

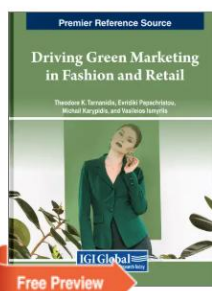
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Driving Green Marketing in Fashion and Retail

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A volume in the Advances in Marketing, Customer
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Chapter 7

The Consumer in the Fashion Industry: An Empirical Study to Understand if It Is Sustainable

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ABSTRACT

The production and consumption of textile products worldwide generate severe environmental impacts as well as economic and social repercussions. Companies are embarking on a new path towards sustainable production and consumption patterns to respond to increasingly environmentally conscious consumers. This study aims to investigate the characteristics of a sustainable consumer in the fashion industry and their level of awareness regarding sustainability at the time of purchase. To this end, a questionnaire was developed to analyse consumer behaviour in the fashion sector, while various statistical techniques were used to analyse the data. The results show that a cluster of consumers can be defined as sustainable, and that socio-demographic variables and price influence the purchase of sustainable products. Sustainability knowledge is also crucial for adopting sustainable consumption behaviour.

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The Consumer in the Fashion Industry

INTRODUCTION

The production and consumption of textile products worldwide generate high environmental impacts related to water consumption, energy consumption and air emissions, and economic and social repercussions (Sinha et al., 2023). The production of textile products is continuously increasing with products that have an increasingly shorter life cycle. This production model aimed at the overproduction and overconsumption of clothing products is known as fast fashion (Yang et al., 2017). According to this logic, consumers buy lower quality and cheaper clothing to keep up with the fashion of the moment. This model has several critical points related to resource consumption and waste management. To respond to increasing environmentally and socially aware consumers, several companies are embarking on a new path towards sustainable production models (Thorisdottir & Johannsdottir, 2019).

Sustainable fashion can be defined as ‘clothing that incorporates one or more aspects of social and environmental sustainability’ (Su et al., 2019, p. 1141). It is, therefore, based on fair trade principles, anti-exploitation and the use of materials that do not cause harm to the environment, as pointed out by (Goworek et al., 2012; Su & Chang, 2018). From a consumer perspective, sustainable fashion has been presented as a response to the overconsumption of clothing products. This perspective aims to address the socio-environmental issues that characterise the industry, including pollution, energy conservation, fair trade principles and exploitation-free labour (Diddi et al., 2019; L. McNeill & Venter, 2019; Su et al., 2019). Fashion represents a key sector for the circular transition at the European level. The industry comprises more than 160,000 companies with a workforce of 1.5 million people and a turnover of EUR 162 billion (EURATEX, 2020). Clothing in Europe generates over 57 million tonnes of waste per year (European Environmental Agency, 2020). European policies, particularly the EU Strategy for Sustainable and Circular Textiles, encourage the development of sustainable production and consumption patterns. They also position Europe as a forerunner of sustainable and circular value chains.

One of the critical points on which the sustainable fashion sector is developing at the European level concerns traceability and transparency of information along the production chain. This combines the production of sustainable products that at the same time respect ethical principles related to the welfare of workers further essential point is upstream in the production chain (Mukherjee, 2015). The use of sustainable raw materials that derive from renewable sources significantly reduces the environmental impacts related to the production of clothing materials (Cimatti et al., 2017). Technological innovation is also fundamental in the sector as through the use of new production techniques and technologies, production processes are more optimised and have a lower environmental impact (Nayak et al., 2020; Papahristou & Bilalis, 2017).

Consumers across Europe are becoming increasingly involved in the consumption of sustainable fashion products. Driven by the awareness of environmental issues and stimulated by new fashions triggered by sustainability, the consumption of sustainable fashion products is continuously growing (Mukendi et al., 2020). Sustainability issues and the circular economy are now familiar themes for consumers. Their knowledge towards sustainable consumption of clothing products does not justify an awareness of their behaviour (Busalim et al., 2022). Several studies in the literature explore consumer behaviour in sustainable fashion, as illustrated by studies such as that of (Jacobs et al., 2018) and (Koszewska, 2016). Still, no studies investigate the gap between consumers’ attitudes towards sustainable consumption and their purchasing behavior towards sustainable products. Against this background, this study aims to examine the characteristics of a sustainable consumer in the fashion industry and their level of awareness in terms of sustainability at the time of purchase.

