0,281
Personality	0,08	0,632
Sustainable Materials	0,204	0,888
Greenwashing	-0,051	0,482
Sustainable Processes	0,71	0,521
Communication	0,852	-0,142

Table 52: Component Score Matrix

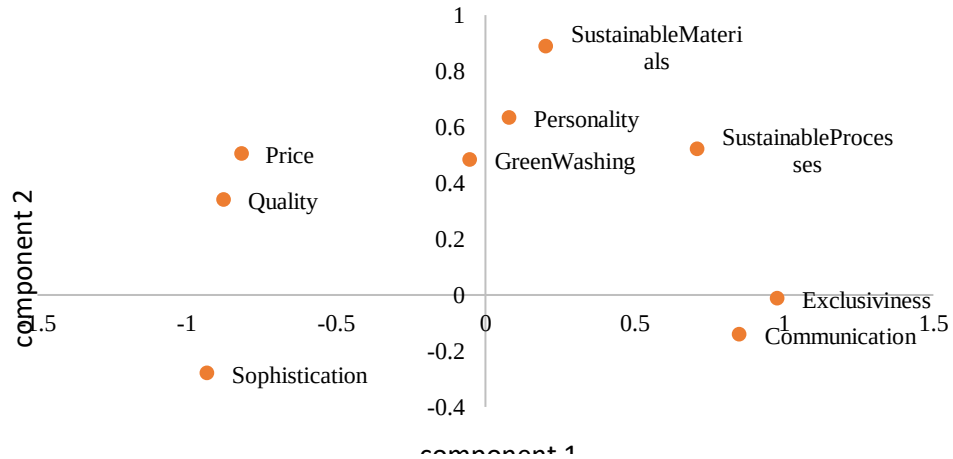
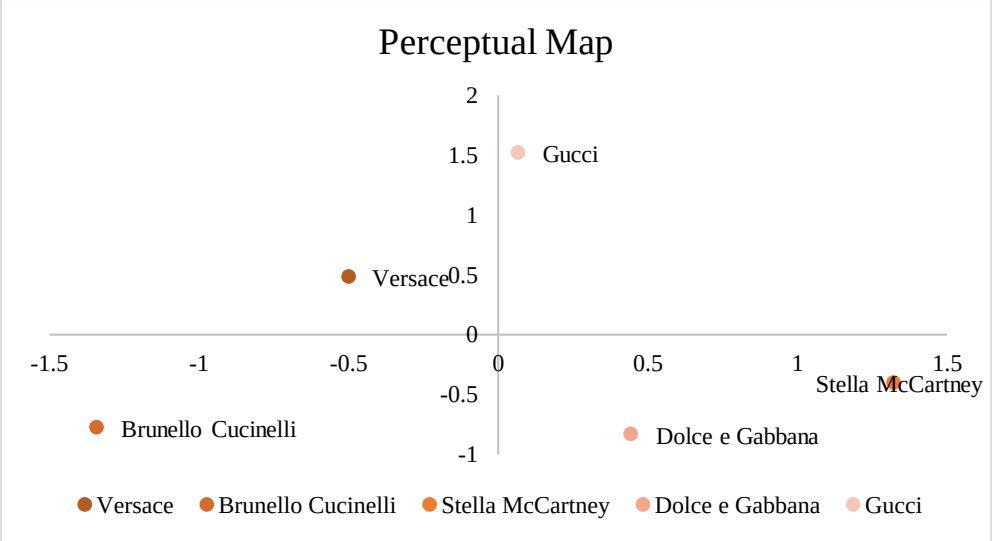


Figure 3.3 - Component Score Coefficient Chart

Being statistically based, not every correlation with the components will make perfect sense, and it will not be possible to have an ideal scenario in which the components are harmoniously correlated to every variable. However, from the map constructed, helpful conclusions can still be drawn.

For instance, the second component has a highly positive and strict correlation with the sustainable qualities (Sustainable Material, Sustainable Processes, and Greenwashing). On the other hand, the first component has a high negative correlation with Price, Quality and Sophistication, and a high positive correlation with Sustainable Communication and Exclusiveness. It is interesting to see how the personality of a brand has a similar correlation to the components of the sustainability variables, suggesting that brands that have good sustainable habits are also perceived with personality.

We now have the available to analyze final results, which are the actual values that the components have for each brand and the perceptual, two-dimensional, map with the brand



s.

Figure 3.4 - Perceptual Map

From this plot, a lot of information about the perception of the customers for these brands can be extrapolated. Let us remember that for component two, the highest the value given to the component, the highest will be its perceived sustainability virtuosity (sustainable material and processes, Greenwashing, and personality). While for component 1 (x-axis) we can say that the lowest the value for a brand, the highest its quality, price, and sophistication, while the lowest

the value, the highest his exclusivity and the sustainable communication.

Answering our first research question: "What perception do consumers have of the level of sustainability of luxury fashion brands?", we can see how Stella McCartney and Gucci are positioned in the best place, they are perceived as very sustainable. While Stella McCartney is perceived to have high quality, high prices and high sophistication, Gucci is more neutral, pending towards exclusivity. Brunello Cucinelli is perceived as the brand with the least eco-sustainable values, having the lowest value of component 2, but it has high exclusivity. Finally, Versace and Dolce & Gabbana have low levels of sustainable features, but while the latter has high levels of quality, prices and sophistication, Versace tends towards exclusivity. Therefore, we conclude that there is no correlation between how a brand is the perceived level of luxury of a brand and how perceived sustainable it is, meaning that sustainability is not considered an attribute that makes a product more luxurious.

In absolute terms from the perceptual map results we are able to infer that the perception of eco-sustainability in high fashion is still quite low. The average of the answer of each brand (from 1 to 5) is around 2.5, which is below the average, and the ratings were assigned in such a way that the highest was the value the highest was the sustainability virtuosity.

	Sustainable Materials	**Green-washing**	**Sustainable Processes**	**Communication**
Rating	**2,716**	**3,302**	**2,852**	**2,91**

Table 3-3 Average ratings for sustainability virtuosity

Group part

4 Conjoint Analysis, Willingness to Pay, Scenario Simulation, and Cluster Analysis

In this part of the thesis, we will move on to a conjoint analysis to discover what attributes are most important to consumers. The insights attained will be deepened by the analysis of pivot tables and the computation of marginal willingness to pay for certain attributes. Finally, a scenario will be simulated to see how sustainability affects market share, and clusters of consumers will be created.

4.1 Conjoint Analysis

We will begin this chapter by performing a conjoint analysis study, which was created with the main goal of discovering if sustainable characteristics are important to consumers of luxury fashion, and, if so, what type of sustainability matters the most. This analysis has also allowed us to acknowledge other important factors to consumers.

4.1.1 Methodology

There are many types of conjoint analysis. In this particular case, Choice-Based Conjoint Analysis was chosen as the most appropriate method. In Choice-Based Analysis, participants are shown many products with different combinations of characteristics and are asked to choose between them. With this data, it is possible to measure preferences, willingness to pay, and how different attributes influence consumers' likelihood to purchase a product. With this method, it was possible to compute whether sustainability affects the purchase of luxury goods.

The platform Conjoint.ly was chosen to host the survey as it offers powerful but intuitive research tools. Besides already being prepared with templates specific to conjoint analysis, it

Group part

also analyzes the raw data and provides a report that is already treated, thus automating this time-consuming task.

Survey Structure and Design

The survey was designed around the idea of a consumer who is going to buy a puffer jacket from a luxury fashion brand. The puffer jacket was chosen because it is an item all the brands being studied sell, and everyone is familiar with.

The structure of the survey is threefold: in the first part, consumers are briefed on the puffer jacket scenario, being told that they are in a purchasing simulation in which they will be presented with multiple options in pairs of three and should pick the one they prefer. Respondents were also given the choice to pick none. The second part is a block of conjoint questions. Finally, the third part is a round of demographic questions. The full survey questions can be found in the *Appendix – Table 9-2*.

A first draft of the survey was created, which was sent to a small group of people who provided early feedback. Taking into account their opinions, we improved certain points, after which the perfected draft was sent to our advisor along with additional questions. Only after this process was the final survey sent out.

Group part

The survey's layout was:

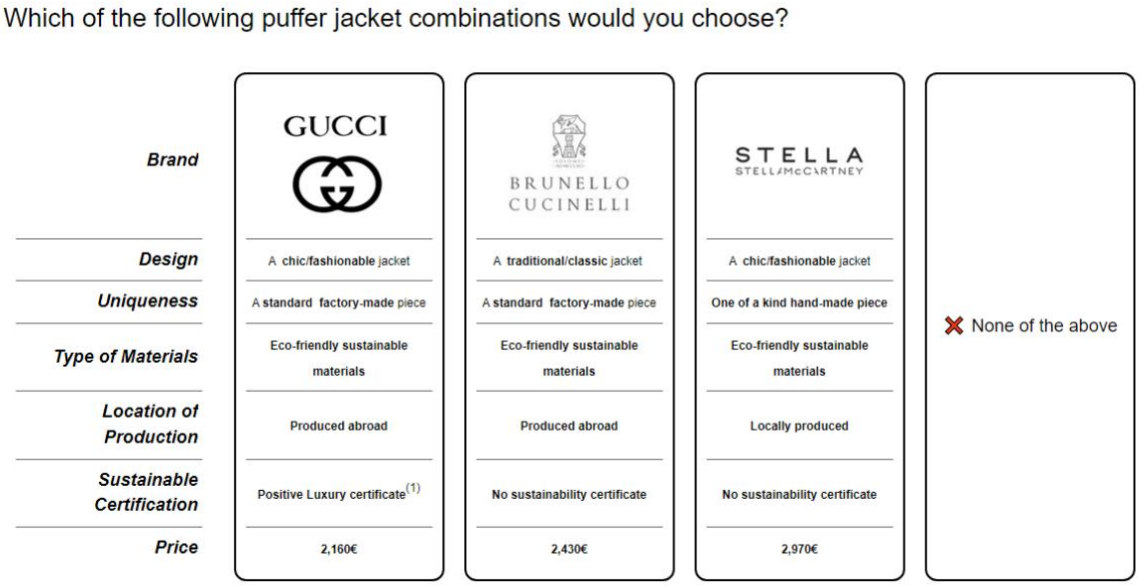


Figure 4.1 - The conjoint survey's layout.

