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Article

Sustainable Fashion: Conceptualization, Purchase Determinants, and Willingness to Pay More

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Abstract: The concept of sustainable fashion is becoming more relevant in today's society. The purpose of this research is to identify the determinants of the purchase intention of sustainable fashion, and the relationship between price and the purchase of sustainable fashion. A questionnaire was administered, which made it possible to define the concept of sustainable fashion, to use PLS-SEM to identify the determinants, and to apply linear regression models and *t*-tests of two independent samples (two-tailed test). The concept of sustainable fashion comprises the dimensions of manufacturing with a reduced environmental impact, consuming second-hand fashion products, manufacturing in an environmentally friendly way, reusing fashion products, manufacturing to last longer, manufacturing according to fair trade principles, using recycled materials, and manufacturing from organic materials. The PLS-SEM results show that purchase intention is determined by consumer knowledge, environmental beliefs, and willingness to pay more. The research also revealed that there is a non-linear (quadratic or exponential) relationship between the price of the product and the price increase that consumers are willing to pay and that they value the dimensions of sustainable fashion differently. The purchase intention determinants of consumers and non-consumers of sustainable fashion are identical, yet the dimensions of sustainable fashion are valued differently by each group.

Keywords: sustainable fashion; sustainable fashion price; willingness to pay more; purchase intention; consumer knowledge; environmental beliefs

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1. Introduction

The concept of sustainable fashion has gained significant attention in recent years due to the increasing awareness of environmental and social issues in the fashion industry. In the view of several authors, the fashion industry is one of the most polluting industries (Jacometti 2019; Suraci 2021), occupying second place (Mariana-Claudia 2022), and the implementation of sustainable fashion practices is beneficial to the environment and contributes to a reduction in the environmental impact (Pandey et al. 2020). Understanding what consumers perceive as sustainable fashion and the price impact on the purchase decision of sustainable fashion is crucial for the industry to move towards sustainability (Dropulić and Krupka 2020). Specifically, there is a need for a clear and precise definition of what sustainable fashion is, especially from a consumer perspective (Morais et al. 2023a). Furthermore, sustainable fashion is usually more expensive than conventional fashion for many reasons (Haines and Lee 2022). Organic and natural materials such as cotton, linen, or silk are more expensive to produce than synthetic materials such as polyester. Also, contributing to the higher prices, sustainable fashion brands invest in high-quality production processes and materials. Fair trade practices, which ensure fair wages and ethical working conditions for workers, also increase costs for sustainable fashion (Goworek 2011; Shaw et al. 2006). But even though the initial cost is higher, sustainable fashion products may

be more durable and of higher quality, resulting in a lower cost per wear over time when compared to fast fashion alternatives. Additionally, as more brands adopt eco-friendly practices and technologies, prices are expected to fall as consumer demand for sustainable fashion grows. To win consumer approval and avoid reputational damage, it is increasingly important to become a purpose-driven brand or company that recognizes the importance of creating value beyond profit (Rolland 2023).

Sustainable fashion focuses on designing, creating, and marketing socially and environmentally responsible fashion products, and it aims to address the adverse effects of this industry on greenhouse gas emissions, climate change (Ray and Nayak 2023), and social impacts (Mizrachi and Tal 2022). It emphasizes sustainable consumption and marketing, with a strong commitment to understanding consumer behavior, purchasing patterns, and the gap between attitudes and behavior (Zhou et al. 2023). It also includes the integration of sustainable materials and practices throughout the fashion supply chain (de la Motte and Ostlund 2022). In fact, this involves the entire production chain, from polyester production to wasteful fashion consumption patterns and landfilling (Mizrachi and Tal 2022). The goal of sustainable fashion is to achieve continuous product value by selecting appropriate fashion design elements that maintain product value and promote sustainability (Almalki and Tawfiq 2023). These design elements include classical, transformative, patterned, multi-material, and decorative designs (Bartkutė et al. 2023). Socially responsible brands that offer eco-friendly products, and have regulatory policies that cater to conscious consumers' demands are key players in sustainably (Khandual and Pradhan 2019). The concept of system maintainability is a popular solution to the conflicts between fast fashion and consumers (Woodside and Fine 2019). By reducing textile waste, and environmental depletion, and improving the ethical treatment of workers, it aims to create a more sustainable industry (Jeong and Ko 2021). Consumers who are now more empowered to purchase ethically due to the advent of socially and environmentally conscious habits are shaping the fashion industry.

Previous research has examined the factors that influence the decision to purchase sustainable fashion, such as brand reputation, product quality, and social responsibility, among other criteria. There is, however, a shortage of research on the role of price in this decision-making process, specifically the impact of price level on the choice between traditional and sustainable fashion. The current literature on sustainable fashion has not adequately addressed the role of price in the purchase intention of sustainable fashion and this research aims to fill this knowledge gap by examining this relationship. Equally compelling is the relationship between the dimensions that comprise sustainable fashion and the perceived value consumers assign to them. The rationale behind this study is to provide insights into the price sensitivity of consumers towards sustainable fashion and to identify the price range that is optimal for encouraging sustainable fashion purchases. Therefore, the research questions are: (i) "What are the determinants of the intention to buy sustainable fashion?"; (ii) "What is the relationship between price and the purchase decision of sustainable fashion?".

2. Literature Review

2.1. What Is Sustainable Fashion

Sustainable fashion encompasses practices that aim to minimize the impact on the environment and maximize social responsibility throughout the entire life cycle of a fashion product (Henninger et al. 2016; Mukendi et al. 2020). It is the consideration of the sourcing, production, distribution, consumption, and disposal of clothing in a way that is ethical, environmentally friendly, and socially conscious. Often associated with the slow fashion movement, sustainable fashion focuses on sustainability values like good working conditions and reducing pollution. Using environmentally friendly materials, reducing the use of pesticides, promoting recycling, and upcycling collections, and emphasizing transparency and traceability in the supply chain are key aspects of sustainable fashion (Henninger et al. 2016). As a whole, it involves a holistic approach to the production of

fashion that takes into account the long-term impact on the environment, society, and the economy, which has been referred to as the Triple Bottom Line (3Ps): People, Planet, and Profit (Rolland 2023).

A literature analysis on sustainable fashion has identified two major lines of research in this area (Mukendi et al. 2020). The first one is pragmatic change, and it tends to focus on practical and incremental change within organizations and with consumers. Pragmatic change is about the implementation of sustainable practices and initiatives that are feasible and realistic in the current business environment. The second one is radical change, and it advocates more transformative and revolutionary shifts in organizational and consumer behavior towards sustainability, in contrast to pragmatic change. Radical change seeks to challenge existing fashion industry norms and practices and drive significant systemic change to achieve sustainability goals. However, other authors strongly endorse the idea of a central category, 'take and return', based on several principles of design that are linked to other categories: material sourcing, fabric treatment, production methods, resource conservation, social impact, information transparency, and attachment and appreciation (Aakko and Koskennurmi-Sivonen 2013). Shen et al. (2013) claim that eight dimensions make up the sustainability fashion construct, namely, recycle, vintage, artisan, custom made, fair trade, locally made, organic, and vegan. Other factors often mentioned are reduced environmental impact, ethical labor practices, quality and durability, and circular economy. As for Jung and Jin (2014), they associated the concept of slow fashion with sustainable fashion, indicating the following dimensions: "caring for producers and local communities for sustainable living (equity and localism); connoting history for sustainable perceived value of the product (authenticity); seeking diversity for the sustainable fashion world (exclusivity); and maximizing product life and efficiency for a sustainable environment (functionality)" (p. 510). In conclusion, it is worth noting that defining sustainable fashion is critical to prevent problems such as greenwashing that other businesses with a more established and longstanding presence in the market have experienced (Henninger et al. 2016).

2.2. The Impact of Traditional Fashion

The impact that traditional fashion has on the environment is a significant one. Research has proven that the textile industry, including the production, processing, use, and end-of-life of garments, contributes to environmental degradation (Karpova et al. 2022). It has been found that specific fibers used in traditional fashion, such as conventional cotton, silk, jute, flax, and polyester, have varying degrees of impact on categories such as fossil resource depletion, global warming, land use, terrestrial ecotoxicity, and water use (Karpova et al. 2022). In addition, dress codes and planned obsolescence in fashion, which are driven by an overriding capitalist logic, also add to these effects (Gonzalez et al. 2023). Recognizing the barriers created by societal norms and institutional logic that hinder the transition to a more sustainable fashion market is crucial (Wiedemann et al. 2020). It is by understanding these environmental impacts and challenging the dominant logic of fashion that there is an opportunity to steer the fashion industry towards more sustainable practices (Chakraborty and Sadachar 2023).

