



Article

Perception of Consumers' Awareness about Sustainability of Fashion Brands

Doroteja Mandarić, Anica Hunjet * and Goran Kozina

University Center Varaždin, University North, 42000 Varaždin, Croatia; domandarić@unin.hr (D.M.); goran.kozina@unin.hr (G.K.)

* Correspondence: anica.hunjet@unin.hr; Tel.: +385-42-493-376

Abstract: Consumers' perception, awareness, and behavior toward sustainable fashion were surveyed with a questionnaire in which 263 respondents participated, and obtained data were primarily analyzed using descriptive statistics and *t*-test. The focus of this research was consumer attitudes toward sustainable business practices of fashion brands. Based on the conducted research, differences were found between sexes in the perception of their own awareness of sustainability in fashion, where women consider their own awareness to be higher than men's. The perception of fashion sustainability awareness in women younger than 35 and those over 36 was also examined. The research showed a gap between consumers' awareness, their positive attitude toward sustainable fashion, and a lack of action in that direction when making purchasing decisions. The results of these studies provide a better understanding of one's own perception of awareness in terms of fashion sustainability and various connected factors, as well as difference in both sexes' awareness of these factors, which may influence consumer behavior related to sustainable fashion products. Thus they can facilitate the implementation of relevant strategies in the fashion industry.



Citation: Mandarić, Doroteja, Anica Hunjet, and Goran Kozina. 2021. Perception of Consumers' Awareness about Sustainability of Fashion Brands. *Journal of Risk and Financial Management* 14: 594. <https://doi.org/10.3390/jrfm14120594>

Academic Editor: Thanasis Stengos

Received: 29 September 2021

Accepted: 2 December 2021

Published: 9 December 2021

Publisher's Note: MDPI stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



Copyright: © 2021 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by/4.0/>).

Keywords: sustainable fashion; sustainable business; consumer behavior; consumer information; corporate social responsibility

1. Introduction

There are three key participants in environmental protection and sustainable development: people, the economy, and society. Society is the foundation of sustainable development, and it should take care of finding and achieving a sustainable balance in the entire system. Ethical and value debate in an industrial context is complex and often difficult to implement. The best practice is manifested when designers and fashion brands choose the best environmental and social solution that exists at a given time (Niinimäki 2013, 2015). Sustainable fashion is a complex concept and combines different aspects, such as social attitudes and values, adequate selection of marketing campaigns and advertising, different industrial processes, and very importantly, the adoption of new behaviors by consumers. The current literature on sustainable fashion includes various interpretations and descriptions of the term. Sustainable fashion is part of the slow fashion movement, and the concept has evolved in recent decades. It very often includes different synonyms and related names, such as eco or green fashion and ethical fashion (Carey and Cervellon 2014). Although even more importance is attached to sustainable fashion nowadays, consumer awareness and information about it is still at an unenviable level (Gonzalez 2015). Even though there is no unified definition of sustainable fashion, there is no doubt that the fashion industry is one of the biggest polluters today (UN Alliance for Sustainable Fashion n.d.). The value of the entire fashion industry in 2020 is estimated to be more than USD 2.5 trillion (10¹²) and is measured to make up about 4% of the total market share (Fashion United Website on "Global Fashion Industry Statistics" n.d.). Clothing accounts for more than 60% of total textile use, and this trend is expected to increase in the future (Ellen MacArthur Foundation 2017). The social responsibility and social aspect

of fashion became the center of attention in the world after the Rana Plaza incident in Bangladesh, a scandal involving several fashion brands: Benetton, Prada, Gucci, Versace, Moncler, Mango, Primark, and others. Following this incident, which unfortunately is not an isolated case, there was a need for enhanced supply chain checks and transparency in every step of the production process (Pookulangara and Shepard 2013; Jung and Jin 2014). Since accidents and fires started occurring in textile factories, it has become clear that a lack of awareness about weak points in the supply chain creates at least a reputational risk (Niinimäki 2013). In addition to the risks associated with social behavior, it is worth noting that the fashion industry's impact on the environment is increasingly recognized as one of the most important risk factors for the global economy. Corporate social responsibility (CSR) addresses these issues—it defines what are the responsibilities of companies in terms of their impact on society and the environment. Corporations should integrate social, environmental, and ethical factors, human rights, and consumer concerns into their strategic plan and in collaboration with their stakeholders (Niinimäki 2013). However, it has been shown that caring about how people are treated in the supply chain does not necessarily result in changed action in consumer behavior. The high availability of fashion products increases the appetite of consumers, but also increases the gap between their attitudes about sustainable fashion and actual consumer behavior. The motivation for this research was to question the importance and consumer awareness of sustainability in the fashion business regarding gender and age in Croatia. The subject of this research is examining the attitudes of consumers toward the sustainable business of fashion brands and the perception of their own information and awareness about the sustainability of fashion brands, taking into consideration differences between sexes and in female age groups. Sustainable behavior includes different aspects, and one part of it is definitely fashion, as clothes are a necessity and not an altruistic act. In general, sustainable behavior is important for the environment, and consumer habits are part of that behavior. It is crucial to raise awareness of the green aspect of fashion to reduce fashion waste and its negative impact on the environment, lessen its buying, and prolong the consumption process of clothing garments. It is important to know the actual market situation for brands to be able to raise awareness about sustainable fashion and assess the situation adequately. Although the Croatian market is small, there have been no studies made on consumer behavior regarding sustainable fashion. Results of this research may be useful to fashion brands when developing their marketing practices and strategic planning. The purpose of this research is to deepen the knowledge on consumer perception of sustainable fashion awareness and the differences between sexes and age groups. Additionally, the aim is to start a discussion on the topic, open the way for deepening knowledge on the topic in this area about consumer behavior in relation to sustainable fashion, and create a framework for further research on consumer awareness of sustainable fashion business in the Republic of Croatia.