Group part

4.1.2 Data Collection

After the attributes and levels were fine-tuned, the survey was finalized and released. The data collection period was 10 days, between the 22nd and the 31st of October 2022. In order to collect data, multiple channels were used. Firstly, through word-of-mouth, the survey was shared between family and friends, who in turn shared it with their connections. Secondly, the link was shared on WhatsApp groups, Facebook communities centered around luxury fashion ("Luxury Fashion – London", "Fashion, Luxury & Lifestyle", and "Luxury Lifestyle & Fashion"), related student groups ("Nova Luxury Society" and the "Luxury Bocconi Student Society"), and Reddit forums (r/SampleSize and r/TakeMySurvey). Finally, SurveyCycle and SurveySwap, data collection tools in which people respond to surveys to gain rewards, were used.

Attaining enough responses to be able to properly analyze the data and achieve statistically significant conclusions was challenging: from 748 people who opened the survey, 631 (84%) were immediately removed by the program. Out of these people, 543 (73% of all respondents, and 86% of the automatic exclusion) opened the survey but did not complete it. The others were excluded for reasons such as not having looked through all alternatives on conjoint questions, or the average duration of time spent on these questions being too short.

We believe the large percentage of unfinished surveys is mostly due to two reasons: (i) since the survey was shared on many online platforms, people are more likely to open it out of curiosity with no intention of answering; and (ii) the platform used to host the survey does not have an intuitive mobile interface – it does not show all options side by side, forcing users to scroll up and down – which could make mobile users quit before finishing. A considerable percentage of people who opened the survey did so on mobile – 41%.

Group part

In the end, after manually excluding 5 responses that were flagged by the system as low quality, the final sample size was N=112.

4.1.3 Results

Sample Demographics

Despite the fact that the survey was spread to people from all over the world, Europe was by far the most represented geography, making up 84% of the sample, with 44,6% of respondents being from Portugal, and 15% from Italy. 12% of respondents were from North America, and 4% from Asia. The division by continent can be seen in the chart below, and the full data can be found in the Apendix.

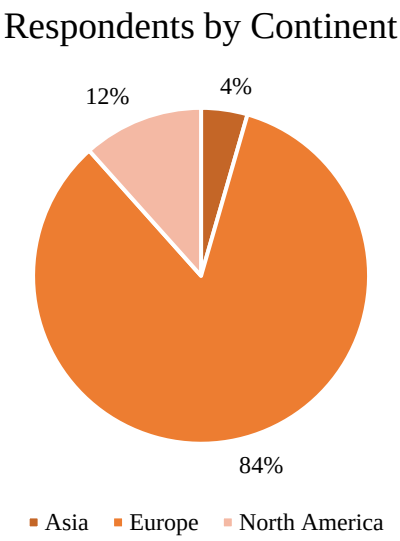


Figure 4.2 - Respondents by Continent

Together, respondents from North America and Asia make up a little above a quarter of the total sample. For this reason, the following descriptive statistics will be compared to European data so as to understand them better.

Group part

Beginning with Gender, 50,9% of respondents were women, 47,3% were men, and 1,8% were non-binary. According to the United Nations, in 2021, 54% of the European population was female, and 48% was male (UN DESA 2022), which the sample is in accordance with, although there was no data regarding individuals identifying as non-binary.

The most prevalent age group, to which 52,7% of respondents belonged to, was 18 to 25, followed by the group of 26 to 41 years of age, with 28,6% of respondents. In 2021, 63,86% of the European population was aged between 15 and 64 years (World Bank 2022), which is reflected in our sample. However, the study provided by the World Bank did not divide the population into categories, so it cannot be compared.

Overall, the age distribution was right-skewed, as respondents tended to belong to the younger generations. As the luxury industry shifts, more and more young consumers enter the market, and it is expected that by 2026, Millennials and Gen Z will make up more than 60 percent of luxury spending (Emperia 2021). Therefore, we believe the age distribution of the sample to not be deterrent to the goal of this study.

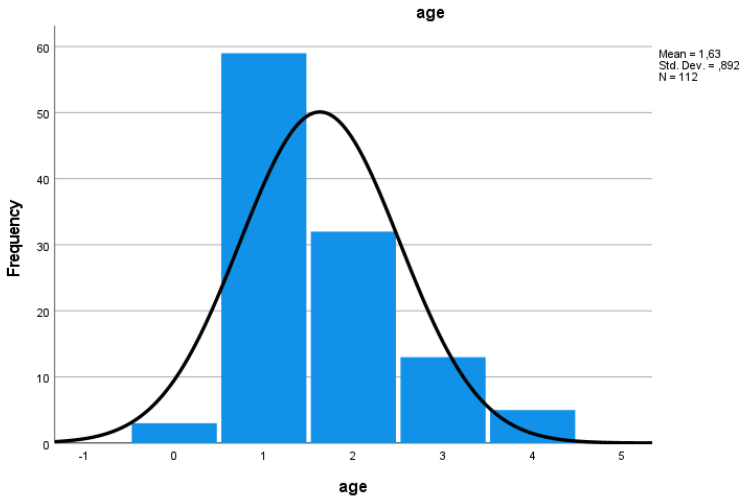


Figure 4.3: Age distribution of respondents.

Group part

Regarding education, 43,8% of respondents reported having earned a Bachelor's degree. The second most prevalent level of education was the Master's degree, which 40,2% of respondents had achieved, followed by High School Degree (11,6%) of respondents had a High School degree, and Doctorate (3,6%). Approximately 41% of people between 25 and 35 years old in Europe had attained a tertiary education degree in 2021 (Eurostat 2022), making this sample more educated than the average, which could have been caused by the sharing of the survey among student communities.

Regarding annual income, 49,1% of respondents reported earning between 15.000 € and 50.000 € annually, and 25% are between 50.000 € and 100.000€. The income distribution is skewed to the left, with most respondents being in the lowest brackets.

A possible explanation for this result is the fact that a big portion of the respondents was young, likely still a student or working an entry-level job. Additionally, many respondents were from Portugal and Italy, where wages are lower than in other European countries.

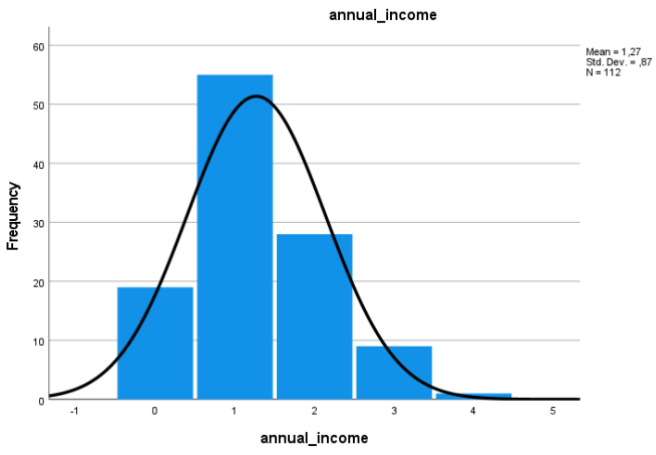


Figure 4.4 - Annual Income

Group part

4.2 Segmented Conjoint Analysis

In order to acknowledge the issue created by the majority of the respondents not identifying themselves as consumers of luxury fashion items, the group decided to run another conjoint test only on those who are in fact consumers. For that, a segment was created, in which we selected only those who have answered "yes" to the question "Are you a consumer of luxury fashion items?". Then, Conjoint.ly provided a data report of only those observations.

It must be noted that the sample size from which these results were derived is N=40. Due to the small sample size, the results were untrustworthy. This sub-chapter is meant to briefly go over the most important results of the answers provided by this segment of the respondents, and to compare it with the full sample. It is not to be viewed as a statistically significant study.

In fact, Conjoint.ly uses McFadden's pseudo-R^2 to assess how well the data outputs describe the respondents' answers (Conjointly n.d.). While the platform reports a strong goodness of fit of R^2 = 67,7%, this only means that respondents have clear preferences for features, not that this study will accurately represent the thoughts of luxury fashion consumers in general.