The Consumer in the Fashion Industry

This research, therefore, aims to answer the following research questions:

RQ1 What are the characteristics of a sustainable consumer in the fashion industry?

RQ2 What is the level of consumer awareness at the time of purchase in the fashion industry?

BACKGROUND

The consumption of products from the fashion industry is changing (McQueen et al., 2022). Today, the figure of the sustainable consumer is becoming increasingly influential and environmental and social awareness are shaping society and behaviour (Domingos et al., 2022). Consumers no longer rely solely on aesthetics and trendiness but consider additional sustainability-related aspects (Busalim et al., 2022). Environmental responsibility, ethics and social awareness are references (Blazquez et al., 2020). To compete in the market, a fashion company will have to offer sustainable and fashionable products (Khandual & Pradhan, 2019).

In the fashion industry, the sustainable consumer can be defined as seeking out clothing products that respect sustainability principles (Mukendi et al., 2020). One example is the consumption of clothing products made from eco-friendly materials, i.e. from renewable sources or recycled raw materials (Daukantienė, 2023). Several brands now produce products that limit their environmental impact through sustainable production processes (Thorisdottir & Johannsdottir, 2019). Upcycling is one of the most widely used techniques (Bhatt et al., 2019).

Another aspect considered when buying clothes is related to the social impact of the fashion production chain (Cerchia & Piccolo, 2019). Consumers look for products that have been produced by ethical principles and workers' conditions (Clube & Tennant, 2022).

Consumers pay attention to the product life cycle and are interested in products with a longer life cycle (Jung & Jin, 2016). To counteract the fast fashion phenomenon, several consumers are inclined to buy more durable products made from quality materials (Fletcher, 2012; Gwilt, 2020). This is also leading to the growth of the secondary market, where second-hand products are consolidating as an excellent alternative to combat the industry's environmental impacts (Machado et al., 2019; Strähle & Gräff, 2017).

In this context, the communication of information on the production of the product starts to represent a fundamental element of the sector (Pereira et al., 2021; SanMiguel et al., 2021). Companies, through information campaigns, labels and websites, must, with maximum transparency, guarantee access to the information that consumers are interested in (Turunen & Halme, 2021). All this is aimed at avoiding the misinformation that results in greenwashing and alerts consumers to consume products that are not always sustainable (Adamkiewicz et al., 2022; Lu et al., 2022).

Moreover, the sustainability of products is not directly perceivable to the end consumer (Kaczorowska et al., 2019). Therefore, certification and control systems emerge as the main tools that can assure the consumer of specific qualities and respect for the environment and workers' rights (Lee et al., 2020). The sustainable consumer is a well-informed individual whose level of awareness has been shaped through the media with a focus on sustainability education (Zhang et al., 2021). Sustainability is seen as a competitive advantage in a company's strategic approach and contributes to the strengthening of reputation and brand image, crucial elements in the fashion industry (Brooksworth et al., 2022). Sustainable behavior becomes the basis of the relationship between business and customer/consumer (Pedersen et al., 2018). Thus, consumer interest drives the industry towards greater sustainability (Busalim et al., 2022).

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METHODOLOGY

The study aims to investigate the characteristics of a sustainable consumer in the fashion industry and their level of awareness regarding sustainability at the time of purchase. For this purpose, a questionnaire was drawn up to analyze consumer behaviour in the fashion industry, while various statistical techniques were used to analyze the data. A non-probabilistic sampling scheme, specifically an accidental sampling, was adopted to identify the customer population, as widely used in market research (Bracalente et al., 2009). The questionnaire analyze in the following two sections:

1. The consumer analysis contains information on consumers' perceptions of sustainable products in the fashion industry.
2. Consumer profile: contains information on socio-demographic characteristics.

