STRATEGIC MANAGEMENT, Vol. XX (20xx), No. x, pp. 0xx-0xx

DOI: 10.5937/StraMan2300061F

Received: March 11, 2023
Revised: August 01, 2023
September 25, 2023
Accepted: October 30, 2023
Published online: January 29, 2024

Changes in the fashion industry and consumer choices in the Portuguese context: strategic directions

Ana Ferreira
ISAG – European Business School and Research Center in Business Sciences and Tourism (CICET - FCVC), Porto, Portugal
https://orcid.org/0009-0004-7231-2932

Ana Pinto Borges
ISAG – European Business School and Research Center in Business Sciences and Tourism (CICET - FCVC) and Centro de Investigação em Organizações, Mercados e Gestão Industrial (COMEGI), Porto, Portugal
https://orcid.org/0000-0002-4942-079X

Bruno Vieira
ISAG – European Business School and Research Center in Business Sciences and Tourism (CICET - FCVC), Porto, Portugal
https://orcid.org/0000-0001-9568-4051

Elvira Vieira
ISAG – European Business School and Research Center in Business Sciences and Tourism (CICET - FCVC), and IPVC- Polytechnic Institute of Viana do Castelo and UNIAG - Applied Management Research Unit, Porto, Portugal
https://orcid.org/0000-0002-9296-3896

Paula Rodrigues
Universidade Lusíada – Porto and Centro de Investigação em Organizações, Mercados e Gestão Industrial (COMEGI), Porto, Portugal
https://orcid.org/0000-0003-2967-2583

Jorge Lopes
ISAG – European Business School and Research Center in Business Sciences and Tourism (CICET - FCVC), Porto, Portugal
https://orcid.org/0000-0002-2417-0659

Ana Canavarro
Universidade Europeia – IPAM, Porto, Portugal
https://orcid.org/0000-0001-9249-6864

Abstract

Background: This study aims to identify the changes in the fashion industry, during the COVID-19 pandemic, specifically, within the context of online purchase of fashion products, the use of sportswear, the pondering moments before the purchase, and the importance of sustainability. Furthermore, we also consider sustainability as a fashion strategic factor and its impact in the decision-making process.

Purpose: The main purpose is to understand if the type of products and the way they are purchased by the retail consumer have changed, and to assess if the level of importance granted to sustainability is significant, in particular, by evaluating the way COVID-19 pandemic has influenced the online purchase of fashion products, the use of sportswear, the pondering moments before the purchase, and the importance of sustainability. Furthermore, we evaluate if the level of importance granted to sustainability, in the decision-making process, is still the same.

Study design/methodology/approach: Quantitative analysis was applied, through an observation data collection technique, using a survey by questionnaire. The sample is non-probabilistic, with the accidental and snowball sampling modalities.

Findings/conclusions: the companies must define new strategies to answer their consumers' real needs, because we verify that consumer behaviour changed. It was verified that there was a growth in the amount of online shopping of fashion products, the use of sportswear increased, the level of pondering before buying expanded, and the increasing importance of sustainability became evident.

Limitations/future research: A non-probabilistic sample was used, which prevents the possibility of extrapolating general conclusions.

Keywords
fashion, pandemic, COVID-19, consumer, sustainability

Introduction

Fashion has been an integral part of daily practices (Buckley & Clark, 2012), composed of innovation and a synergy between personal and social needs (Martin & Koda, 1995). As such, if daily routines and the populations' shortfalls may change, inevitably fashion can also suffer mutations.

In the first months of 2020, COVID-19 virus spread all over the world, with millions of people forced to remain in quarantine, in order to comply with physical and social distancing measures during the month of March. The "usual" way of living was interrupted due to the precautions adopted to alleviate the impact of the COVID-19 pandemic (Addo, Jiaming, Kulbo & Liangqiang, 2020).

The current COVID-19 pandemic has created a world crisis that has been affecting each and every one of us on a daily basis. The increasing number of isolated individuals, due to the confinement situations that are currently taking place in the world, implies a considerable change in their routines; therefore, the consumer behaviour patterns and their priorities will surely be affected by these changes (Ben Hassen, El Bilali & Allahyari, 2020; Butu et al., 2020; Grashuis, Skevas & Segovia, 2020; Hesham, Riadh & Sihem, 2021; Hobbs, 2020; Laato, Islam, Farooq & Dhir, 2020).