Group part

4.2.1 Segmented Conjoint Results

	Gucci	Brunello Cucinelli	Stella McCartney	Segmented Sample Average	Total Sample Average
Price	31,6%	34,5%	36%	34,2%	34,6%
Type of Materials	18,0%	14,1%	14%	15,3%	15,6%
Uniqueness	14,2%	17,1%	15%	15,3%	14,4%
Sustainable Certification	12,0%	15,2%	15%	14,2%	14,2%
Design	13,8%	9,9%	12%	11,8%	11,6%
Location of Production	10,5%	9,2%	8%	9,3%	9,7%

Table 4-1 - Attribute Importance per brand.

Beginning with *Attribute Importance*, it can be seen that on average across the three brands, the consumers of luxury fashion garments were similar to those of the entire sample. This means that both groups give approximately the same relative importance to the attributes, on average.

Group part

		Gucci	**Brunello Cucinelli**	**Stella McCartney**	**Segmented Sample Average**	**Total Sample Average**
Type of Materials	Synthetic	-9,9%	-7,3%	9,2%	-2,7%	-9,4%
	Eco-friendly	9,9%	7,3%	-9,2%	2,7%	9,4%
Design	Traditional	-3,0%	0,4%	-3,7%	-2,1%	-0,9%
	Chic	3,0%	-0,4%	3,7%	2,1%	0,9%

Table 4-2 - Levels Preferences.

As for the *Levels Preferences*, results between the general and the segmented samples were once again similar. In the table above are highlighted the two attributes for which the results changed the most between samples. The full table can be found in the Appendix.

It appears that luxury consumers prefer eco-friendly materials, on average, more strongly than when compared to the full sample. Additionally, while they still prefer chic over traditional designs, this preference is not as strong.

4.2.2 Results Discussion

It appears that the main takeaways from the analysis of the conjoint study do not change much between the full sample and the segment consisting only of luxury fashion consumers.

An interesting result was that design, an attribute which was already ranked surprisingly low, had even less relative importance to the later segment. Three possible explanations could be that the sample is too small to be representative, that people value uniqueness over type of design, or, most likely, that this attribute's levels were not well defined and were therefore not understood by the respondents.

Group part

However, when it comes to sustainability, the conclusions remain the same. Therefore, for the rest of the chapters where the data analyzed was gathered from the conjoint study, the full sample will be used, in order to have a large enough sample size.

4.3 Pivot Table Analysis

While the previous section answered the question of whether sustainability is important and seen in a positive light in the world of luxury fashion, there are still more ways in which this data can be explored.

As mentioned before, one of the outputs generated by the Conjoint.ly data report was a ranked list of 480 different product concepts (i.e. combinations of different features), as preferred by customers. Each combination contains a number, titled "Value to Customers", which is calculated as the average part-worths across individual respondents' total part-worth utility scores for the combination (Conjointly n.d.).

In this sub-chapter, the previously gathered data will be analized in order to find out the relationship between price, sustainability, and the value customers can derive from different combinations of these features.

4.3.1 Pivot Table Results

This analysis began by creating a table that displays the average value consumers obtain from the puffer jacket combinations, divided by the price levels and type of materials used.

Group part

	Eco-Friendly Materials	**Synthetic Materials**	**Total Value to Consumers**
2.160 €	25,4	8,3	33,7
2.240 €	11,9	-5,2	6,7
2.700 €	11	-6,1	4,9
2.970 €	2,2	-14,9	-12,7
3.240 €	-7,7	-24,8	-32,5

Table 4-3 - Average value to consumers generated by different combinations of price points and type of materials

From the table, it can be confirmed that price is indeed the main attribute that consumers consider, as the lower the price, the more value can be derived in total. However, an interesting effect is that no matter the price level, consumers always derive more value from buying an eco-friendly jacket priced one level higher, than by buying the less expensive jacket made with synthetic materials.

For instance, if given the choice between a jacket priced at 2.160 € made with synthetic materials and an eco-friendly jacket priced at the level above, 2.240 €, the former will give consumers an average value of 8,3 and the latter an average value of 11,9.

Additionally, synthetic materials always lead to negative derived values, on average, unless the price level is the lowest.

Group part

	Eco-Friendly Materials		Synthetic Materials	
	No Sustainability Certificate	**With Sustainability Certificate**	**No Sustainability Certificate**	**With Sustainability Certificate**
2.160 €	17,8	33,1	0,7	15,9
2.240 €	4,3	19,6	-12,8	2,5
2.700 €	3,3	18,6	-13,8	1,5
2.970 €	-5,5	9,8	-22,6	-7,3
3.240 €	-15,4	-0,1	-32,5	-17,2

Table 4-4 - Average value to consumers with the introduction of the "Sustainability Certification" dimension

Including the effect of the sustainability certification, it can be seen that it has a positive sway: in all cases, a certified sustainable jacket brings more utility to the consumer than one without such certification, on average. This effect is the most noticeable in the cases where the garments are made with synthetic materials: at the lowest price points, if they come with a certificate, they can still provide positive value (albeit by a lower value compared to its ecological counterparts). When the price of the synthetic jackets becomes too high, the certificate is no longer enough to bring the average value to a positive value.

4.3.2 Results Discussion

From the analysis of the pivot tables, it was found that for each price level, consumers derive on average more value from a garment that is made with sustainable materials, even more so if it comes with certification proving the brand's ecological concerns.

Furthermore, the highest price for which a positive value is derived is 2.970 €, after which consumers would just rather not purchase the product. But, as long as prices stay below this level, it is a general conclusion that a sustainable jacket is preferred to a jacket that is priced

one level lower but made with synthetic materials. This result suggests that consumers would indeed be willing to pay more for an eco-friendly garment.

4.4 Marginal Willingness to Pay Analysis

In order to further explore the previous section's findings, the outputs provided by the Conjoint.ly platform will be used to compute the Marginal Willingness to Pay.

4.4.1 Methodology

Marginal Willingness to Pay (MWTP) is defined as the indicative amount of money that a customer is willing to pay for a feature of a product. In other words, MWTP's value expresses in monetary terms how much a customer will appreciate an upgrade from feature A to B.

To calculate MWTP, the individual-level part-worth utilities of conjoint participants were used. Part-worth utilities relative desirability of an attribute level. To make the findings comparable across individuals, the part-worths were converted into relative importance for attributes. This was done by calculating the range of preferences within each attribute for each individual, then dividing it by the total sum of all ranges of preferences for the individual. Afterwards, the relative importance of each attribute is averaged across all individuals. Finally, the relative importance of each attribute is divided by the price slope to get the marginal for each attribute WTP (B. K. Orme 2005)

Group part

4.4.2 Results and Discussion

Attributes	Levels	Relative Importance	Marginal Willingness to Pay
Design	Chic	2%	4,82€
	Traditional	0%	-
Uniqueness	Unique	14%	38,77€
	Standard	0%	-
Type of Material	Eco-Material	20%	53,09€
	Synthetic Material	0%	-
Production Country	Local Production	9%	23,34€
	Off-shore production	0%	-
Sustainable Certificate	With certificate	15%	41,53€
	Without certificate	0%	-

Table 4-5: Marginal WTP per attribute level.

Table 6-10 shows how much importance customers give to each attribute while at the same time providing us with a monetary estimation related to each of the attribute (Hair, et al. 2010). For example, the respondents of this survey have given the highest value to the attribute Type of Material, being willing to pay an additional value of 53 € for a jacket that, keeping all the other attributes unchanged, is produced with eco-friendly materials rather than synthetic.

Ranking the sustainable attributes based on their values to customers, Type of Material comes first, with a Marginal Willingness to Pay of 53 €, followed by Sustainable Certification (41 €), and Production Country (23 €). Reflecting the findings of the previous sub-chapters, the Design

feature was attributed to the least amount of value. While it is possible that consumers did not base their purchasing decision on whether a puffer jacket is more chic or traditional in design, it is more likely the respondents did not understand the difference between the two terms and gave the two levels the same preference, which resulted in a minimum relative importance.

In the end, returning to the third research question initially posed: "Are consumers willing to pay more for sustainable luxury products?", we found that while luxury consumers are price-sensitive, they are indeed willing to pay an extra amount for a luxury garment if it is made from an eco-friendly rather than of a synthetic material, and even more so if it displays a sustainable certificate.

When the extra amount of money that consumers are willing to spend on the additional sustainable feature is compared to the average price of luxury goods, we see that the increase in price only amounts to 2% of the original price. This fact poses the question of whether this anticipated increase in revenues will at least cover the major expected costs that luxury brands would have to make to alter their manufacturing process in order to add those sustainable features. However, it must be noted that these results might be skewed by the dense price range that was chosen. Perhaps a different study with more appropriate values could reach another outcome.

It is important to note that MWTP calculates the utility of each attribute without taking into account competitive offering in the market. Therefore, to take the market conditions into account, we will perform a market simulation in the following section.

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5 Implicit Association Test

While moving through the creation steps of this thesis, an intriguing idea took form: how compatible can environmental sustainability really be with luxury? It is true that luxury associated concepts such as high durability, exclusivity, and even craftsmanship, might be translated into sustainable efforts as well, mainly due to the promotion of less intensive production means, and therefore, of waste and pollution. Nevertheless, such positive consequences are merely non-regulated externalities. Meaning sustainability is not a conscious priority in the normal operational mechanisms of the luxury industry. Therefore, we were left wondering if there would be an evident change at the core of the luxury fashion industry if it deliberately followed the current trends of sustainability awareness. In other words, we were left with the following question: "Will the luxury fashion industry lose its core value in the eyes of consumers if it incorporates sustainable practices?".