The social impact should also be mentioned. The traditional fashion industry has a substantial social impact, including the exploitation of labor, poor working conditions, and wages that are insufficient to live on. Labor exploitation and human rights abuses are widespread in the branded fashion industry, particularly in developing countries (Crinis 2019). Employees in this industry, known as the 'working poor', are often paid below subsistence wages for full-time work, which is seen as unjust and degrading (Dobos 2019). Low-wage workers in middle-income countries face cardiovascular risk factors, highlighting the need for complementary interventions to support healthy dietary intake (Stein 2017). Additionally, pregnant women employed in the garment industry are vulnerable to exploitation, including abuse, discrimination, forced abortions, unpaid overtime, and unfair working conditions (Barnes and Kozar 2008). This evidence underlines the urgency

of strengthening labor laws and regulations to protect workers' rights and ensure fair and safe working conditions in the fashion industry.

As for the economic impact, resource depletion and dependence on cheap labor should be explored. The expansion and projected growth of this industry contribute to climate change and CO2 emissions, as well as the depletion of natural resources (Papamichael et al. 2022). The clothing and textiles industry generates huge global revenue. However, it is important to acknowledge that this industry poses threats to environmental sustainability due to its natural resource consumption and pollution generation (Putsche 2000). Moreover, the apparel industry faces significant social and economic sustainability challenges, including forced and child labor, low wages, and inadequate worker representation (Fan and Zhou 2020). It is well known that the clothing industry in developed countries faces production cost disadvantages in comparison with countries with abundant labor, leading to a decline in domestic production (Connell and Kozar 2017). These challenges emphasize the call for a new circular business model in the fashion industry that fosters resource-efficient production, the use of natural materials, and fair labor practices (Doeringer and Crean 2006; Connell and Kozar 2017).

2.3. Principles of Sustainable Fashion

Sustainable fashion principles involve eco-friendly production and distribution methods, as well as values such as recycled, vegan, upcycled, zero waste, local production, fair trade, women-owned, give back, and animal protection (Kim and Suh 2022). Another set of principles includes the dimensions of sustainable clothing design, with criteria such as enterprise, design, and consumer sides, and key factors like appreciation (Fan and Chang 2023). The transition to a circular economy is also an important principle, requiring knowledge, financial investment, and consumer purchasing power (Bartkutė et al. 2023). The fashion industry firmly acknowledges the circular economy as the foremost business model for sustainability. Circular economy incorporates, among other things, design for longevity, repair, reuse, and recycling. Strategies such as optimizing material and energy efficiency, extracting value from waste, and embracing a stewardship role are implemented (Colombi and D'Itria 2023). Slow fashion is also a concept within sustainable fashion that is often portrayed on social media as an eco-marketplace, an authentic experience of self-expression, and a community value. It is particularly empowering for women (Lee and Weder 2021).

Sustainable materials are an essential part of sustainable fashion, as they address the environmental impact of the fashion industry and encourage more responsible practices. The use of natural materials, such as organic wool and natural colorants, provides a safe and eco-friendly alternative to hazardous synthetic dyes (Almalki and Tawfiq 2023; Lin et al. 2022). Additionally, the integration of innovative materials like bacterial cellulose and bio-based fabrics can significantly contribute to the advancement of sustainable textiles (Rognoli et al. 2022; Wood et al. 2023). There is no doubt that the fashion industry is increasingly recognizing the need for a sustainable transition and is exploring alternative materials to achieve this.

Ethical manufacturing, decent wages, secure work conditions, and transparency are all essential elements of sustainable fashion. The fashion industry is confronted with concerns related to labor exploitation, environmental impacts, and the use of hazardous chemicals and natural resources (Aakanksha and Aravendan 2023). To address these issues, brands must adopt ethical approaches and pre-evaluate suppliers based on various parameters (Dhir 2022). Clearly, public or not-for-profit certification organizations, as well as tax incentives and subsidies, can encourage businesses to engage in sustainable production (Nandkeolyar and Chen 2023). Last but not least, transparency and traceability in the supply chain are necessary to improve the fashion industry's sustainability and ethical practices (Mizrachi and Tal 2022), and fashion brands are making significant efforts to improve sustainability reporting and increase transparency (Jestratijevic et al. 2022).

2.4. Key Purchasing Determinants of Sustainable Fashion

The determinants of sustainable fashion purchasing have been the subject of numerous research studies. Several determinants have been established, although they are not always consistently or systematically reported. The main purchase determinants of sustainable fashion are environmental consciousness, perceived value, perceived risk, motivation, opportunity, ability, personal norms, social norms, and environmental awareness (Hassan et al. 2022; Lin and Chen 2022). Other authors claim that the determinants include consumer knowledge, willingness to pay more, moral obligation, awareness of consequences, previous sustainable purchasing behavior, fashion orientation, conspicuous consumption, and environmental consciousness (Floriano and Matos 2022; Mehta et al. 2023; Morais et al. 2023b; Tian et al. 2022). Other studies revealed economic, cognitive, and ecological factors such as affordability, ecological concerns, and ascription of responsibility (Tandon et al. 2023). Motivation, opportunity, and ability also play a role in influencing consumers' purchase intentions for sustainable apparel (Hasbullah et al. 2022). Lack of trust in fashion companies and their sustainable statements, as well as higher prices, are barriers preventing consumers from buying sustainable products (Riesgo et al. 2023a). Consumer values, knowledge, normative influences, and fashion orientation are frequently researched themes in sustainable fashion consumption (Dabas and Whang 2022). Nevertheless, price remains a critical purchasing driver for the average consumer (Lin and Chen 2022).

2.4.1. Consumer Knowledge

Environmental consumer knowledge is defined as the understanding of a range of environmental factors, including the impact of purchasing decisions on ecological sustainability, familiarity with eco-labels, awareness of environmental issues in specific industries such as apparel and food production systems, and the ability to make informed choices based on environmental considerations (Taufique et al. 2017). Consumers have a high level of knowledge about how apparel is made and the environmental impact of the use of man-made fibers and intensive cotton production, according to Vehmas et al. (2018). Ritch (2015) also points out that consumers have little awareness of the environmental impacts of fashion production, and that many consumers try to avoid buying products made under exploitative conditions. Yet, they feel they have little information about the working conditions involved in the production of the products they want to buy. According to Kang et al. (2013), consumer knowledge consists of product familiarity and that product familiarity and information from previous experiences can affect purchase intention. As for Lang and Wei (2019), they found that environmental fashion knowledge has an impact on the intention to buy clothes that can be transformed, i.e., reused. Zheng and Chi (2015) are more comprehensive, stating that knowledge has a significant effect between attitudes and intentions to purchase sustainable fashion products.

A body of work exists describing how consumer knowledge plays a significant role in the intention to buy sustainable fashion (Lavuri et al. 2023; Leclercq-Machado et al. 2022). Several authors have shown that consumer knowledge about environmental issues and sustainable practices positively influences their attitude toward sustainable apparel and their intention to purchase such products (Arora and Manchanda 2022; Lin and Chen 2022; Okur et al. 2023). Specifically, environmental consciousness and perceived environmental knowledge have been identified as key predictors of consumers' intention to purchase sustainable apparel. Additionally, the level of consumer knowledge about sustainable apparel has been found to moderate the relationship between a positive attitude toward sustainable apparel and intention to purchase (Arora and Manchanda 2022; Lin and Chen 2022; Okur et al. 2023). This suggests that consumers who are more knowledgeable about sustainable fashion are more likely to have a positive attitude toward it and a higher intention to purchase sustainable apparel. That said, attitudes towards sustainable fashion are the most influential in determining intention to purchase but are negatively influenced by greenwashing concerns and perceived aesthetic risk (Rausch and Kopplin

2021). According to the statements mentioned in the above, the research hypothesis is proposed:

H1: *Consumers who are more environmentally knowledgeable have a higher intention to purchase sustainable fashion.*

2.4.2. Environmental Beliefs

Environmental beliefs refer to beliefs that may be behavior- or product-specific, such as beliefs about buying a particular product or taking a particular pro-environmental action, or general beliefs about the environment and green consumption (Pagiaslis and Krontalis 2014). Environmental beliefs influence consumers' purchasing behavior, according to Sharma et al. (2017). In the same vein, for Davari and Strutton (2014), consumers who are internally motivated by environmental concerns pursue ways to preserve the environment, believing that by purchasing and consuming green products they are helping to protect the environment, even to the point of paying higher prices compared to non-ecological products.