In this line of thought, if the consumers' behaviour is changing, brands should try to adapt to this new reality in order to keep the pace.

According to Japutra, Loureiro, Wang & Primanti (2023), the concept of brand centrality plays a decisive role in this context, considering that, in order to achieve this status, brands must increase their empathy levels toward the consumers. This means that new skills and updated marketing strategies will be necessary in this new environment. Nowadays, the most important factor for organizations is to be near their consumers, to provide answers and solutions to their needs and to strengthen the bond with them (Moss, Damais & Ansons, 2020), corresponding to the demands for a more sustainable commerce. This preference is clearly dominant among younger consumers. The Millennials and the Z Generation strongly believe in the connections that companies should establish with the environmental issues, in contrast to the casual attitudes which are typical of the Baby Boomers (Erez, 2019).

There is a shift in the consumer's conscience and a rising interest in sustainable fashion. Designers and fashion companies, like Stella McCartney and Nike, have been presenting fashion items that are environmentally sustainable (Kim & Oh, 2020).

The present paper will specifically research the changes that have been happening in the fashion industry during the COVID-19 pandemic. The main goal is to understand if the type of products inside this universe and the way they are purchased by the consumer has been modified, as well as trying to ascertain if the level of importance granted to sustainability, in the decision-making process, is still the same. Namely, we seek to verify how COVID-19 pandemic has influenced the online purchase of fashion products, the use of sportswear, the pondering moments before the purchase, and the importance of sustainability.

The internal structure of this paper starts with a literature review, thus allowing the theoretical framing of the topics under discussion, followed by a methodological analysis, which will in turn lead to the discussion of the results, in order to finally obtain the required general conclusions and implications.

1. Literature review

1.1. COVID-19 and online shopping of fashion products

Over time, several world events have influenced fashion and have interfered with its evolution. The first and second World Wars are obvious examples, which lead to a sudden increase in the financial independence of women, whose work became necessary and relevant. The fashion industry has been causing a lot of pollution, not only environmental but also social, thus implying changes in clothing, which became more practical and useful (Kim, Fiore, Payne & Kim, 2021).

It is noteworthy that what we buy and what we use is always in consonance with our reality at a particular moment. Consequently, this pandemic is no exception to the rule, even more so because it is a world-scale problem, which entails several changes.

The year 2020 will be recorded in history as one of the most challenging ones for the fashion industry, marked by a decline in sales, with almost three quarters of the companies losing money (Business of Fashion, 2021).

The way the world works will be reassessed, and online shopping and digitalization will expand (Kim et al, 2021). After a careful observation of the surrounding environment, it is possible to witness the fast pace of these phenomena.

Notwithstanding the growth in online shopping, it is important to notice that, in the past, the fashion industry was slower than other industries in the adoption of e-commerce applications, due to the difficulty represented by the need to replicate the experience felt inside a physical store to the online world (Alves, Ribeiro & Saravanan, 2020).

In fact, COVID-19 has turned the business landscape into a type of environment which is extremely favourable to changes. As a consequence, priorities, attitudes, and the consumer's behaviour have also changed. This has become an opportunity for brands to provide a sense of positivity, which in turn will strengthen their ties with the consumers (Moss et al., 2020). Companies just have to develop social experiences, more engaging and appealing, for their clients, thus allowing them to interconnect with brands.

Physical retail is currently under a descending spiral and the number of stores that are closing on a permanent basis will continue to rise, even in the post-pandemic period (Kannan & Kulkarni, 2022). Approximately half of the European consumers have bought less in physical stores since the beginning of the confinements (Business of Fashion, 2021), a clear contrast with the consumption patterns and indicators before the pandemic (Brydges, Henninger & Hanlon, 2022). On the other hand, most of the clients started asking for more medical kits and products related to personal care, instead of fashion products (Sharma & Jhamb, 2020).

The results of a cross-country research (involving the USA, the UK, Finland, Germany, Switzerland, Iran, Czech Republic, India, and Hong Kong) indicate that all forms of fashion consumption, including more sustainable practices, have decreased during the pandemic (Vladimirova et al., 2022).