At first, this question might seem confusing. "What does it mean to lose its core value"? "How can sustainable practices be negatively connotated to an industry, especially in an era where sustainability awareness is at its highest"? It all comes down to the ideas surrounding the luxury fashion industry, the culture around it and the specific rules and values it follows. As mentioned previously, luxury is not an easy subject to define. Still, we have come to the conclusion that it can be depicted as a sense of superiority. Whether that superiority is connected to quality, price or status, doesn't make such a difference. What we do know is that luxury has always been placed above the status quo. Therefore, what might seem positive in other industries might promote a detrimental look over this specific industry.

For instance, in an open discussion with one of our preliminarily interviewed experts of the industry, we asked the following question: "Do you think luxury fashion consumers are

discouraged to buy items made out of recycled materials?". The expert then questioned himself on the topic, stating that although more items with such materials are coming into the market, he couldn't tell if they would be generally accepted by the majority of consumers. We questioned him if perhaps it was because consumers would perceive those items to have lower quality, since quality is an important aspect for consumers in their luxury fashion purchases. The expert indicated that it might be a possible argument but made an emphasis on whether or not the consumers would perceive the recycled materials' items to have an overall lower value to them.

This was the pivotal moment where we started questioning ourselves about what this "value" in luxury meant. It is not a simple task to compute the breaking point where someone starts valuing an item to an extent where they consider it luxury, and what it takes exactly to decrease such value to a point where the item loses its luxurious connotation. Therefore, the definition of what is the core value of the luxury fashion industry will never be straightforward. Nevertheless, we argue it lies in the eyes of the beholder. It is the people that, in whatever imaginary scale they use, place the luxury value in the items.

From this research, it seems that some people are actually willing to pay more for sustainable items. Nevertheless, there is also a significant portion of people that are not willing to do so. Additionally, from our conjoint analysis, respondents showed a care for sustainable efforts in their products, but still ranked some of those efforts lower when compared to other attributes such as price and uniqueness. This might indicate that, although consumers do not devalue sustainability as a concept, some might devalue it when applied to luxury. Nonetheless, one of the strongest findings from our conjoint analysis was the overwhelming preference for sustainable materials rather than synthetic materials.

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Still, it is crucial to realize that there is a difference between sustainable materials and recycled materials. Wool, silk and organic cotton are described as sustainable materials in their natural form for being eco-friendly (The Good Trade 2022). Recycled materials, on the other hand, imply that they have been used in some other form, before being transformed. From our previously discussed expert interview on this topic, the emphasis on a possible perceived loss of quality or value comes from the usage of recycled and not sustainable materials since the latter doesn't necessarily imply some sort of reusage. Meaning consumers in luxury might feel discouraged buying fashion items that were not found in their rarest and purest form, as their material intrinsic value is lower. As we know, many wanted luxury fashion pieces are made from very sought after, high quality and sometimes scarce materials. Therefore, a sustainable recycled leather jacket might have a perceived lower level of value when compared to a non-sustainable leather jacket.

Additionally, we might also debate on whether second-hand luxury fashion pieces are something that consumers find pleasant. Second-hand fashion has been experiencing an unprecedented growth, being estimated to have a 14,8% CAGR in the next ten years (Future Market Insights 2022). Nevertheless, much of this growth has been experienced in the fast fashion retail market. Still, there are already second-hand initiatives done mainly through online platform websites, that create a market for consumers that wish to buy second-hand luxury fashion pieces. These websites, though, belong to third-party players, meaning the active luxury fashion brands on the market are not pushing this new trend on their own websites and stores. Therefore, it would be interesting to analyze if second-hand pieces would be generally accepted or not by the mass of the luxury fashion market, and especially if important brands on the market would pursue this sustainable side of fashion.

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With this, we became intrigued by the idea that sustainability might be seen as something unfashionable by luxury consumers, due to the core values shared in this market that have been previously explored. Analyzing whether or not consumers would be discouraged from buying fashion pieces that are not intrinsically new in their form due to sustainable efforts during their production process. Which could include but is not limited to the use of recycled materials or the commercialization of second hand pieces. These new trends may give a new outlook to the compatibility between sustainability and luxury fashion.

As the scope of our thesis did not include this topic, our data is not sufficient to provide an argumentative and justified answer to this paradox. Therefore, we wish to leave this topic open for future works to explore, as we believe it is important to truly understand where luxury fashion consumers lay their views of sustainability applied to the luxury fashion industry.

However, enticed by this subject, we decided to run a small bonus study in order to get insight from consumers, applying the Implicit Association Test method to approach this topic, in a small-scale exercise. Due to time constraints, it was not possible to get a sufficient sample size. For this reason, this chapter should not be taken as a critical study, but rather as a suggestion of how we would approach this it had the resources to do so been available.

5.1 Methodology

In the words of Wojnowicz (2009), "Attitudes can be divided into explicit attitudes and implicit attitudes. An explicit attitude is a response based on conscious judgment and can be measured directly by self-report. On the other hand, implicit attitudes are unconscious biases that cannot be consciously perceived and are therefore investigated using cognitive measures or experimental methods such as the IAT and the Dot probe".

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Several studies have shown that the contextual conditions surrounding a specific action can affect the predictive power of implicit and explicit measures. In situations where subjects have limited mental resources and are making impulsive decisions, implicit measures tend to outperform explicit measures. In contrast, when subjects have access to sufficient mental resources, explicit measures tend to be more predictive.

In a study by Hofmann (2007), two groups of participants were subjected to different conditions: one group was provided with resources to exert control over their behaviors, while the other group was depleted of psychological resources, making them more prone to impulsive behavior. Both groups then completed an implicit and explicit attitude test. The results showed that the implicit measure was better at predicting the behavior of the ego-depleted participants, while the explicit measure was better at predicting the behavior of the control group with no resource constraints.

It is then based on Hofmann's (2007) findings that the implicit association test was preferred in this thesis, given that luxury fashion relies on vanity and hedonism, and consumers enjoy the positive emotions of luxury shopping, we assume that luxury purchasing behavior would be more impulsive.

In order to conduct the Implicit Association Test (IAT), a survey was programmed in JavaScript and HTML using open-source code provided by IAGET. It was then hosted on the platform Qualtrics and distributed in online forums and group chats. As this was a short-run, limited study, the final sample size was N=34.

As previously explored, luxury and sustainability are multi-faceted constructs. Therefore, we decided to focus our study on only one possible sustainable manifestation and will perform an implicit association test to see if this sustainable change is compatible with luxury.

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Definition of target and attribute categories

The first step to construct the IAT was to define target and attribute categories.

Since research shows that consumers of luxury have high expectations regarding quality and are unlikely to compromise on quality, the *target categories* to be tested were consumers' perception of the quality of sustainable materials.

Brand (1964) identified 80 words associated with fabrics of high quality, which fall into 4 overlapped categories (Aesthetics, Comfort, Performance, and Tailorability). With a focus on Aesthetics and Comfort, the words that are mostly associated with high quality fabrics were selected. Furthermore, technical words were excluded since they were unlikely to be familiar to the test takers (Greenwald 2022).

As for the *attribute categories*, consumers' motivation to engage in pro-environmental actions can be separated into two types: primary and selective motives. Primary motives can stimulate a group of pro-environmental actions: for instance, a primary motive such as altruism can motivate a wide range of moral behaviors, but it has low ability to predict one specific altruistic action.

On the other hand, context-specific motives have high predictive power toward a specific action. Therefore, it was decided to focus solely on one attribute in luxury fashion: type of material. More specifically, the analysis focused on Sustainable and Regular leather

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The target categories and the attribute categories are shown in the following table:

Categories	**Word items**
Regular leather	Goatskin, Lambskin, Leather, Animal Leather
Sustainable Leather	Eco-Friendly Leather, Sustainable Leather, Bio-Based Leather, Vegan Leather
Positive	Comfortable, Fit, Lively, Durable, Warm, Desirable
Negative	Unfit, Irritating, Unattractive, Cold, Unreliable, Dull

Table 5-1: Target categories and attribute categories

Implicit Association Test Design

Having the target and attribute categories chosen, it was possible to develop a test. Following the method of Greenwald, McGhee and Schwartz (1998), the test consisted of five blocks: two trials, a compatible block, a reversed block, and a non-compatible block. The first block consisted of 40 trials in which participants sorted stimuli into the two target categories (Positive, Negative). The goal was to familiarize the participant with the sorting procedure and the attribute categories.

The second block was similar to the first, allowing the participant practice with target categories. The third block was the compatible block: it had the pair (Positive, Sustainable Leather) on the left and the pair (Negative, Regular Leather) on the right. In block four, in order to offset participants, the order of the target attributes was reversed. Finally, in block number

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five, which is the non-compatible block, the categories that existed in block number three were repaired.