2. Consumers and Fashion Brands in Terms of Sustainability

On the other side of the sustainability spectrum is fast fashion—a production concept that currently dominates the fashion industry and is the opposite of sustainable and slow fashion. Such fashion has put pressure on the manufacturing and production of fashion products and consequently threatens sustainable practices (McNeill and Moore 2015). Despite that, sustainable fashion as a trend has been a focal point of consumers lately, and in response to the global interest in sustainability and business ethics, the fashion industry has started to offer sustainable product lines. As early as 1972, the United Nations described sustainable fashion at the Stockholm Conference on the Human Environment and defined how it includes both social and environmental aspects of sustainability. However, consumers have been shown to be generally skeptical about accepting sustainable changes in consumer decisions, a phenomenon characteristic of industries with rapid goods exchange that offer sustainable products in the marketplace. Even though some clothing and fashion brands are trying to change their business and implement sustainable practices, without

the consumers, real change in the market is not possible. Although it has been shown that consumers are increasingly concerned about the unethical practices of fashion brands, this concern is not always reflected in their behavior (Bray et al. 2010). Research has shown that consumers often buy items from fast fashion brands that are price conscious (such as Zara, Primark, H&M). Purchasing clothes from sustainable brands is not generally present in consumers' behavior, although they show concern for climate change and pollution. They believe their conscientious consumption has a positive impact on the environment, but still it does not have an impact on their purchase decisions when buying clothing items—which demonstrates an attitude behavior gap (Soyer and Dittrich 2021). The research has shown that a substantial number of consumers show interest in sustainable fashion and have concerns for environmental protection, but fast fashion, usually meaning lower-priced items, still dominates the industry (Paço et al. 2020). Even though changes in the environmental aspect of the fashion industry have already taken place, for example, by introducing organic materials and promoting sustainable collections (e.g., H&M's Conscious line, C&A's WearTheChange line), increasing the magnitude of a sustainable fashion system is complex and difficult (Ertekin and Atik 2014). There are various obstacles to this, such as transparency in a globalized supply chain that may not always be feasible. In addition, manufacturers are often pressured to reduce product prices and cut costs to stay competitive (Henninger et al. 2016). The current gap between consumer attitude and real-life actions can be reduced if sustainable clothes fulfill the needs of consumers, as well as by educating them on the topic of sustainability in fashion (Jeong and Ko 2021).

A clearer and more precise definition of the sustainable fashion concept is certainly needed; according to the United Nations specification, the sustainability of fashion brands includes social issues, such as improving working conditions and workers' benefits, and environmental issues related to reducing industrial waste and water pollution and greenhouse gas emissions. As previously mentioned, the fashion industry is a major environmental polluter and contributes to the generation of waste. Such consequences have created concern in society, which is why sustainable fashion is becoming more important. Sustainable fashion aims to avoid harm to the environment and to workers, it strives to use biodegradable and organic materials and environmentally friendly and/or recycled materials, and sustainable fashion items are designed for a longer period of use. It also includes the principles of fair trade, without exploiting workers in sweatshops—factories with awful working conditions (Fletcher 2008; Joergens 2006). Sustainable fashion defined in this way involves both green and ethical dimensions of the fashion industry. Green fashion focuses more on the topic of environmental protection, promoting the use of recycled materials and biodegradable fibers, while ethical fashion is more oriented on the principles of fair trade and a system of equal working conditions for all workers within the production chain. These two dimensions together make the concept of sustainable fashion more comprehensive and richer (Shen et al. 2013).

2.1. Consumer Behavior and Their Motivation for Sustainable Fashion Consumption

Recent research suggests that a few barriers affect the development of positive attitudes toward environmentally conscious clothing consumption and hinder sustainable consumption. These factors include lack of consumer knowledge, availability of information, economic resources, retail environment, and societal norms (Connell 2010). In addition, often consumers have a perception that sustainably produced clothing is unattractive and not modern (Tomolillo and Shaw 2004). Furthermore, there is the problem of greenwashing—it can be characterized as fake green marketing, and its consequence is that any company that promotes green and sustainable business raises doubts among consumers. Still, companies can gain their trust, but it takes a long time to establish and maintain it in the long run (Rahman et al. 2015). Extended producer responsibility is a good example of how to transform a business and industry and how to incorporate environmental values into business logic. An example is environmental ethics: how we should take responsibility for our actions and consider the consequences of industrial

production and business logic (Niinimäki 2015). The concept of slow fashion requires consumers to reconsider established practices and worldviews, questioning the economic models that currently support fashion production and consumption (Fletcher 2010). Slow fashion directs consumers to a deeper understanding of the production process—from raw material to a finished product, which are also part of the consumption experience (Manchiraju and Sadachar 2014).

Consumers generally buy much more clothing than they need, and the clothing they buy often supports the exploitation of workers and resources while increasing the negative impact on the environment by generating waste (O'Connell 2013). This is precisely related to the previously mentioned claims—how sustainable fashion cannot really exist because, as soon as garments are produced, consumers are encouraged to buy those products. Increasing the demand for clothing leads to the creation of a larger quantity of products and further support of consumerism and, ultimately, waste. Additionally, the question arises as to whether a consumerism-based industry can really produce a sustainable product. Using environmentally friendly materials, reducing the use of pesticides, and promoting recycling can be a starting point for encouraging thoughtful behavior. However, the fact that clothing continues to be sold and manufactured seems to contradict sustainability and environmental protection (Henninger et al. 2016).

2.2. Corporate Social Responsibility of Fashion Brands

Sustainable fashion is interpreted in different ways and from different perspectives, which challenges organizations, fashion brands, and chains in declaring themselves as sustainable fashion producers and creates the need for compromise in business. For example, animal rights groups have a negative perception of the use of animal skin and other animal parts, so some organizations might consider it a better solution to omit such information. Recycled and renewed materials are also a possible problem, as the origin of such fabric used in further clothing production is often unknown, and therefore, it cannot be said whether the fabric is from a local source or produced abroad. Constraints imposed on organizations can consequently affect the price of products (i.e., the availability of finished products and the market deficit). To regulate this deficit, the price value of such products is higher, which limits their purchases by customers who can and want to pay for premium products (Henninger et al. 2016).