It is widely acknowledged that the consumption of fashion clothing is the main component of the consumer's experience, which aims at satisfying not only the individuals' desire to be good-looking, but also the needs related to love and belonging, self-esteem and high levels of self-fulfilment (Cope, 2020; Rodrigo, Khan & Valaei, 2023). In some situations, the clothing consumption mirrors the mental health and well-being of people when they face stress driven scenarios (Pavia & Mason, 2004).

Tan (2020) has also enhanced that the use of online platforms and technologies has witnessed a significant boost during the confinement caused by the pandemic. In the same line of thought, Al-Hattami (2021) posited that it is becoming more important than ever to understand the basic motivations that lead consumers to online shopping.

Indeed, the utilitarian motive is the strongest predictor of online fashion shopping (Sumarliah, Usmanova, Mousa & Indriya, 2022).

However, the purchase of clothing is still a broadly discretionary activity, thus becoming more vulnerable to economic shocks caused by the pandemic. According to data from the Census Bureau, released in mid-April 2020, the clothing sales have dropped 50,5% (Callahan, 2020).

It is therefore expectable that brands will try to elevate the online experiences of the consumers even more, thus presenting solutions increasingly sophisticated and customized.

1.2. COVID-19 and the use of sportswear

The 'casual' trend was already active before the pandemic and has naturally evolved during 2020 (Business of Fashion, 2021).

Since the beginning of the pandemic in 2020, millions of workers around the world were forced to work from their houses, due to the level of restrictions determined by several governments. Before the pandemic, companies adopted working practices at home only for their own convenience or to provide more favourable working conditions. However, in 2020, most governments have imposed national confinements, which lead organizations to implement teleworking (He, 2020).

Working at home doesn't imply the same level of variety in the wardrobe. In these environments, it very likely that people will opt for more comfortable and relaxed outfits. Formal wear, which was already declining before the pandemic, has been following an even more negative path since the beginning of COVID-19 (Business of Fashion, 2021).

As a result, design and product development must reflect consumers' new health concerns and changing needs, which were the result of working from home (Zhao & Kim, 2021).

The fact that we are living under a health-related crisis is also influencing some behaviour patterns. The population has become more concerned and conscious of its physical and mental state, which in turn leads to different consumer behaviours and a more complex approach to decision-making processes (Mandarić, Hunjet & Vuković, 2022).

The COVID-19 pandemic has significantly disrupted the clothing consumption patterns (Liu, Xia & Lang, 2021).

Consequently, the consumers have improvised some behaviour adjustments, in order to adapt to this new environment, which has included a change in their garments' styles, aiming at favouring comfort, simplicity, as well as online shopping (Liu et al., 2021).

Mobility restrictions and total lockdowns played a role in 2020, stimulating a greater interest in comfortable sportswear largely purchased online after the closing of many stores (Jaworek, Karaszewski & Kuczmarska, 2021).

Although not immune to the effects of COVID-19, sportswear is increasing sales, thus implying that all the promotions that are usually present in these contexts, were avoided in this particular segment (Business of Fashion, 2021).

Among all the products' categories, the year of 2020 was a milestone for sportswear, with a profit of 42% in the MGFI (McKinsey Global Fashion Index), considering this particular sector, in the scope of a significant growth of the Chinese operators (Amed et al., 2021). It is expected that the interest of the consumer on health and well-being will persist beyond the pandemic period, which means that the search for sportswear will keep on growing in 2021 (Amed et al., 2021; Business of Fashion, 2021).

1.3. COVID-19 and its effects on the decision-making process

After the surge of discounts, which took place in the initial stage of the pandemic, there was a price revision and a reduction of sales promotions, as a way of assuring the profit margins (Amed et al., 2021; Business of Fashion, 2021).

The events that were held last year clearly indicate that more is not necessarily a synonym of better. After confirming that more products and collections rarely translate into better financial results, this pandemic has also demonstrated the need for a change in the profitability paradigm. Companies have to lower their complexity levels and find new ways of selling their products for the full established price, avoiding promotions (Amed et al., 2021; Business of Fashion, 2021).

In a recent study released by McKinsey, 65% of the consumers said that they were planning the purchase of long-lasting and better quality goods (Amed et al., 2021; Business of Fashion, 2021). The attitudes of the buyers are changing, and many clients are embracing the motto 'less is more', thus implying that the organizations really need to adapt to this new reality.