The test's scheme can be found in the table below:

Sequence	**1**	**2**	**3**	**4**	**5**
Task instruction	*Practise block*	*Practise block*	*Compatible block*	*Practise block*	*Non-compatible block*
Fixed categories on the screen	•Positive Negative• •Desirable Unattractive•	•Regular Leather Sustainable Leather•	•Positive •Sustainable Leather Negative• Regular Leather•	Regular Leather• •Sustainable Leather	•Negative •Sustinable Leather Positive • Regular Leather•
Sample of stimuli that will be shown to participants	•Fit •Comfortable Irritating• •Desirable Unattractive•	•Lambskin Bio-based Leather• Vegan Leather• •Animal Leather •Goatskin	•Desirable •Vegan Leather •Bio-based Leather •Fit Irritating • Lambskin•	•Sustainable Leather •Vegan Leather Lambskin • Animal Leather• •Bio-Based Leather Goatskin•	•Dull Goatskin • Fit• Attravtive• •Sustainable Leather Desirable•

Table 5-2: IAT scheme.

5.2 Results

Despite the small sample size, this analysis yielded statistically significant results (p-value = 0,035 < 0,050). However, it must not be forgotten that this is a small-scale study with a very restricted sample size. While the results will nevertheless be briefly disclosed and discussed,

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the objective of this chapter was to launch a new idea to be further research, advising its approach by the Implicit Association Test.

The D-score was calculated according to the procedure proposed by Greenwald (1998) in his original paper. A positive D-score indicates an association of the form (Positive and Sustainable materials; Negative and Regular Leather), while a negative D-score indicates the associations "Positive with Regular Leather" and "Negative with Sustainable Leather". When D=0, there is no preferred association. Therefore, through the analysis of the average D-score for all respondents we can understand what is the implicit association that is made by participants over the categories presented. In our small-size study, the D-score is (0,24). This indicates that participants automatically associate Sustainable Leather with positive subjective evaluations, supporting the idea that Luxury and Sustainability are indeed compatible, at least on the high-quality demission.

However, we wish to shed light again on the fact that this study should not be interpreted as conclusive data, for its small size in sample. Nonetheless, it is statistically significant. Therefore, we propose the future study of this theme, through the Implicit Association Test, since it's a method that examines the automatic associations between categories made by consumers. Furthermore, it would be an interesting topic to study on which sustainable factors seem to be (or not) implicitly associated with luxury in consumers' minds.

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6 Discussion

In this next chapter, a summary of our main findings will be provided, as our three research questions have been answered along the thesis. Additionally, the limitations of our work will be examined, and a variety of managerial implications will be presented as a recommendation outlook for luxury fashion companies over the matter of sustainability.

6.1 Findings

We started by selecting five luxury fashion brands and creating a perceptual map to understand how consumers understand them in terms of sustainability and quality, prices and exclusivity traits. We found that Stella McCartney and Gucci were viewed as very sustainable, while Brunello Cucinelli, Versace, and Dolce & Gabbana have low levels of sustainability perception.

Keeping this result in mind, we moved on to the conjoint analysis, where we selected only three of the aforementioned brands – Gucci, Brunello Cucinelli, and Stella McCartney – and created a choice-based survey which allowed us to draw the conclusion that after price, eco-friendly materials are the second most important attribute to consumers when making purchasing decisions.

Further looking into this result, a pivot table analysis found that despite price holding the most relative importance, consumers derive more utility from a sustainable jacket than from one made from synthetic materials priced a level lower.

This led to us computing Marginal Willingness to Pay, where we found that, on average and *ceteris paribus*, if producers changed a puffer jacket in order to start producing it with eco-friendly materials, consumers would be willing to pay an additional 53 € for it.

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Having answered all the research questions, we still saw potential in the data to learn more. Therefore, in the optic of being able to make managerial recommendations in this thesis, we made a market simulation, in which we created a scenario as close to reality as we could, and then introduced sustainable concepts to see the change in revenue and market share. For this effect we took Gucci, which was the most favored brand among consumers, and found that introducing products with sustainable characteristics had had a positive effect on the revenues and market share.

Finally, to deepen the insights we can provide to managers, we created clusters, and found three main types of consumer: the environmental rationalist, the status seeker, and the economical segment.

6.2 Managerial Implications

This thesis contributes to the current literature on sustainable fashion by expanding it to the market of luxury fashion. In this final section, a summary of how managers can bring the research findings into practice will be provided. In particular, managerial suggestions will be made regarding product design and pricing based on market clusters.

In general, it was found that consumers care about sustainability, and are willing to pay more for a luxury garment if it contains sustainable properties such as eco-friendly materials and the proper certifications. However, not all consumers are the same or will react in the same way to a new sustainable luxury fashion product introduced in the market.

As seen in chapter 6.6, when analyzing our data through the cluster, three main types of consumer were found: (1) the environmental rationalist; (2) the status seeker; (3) the economical segment. Therefore, the different needs and preferences of each type of possible

consumer need to be evaluated and taken into consideration when applying marketing targeting strategies. For instance, the environmental rationalists are the most propense to engage in the purchase of a luxury fashion sustainable item. Nevertheless, given their specific preferences, these consumers need the combination of two sustainable attributes such as certification and eco-friendly materials, to have an actual positive driven effect on their purchasing decision. Simply proposing one of these attributes in a new product would not necessarily drive consumers to purchase it, as the force it has on their preferences is not enough. As for the 'status-seeking consumers', the best targeting option for a sustainable product lays on simply having one sustainable trait (preferably the certification attribute), since are open to new concepts as long as it is produced by their favorite brand. Finally, the 'economical segment' is looking for the best return for value for their money, as they are very price sensitive. Therefore, we conclude that switching to Eco-friendly materials is the best approach to target this segment since it is the second highest valued attribute in this segment.

From our market simulation analyses, we were also able to conclude that if a strong brand such as Gucci develops a sustainable product, the brand is likely to gain a significant portion of the market share, though also suffering some cannibalization of its more non-sustainable similar items.

Therefore, as sustainability seems to be an overall want from consumers in the luxury fashion market, companies should engage in marketing decisions to develop and promote sustainable products that will go hand in hand with consumers sustainable preferences.

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6.3 Limitations

The main limitation faced in this study was the difficulty in gathering data. In order to truly understand how consumers of luxury fashion clothes behave, we would have needed access to people from higher economic backgrounds, who regularly purchase these products. Despite our attempts at doing so, we faced difficulties in attracting such people and being limited by a short time frame and no financial capability to reach out to respondents through means that could have been more efficient at targeting the desired population.

In the end, neither the data sample used for the perceptual maps, nor the data used for the conjoint analysis and subsequent studies was fully representative of our initial target population. We were still able to take interesting conclusions and to answer our research questions, but while the initial goal of this thesis was to understand the behavior of regular consumers of luxury fashion, we ended up with a sample of people who mostly only purchase these garments occasionally, or not at all, though being active enthusiasts.

If we were to redo this thesis having more time and resources to target the desired type of consumers, we believe some of the results would be different. Particularly, we hypothesize that consumers from higher economic backgrounds would not be so price-sensitive, and might even prefer higher priced garments.

As the data was analyzed, other limitations came to light. First, as mentioned before, in the creation of the conjoint analysis survey, for the attribute Price, we wanted to develop levels based on research and data. Therefore, we researched the market to attain an average selling price for puffer jackets in luxury brands. Then, based on the findings of Ciasullo et al. (2017), as well as reports by KPMG (2019), we created price levels that were 10% and 20% above and below the average price. However, the resulting price range may have been too dense, making

it hard for consumers to distinguish sufficiently between price points. Taking the two lowest prices as an example: the price 20% below average was 2,160 € and the price 10% below average was 2.430 €. These price points may be too close to each other, thus not making a difference in the consumer's mind. Perhaps results regarding price levels could have been more conclusive if the levels were more clearly distinct from each other.

Another attribute which represented a limitation was Design: consumers did not particularly seem to care about design when choosing a puffer jacket to purchase, a result we did not expect. When thinking about the layout of the study, we believed Design would be one of the most relevant attributes, given that clothes are something people usually choose based on aesthetics. However, that was not the case, and we suspect it might be due to the respondent's becoming confused when differentiating "traditional" and "chic" as features, and therefore not presenting this attribute enough importance. Perhaps if the levels were different, or better explained, distinct results would occur.

Another limitation related to Chapter 6 was the choice of the puffer jacket itself. The world of luxury fashion is vast and cannot be represented solely by one category of items: besides clothes, other luxury fashion items can be shoes, handbags, and even jewelry. These are very distinct products that consumers regard in different ways. For instance, while a luxury puffer jacket will typically be seen simply as a garment to wear, a luxury handbag may be seen as an investment which will appreciate over time and can be sold in the future for a profit, or luxury jewelry may be perceived as an investment that can be passed down to the next generations. This study can only make conclusions about clothes, but perhaps if a collectible handbag were to be analyzed instead, the results could be different, with consumers preferring to spend more money on it, or even not wanting sustainable materials, preferring the classic designs instead.

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Finally, it is relevant to mention that only five luxury fashion brands were used as subjects in this research, while only three of those five were explored more deeply. It is understandable that these five brands are not representative in any way of the entire market of luxury fashion, though still being relevant and sufficiently distinct enough brands.