A term that can be related to sustainable business is corporate social responsibility (CSR) of organizations, including fashion brands, which affects consumers' perception of a brand. Social responsibility refers to the ethical way of doing business and puts emphasis on responsibility to employees, customers, and other participants in business, as well as contribution to society and social goals (Niinimäki 2013). This description of CSR is obviously intertwined with values in sustainable fashion. Therefore, it could be determined how organizations that apply CSR in their business can create an opportunity for competitive advantage and contribute to a better perception of themselves in public.

2.3. Tools for Informing Consumers about Sustainable Fashion

Sustainability of clothing is a very complex concept, and consumers lack knowledge and understanding of the sustainable business of fashion brands, although consumers themselves show concern for various aspects of sustainability. Buying clothes is not an altruistic act, and it has been shown that sustainability is low in the list of criteria when it comes to a consumer purchase decision. To encourage more sustainable consumption of clothing, it is necessary to focus marketing campaigns on consumers in order to change their behavior. This refers to marketing that shows a good understanding of customer needs, their buying behavior, and problems that influence purchasing decisions and choices, and also takes into account social issues. In addition, sustainable clothing needs to further fulfill the necessary roles and meet the needs of consumers. Furthermore, it is necessary to influence consumer behavior and social norms to protect the environment and the well-being of all stakeholders in the production process. Therefore, Harris et al. (2016)

believe that an interdisciplinary approach and experience of different professionals should be relied upon while integrating previous research about the subject. Interventions require the action of all parties in the fashion industry, from retail stores to designers, managers, and of course, consumers.

What should be added is that today it is possible to get a series of information on the sustainability of fashion brands' business via the Internet. An example of good practice and help for conscious consumers, but also for those who want to be informed, is the Good On You application, which contains ratings of fashion brands in accordance with their sustainability policies and business ethics. Along with a description and more detailed information on each fashion brand, the application lists various aspects of business sustainability: the impact on the planet and the environment, working conditions, and treatment of employees, as well as the impact on animals. Each of these three aspects is described in more detail, and the individual grades are explained. Possible grades range from 1 to 5, where 1 is the lowest grade and 5 the highest ([Good on You Webpage n.d.](#)). Such application provides support to self-aware consumers while also providing transparent information about fashion brands and helps inform those who want to educate themselves about sustainable fashion and the overall business of fashion brands. In addition, there are a number of movements and organizations in the world that are engaged in sustainable fashion, pioneers—designers of sustainable fashion, and individuals aware of the impact that fashion has on the environment and society. The Copenhagen Fashion Summit is a sustainable fashion week that started in 2009 and has been held every year since then ([Lyst Webpage—Data on “Searching for Sustainability”](#)). Moreover, the Fashion Revolution platform is dedicated to the global movement of environmental conservation and regeneration versus growth and profit, which connects designers, writers, managers, fashion brands, workers, and fashion lovers ([Fashion Revolution Webpage n.d.](#)). Very often, large organizations, especially high street fashion brands, play a key role in spreading value and ultimately the message of sustainability itself ([Henninger et al. 2016](#)). Every step forward in terms of sustainability is significant in several directions: environmental, social, and economic. It can be determined how, through environmental and social responsibility, a fashion brand can stand out, improve the way it is perceived by the public, and thus create an opportunity for economic growth.

It is worth mentioning that in today's world, when digitalization is present in everyday life, social networks such as Facebook, Instagram, TikTok, and others open the possibility to influence consumers. Social interactions and marketing communications through these networks have become a common way of transmitting messages to potential consumers, and it can be said that such platforms have replaced physical magazines, and through them, different (fashion) trends are spreading rapidly. Related to this, consumers can create an impression of the product based on social media posts. Such insights create space for influence on those consumers who perceive sustainable fashion to be unattainable or unfamiliar with what the term represents—strategic advertising on social networks can alleviate or even remove certain barriers connected to sustainable behavior when it comes to sustainable fashion.

3. Previous Research on Consumers and Their Perception of Own Awareness of Sustainable Fashion

Some research on consumer behavior has shown that consumers' attitudes toward sustainability when buying clothing are determined by their general level of concern for social and environmental well-being, perception of sustainable fashion, and their previous behavior related to ethical consumer practices. Fast fashion has been criticized as unsustainable; however, consumer information and knowledge of actual sustainability practices in fashion production are limited. For example, a number of fashion brands use sustainable fibers (e.g., hemp, organic cotton, bamboo, recycled fabrics.), encourage the reuse of used clothing, and support ethical work practices. However, many consumers are reluctant to support such changes or face obstacles in accepting sustainably produced clothes. Consumers do not have confidence in the sustainability and green labels of fashion

brands because they often cannot verify the credibility of claims about the sustainability of the organization (Chen and Chang 2013). One of the primary obstacles to full acceptance of the sustainable fashion movement is consumer doubt in the motives of the fashion industry (McNeill and Moore 2015). On the other hand, there is a possibility that, since sustainable fashion is a relatively new idea within consumer decision making, it does not have a sufficient level of maturity to significantly influence the consumer decision-making framework and become recognizable (Shen et al. 2013). Based on the conducted research, however, it could be inferred that consumers are aware of the business sustainability of organizations, and thus fashion brands. Research on consumer behavior related to buying clothing from sustainable fashion brands has shown that there is a difference in sustainable consumer behavior between the sexes. It was found that women show a higher level of sustainable behavior in consumption compared with men (Khan and Trivedi 2015), which is related to this study that examined the perception of personal awareness connected to sustainable fashion in relation to gender, and in relation to age, when women were observed. Additionally, research conducted in 2019 showed that consumers under the age of 34 strongly support sustainable fashion ideas when compared with those over the age of 35 (KPMG 2019) and show a greater tendency toward sustainable behavior associated with fashion.