The Likert scale measured consumer perception of sustainable products in the fashion industry. The scale assigned respondents a score ranging from “strongly disagree” (value 1) to “strongly agree” (value 6) (Likert, 1932). The data sample collected through the administration of the questionnaire was 230 persons, analyzed with the statistical software “STATA 12 Data Analysis and Statistical Software”.

This study used a sample of Italian consumers as a reference. The fashion industry is one of the leading sectors in Italy. It is the third largest manufacturing sector in terms of companies (almost 45,000) and employees (over 397 thousand). Moreover, Italy is the world's second-largest exporter of clothing articles (Italian Trade Agency, 2023). Italy boasts a consolidated position on the world fashion scene, and therefore, investigating consumer perceptions in such a fashion-conscious country is an essential first step to extending the study (Silvestri et al., 2020). The sample analyzed consisted of 157 females and 73 males. The age of the consumers interviewed is as follows: 2% are over 20 years old, 17% are over 60 years old, 33% are between 20 and 29 years old, 17% are between 30 and 39 years old, 13% are between 40 and 49 years old, and 17% are between 50 and 59 years old. Descriptive and multivariate analyses were used to answer the research questions. Factor analysis and cluster analysis were used to understand which characteristics define sustainable consumers in the fashion industry and their level of awareness in purchasing sustainable products. The results of the statistical analyses carried out on the sample are reported in the next section. In the first step, descriptive analyses are reported that allow us to highlight the characteristics that influence and describe consumer behavior in the fashion industry. In the second step, multivariate analyses are reported to identify the types of consumers in the fashion industry and assess their purchasing awareness.

DATA ANALYSIS AND RESULTS

Factor Analysis

Factor analysis (FA) is used in market research to investigate consumers who display differential opinions regarding product characteristics or behavioral perceptions. FA allows consumer behavior analysis in this study, offering valuable data to test hypotheses (Bracalente et al., 2009). Factor analysis was used to address the challenges related to multicollinearity, which emerged from the correlation matrix (Tab.2). Table 1 presents a descriptive analysis of the variables examined.

*The Consumer in the Fashion Industry**Table 1. Descriptive statistics of sustainability factors*

Items	Var.	Obs	Mean	Std. Dev.	Min	Max
Product life	var1	230	4.53	1.5	1	6
Price	var2	230	4.58	1.41	1	6
Recycled Product Awareness	var3	230	3.87	1.55	1	6
Presence of recycled components	var4	230	3.75	1.52	1	6
Awareness of sustainable choices	var5	230	4.08	1.56	1	6
Reduced environmental impact	var6	230	4.29	1.53	1	6
Reduced social impact	var7	230	4.07	1.57	1	6
Presence of environmental certifications	var8	230	3.66	1.62	1	6
Presence of quality certifications	var9	230	3.69	1.58	1	6
Made in	var10	230	4.2	1.51	1	6
Presence of eco-friendly fibers	var11	230	4.1	1.59	1	6
Possibility of cold washing	var12	230	3.73	1.78	1	6
Possibility of ironing at low temperatures	var13	230	3.53	1.81	1	6

Source: our elaboration on the dataset.

In Table 1, the items ‘Price’ (with an average of 4.58) and ‘Product life’ (with an average of 4.18) emerges as the most decisive. These categories are closely linked to the product’s value, highlighting their importance in the consumer’s purchasing decision. In contrast, the item ‘Ability to iron at low temperatures’ shows less influence, with an average of 3.53. This suggests the opportunity to focus on these aspects to increase consumer awareness.

A correlation study of the observed variables was employed (Table 2) to assess the presence of any redundancies that might confuse or reduce the significance of the statistical analysis results.

Correlation coefficients are instruments that measure the existence of a linear link between two quantitative variables, providing details on the intensity and sign of this relationship. The data presented in Table 2 show a robust connection between the variables under investigation, especially those related to ‘Presence of recycled components’, ‘awareness of sustainable choices’, ‘reduction of environmental impact’, the presence of environmental and quality certifications, and the presence of ecological fibers.