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8 Appendix

Chapter 4

Section 1 - Experience	How familiar are you with the luxury fashion market?	Not familiar at all
		Somewhat familiar
		Very familiar
	To what degree do you keep up with the luxury fashion market?	I don't keep up at all
		I somewhat keep up with the market
		I'm highly knowledgeable of the market
	Are you a consumer of luxury fashion items?	Yes
		No
	How many luxury fashion items do you own, approximately?	1-3
		4-6
		6-10
		10+
	How often do you purchase luxury fashion items?	Weekly
		Monthly
		Seasonal
		Yearly
	On average, how much money do you spend on luxury fashion purchases?	<500€
		500€-1,000€
		1,000€-5,000€
		5,000€-10,000€
		>10,000€
	What makes you interested in the fashion luxury market? You can check multiple boxes.	I enjoy the fashion trends, designs and brands offered by this market
		I'm fascinated by the idea of luxury and how it is portrayed in fashion
		I enjoy the social status and prestige aligned with being a luxury fashion consumer
		I believe this market offers more valuable items of fashion that justify the pricing, when comparing to other fashion markets
		I'm intrigued by the culture surrounding the luxury fashion market and wish to become part of it
	Please indicate how often in your daily life you act as the following:	I recycle glass, plastic bottles and batteries

Section 2 - Sustainability	Never / Rarely / Sometimes / Often / Always	I turn electronic devices off when they are not in use.
		I try to save the environment by limiting my consumption of paper and plastic bags
		I use public transportation to commute
	On a scale of 1 (Low) to 5 (High), how much do you care about the **sustainability** of your **fashion purchases**?	
	On a scale of 1 (Low) to 5 (High) how much do you care about the **sustainability** of your ***luxury*** **fashion purchases**?	
	To what extent do you feel that the following statements represent you: Strongly disagree / Disagree / Neutral / Agree / Strongly Agree	I actively avoid buying from luxury brands that are negligent toward the environment
		I prefer to buy environmentally-friendly products to the conventional ones.
		I will not buy sustainable alternatives if they are priced higher than the conventional products
		I enjoy buying luxury products even if they have negative impact on the environment
		I will not buy sustainable alternatives if they don't match my quality criteria
		Before purchasing a product, it is important for me to know how sustainable the brand is
		I am aware which brands are eco-friendly and which brand are not
		It is very hard for me to find sustainable clothing that match my fashion taste ´
Section 3 - Attributes	How would the following characteristics influence your luxury fashion purchases? Negative influence / No influence / Somewhat influencial / Influencial / Highly influencial	Brand
		Price
		Quality
		Sustainability
		Trendiness
		Exclusivity
		Design
		Future value of the product
		Less Inclined

	Would you be more or less inclined to purchase a luxury fashion item if it is sustainable?	Neutral
		More inclined
	Could you elaborate on the reasoning behind your previous answer? (Open question)	
Section 4 - Market Perception	Are you aware of any **sustainable luxury products/trends** in the luxury fashion market?	Yes
		No
	Could you provide us with some example(s)? (Open question)	
	Please indicate the **3 most decisive elements of sustainable fashion** from your point of view:	Use of only eco-friendly fabrics (e.g. organic cotton)
		Transparency
		No product testing on animals
		Production with the least amount of pollution
		No use of animal-based materials
		Use of eco-friendly packaging
		Use of recycled material in the manufacture of products
Section 5 - About You	What is your gender?	Woman
		Man
		Non-binary
		Prefer not to say
	How old are you?	< 18
		18 - 25
		26 - 41
		42 - 57
		> 58
		Prefer not to say
	Where do you live?	
	What is the highest level of education you've completed?	High school
		Bachelor's degree
		Master's degree
		Doctorate degree
		Prefer not to say
	What is your occupation? (Open question)	
	Which industry are you working/studying for?	Fashion
		Marketing
		Engineering
		Finance
		Manufacturing

		Business
		Research
		Prefer not to say
	What is your annual household income?	€15,000 or less
		€15,000 to €50,000
		€50,000 to €100,000
		€100,000 to €300,000
		€300,000 or up
		Prefer not to say
Section 7 - Contact	Please, provide us with your email address: (Open question)	

Table 8-1: Questions from the Preliminary Survey for Consumers

Chapter 6

Part 1	Puffer jacket purchase scenario briefing: "Please imagine a scenario where you are in search of a new luxurious puffer jacket. In this survey, you will be presented with sets of different combinations of possible choices, where you shall decide which choice better translates your ideal purchase taking in consideration certain features. The idea is to pretend you are in a luxury clothing store and have three different jackets in front of you. Between the three, you can only pick the one you like the most. Alternatively, if none of the jackets please you, you can leave the store without purchasing any. You will have to make choices between jackets several times. Feel free to let your imagination create a visual aesthetic representation of your desired puffer jacket (e.g.: color, size, shape...)."
Part 2	Block of Conjoint Questions
Part 3	Are you a consumer of luxury fashion items?

	What is your gender?
	What age group do you belong to?
	Where are you from?
	Which of the following options best represents your education level?
	What is your approximate annual household income?

Table 8-2: Conjoint Survey Questions

	N	Mean	Std. Deviation
Brand(Gucci)	112	2.21662977	1.28113861
Design(chick)	112	.988457072	.934735170
Unique	112	1.37104692	1.02381671
eco	112	1.99244437	1.05396049
COO(offshore)	112	.948664282	.742853217
Certificate	112	1.57371408	1.05926650
Price(lowest price)	112	3.78366697	1.24105492
Valid N (listwise)	112		

Table 8-3: Conjoint survey's attribute information

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Man	53	47,3	47,3	47,3
	Non-bina	2	1,8	1,8	49,1

	Woman	57	50,9	50,9	100,0
	Total	112	100,0	100,0	

Table 8-4: Conjoint respondents by Gender

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<18	3	2,7	2,7	2,7
	18-25	59	52,7	52,7	55,4
	26-41	32	28,6	28,6	83,9
	42-57	13	11,6	11,6	95,5
	>58	5	4,5	4,5	100,0
	Total	112	100,0	100,0	

Table 8-5: Conjoint respondent by Age

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelor's degree	49	43,8	43,8	43,8
	Doctorate	4	3,6	3,6	47,3
	High school	13	11,6	11,6	58,9
	Master's degree	45	40,2	40,2	99,1
	Prefer not to say	1	,9	,9	100,0
	Total	112	100,0	100,0	

Table 8-6: Conjoint respondents by Education

Annual_Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	€15,000 or less	19	17,0	17,0	17,0
	€15,000 to €50,000	55	49,1	49,1	66,1
	€50,000 to €100,000	28	25,0	25,0	91,1
	€100,000 to €300,000	9	8,0	8,0	99,1
	€300,000 or up	1	,9	,9	100,0
	Total	112	100,0	100,0	

Table 8-7: Conjoint respondents by Annual Income

Region

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Australia	2	1,8	1,8	1,8
	Austria	1	,9	,9	2,7
	Canada	1	,9	,9	3,6
	Croatia	1	,9	,9	4,5
	france	2	1,8	1,8	6,3
	France	4	3,6	3,6	9,8
	germany	1	,9	,9	10,7
	Germany	2	1,8	1,8	12,5
	ireland	1	,9	,9	13,4
	Italy	17	15,2	15,2	28,6
	Japan	2	1,8	1,8	30,4
	Luxembourg	1	,9	,9	31,3
	Malaysia	1	,9	,9	32,1
	Malta	1	,9	,9	33,0
	Portugal	50	44,6	44,6	77,7
	Russia	1	,9	,9	78,6
	Singapore	1	,9	,9	79,5
	South Korea	1	,9	,9	80,4
	Spain	5	4,5	4,5	84,8
	The Netherlands	1	,9	,9	85,7
	uk	2	1,8	1,8	87,5
	UK	4	3,6	3,6	91,1
	USA	10	8,9	8,9	100,0
	Total	112	100,0	100,0	

Table 8-8: Conjoint respondents by Region

Consumers of Luxury Fashion

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	72	64,3	64,3	64,3
	Yes	40	35,7	35,7	100,0
	Total	112	100,0	100,0	