Environmental beliefs have been found to have a significant impact on consumers' intention to buy sustainable fashion (Lin and Chen 2022; Penz and Drewes 2022). Besides, several studies have shown that consumers who have a higher level of environmental awareness and concern are more likely to have a positive attitude towards sustainable clothing and a higher intention to purchase it (Leclercq-Machado et al. 2022; Penz and Drewes 2022). Furthermore, perceived environmental knowledge has been identified as a predictor of purchase intention, suggesting that consumers who are more aware of current environmental issues are more likely to purchase sustainable clothing (Campos et al. 2023). Finally, the adoption of a voluntary simplicity lifestyle has been found to positively influence environmental activism and sustainable fashion purchase intention (Campos et al. 2023). Taking into account the aforementioned statements, the research hypothesis is proposed:

H2: *Consumers who have environmental beliefs have a higher intention to purchase sustainable fashion.*

2.4.3. Willingness to Pay More

Price is one of the biggest drivers of the difference between attitudes and behaviors towards sustainable fashion, as consumers are concerned about sustainability but fail to translate their intentions into sustainable purchasing behavior (Wiederhold and Martinez 2018). Yet some consumers do not consider ethical issues when buying fashion and price is the deciding factor, preferring to buy more clothes at a lower price than worrying about ethical issues in the production of clothes (Joergens 2006). When it comes to fashion consumers, they are unwilling to buy sustainable products if they perceive the price to be higher than acceptable and therefore are likely not to buy (Chan and Wong 2012). Aschemann-Witzel and Zielke (2017) identified that the primary perceived barrier to purchasing green products is the price. Indeed, McNeill and Moore (2015) asserted that consumers mentioned the premium price of sustainable fashion brands as a major barrier to purchasing sustainable clothing, despite these consumers stating that they wanted to be more sustainable and engage more with sustainable fashion. The willingness to pay more for sustainable fashion is further supported by Davari and Strutton (2014) and Henninger et al. (2016). Summing up, and in consideration of the aforementioned, the research hypothesis follows:

H3: *Consumers who are willing to pay more have a higher intention to purchase sustainable fashion.*

2.4.4. Purchase Intention

Purchase intention is a representation of the consumer's determination to purchase the product at a certain point in time after the collection of the desired information (Saxena 2011). It is related to the individual's level of consciousness when attempting to purchase a product from a brand (Spears and Singh 2004), as the purchase intention represents the

likelihood that consumers are willing to purchase a particular product (Lou and Yuan 2019). Accordingly, Santiago et al. (2020) suggested that purchase intention refers to a specific moment or situation in which the consumer is willing to buy the product. For Mirabi et al. (2015), purchase intention is related to consumer perceptions, attitudes, and behavior, and it is a measure that becomes the best predictor of an individual's behavior (Dewanto and Belgiawan 2020). Chang and Watchravesringkan (2018) concluded that there is a strong relationship between the intention to purchase sustainable fashion products and their consumption. In line with this, Dewanto and Belgiawan (2020) also found that the intention to purchase sustainable fashion products has a positive, significant, and highly influential impact on the purchase of these products. The same was found by Pereira (2020).

2.5. The Impact of Price on Sustainable Fashion Purchases

The relationship between price and sustainable fashion purchases is multidimensional. For slow and circular fashion brands, pricing is often value-based and targeted at middle- to high-income consumers (Hapsari and Belgiawan 2023), but the relationship between price and quality in sustainable fashion is not straightforward. Research shows that low-priced garments, often associated with fast fashion, are perceived to have lower quality and durability, leading to disposal after minimal wear (Wakes et al. 2020). Consumers are positive about the sustainability of fashion brands, but sustainability is one of the least important factors in their purchasing decisions (Mandarić et al. 2022). The key takeaway is that while consumers may value sustainability, it may not be the primary driver of their purchasing behavior. However, there is research that supports the opposite. In fact, research shows that sustainable fashion consumers prioritize fashion, environmental concerns, and perceived consumer effectiveness over price when making purchasing decisions (Riesgo et al. 2023a, 2023b).

The evidence of a clear lack of agreement among researchers is further highlighted by the following remarks. The willingness of consumers to pay a premium for sustainable fashion products is influenced by their environmental concerns and the perceived value of the product (Dangelico et al. 2022). However, the viability of eco-fashion brands is challenged by factors such as environmental concern, sustainable pricing, and sustainable behavior, with a negative correlation between sustainable pricing and purchase intentions (D'Souza et al. 2015). The literature suggests that price sensitivity remains a significant barrier to widespread adoption, although some consumers are willing to pay a premium for sustainable options. Additionally, there are contradictions in consumer behavior. For example, although Gen Z consumers are environmentally aware, they do not always reflect their values in their purchasing behavior. This suggests a gap between their values and actual decisions, which may be influenced by brand attributes and advertising strategies (Palomo-Domínguez et al. 2023). Furthermore, luxury fashion customers have conflicting attitudes, as they express interest in environmentally friendly clothing while also showing reluctance to purchase sustainable fashion products (Delieva and Eom 2019). Overall, while there is a segment of consumers who are willing to pay a premium for sustainable fashion, influenced by their environmental concerns and perceived value (Dangelico et al. 2022), there are also significant challenges related to price sensitivity (D'Souza et al. 2015) and inconsistencies between consumer values and behavior (Palomo-Domínguez et al. 2023). These findings suggest that although the market for sustainable fashion is expanding, there are still obstacles to overcome in terms of pricing and consumer attitudes (Delieva and Eom 2019). Addressing these challenges may require specific marketing strategies and a deeper understanding of consumer behavior to promote wider adoption of sustainable fashion practices. Therefore, businesses need to understand consumer reactions to price adjustments in sustainable fashion (Tascioglu et al. 2019).

Further insights come from other specific studies. Consumers are willing to pay up to 20% more for a sustainable clothing product (Ciasullo et al. 2017). However, Chan and Wong (2012) claimed that fashion consumers would buy sustainable fashion products if the premium price was no more than 10 percent of the standard price, but a percentage of 25 to

30 percent above the premium price was deemed unacceptable. Additionally, those who intend to purchase slow fashion products are willing to pay higher prices than for other products (Şener et al. 2019). However, for the average consumer, price remains the most important factor when making a purchase, with 31.9% of the sample always choosing the lowest price regardless of other attributes (Shen 2023). These latest studies clearly reinforce and highlight the importance of deepening the relationship between the price consumers are willing to pay and the purchasing of sustainable fashion products. As the literature reveals several studies with inconsistent results, the relationship between price and willingness to pay more for sustainable fashion will be the subject of investigation, proposing:

Research proposition: *There is a relationship between price and willingness to pay more for sustainable fashion.*

3. Conceptual Model, Research Hypotheses and Research Proposition

The purpose of this research is twofold: (i) identify the determinants of the intention to purchase sustainable fashion; (ii) establish the relationship between price and the willingness to pay more for dimensions in sustainable fashion. The existence of two objectives that require the application of different models led to the division into two subsections in Section 5: (i) partial least squares structural equation modeling to determine the key purchasing determinants of sustainable fashion; (ii) willingness to pay more.

The first subsection is aimed at identifying the determinants of the intention to purchase sustainable fashion. The literature review identified the research hypotheses outlined in Table 1.

Table 1. Research hypotheses.

Research Hypotheses	Description
H1	Consumers who are more environmentally knowledgeable have a higher intention to purchase sustainable fashion.
H2	Consumers who have environmental beliefs have a higher intention to purchase sustainable fashion.
H3	Consumers who are willing to pay more have a higher intention to purchase sustainable fashion.

Source: authors.

The conceptual model shown in Figure 1 was designed and developed given the constructs and research hypotheses presented in the previous table and supported by the literature.

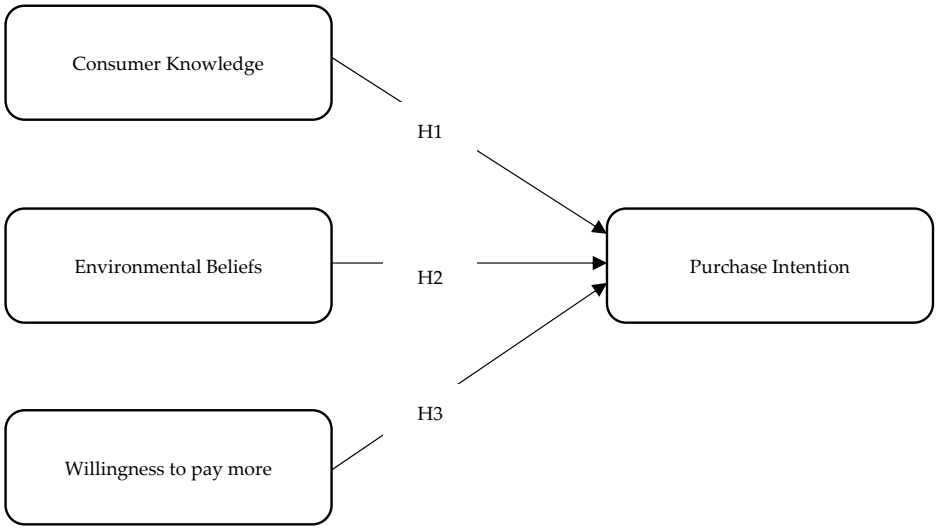

Figure 1. Conceptual model intention to purchase sustainable fashion. Source: authors.

The second subsection examines the research proposition that there is a relationship between price and willingness to pay more for sustainable fashion. In addition, a new section has been introduced as a result of the review of the bibliography and the first part of the questionnaire, which defines the concept of sustainable fashion.

4. Methodology

The methodology details the intervention program to be devised, and it is therefore required to outline the methods to be used for data collection and analysis. This research will be exploratory and quantitative to address the research questions and test the research hypotheses formulated on which the literature review is based.