In the context of fashion in general, what cannot be ignored and is related to the situation in the world is the COVID-19 pandemic. During the coronavirus pandemic, McKinsey & Company (2020) examined consumer attitudes toward sustainable fashion, and research showed that consumers expect fashion brands to be socially and environmentally responsible. During this crisis, more than 60% of consumers said they spend less on fashion products, and about half of them expect this trend to continue after the crisis. As a result of the COVID-19 crisis, 65% of respondents plan to buy longer-lasting clothing items, and 71% plan to keep items they already have for longer. Furthermore, 57% of respondents are willing to repair items to prolong their use. Thus, consumer attitudes in this study suggest that the coronavirus crisis could serve as an initiator of change toward sustainability and consumer behavior, but also could encourage fashion brands to strengthen their sustainability policies and accelerate positive changes in the fashion industry, for example, by reducing clothing seasonality and optimizing the circular business model.

Sustainable Fashion in the Republic of Croatia

Topic coverage and research on sustainable fashion in Croatia are represented in a small extent. The topic is often covered on popular portals, mostly those intended for the female population, such as *journal.hr*, *elle.hr*, and *diva.hr*. What is also present on the Croatian market is the advertising of Croatian craftsmen who claim that their products are sustainable, but often there is no objective evidence for such claims. Moreover, no systematic research has been conducted on the sustainability of Croatian craftsmen present on the fashion market. So far, no research has been conducted on consumer behavior in the Republic of Croatia and their attitudes about sustainable fashion and values in the form of sustainability of fashion brands. The shift toward sustainable fashion and an indicator of awareness in Croatia is participation in the previously mentioned Fashion Revolution Week. Croatia is part of the Fashion Revolution and its Sustainable Fashion Week, which takes place around 24 April—the date when the Bangladeshi clothing factory Rana Plaza collapsed. In 2015, Croatia joined this sustainable fashion initiative and has since participated in the Sustainable Fashion Week (Fashion Revolution Webpage n.d.).

A theoretical review on sustainable fashion was given by Omazić et al. (2017), and in conclusion, they stated that this is a prerequisite for empirical research on the impact of various elements in terms of socially responsible business in the fashion industry in Croatia. Such research would be able to define the key elements of the impact that corporate social responsibility (CSR) has on organizations in the fashion industry, design and empirically confirm models of the impact of corporate social responsibility on the business of fashion brands, and determine managerial implications for the observed organizations and brands.

This could consequently have a positive impact on the performance of the overall business and help define a sustainable business model. It would also provide a basis for the economic development of fashion brands with the implementation of CSR elements, with special emphasis on reducing environmental pollution, to which the fashion industry contributes greatly. Such an approach would provide a basis for shaping a new model of assumed connections and developing new theoretical and empirical knowledge about key items of CSR in fashion in the Republic of Croatia, as well as understanding the practical benefits of CSR for the benefit of business, fashion, and local communities. Socially responsible business enables the advancement in strategic research related to competitiveness and strategic management in the fashion industry.

Namely, by applying CSR, fashion brands can have a positive influence on their own image in modern society. Additionally, by applying such a business concept, it is possible to encourage innovation capacity, enhance stakeholder motivation and engagement and consumer loyalty, and improve financial flows and, ultimately, the success and sustainability of the business model.

4. Methodology

As a tool for this quantitative research, an online questionnaire in Croatian on the Google Forms platform was used. The snowball method was employed for the distribution of the questionnaire, via email, social networks, and private contacts. Since there are no standardized tests for such a research, two previously published articles, which examined a similar topic, provided a basis for the questionnaire. The questionnaire was prepared based on previous research conducted by [Shen et al. \(2013\)](#) and [Ceylan \(2019\)](#), and it consists of 15 questions. The first part of the questionnaire includes 6 questions related to the sociodemographic profile of the respondents. In the second part of the questionnaire, the 9 closed-ended questions are related to the behavior and attitudes of the respondents regarding various aspects of sustainable fashion. In this questionnaire, the following possibilities as potential answers to the abovementioned questions were offered: Likert's five-point scale and self-assessment scale and the selection of the statement that most likely corresponds to the respondents' attitude. Likert's five-point scale was chosen, being the most common scale used in research and most well-known to the participants. The respondents voluntarily completed a questionnaire on the topic of sustainable fashion. The study was conducted on a sample of 263 people, of which 176 were female and 87 were male respondents.

As already mentioned, earlier research on consumer behavior related to buying clothing from sustainable fashion brands showed that there is a difference in sustainable consumer behavior between the sexes, where women showed a higher level of sustainable consumption behavior compared with men ([Khan and Trivedi 2015](#)). Additionally, research has shown that women stated they have more awareness of sustainable movement than men ([Wijaya and Paramita 2021](#)), and female respondents show more of sustainable behavior regarding fashion ([Gazzola et al. 2020](#)). Previous research also indicates that men do not give a lot of attention to the origin of clothes, whether it is produced sustainably or not. On the other hand, women have shown more concern about the production of clothes, if they are made responsibly and having in mind the sustainability aspect ([Garcia et al. 2019](#)). Additionally, earlier results have shown a difference between men and women in terms of purchasing environmentally friendly clothes, where women give more importance to such purchases if the prices of garments are the same ([Tama et al. 2017](#)). Related to that, this research examined the perception of personal awareness of sustainable fashion between the sexes and was used as a basis for the hypothesis. In addition, research also showed that consumers under 34, compared with those who are 35 and older, are stronger supporters of ideas of sustainable fashion ([KPMG 2019](#)). As this research was conducted a year earlier than the following one, the same respondents were aged 35 and 36, and this age values were used in this research as two groups when forming the second hypothesis. Previous research also found that sustainability awareness increases with age, and younger