Although, in some cases, the linear link between some variables is not exceptionally high, it is considered appropriate to proceed with the component analysis of all variables. In the context of FA, each linear combination represents a function of all original variables but correlates specifically with some of them. On the other hand, the components are uncorrelated and, therefore, contribute to differentiating information content. The correlation matrix between the variables is the input for this technique, where a higher mean correlation indicates a higher synthesis capacity of the factor analysis. Consequently, correlations between the various observed variables are crucial to starting a market segmentation analysis with a classical approach. In the segmentation process, the initial step involves factor analysis to identify the fundamental dimensions of a phenomenon described by a set of quantitative variables. Using the principal component method, it was possible to select a limited number of ‘new variables’ (factors), $q < p$, that efficiently represent the main characteristics of the phenomenon, minimizing information loss. Before conducting the factorial analysis, the items’ internal consistency was checked using Cronbach’s

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Table 2. Correlation matrix

	Product life	Price	Recycled Product Awareness	Presence of recycled components	Awareness of sustainable choices	Reduced environmental impact	Reduced social impact	Presence of environmental certifications	Presence of quality certifications	Made in	Presence of eco-friendly fibers	Possibility of cold washing	Possibility of ironing at low temperatures
Product life	1												
Price	0.67	1											
Recycled Product Awareness	0.48	0.42	1										
Presence of recycled components	0.48	0.41	0.92	1									
Awareness of sustainable choices	0.55	0.42	0.85	0.86	1								
Reduced environmental impact	0.50	0.42	0.85	0.84	0.90	1							
Reduced social impact	0.44	0.40	0.73	0.72	0.76	0.84	1						
Presence of environmental certifications	0.52	0.41	0.73	0.72	0.74	0.77	0.72	1					
Presence of quality certifications	0.53	0.41	0.70	0.70	0.73	0.76	0.72	0.94	1				
Made in	0.51	0.36	0.56	0.55	0.59	0.59	0.60	0.63	0.63	1			
Presence of eco-friendly fibers	0.48	0.36	0.74	0.75	0.75	0.76	0.67	0.73	0.72	0.63	1		
Possibility of cold washing	0.46	0.34	0.56	0.58	0.54	0.53	0.54	0.65	0.64	0.55	0.63	1	
Possibility of ironing at low temperatures	0.41	0.35	0.48	0.52	0.47	0.47	0.48	0.57	0.58	0.52	0.54	0.88	1

Source: our elaboration on the dataset.

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α -index, as suggested by (Namukasa, 2013) and (Hair et al., 2006). This index, with values above 0.6 as a reliability criterion, was applied to check the internal consistency of the items. The results shown in Table 3 confirm the presence of good internal consistency.

Factorial analysis was employed to condense the information in the variables into factors, and the criterion used to identify new factors was based on eigenvalues > 1 . A ‘rotation’ was applied to the initial factorial solution to facilitate interpretation. The orthogonal rotation of the factors was performed using Kaiser’s varimax method. This type of rotation ensures that the rotated factors remain uncorrelated. Table 4 presents the factors’ principal component matrix (eigenvectors) and shows that the first three factors have eigenvalues greater than 1. These three factors also contain approximately 81% of the information initially present in the dataset. For this reason, it was decided to consider only these first three factors to identify the new variables.

Table 3. Cronbach α test

Items	Var.	Obs	Sign	alpha
Product life	var1	230	+	0.95
Price	var2	230	+	0.96
Recycled Product Awareness	var3	230	+	0.95
Presence of recycled components	var4	230	+	0.95
Awareness of sustainable choices	var5	230	+	0.95
Reduced environmental impact	var6	230	+	0.95
Reduced social impact	var7	230	+	0.95
Presence of environmental certifications	var8	230	+	0.95
Presence of quality certifications	var9	230	+	0.95
Made in	var10	230	+	0.95
Presence of eco-friendly fibers	var11	230	+	0.95
Possibility of cold washing	var12	230	+	0.95
Possibility of ironing at low temperatures	var13	230	+	0.95
Test scales				0.95

Source: our elaboration of the data set.

Table 4. Rotation orthogonal Varimax (Kaiser off)

Factor	Variance	Difference	Proportion	Cumulative
Factor1	5.86	3.12	0.45	0.45
Factor2	2.74	0.76	0.21	0.66
Factor3	1.98	.	0.15	0.81

Source: our elaboration of the data set. Notes: Number of obs = 230; Retained factors = 3; Number of params = 36.