4.1. Sample and Sampling

The objective of this research is to study the habits of consumers who are eighteen years of age or older, regardless of their gender. The target population encompasses all such individuals who engage in the purchase of fashion products. A representative sample, which is a subset of the population (Portuguese inhabitants) that was selected to be surveyed, has been chosen from this population. This sample will be used to draw conclusions about the entire population.

The research sample was obtained using non-probabilistic convenience and snowball sampling techniques. The convenience sampling approach involves selecting individuals who are readily available and convenient for the researcher to study. Snowball sampling, on the other hand, relies on existing study participants to recruit future participants from their acquaintances, resulting in a sample size that expands like a snowball rolling down a hill. Respondents in this case are typically chosen because they happen to be in the right place at the right time. The selected sample comprises participants who were contacted via digital social media, such as Facebook, Instagram, WhatsApp, and LinkedIn, as well as those who subscribed to a newsletter from various faculties of a university. All participants were invited to take part in the study via the digital channels mentioned in the previous paragraph. Participants' responses were received between April and May of 2023.

The data collected for this study will consist of primary data, which will be obtained through a structured questionnaire survey. The questionnaire is an effective method for obtaining relevant information from respondents through a series of predetermined questions. This approach will enable us to gather accurate and reliable data that will be essential for the success of this research project. The use of primary data will ensure that the information obtained is specific to the research topic and will provide a more comprehensive understanding of the phenomenon under investigation.

4.2. Questionnaire Structure, Sections and Scales

To address the research questions and the research hypotheses, a questionnaire was developed with the structure and sections described in Table 2.

Table 2. Questionnaire structure, sections, and supporting references.

Section	Items	References
What Is Sustainable Fashion?	Sustainable fashion advocates reducing the consumption of fashion products.	Author's own work *
	Sustainable fashion encompasses the reuse of fashion products.	
	Sustainable fashion encompasses the consumption of second-hand fashion products.	
	Sustainable fashion employs recycled materials.	
	Sustainable fashion is made from organic materials.	
	Sustainable fashion is made to last longer than conventional fashion.	
	Sustainable fashion is manufactured with a reduced environmental impact.	

Table 2. *Cont.*

Section	Items	References
What Is Sustainable Fashion?	Sustainable fashion is manufactured according to fair trade principles.	Author's own work *
	Sustainable fashion is manufactured in an environmentally friendly way.	
Consumer Knowledge	I'm very familiar with sustainable fashion products.	(Loureiro et al. 2018) *
	I often see sustainable fashion products in stores (both physical and online).	
	I buy sustainable clothing frequently.	
	I'm often a trial buyer of sustainable fashion products, even if I'm not a purchase buyer.	
	I often learn more about sustainable fashion products by reading articles or news.	
Environmental Beliefs	I am willing to contribute to the preservation of the environment.	(Lang and Wei 2019) *
	I believe that it is important to take personal responsibility for environmental problems.	
	I believe that we have a moral obligation to help the environment.	
	The increase in the rate of destruction of the environment is a serious problem.	
Willingness to pay more	I am willing to pay a higher price for a sustainable fashion product because it is sustainable for the environment.	(Chaudhary and Bisai 2018) *
	I am willing to pay an extra percentage for sustainable fashion products to support the efforts of the company/product to be sustainable for the environment.	
	I am proud to have a sustainable fashion product, even if it is more expensive than a conventional fashion product.	
Purchase Intention	I intend or consider buying a sustainable fashion product when I see it.	(Loureiro et al. 2018) *
	I intend to visit the store to buy a sustainable fashion product when I see it.	
	I am more likely to buy a fashion product if I know it is made with sustainable raw materials when I see one that meets my needs.	
Willingness to pay how much more?	Consider that you pay €50 for a t-shirt that has been produced in a conventional way. How much would you be willing to pay for a t-shirt produced under sustainable conditions?	Author's own work (ratio scale)
	Consider that you pay 90 euros for a pair of trousers produced under conventional conditions. How much would you be willing to pay for a pair of trousers produced under sustainable conditions?	
	Consider that you pay €150 for a pair of shoes produced under conventional conditions. How much are you willing to pay for a pair of shoes produced under sustainable conditions?	
	Consider that you pay €200 for a jacket produced under conventional conditions. How much would you be willing to pay for a jacket produced under sustainable conditions?	
How much do consumers value sustainable fashion?	Consider this: You paid 50 euros for a shirt produced under conventional conditions.	Author's own work (ratio scale)
	How much would you be willing to pay for this conventional shirt in a second-hand fashion shop?	
	How much would you be willing to pay for this conventional shirt made from recycled materials?	
	How much would you be willing to pay for this conventional shirt, but produced with organic materials?	
	How much would you be willing to pay for this conventional shirt, but produced to last longer than conventional fashion?	
	How much would you be willing to pay for this conventional shirt, but produced with a reduced environmental impact?	
	How much would you be willing to pay for this conventional shirt, but produced using fair trade principles?	
	How much would you be willing to pay for this conventional shirt, but produced in safe and suitable working environments?	
Demographic survey	Gender, age, gross monthly household income	

* 7-point scale (1—strongly disagree; 4—neither agree nor disagree; 7—strongly agree). Source: authors.

5. Results

The study sample comprised 434 participants. Furthermore, a question was formulated to determine if the participants were consumers of sustainable fashion. Table 3 contains the descriptive characterization of the sample.

Table 3. Descriptive characterization of the sample.

Are you buying sustainable fashion when you shop?				Yes (50.7%)		No (49.3%)	
Gender	Female			Male		Prefer not to say	
	79%			18.4%		2.5%	
Age	18–30	31–40		41–50		51–59	
	68.9%	19.8%		9.2%		2.1%	
Gross monthly salary of the household	Less than EUR 1000	1001–1500	1501–2000	2001–2500	2501–3000	3001–3500	Over EUR 3000
	20.5%	24%	19.1%	13.4%	10.1%	5.1%	7.8%

Source: authors.

Of the 434 members, 79% are female, 18.4% male, and 2.5% preferred not to reveal their gender. One possible reason for the high number of female members could be that the fashion sector is of greater interest to women. In terms of age, the largest demographic is the 18–30 age group, representing 68.9% of the total. This is followed by the 31–40 age group at 19.8%, the 41–50 age group at 9.2%, and finally the 51–59 age group at 2.1%. The distribution of participants in terms of age shows a sharply decreasing pattern, which is in line with what happens with fashion purchases. The household's gross monthly salary is distributed as follows: 20.5% receive less than EUR 1000, 24% earn between EUR 1001 and 1500, 19.5% have a salary between EUR 1501 and 2000, 13.4% receive between EUR 2001 and 2500, 10.1% have a salary between EUR 2501 and 3000, 5.1% earn between EUR 3001 and 3500, and 7.8% earn more than EUR 3500. Additionally, regarding income, the sample is representative of the Portuguese population.

5.1. Results for What Sustainable Fashion Means to Consumers

To determine the meaning of sustainable fashion from a consumer perspective, it is necessary to analyze the question "What is Sustainable Fashion?". To this end, the dimensions relating to this question have been ranked in descending order of their average value and are shown in Table 4.

Table 4. What sustainable fashion means to consumers.

Position	What Sustainable Fashion Means to Consumers	Mean
1	Sustainable fashion is manufactured with a reduced environmental impact	6.06
2	Sustainable fashion encompasses the consumption of second-hand fashion products	5.88
3	Sustainable fashion is manufactured in an environmentally friendly way	5.88
4	Sustainable fashion encompasses the reuse of fashion products	5.86
5	Sustainable fashion is made to last longer than conventional fashion	5.77
6	Sustainable fashion is manufactured according to fair trade principles	5.72
7	Sustainable fashion employs recycled materials	5.63
8	Sustainable fashion is made from organic materials	5.43
9	Sustainable fashion advocates reducing the consumption of fashion products	4.81 *

* 95% confidence interval on the mean:] -Infinite; 4.965]; *p*-value (one-tailed) = 0.022. Source: authors.

Recalling that the scale goes from 1 ("totally disagree") to 7 ("totally agree"), with a value of 4 for indifference, the first step was to determine whether the mean of the last dimension was statistically less than 5. Using the one-sample *t*-test, the null hypothesis was rejected, thus proving that the mean was less than 5. As a result, there is a perception among consumers that sustainable fashion does not imply advocating a reduction in the consumption of fashion products.

Tests were also carried out to assess the scale's reliability and internal consistency, whether with 8 or 9 dimensions. Cronbach's alpha, rho A, and the Composite reliability have values higher than 0.9; it can therefore be concluded that the scale's internal consistency reliability has been achieved.

In the next step, the hierarchy of the dimensions is to be determined. Additionally, given that this is a sample, to ensure that the means of the different dimensions are different, the *t*-test for two independent samples (two-tailed test) was used, comparing the two dimensions sequentially. The shaded columns show the results of these tests. The table above shows that the first three dimensions (1 through 3) have statistically equal means, meaning that consumers give them a similar level of agreement. The table also reveals that consumers give the same level of agreement to dimensions 2 through 7. Positions 8 and 9 of the dimensions also exhibit a noticeable hierarchy, with statistically different averages from the other dimensions.