people (i.e., the millennial subgroup) are less aware of sustainability. On the other hand, social media influencers have more influence on the younger group of people, so those who follow accounts that promote ethical consumption could show greater awareness of sustainability (Johnstone and Lindh 2017). Social media has a great impact on younger consumers' behavior, and it can increase consumer participation in sustainable behavior, as well as make sustainable fashion more mainstream (McKeown and Shearer 2019). Buying decisions also seem to be influenced by the opinions of people with whom consumers maintain relations (Ciasullo et al. 2017). Furthermore, consumers aged 20 to 24 have shown willingness to purchase clothes within sustainable line from international fast-fashion brands (Wijaya and Paramita 2021). Research on US and Chinese markets has shown that young consumers have more awareness of the environmental impact and social issues in the fashion business (Su et al. 2019). As sustainable fashion has recently gained more attention on social media platforms that are mainly used by younger consumers, this study sought to determine whether there is a statistically significant difference between the two age groups of women—younger than 35 and older than 36, as women in general have previously shown a greater tendency to behave sustainably in relation to fashion consumption.

The main goal of this research was to examine how important fashion sustainability is to consumers when buying clothes and whether they are informed about the sustainability policies of a particular fashion brand before purchasing. So far, no research of this type has been conducted in Croatia, which would examine the perception of consumers' information regarding sustainable manufacturing of fashion brands, depending on their gender and age. The target group of this research were adults in the Republic of Croatia who have purchasing power.

The hypotheses are based on own experience, as well as previous research and relevant literature. Based on the above, the following hypotheses were set:

Hypothesis 1 (H1). *Women rate their awareness of the sustainability of fashion brand business practices higher than men.*

Hypothesis 2 (H2). *Women under the age of 35 rate their awareness of the sustainability of fashion brand business practices higher than women over the age of 36.*

5. Results

First, the respondents answered questions related to their sociodemographic profile. As previously mentioned, the questionnaire was answered by 176 female respondents and 87 male respondents, equaling 263 respondents in total. The sociodemographic data are shown in the following Table 1.

The respondents then assessed their own awareness of sustainable fashion according to a Likert-type scale: 1—not aware at all, 2—mostly not aware, 3—neither aware nor not aware, 4—mostly aware, 5—fully aware. Table 2 shows that women rate their own awareness higher than men. Whereas the average value for women is 3.14 and leans toward the positive part of the scale, the average value for men is 2.37 and leans toward negative. Based on the *t*-test, this difference was found to be statistically significant ($t = -5.608$, $df = 261$, $p < 0.001$). The results confirm the H1 hypothesis, which assumes that women rate their own awareness of the sustainability of the fashion brand business higher than men. As women self-assess themselves to be more informed than men in relation to sustainable fashion, it was further explored whether women under the age of 35 rate their own awareness about sustainable fashion higher than women over the age of 36. Descriptive data in Table 3 show the difference between the two groups: the difference in self-assessment between women younger than 36 and those who are 36 and older is statistically irrelevant ($t = 0.747$, $df = 174$, $p = 0.456$). Thus, hypothesis H2 is rejected. However, the results of this study need to be carefully assessed and interpreted with a degree of caution, as there is a possibility that a larger sample size may show a statistically

more significant difference between the described age groups of women in assessing their own awareness of sustainable fashion.

Table 1. Sociodemographic profile of the respondents.

Age Group	Frequency	Percentage	CumulativePercentage
18–26	82	31.2	31.2
27–35	75	28.5	59.7
36–44	54	20.5	80.2
45–53	23	8.7	89.0
54–62	19	7.2	96.2
More than 63	10	3.8	100.0
Total	263	100.0	
Education Level	Frequency	Percentage	CumulativePercentage
Primary school	1	0.4	0.4
High school	62	23.6	24.0
Undergraduate study	65	24.7	48.7
Graduate study	118	44.9	93.5
Postgraduate specialist study	4	1.5	95.1
Postgraduate master of science	11	4.2	99.2
Doctor of science	2	.8	100.0
Total	263	100.0	
Employment Status	Frequency	Percentage	CumulativePercentage
Student	54	20.5	20.5
Professional training	1	0.4	20.9
Employed	183	69.6	90.5
Unemployed	14	5.3	95.8
Retired	11	4.2	100.0
Total	263	100.0	
Monthly Income	Frequency	Percentage	CumulativePercentage
Up to HRK 5500	106	40.3	40.3
HRK 5501–9000	98	37.3	77.6
HRK 9001–12,500	32	12.2	89.7
HRK 12,501–16,000	13	4.9	94.7
HRK 16,001–19,500	4	1.5	96.2
More than HRK 19,501	10	3.8	100.0
Total	263	100.0	
Monthly Spending on Clothing	Frequency	Percentage	CumulativePercentage
Up to HRK 500	196	74.5	74.5
HRK 501–1000	49	18.6	93.2
HRK 1001–1500	11	4.2	97.3
HRK 1501–2000	6	2.3	99.6
More than HRK 2001	1	0.4	100.0
Total	263	100.0	

Source: author's work.

Table 2. Descriptive data for the question On a scale of 1 to 5, how would you rate your own awareness of sustainable fashion? according to gender.

	Sex	N	M	SD
On a scale of 1 to 5, how would you rate your own awareness of sustainable fashion?	M	87	2.37	1.122
	F	176	3.14	1.018

Source: author's work.

Table 3. Descriptive data for the question On a scale of 1 to 5, how would you rate your own awareness of sustainable fashion? according to age of the female respondents.

	Sex	N	M	SD
On a scale of 1 to 5, how would you rate your own awareness of sustainable fashion?	F under 35	106	3.19	1.015
	F above 36	70	3.07	1.026

Source: author’s work.