The saturation matrix was used to understand how the various factors can synthesize the different variables. Within this table, the correlations between the original variables and the factors were identi-

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fied. Each variable is associated with the others according to the highest correlation factor, and then this factor is interpreted based on the variables associated with it. Table 5 shows that Factor 1 brings together aspects related to product sustainability (e.g. Presence of recycled components, Reduced environmental impact, and Presence of environmental certifications). Factor 2 summarizes the variables concerning energy saving (The presence of environmental certifications and the Possibility of ironing at low temperatures). Finally, Factor 3 summarizes the variables relating to product value (Price and Product Life).

Table 5. Saturation matrix (factor loadings)

Items	Variable	Factor1	Factor2	Factor3	Uniqueness	New Variables
Recycled Product Awareness	var3	0.87			0.15	Product sustainability - FA1
Presence of recycled components	var4	0.86			0.16	
Awareness of sustainable choices	var5	0.88			0.12	
Reduced environmental impact	var6	0.90			0.09	
Reduced social impact	var7	0.79			0.26	
Presence of environmental certifications	var8	0.73			0.21	
Presence of quality certifications	var9	0.71			0.22	
Made in	var10	0.51			0.44	
Presence of eco-friendly fibers	var11	0.74			0.26	
Possibility of cold washing	var12		0.86		0.09	Energy saving - FA2
Possibility of ironing at low temperatures	var13		0.90		0.10	
Price	var1			0.82	0.18	Value for money - FA3
Product life	var2			0.89	0.15	

Source: our elaboration of the data set.

Cluster Analysis (CA)

Whereas factor analysis summarises aspects of macro dimensions, clustering analysis allows individuals to be grouped according to shared characteristics, thus forming groups or segments characterised by considerable homogeneity (Bracalente et al., 2009). In the context of this research, Ward's hierarchical method (Brito et al., 2021; Majeed et al., 2022) is employed for market analysis when marketing actions influence the identification of consumer groups. The following tools were jointly used to define the number of groups: dendrogram analysis and the Calinski/Harabasz indicator (Bracalente et al., 2009; Gerdt et al., 2019).

Table 6 shows the socio-demographic variables of this study sample.

According to the Calinski/Harabasz indicator, the appropriate number depends on the value of the pseudo-F. Typically, one opts for the number of clusters associated with the highest pseudo-F. In this context, the highest value of pseudo-F corresponds to several factors, all converging on three as the highest number.

The Consumer in the Fashion Industry*Table 6. Socio-demographic characteristics of the analyzed sample*

Variable	Items
Gender	M/F
Age	<20;20-29;30-39;40-49;50-59;>60
Profession	Student; Employee; Freelancer; Laborer; Entrepreneur; Housewife; Entrepreneur; Unemployed; Retired; Other

Source: our elaboration of the data set.

Table 7. Calinski/Harabasz pseudo-F

Number of Clusters	Calinski/Harabasz Pseudo-F
3	130.52
4	116.51
5	97.24
6	85.13
7	77.43

Source: our elaboration

Using the Calinski-Harabasz index (Calinski&Harabasz, 1974) (Table 7), together with the dendrogram analysis, four groups can be identified sufficiently clear, and Table 8 analyses the three identified clusters based on the correlation link intensity.

The first cluster is distinctive due to the variable FA1, while the FA2 characterises the second cluster. On the contrary, the third cluster shows no blatant discrimination related to any of the three factors.

Table 8. Cluster analysis: Correlation link intensity

Cluster	Product Sustainability - FA1	Energy Saving - FA2	Value for Money - FA3
CL1 - Sustainable consumer	0.8	-0.23	0.1
CL2 - Saving consumer	-0.35	0.65	0.14
CL3 - Indifferent consumer	-1.4	-0.21	-0.38
Total	-6.72×10^{-10}	8.89×10^{-10}	8.10×10^{-12}

Source: our elaboration of the data set.