More detailed analyses are needed to determine the hierarchy of dimensions associated with sustainable fashion. What is especially relevant is to apply the above analysis to the two groups of consumers: groups of consumers who buy sustainable fashion and groups of consumers who do not buy sustainable fashion. The results are shown in Table 5.

Table 5. What sustainable fashion means to consumers.

Pos.	Non-Consumers of Sustainable Fashion		Consumers of Sustainable Fashion	
	What Sustainable Fashion Means to Consumers	**M**	**What Sustainable Fashion Means to Consumers**	**M**
1	Sustainable fashion is manufactured with a reduced environmental impact	5.99	Sustainable fashion is manufactured with a reduced environmental impact	6.12
2	Sustainable fashion encompasses the reuse of fashion products	5.75	Sustainable fashion is manufactured in an environmentally friendly way	6.04
3	Sustainable fashion encompasses the consumption of second-hand fashion products	5.71	Sustainable fashion encompasses the consumption of second-hand fashion products	6.04
4	Sustainable fashion is manufactured in an environmentally friendly way	5.71	Sustainable fashion is made to last longer than conventional fashion	5.99
5	Sustainable fashion employs recycled materials	5.63	Sustainable fashion encompasses the reuse of fashion products	5.96
6	Sustainable fashion is manufactured according to fair trade principles	5.56	Sustainable fashion is manufactured according to fair trade principles	5.87
7	Sustainable fashion is made to last longer than conventional fashion	5.54	Sustainable fashion employs recycled materials	5.62
8	Sustainable fashion is made from organic materials	5.38	Sustainable fashion is made from organic materials	5.47
9	Sustainable fashion advocates reducing the consumption of fashion products	4.66 *	Sustainable fashion advocates reducing the consumption of fashion products	4.94

* 95% confidence interval on the mean:] -Infinite; 4.891]; *p*-value (one-tailed) = 0.008. Source: authors.

The table provides important insights. First, it can be observed that the two types of consumers establish different hierarchies for the dimensions that characterize sustainable fashion. This is viewable from position 2. Additionally, sustainable fashion purchasers tend to have higher values for each dimension. The only exception is the dimension "sustainable fashion employs recycled materials". Thirdly, there is a difference in the way dimensions are aggregated between sustainable fashion purchasers and non-sustainable fashion purchasers. Non-purchasers of sustainable fashion highlight two dimensions and then rank them up to 7th. Sustainable fashion purchasers, on the other hand, highlight 6 dimensions as important and aggregate the remaining dimensions into three additional groups. Finally, it is important to note that purchasers of sustainable fashion agreed with all of the dimensions, while non-purchasers indicated their disagreement with the dimension "sustainable fashion advocates reducing the consumption of fashion products".

5.2. Results from the PLS-SEM

The determinants of purchase intention for sustainable fashion are assessed in this part. The research hypotheses were assessed by using Partial Least Squares Structural Equation Modeling (PLS-SEM). As a first step, the Mahalanobis distance was computed, which enables the detection of multivariate outliers within the data set (Hair 2019). There were no outliers detected in the sample, and no missing values were observed. Although PLS-SEM makes no distributional assumptions, it is important to confirm that the data do not deviate significantly from normality, as extremely non-normal data can interfere with the determination of parameter significance (Hair et al. 2022). The skewness and kurtosis of the variables were examined and no variables with an uneven distribution or an overly sharp distribution were detected.

To analytically evaluate the results of PLS-SEM, a two-stage approach is used (Hair et al. 2022). The first stage consists of the evaluation of the measurement model, while the second stage consists of the evaluation of the structural model. The evaluation of the measurement model includes the evaluation of both the reflective measurement model and the formative measurement model. The reflective measurement model also examines the reliability of each indicator, the internal consistency of the instrument, convergent validity, and discriminant validity. As all the constructs are reflective, it is not necessary to evaluate the formative measurement model. Finally, the structural model evaluation consists of assessing collinearity (VIF), the significance and relevance of structural model relationships (path coefficients), and the explanatory power (coefficients of determination; R^2).

5.2.1. Measurement Model

The values obtained to determine the inclusion of external loadings are shown in Table 6. It also includes the values of internal consistency and convergent validity.

Table 6. Outer loadings, internal consistency, and convergent validity–measurement model.

Constructs	Indicators	Outer Loadings	Cronbach's Alpha	rho A	Composite Reliability	AVE
Consumer Knowledge	1	0.890	0.888	0.891	0.923	0.749
	2	0.877				
	3	0.850				
	5	0.843				
Environmental Beliefs	1	0.931	0.961	0.968	0.971	0.894
	2	0.958				
	3	0.959				
	4	0.934				
Willingness to pay more	1	0.891	0.924	0.929	0.952	0.868
	2	0.878				
	3	0.839				
Purchase Intention	1	0.946	0.843	0.866	0.903	0.756
	2	0.939				
	3	0.909				

Source: authors.

The outer loadings of the indicators (see Table 6) are the first step in the assessment of a reflective measurement model. Outer loadings estimate the absolute contribution of an indicator to its respective construct. The minimum acceptable value is 0.708. It is important to note that indicator 4 of consumer knowledge had an outer loading value of 0.677, which had to be eliminated. This was required because the values of composite reliability and average variance extracted increased with its elimination (Hair et al. 2022). Table 6 displays

the results of all outer loadings of the indicators, which are higher than the minimum acceptable and should therefore all be retained.

Cronbach's alpha is used to assess the reliability of internal consistency. It provides an estimate of the reliability of the intercorrelations between the indicator variables analyzed. It ranges from 0 to 1, with 0.70 being the minimum acceptable value for alpha (Hair et al. 2022). All constructs have Cronbach's alpha greater than or equal to 0.843, which is above the minimum acceptable value. Composite reliability ranges from 0 to 1, with higher values indicating greater reliability. Unlike Cronbach's alpha, composite reliability does not assume equal external loadings but has a similar interpretation. Values between 0.7 and 0.9 are considered satisfactory. Table 6 shows that all constructs have a composite reliability value of at least 0.903, which exceeds the minimum acceptable level. Based on Cronbach's alpha and composite reliability values, it can be concluded that internal consistency reliability has been achieved.

The average variance extracted (AVE) measures the extent to which the latent construct explicates its indicators, and its value must be greater than 0.5 (Hair et al. 2022). As can be seen in the previous table, all the constructs have a value greater than 0.5. It can therefore be concluded that convergent validity has been established.

Discriminant validity tests whether a construct is distinct from others and is the only one that explains a particular phenomenon. The Heterotrait–Monotrait Ratio (HTMT) is used for this purpose. A cutoff of 0.85 is appropriate for path models with disjoint constructs, as an HTMT greater than 0.90 implies unsatisfactory discriminant validity. Table 7 exhibits the model's values.

Table 7. Discriminant validity–measurement model.

	Consumer Knowledge	Environmental Beliefs	Purchase Intention
Environmental Beliefs	0.384		
Purchase Intention	0.685	0.403	
Willingness to pay more	0.655	0.504	0.603

Source: authors.

Table 7 shows that all values are less than 0.85, confirming that the model's constructs measure different phenomena, and it was possible to confirm that discriminant validity was also achieved.

5.2.2. Structural Model

For the assessment of collinearity, it is a prerequisite to examine each construct indicator separately for each subset of the structural model. Collinearity concerns occur if the indicators have a variance inflation factor (VIF) greater than 5. A value between 0.2 and 5 is considered tolerable (see Table 8).

Table 8. Inner VIF values.

Construct	Purchase Intention
Consumer Knowledge	1.568
Environmental Beliefs	1.311
Willingness to pay more	1.775

Source: authors.

From the results, wherein the values of VIF are significantly under the threshold of 5 for all predictor constructs, it can be reliably inferred that collinearity is not a significant concern in the structural model. Thus, the analysis of the structural model can proceed.

The path coefficients represent the presumed associations between the constructs in the structural model and typically fall within a range of −1 to +1, although they may sometimes be lower or higher. Constructs with coefficients near zero indicate that they have a more tenuous relationship and are of less importance in helping to predict other constructs in the structural model. Table 9 provides the path coefficient values for the model.

Table 9. Path coefficients.

Constructs	Original Sample	Sample Mean	T Statistics	*p* Values
Consumer Knowledge -> Purchase Intention	0.404	0.404	8.682	0.000
Environmental Beliefs -> Purchase Intention	0.120	0.120	2.884	0.002
Willingness to pay more -> Purchase Intention	0.258	0.259	5.108	0.000

Source: authors.

The path coefficients in the enclosed table are statistically significant, confirming the validity of the relationships between the constructs. The path coefficients provide insights regarding the magnitude of the relationships as follows. Therefore, it can be concluded that the relationships depicted in the model are valid, demonstrating the connections between consumer knowledge, environmental beliefs, willingness to pay more and purchase intention. It is also established that the former factors have an impact on the latter.