When asked about the importance of certain aspects of the sustainability of a fashion brand’s business, the respondents had to assess the extent to which individual claims describe them. The answers offered ranged on a Likert-type scale from 1 (strongly disagree) to 5 (strongly agree). The questions consisted of the following nine statements:

- I find it important that a fashion brand uses organic materials in the clothing production.
- I find it important that a fashion brand uses recycled materials in the clothing production.
- I find it important that a fashion brand uses biodegradable materials in the clothing production.
- I find it important that a fashion brand uses recycled and/or biodegradable packaging (bags, boxes, etc.).
- I find it important that a fashion brand uses environmentally friendly colors in the clothing production.
- I find it important that a fashion brand has reduced water consumption in the clothing production.
- I find it important that a fashion brand transparently publishes data on energy efficiency in the clothing production.
- I find it important that a fashion brand has tips on caring for the environment (such as the impact of washing clothes, throwing away old clothes).
- I find it important that a fashion brand has a line of sustainable clothing that is clearly marked.

According to the data in Table 4, it is presented that the mean value of all particles of the variable Importance of sustainability of the fashion brand business in the female respondents is higher than in the male respondents. The use of recycled and/or biodegradable packaging is of the greatest importance for all the respondents (the average score for females is 3.98, and for males 3.61). The next important thing for women is the use of environmentally friendly colors in the production of clothing (3.89), and for the male respondents the second most important thing is the reduced water consumption in the production process (3.59). The following items have the lowest mean value for all the respondents: transparent publication of data on energy efficiency in the clothing production (for females: 3.48, and for males: 3.26) and the use of recycled materials in the clothing production (for females: 3.49, for males: 3.17). However, it should be noted that the differences between the male and female respondents are not statistically significant based on the performed *t*-test. The only particle where the gender difference is statistically significant ($p < 0.001$) is It is important to me that the fashion brand uses recycled and/or biodegradable packaging (bags, boxes, etc.), where it is statistically significantly more important to women that fashion brands use recycled and/or biodegradable packaging. All the remaining particles do not have a statistically significant difference between the sexes, which means that in this sample, there is no difference in the importance of these aspects of the sustainability of a fashion brand business in terms of gender. Although women assess their own awareness of the sustainability of a business more greatly than men, the *t*-test showed that it is as important to them as it is to men whether the business of a fashion brand is sustainable. Cronbach’s alpha coefficient was used to determine the reliability of the questionnaire. Since the value of Cronbach’s alpha coefficient is 0.695, it can be determined that this is an acceptable coefficient value leaning toward very good.

This would mean that almost 7 out of 10 respondents have the same opinion about the mentioned importance of business sustainability. It is important to note that there is a possibility of different results in a larger number of respondents, and these results are still to be further determined by further research.

Table 4. The importance of the sustainability of a fashion brand business by gender.

	Sex	N	M	SD	t	df	p
I find it important that a fashion brand uses organic materials in the clothing production.	M	87	3.33	1.158	−2.304	154.507	0.023
	F	176	3.67	1.028			
I find it important that a fashion brand uses recycled materials in the clothing production.	M	87	3.17	1.143	−2.235	144.870	0.027
	F	176	3.49	0.938			
I find it important that a fashion brand uses biodegradable materials in the clothing production.	M	87	3.48	1.140	−1.287	160.190	0.200
	F	176	3.67	1.055			
I find it important that a fashion brand uses recycled and/or biodegradable packaging (bags, boxes, etc.).	M	87	3.61	1.223	−2.526	261	0.012
	F	176	3.98	1.053			
I find it important that a fashion brand uses environmentally friendly colors in the clothing production.	M	87	3.57	1.158	−2.109	167.618	0.036
	F	176	3.89	1.129			
I find it important that a fashion brand has reduced water consumption in the clothing production.	M	87	3.59	1.187	−.368	159.928	0.713
	F	176	3.64	1.097			
I find it important that a fashion brand transparently publishes data on energy efficiency in the clothing production.	M	87	3.26	1.234	−1.351	159.442	0.179
	F	176	3.48	1.136			
I find it important that a fashion brand has tips on caring for the environment (such as the impact of washing clothes, throwing away old clothes).	M	87	3.55	1.159	−.856	171.813	0.393
	F	176	3.68	1.162			
I find it important that a fashion brand has a line of sustainable clothing that is clearly marked.	M	87	3.32	1.271	−1.799	158.837	0.074
	F	176	3.61	1.166			

Source: author's work.

6. Discussion

This research confirmed previous findings when it comes to differences in sustainable behavior in terms of fashion consumption between sexes (Khan and Trivedi 2015). Women show a greater tendency to rate their awareness of sustainable fashion higher than men. Although earlier research showed that there are differences in behavior between consumers younger than 34 and those older than 35 (KPMG 2019), the research showed that there is no statistically significant difference between the two age groups in women. Nevertheless, keeping in mind the sample size and the number of respondents, it is possible that the results would be different if the research were to be conducted on a larger scale.

The limitations of this research are also important to mention, and they include sample size, gender representation, unequal age groups, and different groups regarding education level, income, and the amount respondents spend on clothing purchases. In addition, issues of sustainability and ethical behavior, which are related to this topic, may include attitudes that individuals would not want to reveal in certain situations, even though the anonymity of individuals participating in the research was ensured. The research using the questionnaire was conducted online, in conditions that are not controlled, so it is not possible to determine the reliability of the results with absolute certainty. Additionally, this research, just like most marketing research, was conducted over a certain period of time. However, these limitations do not diminish the contribution of the research in the overall matter.