Table 9 summarizes the socio-behavioral characteristics of the three clusters. The largest cluster is Cluster 1 (51.3%), followed by Cluster 2 (25.65%), and finally, Cluster 3 (23.04%).

Cluster 1 comprises women aged 30-39, 40-49 and over 60. They are primarily office workers, housewives and pensioners. They prefer an evergreen fashion style. They are interested in sustainability and are therefore willing to pay more for a sustainable product. They consider reducing consumption, buying environmentally friendly products, and extending the product life cycle to be central aspects of sustainable consumption (score given on Likert scale 5-6). They buy new products more when clothes are worn out, on promotion, or for novelty (score given on a Likert scale of 5-6).

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Cluster 2 consists mainly of women under 20 and between 20 and 29. They are primarily students, unemployed, and engaged in other types of work not included in the questionnaire. They prefer a fashion style that is in step with current trends. They have little interest in sustainability and are unwilling to pay more for a sustainable product. They consider extending the product life cycle as a central aspect of sustainable consumption (score given on Likert scale 5) followed by buying environmentally friendly products (score given on Likert scale 4). They buy more new products when clothes are no longer in fashion (score given on Likert scale 4) or for novelty (score given on Likert scale 5-6).

Cluster 3 is mainly composed of men aged 50-59. They are mainly self-employed and blue-collar workers. They prefer a fashion style in step with current trends. They are not interested in sustainability and are, therefore, not willing to pay more for a sustainable product. On average, they consider extending the product life cycle an important aspect of sustainable consumption (score given on Likert scale 4). They are not conditioned to buy new products.

Table 9. Clusters' characteristics

Variable	CL1 - Sustainable Consumer	CL2 - Saving Consumer	CL3 - Indifferent Consumer
Dimension	51.31%	25.65%	23.04%
Gender	F	F	M
Age	30-39/40-49/>60	<20;20-29	50-59
Job	Office workers, Homemakers, Retired	Student; Unemployed; Other Employment	Freelancers; Workman
Fashion style	Evergreen	Trend	Trend
Willingness to pay	Yes	No	No
Interested in sustainable fashion	High (score 5-6)	Low - Medium (score 1;4)	Low (score 1-2)
Reduction of consumption	High (score 5-6)	Low - Medium (score 1;4)	Low (score 2-3)
Purchase of eco-sustainable products	High (score 5-6)	Medium (score 4-5)	Low (score 1;3)
Extend the product life cycle	High (score 5-6)	High (score 5)	Low - Medium (score 1;4)
Purchase used products	Medium (score 4-5)	Low (score 1-2)	Low (score 1;3)
Focus on quality	High (score 5-6)	Medium (score 4-5)	Low - Medium (score 1;4)
Purchase for wear of clothes	High (score 5-6)	Low-Medium (score 2;5)	Low - Medium (score 1;4)
Purchase for fashion trends	Low - High (score 3; 5-6)	Medium (score 4)	Low (score 1-2)
Purchase for promotion and sales	High (score 5-6)	Low - Medium (score 1; 4-5)	Low - Medium (score 2; 4)
Purchase for novelty	High (score 5-6)	High (score 5-6)	Low - Medium (score 1;4)
Purchase for advice	Medium-High (score 4-6)	Low- Medium (2-3;5)	Low (score 1)

Source: our elaboration of the data set.

*The Consumer in the Fashion Industry***DISCUSSION**

This survey reveals important considerations regarding consumer behavior in the fashion industry. The objective of the study is to understand the characteristics of the sustainable consumer in the fashion industry and their level of awareness of sustainability.

The research aims to answer the following research questions:

RQ1 What are the characteristics of a sustainable consumer in the fashion industry?

RQ2 What is the level of consumer awareness at the time of purchase in the fashion industry?

RQ1 What are the characteristics of a sustainable consumer in the fashion industry?