The path coefficients provide additional information by the magnitude of their values. The strongest relationship is between consumer knowledge and purchase intention, with an average value and a path coefficient of 0.404. It is followed by the relationship between willingness to pay more and purchase intention, with a path coefficient of 0.258, and finally the relationship between environmental beliefs and purchase intention, with a path coefficient of 0.120.

In the evaluation of the structural model, there is one more step, and that is the evaluation of the predictive power of the model. This refers to the model's capacity to provide an accurate fit to the data and is a measure of the strength of the association shown by the model. The metric that is used most frequently to evaluate the predictive power of a structural model is the coefficient of determination, R^2. It is obtained as the squared correlation between the actual and predicted values of an endogenous construct. In simpler terms, R^2 indicates how much of the variation in the endogenous construct is accounted for by the exogenous constructs associated with it. R^2 values range from 0 to 1, where higher values indicate the greater explanatory power of the model, and where reasonable values may change according to the domain and the type of research questions that are being examined. The R^2 and adjusted R^2 values are shown in Table 10.

Table 10. Coefficient of determination, R^2.

	R^2	Adjusted R^2
Purchase Intention	0.433	0.429

Source: authors.

The data show that the purchase intention construct has average values for R^2 and adjusted R^2. Accordingly, purchase intention variation is explained by more than 43%. Effect sizes f^2 were applied to evaluate the strengths of the relationships. The findings of this analysis confirmed the previous conclusions. The model's predictive power was also assessed using the Q^2 statistic, and the findings show that the model had better predictive power than the naive LM benchmark model.

After completing all necessary steps following the PLS-SEM directives, the research hypotheses are revised (Table 11).

Table 11. Assessment of research hypotheses.

Research Hypotheses	Value	*p* Values	Result
Consumer Knowledge -> Purchase Intention	0.404	0.000	Supported
Environmental Beliefs -> Purchase Intention	0.120	0.002	Supported
Willingness to pay more -> Purchase Intention	0.259	0.000	Supported

Source: authors.

These findings are consistent with those reported in the existing literature and support the validity of the three relationships shown in the previous table. Therefore, it can be concluded that all the research hypotheses have been supported.

5.2.3. Multigroup Analysis

The comparative analysis between the consumers who buy sustainable fashion and the consumers who do not buy sustainable fashion is also important. The results will allow us to identify any differences that may exist between these two groups of consumers (Table 12).

Table 12. Multigroup parametric test results.

Research Hypotheses	Path Coefficients *	T Values	*p* Values
Consumer Knowledge -> Purchase Intention	−0.009	0.098	0.461
Environmental Beliefs -> Purchase Intention	0.048	0.512	0.304
Willingness to Pay -> Purchase Intention	0.103	1.039	0.150

* Difference between groups of consumers who buy sustainable fashion and consumers who do not buy sustainable fashion. Source: authors.

The parametric test results reveal that there is no difference between the two groups of consumers and that the model is suitable for both groups. Therefore, the proposed model is suitable for use with both types of consumers.

5.3. Results for Willingness to Pay How Much More?

The questionnaire includes four questions aimed at determining the extent to which consumers are willing to pay for sustainable fashion products. The questions address different prices and products: a EUR 50 T-shirt, a EUR 90 pair of pants, a EUR 150 pair of shoes, and a EUR 200 jacket. The goal is to determine how much more consumers are willing to pay for the same products when they are made under sustainable conditions. The first analysis is to find out the average additional amount they are willing to pay (Table 13). Once again, both types of consumers were considered in the analysis.

Table 13. The additional average value that they are willing to pay more.

	EUR 50 T-Shirt	EUR 90 Pair of Pants	EUR 150 Pair of Shoes	EUR 200 Jacket
Total	EUR 17.09	EUR 19.67	EUR 25.34	EUR 38.31
Non-purchasers	EUR 12.38	EUR 14.70	EUR 19.68	EUR 31.95
Purchasers	EUR 21.65	EUR 24.47	EUR 30.82	EUR 44.46

Source: authors.

Nine *t*-tests of two independent samples (two-tailed test) were carried out to compare the means of the four variables, and all the tests produced results that rejected the hypothesis of the means being equal. This means that as the price of products rises, consumers are willing to pay more for products produced under sustainable conditions. Given the findings presented in the preceding paragraph, a more in-depth analysis was performed to estimate the additional price that consumers are willing to pay for products produced under sustainable conditions. To accomplish this analysis, a graphical representation and a quadratic regression were employed (Figure 2).

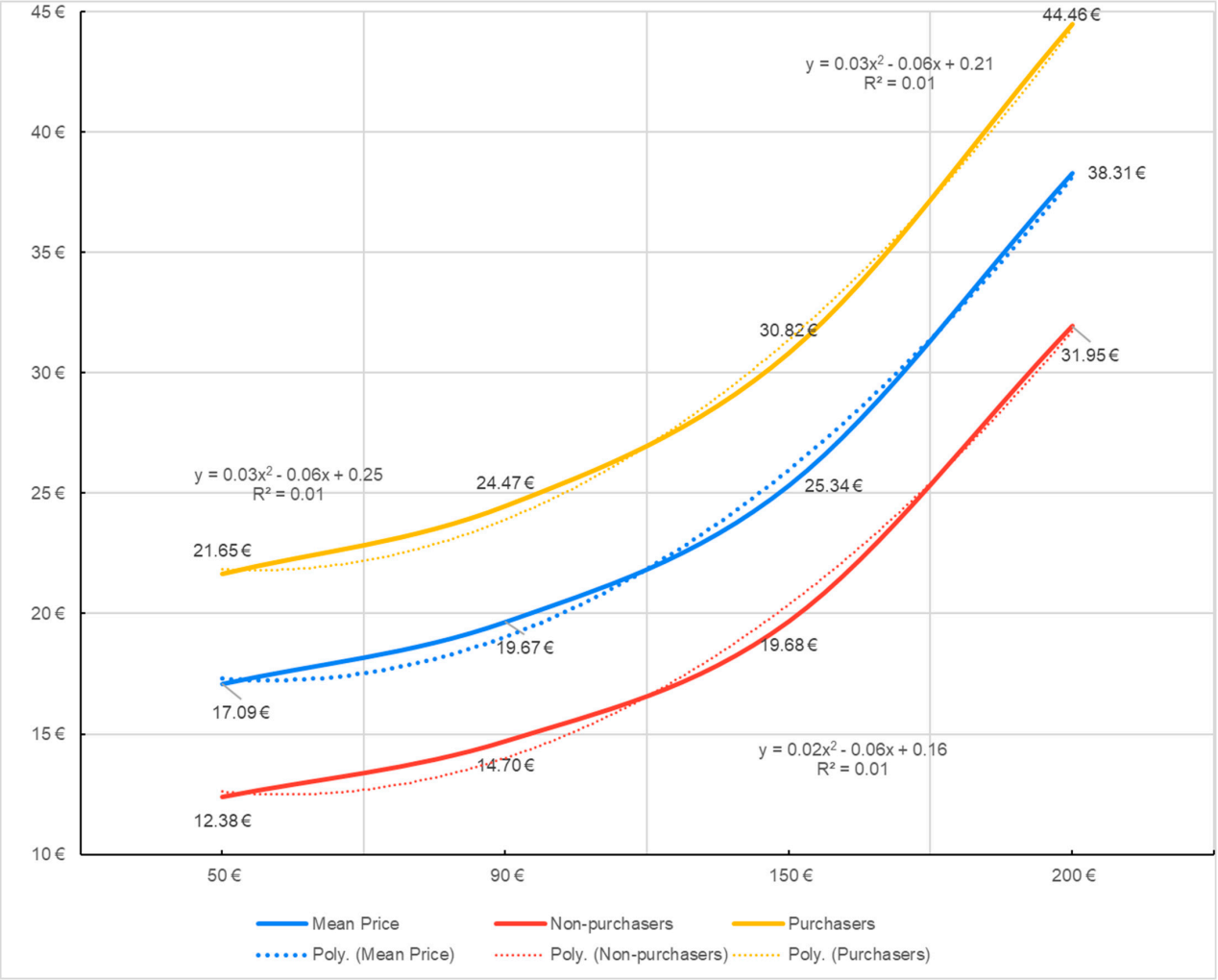

Figure 2. The additional average value of willingness to pay how much more. Source: authors. Total is the complete sample, i.e., the sum of buyers and non-buyers of sustainable fashion.

The figure clearly illustrates that the same pattern holds for consumers who buy sustainable fashion as it does for consumers who do not buy sustainable fashion. Moreover, consumers who buy sustainable fashion are willing to pay more than others. Irrevocably, the relationship between the price of the products and the increase they are willing to pay is not linear. It is represented better by a quadratic regression, as shown in the figure (an exponential regression is another possibility).

The next step is to determine how much of a price increase they are willing to pay varies as a percentage of the price of the product. The approach used was similar to the previous one, where a graphic representing the averages of the increase they are willing to pay as a percentage was used for the four alternatives. The findings are presented in Figure 3.