Table 8-9: Conjoint respondents by Consumer of Luxury Fashion

Rank	Brand	Design	Uniqueness	Type of Materials	Location of Production	Sustainable Certification	Price	Value to customers
1	Gucci	Chic Design	Unique	Eco-Friendly Materials	Local Production	With Sustainability Certificate	-20% Average	53,68241
2	Gucci	Traditional Design	Unique	Eco-Friendly Materials	Local Production	With Sustainability Certificate	-20% Average	50,79401
3	Gucci	Chic Design	Unique	Eco-Friendly Materials	Off-Shore Production	With Sustainability Certificate	-20% Average	42,12897
4	Gucci	Chic Design	Unique	Eco-Friendly Materials	Local Production	With Sustainability Certificate	-10% Average	42,07114
5	Brunello Cucinelli	Traditional Design	Unique	Eco-Friendly Materials	Local Production	With Sustainability Certificate	-20% Average	41,88816
6	Stella McCartney	Chic Design	Unique	Eco-Friendly Materials	Local Production	With Sustainability Certificate	-20% Average	41,45645
7	Brunello Cucinelli	Chic Design	Unique	Eco-Friendly Materials	Local Production	With Sustainability Certificate	-20% Average	40,71499
8	Gucci	Chic Design	Standard	Eco-Friendly Materials	Local Production	With Sustainability Certificate	-20% Average	39,52561
9	Gucci	Chic Design	Unique	Eco-Friendly Materials	Local Production	No Sustainability Certificate	-20% Average	39,4066
10	Stella McCartney	Chic Design	Unique	Eco-Friendly Materials	Off-Shore Production	With Sustainability Certificate	-20% Average	39,32352
11	Gucci	Traditional Design	Unique	Eco-Friendly Materials	Off-Shore Production	With Sustainability Certificate	-20% Average	39,24057
12	Gucci	Traditional Design	Unique	Eco-Friendly Materials	Local Production	With Sustainability Certificate	-10% Average	39,18274
13	Stella McCartney	Traditional Design	Unique	Eco-Friendly Materials	Local Production	With Sustainability Certificate	-20% Average	38,3325
14	Gucci	Chic Design	Unique	Eco-Friendly Materials	Local Production	With Sustainability Certificate	Average	37,37483
15	Gucci	Traditional Design	Standard	Eco-Friendly Materials	Local Production	With Sustainability Certificate	-20% Average	36,63721
16	Gucci	Traditional Design	Unique	Eco-Friendly Materials	Local Production	No Sustainability Certificate	-20% Average	36,5182
17	Stella McCartney	Traditional Design	Unique	Eco-Friendly Materials	Off-Shore Production	With Sustainability Certificate	-20% Average	36,19957
18	Gucci	Chic Design	Unique	Eco-Friendly Materials	Local Production	With Sustainability Certificate	+10% Average	34,6297
19	Gucci	Traditional Design	Unique	Eco-Friendly Materials	Local Production	With Sustainability Certificate	Average	34,48643
20	Gucci	Chic Design	Unique	Synthetic Materials	Local Production	With Sustainability Certificate	-20% Average	32,69304
21	Brunello Cucinelli	Traditional Design	Unique	Eco-Friendly Materials	Local Production	With Sustainability Certificate	-10% Average	31,78804
22	Gucci	Traditional Design	Unique	Eco-Friendly Materials	Local Production	With Sustainability Certificate	+10% Average	31,7413
23	Brunello Cucinelli	Chic Design	Unique	Eco-Friendly Materials	Local Production	With Sustainability Certificate	-10% Average	30,61486
24	Gucci	Chic Design	Unique	Eco-Friendly Materials	Off-Shore Production	With Sustainability Certificate	-10% Average	30,5177
25	Brunello Cucinelli	Traditional Design	Unique	Eco-Friendly Materials	Off-Shore Production	With Sustainability Certificate	-20% Average	30,42975
26	Gucci	Traditional Design	Unique	Synthetic Materials	Local Production	With Sustainability Certificate	-20% Average	29,80464
27	Brunello Cucinelli	Chic Design	Unique	Eco-Friendly Materials	Off-Shore Production	With Sustainability Certificate	-20% Average	29,25658
28	Brunello Cucinelli	Traditional Design	Unique	Eco-Friendly Materials	Local Production	With Sustainability Certificate	Average	29,00931
29	Brunello Cucinelli	Traditional Design	Unique	Synthetic Materials	Local Production	With Sustainability Certificate	-20% Average	28,58989
30	Brunello Cucinelli	Traditional Design	Standard	Eco-Friendly Materials	Local Production	With Sustainability Certificate	-20% Average	28,56953

Table 8-10: Ranked list of concepts: top 30 (taken from the Conjoint.ly results report)

		Count	Percentage
Brand	Brunello Cucinelli	9	30%
	Gucci	17	57%

	Stella McCartney	4	13%
Design	Chic Design	14	47%
	Traditional Design	16	53%
Type of Materials	Eco-Friendly Materials	27	90%
	Synthetic Materials	3	10%
Uniqueness	Standard	3	10%
	Unique	27	90%
Location of Production	Local Production	23	77%
	Off-Shore Production	7	23%
Sustainable Certification	No Sustainability Certificate	2	7%
	With Sustainability Certificate	28	93%
Price	+10% Average	2	7%
	-10% Average	5	17%
	-20% Average	20	67%
	Average	3	10%

Table 8-11: Top 30 concepts broken down into percentages.

Rank	Brand	Design	Uniqueness	Type of Materials	Location of Production	Sustainable Certification	Price	Value to customers
252	Brunello Cucinelli	Traditional Design	Unique	Synthetic Materials	Local Production	No Sustainability Certificate	Average	-0,01362
471	Gucci	Traditional Design	Standard	Synthetic Materials	Off-Shore Production	No Sustainability Certificate	+20% Average	-42,028
472	Stella McCartney	Chic Design	Standard	Synthetic Materials	Local Production	No Sustainability Certificate	+10% Average	-42,3772
473	Stella McCartney	Chic Design	Standard	Synthetic Materials	Off-Shore Production	No Sustainability Certificate	+20% Average	-43,5038
474	Stella McCartney	Traditional Design	Standard	Synthetic Materials	Local Production	No Sustainability Certificate	+20% Average	-44,4948
475	Stella McCartney	Chic Design	Standard	Synthetic Materials	Off-Shore Production	No Sustainability Certificate	+10% Average	-44,5101
476	Stella McCartney	Traditional Design	Standard	Synthetic Materials	Local Production	No Sustainability Certificate	+10% Average	-45,5012
477	Brunello Cucinelli	Traditional Design	Standard	Synthetic Materials	Off-Shore Production	No Sustainability Certificate	+20% Average	-45,5119
478	Stella McCartney	Traditional Design	Standard	Synthetic Materials	Off-Shore Production	No Sustainability Certificate	+20% Average	-46,6278
479	Brunello Cucinelli	Chic Design	Standard	Synthetic Materials	Off-Shore Production	No Sustainability Certificate	+20% Average	-46,6851
480	Stella McCartney	Traditional Design	Standard	Synthetic Materials	Off-Shore Production	No Sustainability Certificate	+10% Average	-47,6341

Table 8-12: Ranked list of concepts: the first negative utility concept, and the bottom 10 (taken from the Conjoint.ly results report)

Agglomeration Schedule

Stage	Cluster Combined Cluster 1	Cluster 2	Coefficients	Stage Cluster First Appears Cluster 1	Cluster 2	Next Stage
104	2	19	367.695	85	90	105
105	2	8	401.193	104	94	108
106	1	3	442.872	103	101	110
107	5	11	494.431	102	87	109
108	2	24	555.293	105	98	111
109	5	10	627.854	107	100	110
110	1	5	716.353	106	109	111
111	1	2	875.587	110	108	0

Table 8-13: Agglomeration Schedule by the Ward's method

Agglomeration Schedule

Stage	Cluster Combined Cluster 1	Cluster 2	Coefficients	Stage Cluster First Appears Cluster 1	Cluster 2	Next Stage
103	11	19	24.360	92	100	107
104	2	29	24.899	86	95	105
105	2	24	26.254	104	90	109
106	5	10	28.971	101	102	108
107	1	11	29.704	98	103	110
108	5	16	37.085	106	99	110
109	2	44	37.784	105	93	111
110	1	5	41.225	107	108	111
111	1	2	64.488	110	109	0