7. Conclusions

The rising interest in sustainable fashion in recent years, having in mind the current disruption in the previously established way of life, could pave the way for a more significant inclusion of sustainable behavior and greater consumer awareness of the consequences

when consuming fashion items and reviewing current behavior-related practices. However, Croatia lacks systematic and empirical research on consumer attitudes toward sustainable business in the fashion industry. The aim of the research is to start a discussion on the topic of sustainable fashion and open the way to deeper questioning and adoption of sustainable business practices in fashion. Additionally, changes are needed in the current manufacturing of fashion brands, which should be transparent, and in production processes, brands should strive for the greatest possible implementation of sustainable strategies in environmental and social terms. That being so, the goal of this research was to initiate the topic of sustainable fashion and bring awareness of problems within the fashion industry to consumers, who are a big part of the change, in Croatia. Change in consumers' behavior would induce the shift in the business part of fashion toward sustainable practices. When it comes to raising awareness about sustainability in the fashion industry, previous research has shown that education on sustainability is important to create a change in consumer behavior. Educating consumers can be done via brands' marketing strategies that go beyond regular item promotion and deeper into knowledge about sustainable practices in business. That can create an opportunity for customers to participate by choice in fashion sustainability (Jeong and Ko 2021). Sustainable fashion encompasses a number of extensive and complex parameters and unites them in one niche of the fashion industry. Part of sustainable fashion refers to socially responsible business, innovation in production processes, and understanding the wishes and needs of consumers and their psychological framework. These are just some of the aspects that the sustainability of fashion brands must cover, and it is certainly clear that such business requires thinking outside the box toward the future. By creating content about sustainability and encouraging conversation about it, fashion brands can create an opportunity to increase buyers' interest in sustainable fashion, help reduce the negative environmental impact, but also improve their overall image and influence consumer information and awareness. The result of this research shows that it is required to raise awareness about sustainability in fashion to motivate consumers to make conscious buying choices that have less pressure on the environment. In order to truly understand the concept of sustainable fashion, it is important to understand the ecological and social footprint of every garment used on a daily basis. Future research could extend preliminary results from this research and test their applicability on a wider scale. Only approximate conclusions can be drawn from this study due to the relatively small sample size. Nevertheless, the study provides a better understanding of the various factors that can influence consumer behavior in terms of sustainability as well as sustainable fashion, and thus can facilitate the selection of marketing strategies, campaigns, and messages.

Author Contributions: Conceptualization, D.M. and A.H.; methodology, D.M.; software, D.M.; formal analysis, D.M., A.H. and G.K.; investigation, D.M.; writing—original draft preparation, D.M., A.H. and G.K.; writing—review and editing, A.H. and G.K.; supervision, G.K. All authors have read and agreed to the published version of the manuscript.

Funding: This research was funded by the University North (UNIN-2021).

Institutional Review Board Statement: Not applicable.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The datasets supporting the conclusions of this article are included within the article.

Conflicts of Interest: The authors declare no conflict of interest.

References

- Bray, Jeffery, Nick Johns, and David Kilburn. 2010. An exploratory study into the factors impeding ethical consumption. *Journal of Business Ethics* 98: 597–608. [\[CrossRef\]](#)
- Carey, Lindsey, and Marie-Cécile Cervellon. 2014. Ethical fashion dimensions: Pictorial and auditory depictions through three cultural perspectives. *Journal of Fashion Marketing and Management* 18: 483–506. [\[CrossRef\]](#)