Here too, some relevant conclusions can be drawn. The graph shows a similar pattern for both types of consumers. Additionally, non-purchasing consumers of sustainable fashion always have a lower percentage when compared to other consumers. The pattern can be described as follows: the increase in percentage terms that consumers are willing to pay for fashion products produced under sustainable conditions decreases as the price of the products increases. The last product is an exception, and there is the possibility of speculating whether this is a negative exponential or a U-shaped pattern. It is important to note that no further conclusions can be drawn from the present data.

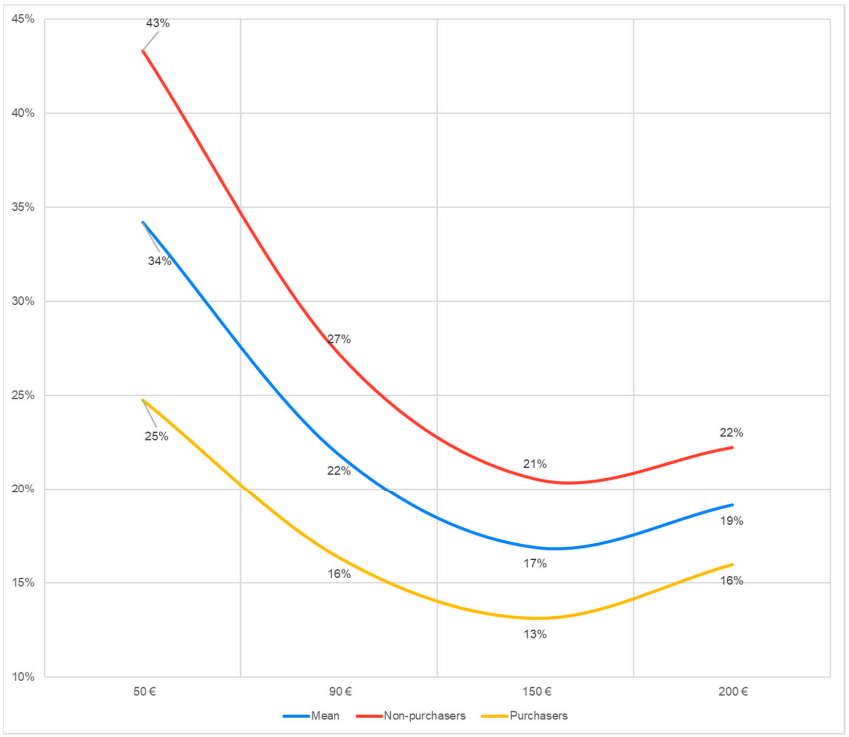

Figure 3. Willingness to pay how much more as a percentage. Source: authors. Total is the complete sample, i.e., the sum of buyers and non-buyers of sustainable fashion.

The final part of the analysis examines the variability of the price increase that consumers are willing to pay and its relationship with different price levels. As before, a graphical analysis was conducted to display the standard deviations of the four alternatives, including the breakdown by the two types of consumers (Figure 4).

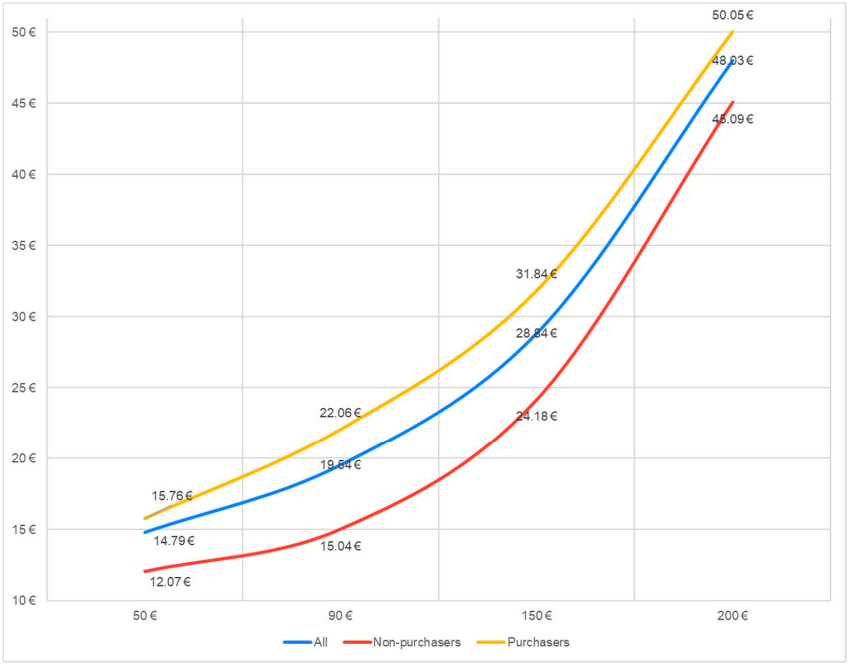

Figure 4. The standard deviation of willingness to pay how much more. Source: authors. Total is the complete sample, i.e., the sum of buyers and non-buyers of sustainable fashion.

The results shown in the previous figure are quite significant. Indeed, there is nonetheless a broad similarity between the two types of consumers. The underlying pattern is consistent with and can be represented by a quadratic regression or an exponential. Additionally, one interesting finding is that consumers of sustainable fashion consistently have a higher average standard deviation than the other consumers.

Results for How Much do Consumers Value Sustainable Fashion?

There remains to be addressed the issue of the financial valuation that consumers assign to the various dimensions that comprise sustainable fashion. To accomplish this goal, consumers attributed a financial value to each dimension in Table 14. As before, the evaluation is performed considering both groups of consumers.

Table 14. How much do consumers value sustainable fashion?

You Paid 50 Euros for a Shirt Produced under Conventional Conditions	Mean	Groups	Total *	Non-Purcha	Purchas
How much would you be willing to pay for this conventional shirt, but produced in safe and suitable working environments?	EUR 67.61		35.2%	26.4%	43.80%
How much would you be willing to pay for this conventional shirt, but produced to last longer than conventional fashion?	EUR 65.97		31.9%	28.6%	35.20%
How much would you be willing to pay for this conventional shirt, but produced using fair trade principles?	EUR 65.67		31.3%	22.0%	40.30%
How much would you be willing to pay for this conventional shirt, but produced with a reduced environmental impact?	EUR 65.15		30.3%	24.1%	36.30%
How much would you be willing to pay for this conventional shirt, but produced with organic materials?	EUR 62.04		24.1%	17.7%	30.20%
How much would you be willing to pay for this conventional shirt made from recycled materials?	EUR 59.13		18.3%	15.6%	20.80%
How much would you be willing to pay for this conventional shirt in a second-hand fashion shop?	EUR 24.08		−51.8%	−50.7%	−52.90%

* Total is the complete sample, i.e., the sum of buyers and non-buyers of sustainable fashion. Source: authors.

The dimensions in the table are in descending order of average financial value assignment. The shaded areas are the groups of dimensions that do not have statistically different means. A two-tailed independent samples *t*-test was used to compare the two elements sequentially. Thus, the first four elements do not differ on average. As a result, consumers equally value products produced in safe and appropriate working environments, produced to last longer than conventional fashion, produced according to fair trade principles, and produced with a reduced environmental impact. These are followed by dimensions made with organic materials and made with recycled materials. The last dimension was not evaluated to be grouped because the value assigned to it is in the opposite direction of the scale of the other dimensions and, for this reason, it does not make sense to make a comparison.

The other columns contain information about both types of consumers. This analysis also confirms that sustainable fashion consumers are willing to pay more for each dimension than non-sustainable fashion consumers. It should be emphasized that the difference is statistically significant and, for some dimensions, that difference is very high in percentage points.

Finally, we proceeded to analyze the issue of shopping in second-hand fashion stores. In general, consumers consider second-hand clothes to be worth about half the price of new clothes. In addition, the results may be unexpected at first and, in fact, they are not

in line with what has been found previously. Consumers of sustainable fashion gave a lower value than other consumers, which means that they consider used clothes to have less value for them (−52.9%) than for other consumers (−50.7%).

6. Discussion, Conclusions, Limitations, Contributions, and Future Research

6.1. A Discussion of the Results

The results presented in the previous section leave much to discuss. Starting from the question of what sustainable fashion means to the consumer, there are relevant contributions. The concept of sustainable fashion, as perceived by consumers, encompasses a number of dimensions. Firstly, it is defined as manufactured with a reduced environmental impact. Secondly, it encompasses the consumption of second-hand fashion products. Thirdly, it is manufactured in an environmentally friendly way. Fourthly, it encompasses the reuse of fashion products. Fifthly, it is made to last longer than conventional fashion. Sixthly, it is manufactured according to fair trade principles. Seventhly, it employs recycled materials. Finally, it is made from organic materials. The results of the literature review revealed a dearth of consistent, cross-sectional definition, which was further substantiated by the analysis of the initial section of the questionnaire. The findings of this study are not consistent with those proposed by Kim and Suh (2022), who suggest that sustainable fashion principles involve eco-friendly production and distribution methods, as well as values such as recycled, vegan, upcycled, zero waste, local production, fair trade, women-owned, give back, and animal protection. Furthermore, it is not in accordance with Fan and Chang (2023)'s indications, which include the dimensions of sustainable clothing design and appreciation.