Table 8-14: Agglomeration schedule by the furthest neighbor algorithm

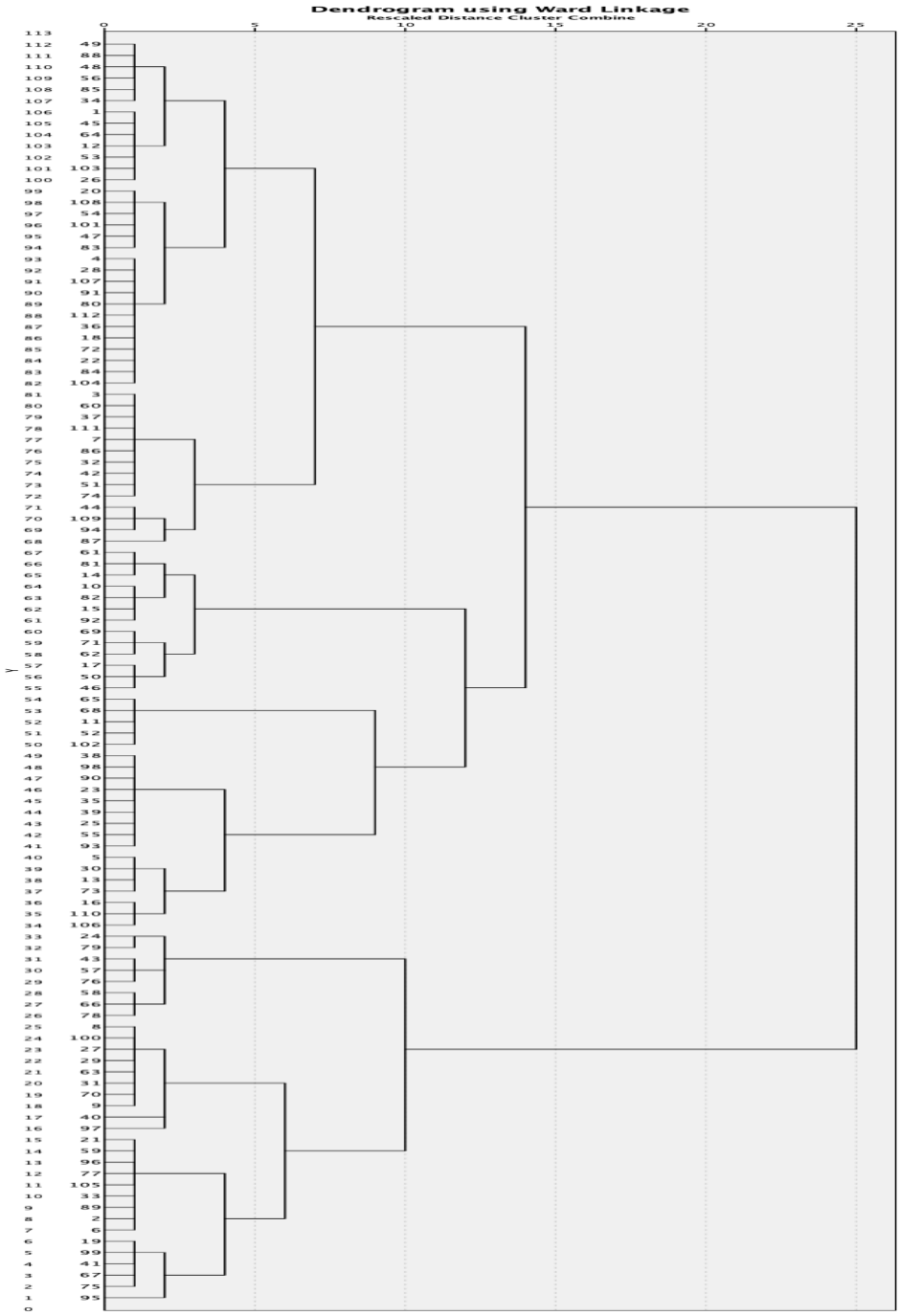

Table 8-15: Dendrogram using Ward's Linkage

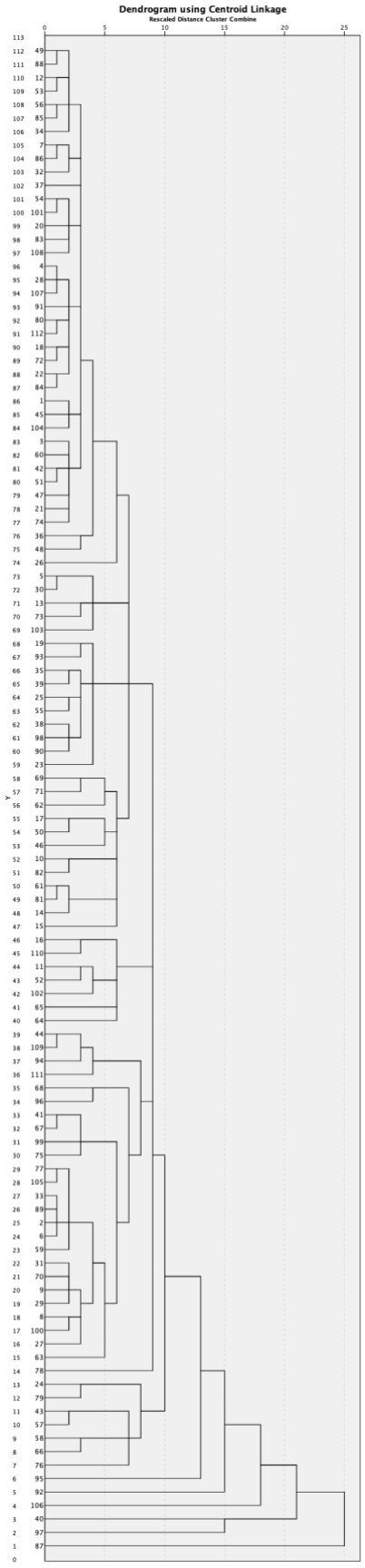

Table 8-16:Dendrogram using Single Linkage

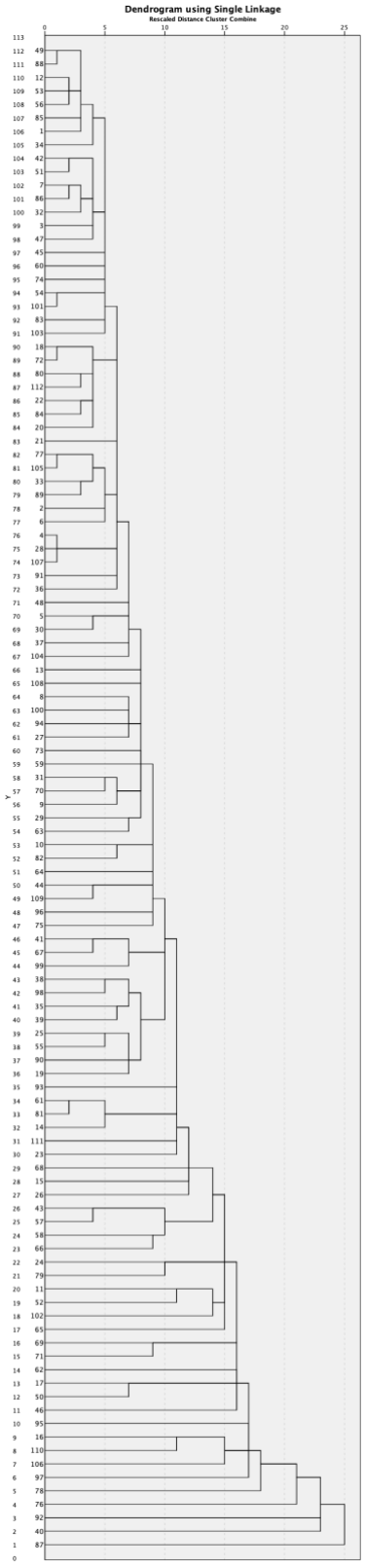

Table 8-17:Dendrogam using Single Linkage

Iteration History[a]

Iteration	Change in Cluster Centers 1	2	3
1	.242	.336	.135
2	.116	.203	.153
3	.115	.083	.061
4	.101	.090	.038
5	.000	.000	.000

Table 8-18: Iteration History of the K-means clustering Analysis

			cluster 1.00	2.00	3.00	Total
income	€100,000 to €300	Count	5	3	1	9
		% within income	55.6%	33.3%	11.1%	100.0%
	€15,000 or less	Count	7	2	10	19
		% within income	36.8%	10.5%	52.6%	100.0%
	€15,000 to €50,0	Count	14	15	26	55
		% within income	25.5%	27.3%	47.3%	100.0%
	€300,000 or up	Count	1	0	0	1
		% within income	100.0%	0.0%	0.0%	100.0%
	€50,000 to €100,	Count	11	7	10	28
		% within income	39.3%	25.0%	35.7%	100.0%
Total		Count	38	27	47	112
		% within income	33.9%	24.1%	42.0%	100.0%

Table 8-19: Distribution of income groups across clusters

			cluster 1.00	2.00	3.00	Total
gender	Man	Count	15	16	22	53
		% within gender	28.3%	30.2%	41.5%	100.0%
	Non-binary	Count	2	0	0	2
		% within gender	100.0%	0.0%	0.0%	100.0%
	Woman	Count	21	11	25	57
		% within gender	36.8%	19.3%	43.9%	100.0%
Total		Count	38	27	47	112
		% within gender	33.9%	24.1%	42.0%	100.0%

Table 8-20: Distribution of genders across clusters

			cluster			
			1.00	2.00	3.00	Total
age	18-25	Count	22	9	28	59
		% within age	37.3%	15.3%	47.5%	100.0%
	26-41	Count	10	11	11	32
		% within age	31.3%	34.4%	34.4%	100.0%
	42-57	Count	2	4	7	13
		% within age	15.4%	30.8%	53.8%	100.0%
	Over 58	Count	2	2	1	5
		% within age	40.0%	40.0%	20.0%	100.0%
	Under 18	Count	2	1	0	3
		% within age	66.7%	33.3%	0.0%	100.0%
Total		Count	38	27	47	112
		% within age	33.9%	24.1%	42.0%	100.0%

Table 8-21 Age profile of each cluster

Rank	Brand	Design	Uniqueness	Type of Material	Production Location	Sustainable Certificate	Price
1	Gucci	Chic Design	Unique	Eco Materials	Local	With Sustainable Certificate	Average
2	Gucci	Chic Design	Unique	Eco Materials	Local	With Sustainable Certificate	+10% Average
3	Gucci	Traditional Design	Unique	Eco Materials	Local	With Sustainable Certificate	Average
4	Gucci	Chic Design	Unique	Eco Materials	Local	With Sustainable Certificate	+10% Average

5	Gucci	Chic Design	Standard	Eco Materials	Local	With Sustainable Certificate	Average
6	Gucci	Chic Design	Unique	Eco Materials	Local	Without Sustainable Certificate	Average
7	Gucci	Chic Design	Unique	Eco Materials	Local	With Sustainable Certificate	+20%Average
8	Gucci	Chic Design	Standard	Eco Materials	Local	With Sustainable Certificate	+10% Average
9	Gucci	Chic Design	Unique	Eco Materials	Local	Without Sustainable Certificate	+10%Average
10	Gucci	Traditional Design	Standard	Eco Materials	Local	With Sustainable Certificate	Average

Table 8-22: the 10 highest ranked product concepts for the simulation