The cluster analysis results indicate that, of the three clusters identified, only one (CL 1 - sustainable consumers) consists of individuals demonstrating a commitment to sustainability in the fashion industry. These individuals are interested in sustainability issues in fashion and actively inform themselves about related environmental problems (score 5-6 Likert scale). A higher level of consumer information is often associated with a better understanding of ecological issues, influencing consumer awareness and consideration of these aspects as relevant when shopping (Turunen & Halme, 2021). Another relevant aspect is the correlation between sustainability and demographic variables such as gender and age, which are considered crucial when analysing consumer behaviour (Jegethesan et al., 2012; Zelezny et al., 2000). Cluster 1 is predominantly composed of women, suggesting that the female gender shows a greater propensity for sustainability than the male gender. Previous studies on sustainable consumer behavior have shown a strong 'gender effect', with women tending to express more significant concern for consumption's environmental impacts and adopt more sustainable behaviour (Luchs & Mooradian, 2012). Women, therefore, are shown to be more sensitive to social and environmental issues, which is in line with findings in the literature (Luchs & Mooradian, 2012).

Cluster 2 (CL 2 - Saving consumer) consists of individuals who consider energy and money-saving aspects in their purchases. These individuals are unwilling to pay more to buy a product because their spending power is low. This is in line with the age of the members of the second group, who are either under 20 or between 20 and 29 years old. Young people consider the economic aspect when purchasing a product (Pena-cerezo et al., 2019). It is highlighted in the literature that price is one of the main obstacles in this context (Sheoran & Kumar, 2022). In the fashion industry, price is synonymous with quality (Wani, 2022). A study showed that young people are unwilling to pay more for a fashion product made from recycled materials as, according to them, the price increase is not justified by the quality of the materials (Fani et al., 2023). Cluster 2 considers the extension of the product's life cycle as an essential aspect of sustainability. They prefer a product with good quality and a good durability/price ratio. Young people usually show more interest in the aesthetic aspects of a product and do not want to choose a sustainable product that is not also fashionable (Pencarelli et al., 2020). Cluster 2 appears to follow fashion trends and is more interested in buying new products for novelty.

Cluster 3 (CL 3 - Indifferent consumer) consists of individuals who do not consider environmental aspects in their purchases. These individuals are unwilling to pay more to buy a fashion product as they are not interested in sustainability. They are indifferent to sustainable fashion and do not identify any critical factors that define the concept of sustainable fashion. This shows a lack of knowledge of the topic, which results in difficulty in recognising a product's sustainability (Heinl et al., 2021). A lack of

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information and understanding of the topic leads to an irresponsible consumer, where responsibility is a critical factor in sustainable consumption choices (Balderjahn et al., 2020).

RQ2 What is the level of consumer awareness at the time of purchase in the fashion industry?

The second research question seeks to investigate consumer awareness of sustainability issues. An analysis of the data shows that consumer awareness is linked to knowledge of the topic. An informed consumer has sustainable purchasing behavior. CL 1 consists of individuals informed about sustainability in the fashion industry. This is evident from the scores given to the questions defining the concept of sustainable fashion. In contrast, CL 3 appears to have no clear idea of sustainable fashion, and CL 2 is entirely unaware of the topic. A gap exists between attitude and behaviour in the sustainable consumption of clothing products (Dhir et al., 2021). Several studies have attempted to identify the drivers and associations present (Jacobs et al., 2018). Our study reveals how sustainable behavior can be improved through an increase in environmental knowledge. This aspect also appears in studies present in the literature on sustainable fashion product consumption (Dhir et al., 2021). Social media use can positively impact consumers' green behavior by informing them and increasing their awareness towards the consumption of fashion products (Salem & Alanadoly, 2021). Social media can engage the consumer, improve the transparency of information, and share experiences and opinions that increase awareness (Strähle & Gräff, 2017).

Educating consumers about sustainability is the basis for change in consumption behavior (Jeong & Ko, 2021). The study shows that consumers educated sustainably are conscious of their consumption. Therefore, media such as brands or certifications can educate consumers in their purchases by making them genuinely conscious (Mandarić et al., 2022). Companies, thus, should act as active promoters of environmental awareness by communicating the benefits and risks of irresponsible consumption (Marc et al., 2022).