The second important point to address, which has been largely ignored in the literature, is the importance of differentiating between consumers who are sustainable fashion purchasers and those who are not. Tables 4 and 5 show the importance of making this distinction, as the values in them lead to different conclusions and therefore have other implications. Let us examine all the consequences. By not distinguishing between the two types of consumers, the concept of sustainable fashion fails to include the last dimension, which advocates that sustainable fashion should reduce the consumption of fashion products. This applies to non-consumers of sustainable fashion, but not for the rest. For consumers of sustainable fashion, this concept includes advocating a reduction in the consumption of fashion products. Yet, it should be emphasized that this dimension has the lowest average, indicating that it is the one they agree with the least.

Several points are also worth highlighting. Beginning with the shared aspects, the dimension with which they most agree is manufacturing with reduced environmental impact, which comes in the first place, and the last two dimensions in the two tables. The remaining dimensions, however, are positioned differently, as is the grouping of the dimensions. Thus, Table 4 has a hierarchy that does not reflect either the hierarchy or the grouping of dimensions for the two types of consumers. This is a classic marketing situation where segmentation allows for a more detailed understanding of consumers. Nevertheless, several new results were presented, and the improvements gained are clear. These findings may lead to a better understanding of what sustainable fashion means to consumers. They also may have implications both from a theoretical and an empirical perspective. A major contribution of this research is the solution it provides for the definition of the sustainable fashion concept, which comprises eight or nine dimensions. From a knowledge perspective, it proposes a precise definition and a reliable and consistent scale for measuring sustainable fashion. From a knowledge perspective, the study provides a detailed description and a reliable and consistent scale for measuring sustainable fashion. This addresses a gap identified and reported in the literature review. Although there are questions about the number of dimensions that make up the scale, these limitations are at best opportunities for future research.

From an empirical perspective, the implications are equally compelling. The research reveals accurate guidance that can be used by the fashion industry to respond to the new

challenges it is confronted with. These guidelines, as can be seen, are transversal to the activities of businesses and go far beyond the activities that interface with consumers. They allow businesses to adjust or revise their value proposition to match what consumers are looking for. For companies that are looking to develop valuable brands in the sustainable fashion environment, the dimensions that have been determined are a relevant aid.

As far as the determinants of purchasing sustainable fashion are concerned, the results of applying the PLS-SEM are directly comparable with previously published results, and they reflect and confirm what is stated in the literature. Additional contributions were made by the research. The conceptual model developed was proven to be robust, establishing and proving that consumer knowledge, environmental beliefs, and willingness to pay more are constructs that influence purchase intention for sustainable fashion. Utilizing PLS-SEM, significant advantages are achieved, particularly the hierarchical arrangement of the constructs that impact purchase intention. This facilitates an assessment of the determinants and the ranking and extent of their influence, thereby providing a comprehensive understanding of their impact. The outcomes were unequivocal, revealing that consumer knowledge exerts the greatest influence on purchase intention, followed by willingness to pay more and then environmental beliefs. Although the former has a substantial effect, the latter two have considerably smaller effects. Overall, these three constructs explain more than 40% of the variation in the purchase intention for sustainable fashion. To conclude, it is worth mentioning that the conceptual model developed applies to both consumers and non-consumers of sustainable fashion. To validate this assertion, multi-group tests were conducted, and the results unequivocally revealed that the model's applicability was indeed extensive, across both groups. The conceptual model presented, which relates the different constructs, is consistent with and supports the findings of previous studies, specifically the works of Lang and Wei (2019), Zheng and Chi (2015), and many others (Arora and Manchanda 2022; Lavuri et al. 2023; Leclercq-Machado et al. 2022; Lin and Chen 2022; Okur et al. 2023).

As for the willingness to pay how much more, this research is a big step towards a deeper understanding of the relationship between price and the dimensions that make up the concept of sustainable fashion and the willingness to pay for this type of fashion. The findings of this study do not align with the outcomes reported in prior research; however, there may be several factors contributing to this discrepancy. One potential explanation is that this investigation is more extensive and precise, taking into account not only the prices of various products but also the financial assessment of the dimensions that constitute the notion of sustainable fashion. There are several notable strengths to this research, and the contributions on this point are striking. It is important to emphasize that the outcomes of the study demonstrated a consistent pattern for both categories of consumers. This is demonstrated in all of the graphs that have been presented. Despite the similarities between the two types of consumers, the findings of the study indicate that those who consume sustainable fashion are willing to pay more than those who do not consume sustainable fashion. It is worth noting that the results of the study did not support the notion that there is a fixed value or percentage that determines how much consumers are willing to pay for sustainable fashion. Thus, the figures of 20% (Ciasullo et al. 2017) or 10% (Chan and Wong 2012) were not confirmed. The study suggests that the absolute price increase that consumers are willing to pay for sustainable fashion is not a fixed amount and cannot be represented by a linear relationship. Instead, the relationship can be approximated by a quadratic or an exponential. When it comes to percentage values, the study did not find evidence to support the 25–30% limit mentioned by Chan and Wong (2012). For low-priced products, the percentage value can exceed 40%, which is higher than what is mentioned in the literature. The study also found that there is a pattern in the percentage increase in price that can be represented by a negative exponential or U-shaped curve. However, the standard deviation of the increase in absolute value is the same as an exponential or a quadratic. This suggests that as the price of products increases, consumers' average increase in the price they are willing to pay also increases.

When examining the dimensions contributing to the concept of sustainable fashion, the emphasis placed on purchasing second-hand clothing is particularly noteworthy. Consumers believe that second-hand garments should be discounted by more than 50%. Additionally, the remaining dimensions are categorized into three groups, with the most highly valued group comprising four dimensions and the least valued groups encompassing the incorporation of organic materials and recycled materials.

6.2. Research Conclusions

In response to the two research questions, this proceeds to present the findings and conclusions. An unexpected but relevant conclusion is the definition of the concept of sustainable fashion. Therefore, sustainable fashion, as perceived by consumers, encompasses seven dimensions. These are: (1) manufactured with a reduced environmental impact; (2) manufactured in an environmentally friendly way; (3) manufactured according to fair trade principles; (4) made from organic materials; (5) encompasses the consumption of second-hand fashion products; (6) made to last longer than conventional fashion; (7) employs recycled materials. For the second research question, the answer is that consumer knowledge, environmental beliefs, and willingness to pay more are factors that influence the intention to buy sustainable fashion. The answer to the third research question is that the absolute increase in price that consumers are willing to pay for sustainable fashion is not a fixed value and cannot be represented by a linear relationship. Instead, it can be approximated by a quadratic or exponential relationship.

6.3. Limitations

Despite its notable achievements, this research presents certain limitations that warrant recognition. The research utilized convenience sampling and snowballing techniques, which are not typically considered the most rigorous sampling methods. Additionally, the sample was restricted to a relatively limited geographic region. It should also be noted that the sample is not evenly distributed, revealing some irregularities in terms of age, income, and gender. Nonetheless, it is necessary to highlight that these limitations should not be seen as a major constraint, but rather as a basis for further research into the concept of sustainable fashion and the relationship between price and sustainable fashion.

6.4. Future Research

A comprehensive review based on more reliable study designs is recommended to provide a more accurate and reliable assessment of the subject matter. Moreover, several questions remain unanswered at present, and there is ample opportunity for further advancement. Prior to any further analysis, it is essential to address the limitations of the study. This necessitates the use of a more homogeneous sample, if possible, and random sampling. Additionally, there are promising lines of research into the definition of the concept of sustainable fashion. It is first and foremost important to note that the scale meets the compulsory requirements. However, the construction of a scale is a complex and lengthy process, consisting of four steps (Bustamante and Rubio 2017; Maklan and Klaus 2011): The scale generation and initial purification (item generation) is the first step in the process. This is followed by the purification of the scale through EFA (purification and refinement). The third step is the assessment of the scale's reliability and validity (refinement and final validation). Finally, the scale is validated. The full potential of the approach has yet to be demonstrated, and it is therefore anticipated that further improvements will lead to a more comprehensive understanding of the concept of sustainable fashion. Given that several outstanding issues remain unresolved, further work is recommended to enhance the newly developed solutions. It is only when such a scale is available that we will be able to demonstrate that it is suitable for measuring sustainable fashion. As for the determinants of the intention to buy sustainable fashion, since this is a topic that has been extensively researched, future research should focus on holistically integrating all of these determinants into a conceptual model. The third research question, however, opens

up a multitude of further lines of in-depth research. These include the investigation of the extent to which consumers are willing to pay more for sustainable fashion products. To this end, new experiments or observations will have to be carried out with different fashion products and at different price levels. This will enable the results obtained to be replicated and, if necessary, further research to be conducted to prove the non-linear relationship (polynomial or exponential) between the increase in the price consumers are willing to pay for sustainable fashion and the price of products.

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