- Ceylan, Özgür. 2019. Knowledge, attitudes and behavior of consumers towards sustainability and ecological fashion. *Textile & Leather Review* 2: 154–61. [CrossRef]
- Chen, Yu-Shan, and Ching-Hsun Chang. 2013. Greenwash and Green Trust: The Mediation Effects of Green Consumer Confusion and Green Perceived Risk. *Journal of Business Ethics* 114: 489–500. [CrossRef]
- Ciasullo, Maria Vincenza, Gennaro Maione, Carlo Torre, and Orlando Troisi. 2017. What about Sustainability? An Empirical Analysis of Consumers' Purchasing Behavior in Fashion Context. *Sustainability* 9: 1617. [CrossRef]
- Connell, Kim Y. Hiller. 2010. Internal and external barriers to eco-conscious apparel acquisition. *International Journal of Consumer Studies* 34: 279–86. [CrossRef]
- Ellen MacArthur Foundation. 2017. A New Textiles Economy: Redesigning Fashion's Future. Available online: <http://www.ellenmacarthurfoundation.org/publications> (accessed on 23 January 2021).
- Ertekin, Zeynep Ozdamar, and Deniz Atik. 2014. Sustainable markets: Motivating factors, barriers, and remedies for mobilization of slow fashion. *Journal of Macromarketing* 35: 53–69. [CrossRef]
- Fashion Revolution Webpage. n.d. Available online: <https://www.fashionrevolution.org/> (accessed on 8 January 2021).
- Fashion United Website on "Global Fashion Industry Statistics". n.d. Available online: <https://fashionunited.com/global-fashion-industry-statistics/> (accessed on 15 February 2021).
- Fletcher, Kate. 2008. *Sustainable Fashion and Textiles: Design Journeys*. Oxford: Routledge.
- Fletcher, Kate. 2010. Slow fashion: An Invitation for Systems Change. *The Journal of Design, Creative Process and the Fashion Industry* 2: 259–66. [CrossRef]
- Garcia, Solimar, Alexandra Cordeiro, Irenilza de Alencar Nääs, and Pedro Luiz de Oliveira Costa Neto. 2019. The sustainability awareness of Brazilian consumers of cotton clothing. *Journal of Cleaner Production* 215: 1490–502. [CrossRef]
- Gazzola, Patrizia, Enrica Pavione, Roberta Pezzetti, and Daniele Grechi. 2020. Trends in the Fashion Industry. The Perception of Sustainability and Circular Economy: A Gender/Generation Quantitative Approach. *Sustainability* 12: 2809. [CrossRef]
- Gonzalez, Nayelli. 2015. Why Is Slow Fashion So Slow to Catch on? Triplepundit. Available online: <https://www.triplepundit.com/story/2015/why-slow-fashion-so-slow-catch/58091> (accessed on 15 December 2020).
- Good on You Webpage. n.d. Available online: <https://goodonyou.eco/> (accessed on 17 February 2021).
- Harris, Fiona, Helen Roby, and Sally Dibb. 2016. Sustainable clothing: Challenges, barriers and interventions for encouraging more sustainable consumer behaviour. *International Journal of Consumer Studies* 40: 309–18. [CrossRef]
- Henninger, Claudia E., Panayiota J. Alevizou, and Caroline J. Oates. 2016. What is sustainable fashion? *Journal of Fashion Marketing and Management* 20: 400–16. [CrossRef]
- Jeong, Dayun, and Eunju Ko. 2021. The influence of consumers' self-concept and perceived value on sustainable fashion. *Journal of Global Scholars of Marketing Science* 31: 511–25. [CrossRef]
- Joergens, Catrin. 2006. Ethical fashion: Myth or future trend? *Journal of Fashion Marketing and Management* 10: 360–71. [CrossRef]
- Johnstone, Leanne, and Cecilia Lindh. 2017. The sustainability-age dilemma: A theory of (un)planned behaviour via influencers. *Journal of Consumer Behaviour* 17: e127–e139. [CrossRef]
- Jung, Sojin, and Byoungjo Jin. 2014. A theoretical investigation of slow fashion: Sustainable future of the apparel industry. *International Journal of Consumer Studies* 38: 510–19. [CrossRef]
- Khan, Nasreen, and Pooja Trivedi. 2015. Gender Differences and Sustainable Consumption Behavior. *British Journal of Marketing Studies* 3: 29–35.
- KPMG. 2019. Sustainable Fashion—A Survey on Global Perspectives. Available online: <https://assets.kpmg/content/dam/kpmg/cn/pdf/en/2019/01/sustainable-fashion.pdf> (accessed on 17 February 2021).
- Lyst Webpage—Data on "Searching for Sustainability". n.d. Available online: <https://www.lyst.com/news/sustainable-ethical-fashion/> (accessed on 7 February 2021).
- Manchiraju, Srikant, and Amrut Sadachar. 2014. Personal Values and Ethical Fashion Consumption. *Journal of Fashion Marketing and Management* 18: 357–74. [CrossRef]
- McKeown, Carolyn, and Linda Shearer. 2019. Taking sustainable fashion mainstream: Social media and the institutional celebrity entrepreneur. *Journal of Consumer Behaviour*. [CrossRef]
- McKinsey & Company. 2020. Consumer Sentiment on Sustainability in Fashion. Research Done by: Anna Granskog, Libbi Lee, Karl-Hendrik Magnus and Corinne Sawers. Available online: <https://www.mckinsey.com/industries/retail/our-insights/survey-consumer-sentiment-on-sustainability-in-fashion> (accessed on 19 December 2020).
- McNeill, Lisa, and Rebecca Moore. 2015. Sustainable fashion consumption and the fast fashion conundrum: Fashionable consumers and attitudes to sustainability in clothing choice. *International Journal of Consumer Studies* 39: 212–22. [CrossRef]
- Niinimäki, Kirsi. 2013. *Sustainable Fashion: New Approaches*. Helsinki: Aalto ARTS Books, Available online: <https://aaltodoc.aalto.fi/handle/123456789/13769> (accessed on 17 December 2020).
- Niinimäki, Kirsi. 2015. Ethical foundations in sustainable fashion. *Textiles and Clothing Sustainability* 1: 1–11. [CrossRef]
- O'Connell, Sanjida. 2013. *Eco Chic: Can Fashion Be Sustainable?* Independent Minds Powered by Live Journal. Available online: <https://sanjidaoconnell.livejournal.com/7459.html> (accessed on 17 January 2021).
- Omazić, Mislav Ante, Alica Grilec, and Irena Šabarić. 2017. Razvoj koncepta održivog razvoja u modnoj industriji—Pregled literature. *Zbornik Ekonomskog fakulteta u Zagrebu* 15: 165–77. [CrossRef]

- Paço, Arminda, Walter Leal Filho, Lucas V. Ávila, and Karen Dennis. 2020. Fostering sustainable consumer behavior regarding clothing: Assessing trends on purchases, recycling and disposal. *Textile Research Journal* 91: 373–84. [CrossRef]
- Pookulangara, Sanjukta, and Arlesa Shepard. 2013. Slow fashion movement: Understanding consumer perceptions—An exploratory study. *Journal of Retailing and Consumer Services* 20: 200–6. [CrossRef]
- Rahman, Imran, Jeongdo Park, and Christina Geng-qing Chi. 2015. Consequences of “greenwashing”: Consumers’ reactions to hotels’ green initiatives. *International Journal of Contemporary Hospitality Management* 27: 1054–81. [CrossRef]
- Shen, Dong, Joseph Richards, and Feng Liu. 2013. Consumers’ Awareness of Sustainable Fashion. *Marketing Management Journal* 23: 134–47.
- Soyer, Mirella, and Koen Ditttrich. 2021. Sustainable Consumer Behavior in Purchasing, Using and Disposing of Clothes. *Sustainability* 13: 8333. [CrossRef]
- Su, Jin, Kittichai Tu Watchravesringkan, Jianheng Zhou, and Maria Gil. 2019. Sustainable clothing: Perspectives from US and Chinese young Millennials. *International Journal of Retail & Distribution Management* 47: 1141–62. [CrossRef]
- Tama, Derya, Berna Cüreklibatir Encan, and Ziyet Öndoğan. 2017. University students’ attitude towards clothes in terms of environmental sustainability and slow fashion. *Textile and Apparel* 27: 191–97.
- Tomolillo, Dominique A. C., and Deirdre Shaw. 2004. Undressing the ethical issues in fashion: A consumer perspective. In *International Retail Marketing: A Case Study Approach*. Edited by Margaret Bruce, Christopher Moore and Grete Birtwistle. Oxford: Elsevier Butterworth-Heinemann, pp. 141–52.
- UN Alliance for Sustainable Fashion. n.d. Available online: <https://unfashionalliance.org/> (accessed on 19 November 2020).
- Wijaya, Siauw Gabriella Tiffany, and Eristia Lidia Paramita. 2021. Purchase intention toward sustainable fashion brand: Analysis on the effect of customer awareness on sustainability on willingness to pay. *Diponegoro International Journal of Business* 4: 49–57. [CrossRef]