This level of knowledge is also reflected in purchasing behavior. According to (Domingos et al., 2022), sustainable consumers, irrespective of their generation, tend to buy timeless clothes, even though they strongly need to feel up-to-date by purchasing fashionable products. This aspect also emerges in CL1, within which it is possible to identify consumers who buy new clothes when their old clothes are worn out. However, they are not entirely indifferent to novelty and, thus, to fashion trends. This latter aspect is very characteristic of the members of the CL2 predominantly composed of young people, thus the leading target group of fast fashion. One of the main drivers of young people's consumption habits is the desire to conform to the social norm and gain recognition from their peers; therefore, social pressure and identity play an important role in shaping young people's attitudes towards consumption (Yalkin & Elliott, 2006). Chasing fashion trends is important for young people to differentiate themselves and stand out from the crowd (L. S. McNeill et al., 2020; L. McNeill & Venter, 2019). Young people are part of a social circle and often need to express their individuality and gain peer approval by wearing fashionable clothes and using popular items (Eriko, 2012). In addition, fashion trends change quickly, which generates difficulties in the choice of purchase for a consumer who wants to be fashionable but simultaneously complies with sustainability principles (Anisah et al., 2024). However, according to (DeLong et al., 2019), young people can also have sustainable behaviors, and this focus comes from an external influence from a place with an eco-conscious culture that leads to involvement in more sustainable purchases.

Among sustainable behaviours is undoubtedly the purchase of second-hand products (Borusiak et al., 2020). According to the 3R concept, there are three basic types of sustainable consumption behavior: Reduce, Reuse, and Recycle. Reuse includes the use of goods previously used by other people. Second-

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hand purchase is acquiring used items through often specific retail formats and exchange venues, both offline and online, giving goods a second life.

Among the three clusters, only cluster 1 considers the purchase of second-hand products as an essential factor for sustainable fashion. The purchase of second-hand products is stimulated by a pro-environmental attitude and, therefore, by a social context in which information is an essential tool to increase consumers' awareness of the environment by inducing similarly sustainable behaviour (Colasante et al., 2023). Environmental concerns prompt consumers to adopt behaviours that can affect overproduction and prevent it from negatively affecting their living conditions (Cervellon et al., 2012). However, studies have shown that despite environmental awareness, individuals tend to be reluctant to buy second-hand clothes. Among the main criticisms is the perceived poor quality of second-hand clothes (Colasante & D'Adamo, 2021).

CL2 members do not show a predisposition to buy second-hand products; however, it is also true that young people play a crucial role in bringing about real change. The environmental concern of young people and their ability to become agents of change seem to be vital for the future state of the natural environment.

Socio-demographic variables also influence awareness of sustainability in the fashion industry. Such gender differences also emerge in other studies, where females are more aware than men (Mandarić et al., 2022).

CONCLUSION

The study aimed to analyze and identify the characteristics of sustainable consumers in the fashion industry and to consider their level of awareness at the time of purchase. Through descriptive and multivariate statistical analyses, it was possible to identify three main clusters. Of these, only one cluster (CL1 Sustainable Consumer) was identified as a cluster composed of sustainable individuals. The other two clusters are instead composed of individuals uninterested in sustainability (CL 2 - Saving consumer; CL 3 - Indifferent consumer). The analysis also shows how socio-demographic variables (gender and age) influence the purchase of sustainable products in the fashion industry while price is a barrier to purchasing sustainable garments. Finally, the study highlights how knowledge of sustainability is fundamental for adopting sustainable consumption behavior.

On a managerial level, the study implies that companies need to invest more in communication and strengthen their marketing strategies to make consumers more aware of sustainable fashion and, thus, more inclined to buy sustainable clothing.

At the research level, aspects of consumer awareness should be investigated in greater depth, and analyses should be strengthened on the information to be conveyed so that the consumer is informed and truly aware of their choices.

At the policy level, it is necessary to invest in consumer environmental education to better guide them in recognizing the characteristics of a sustainable product and choosing the product according to their own knowledge on the subject.

However, the study has some limitations. The limitations relate mainly to the limited number of participants and the method of participant selection (not accidentally probabilistic).

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Future steps of the research include analyzing the relationship between knowledge on the topic of sustainable fashion and information conveyed by companies on labels and information sites to understand how this information can strengthen knowledge on the topic and make consumers aware of their choices.

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