The demographic variables of age, education, and marital status influenced consumer behaviour during a pandemic with regard to frequency of use of precautionary measures. Older adults, adults with higher education, and married adults used precautionary measures more frequently when shopping in retail stores than did younger adults, adults with high school or less education, and single adults (Workman & Lee, 2022).

Academic research that tried to provide a contribution to the understanding of the trends and impacts generated by the pandemic on the consumers' behaviour patterns, has concluded that the three main purchase motives of the consumers included in that study, were the quality, availability, and convenience of the products (Eger et al., 2021).

At the same time, the purchase decisions and the consumers' choices are the result of a thorough examination that weighs the pros and cons, besides being influenced by emotional and sensitive aspects of the selected products (Eger et al., 2021). These products are perceived as being susceptible to overcoming a risk or a specific hazard, thus being successful in the mitigation of that hazard's perception and in the decrease in their levels of fear, attracting bigger purchase orders (Eger et al., 2021).

Additional studies also state that nowadays it may be more difficult to marketing professionals to conquer the loyalty of their clients, due to a decline in their satisfaction levels (Mason et al., 2020). Cao (2023) posits that the consumers' buying process framework should integrate memorable experiences, thus allowing meaningful emotional connections with them.

1.4. Sustainability as a fashion strategic factor

Sustainable consumption has been identified as a key contributor drive to implement sustainable practices and foster sustainable development (Vargas-MErino, Rios-Lama & Panez-Bendezú, 2023).

In 2021, brands should apply more intelligent strategies, reducing their complexity and realigning the launching of new collections with the consumers' opportunities (Amed et al., 2021; Business of Fashion, 2021).

The fashion industry pushes the use of natural resources to its limits by mass production and a low-cost structure that motivates consumerism at large (Thorisdottir & Johannsdottir, 2020).

Due to the pandemic, consumerism began to be questioned and caused a great influence on sustainable behaviour and environmental awareness, thus enhancing the need to move towards more responsible working methods. The fashion world is constantly being confronted by new trends, and sustainability is one of those current tendencies (Mohr, Fuxman & Mahmoud, 2021). Zhou et al. (2023) even consider that sustainable policies should be increasingly aggressive, a type of strategy that could be determinant to gain the trust of the consumers.

The trends related to sustainable fashion are focused, mainly, in the reduction of pollution caused precisely by fashion (Woodside & Fine, 2019), which leads companies towards the introduction of more transparency in their websites and promotional materials, considering that the sustainability concept is becoming increasingly important to the consumers. In the same line of thought, Mesjar, Cross, Jiang and Steed (2023) consider that companies should even try to educate consumers, thus raising their awareness levels regarding sustainable behaviors.

The fashion industry has been frequently associated to multiple examples of bad practices, namely environmental, economic, social, cultural and ethical (Rzyczycki, 2023). The truth is that the success of industrial companies with respect to sustainability depends on their ability to be sustainable throughout both the global supply chain and throughout the product life cycle. Sustainable fashion business requires integrating complex considerations into the company's business model, mainly through R&D and production from a long-lasting perspective (Daukantienė, 2023).

Some media have reported that environmental pollution (clothing wastes, dyes, and toxic chemical products) and ethical issues (excessive consumption, unfair trade, and child labour exploitation) are increasing due to fast fashion. In consonance with the growing concern of the consumers regarding these issues, the demand for sustainable fashion has rapidly increased (Kim & Oh, 2020). Nowadays people are more willing to pay more for sustainable products, as stated by the Accenture research, which indicates that half of the consumers would pay more for sustainable products, aiming at their future recycling and reuse (Cantwell, Nolan & Corser, 2019). Marketing managers should identify the preferences and needs of the consumers in relation to ethical practices that could be included in their positioning strategies (Javed, Yang, Gilal & Gilal, 2020).

Environmental and social sustainability has become a priority in the fashion industry, and it has been gaining importance among consumers and governments (Berg et al., 2019).

According to Köksal and Strähle (2021), despite the several massive reports on social complaints in the apparel industry, the adoption of private social standards remains the most critical practice for retailers to manage social risks with suppliers and communicate social accountability to stakeholders.

More than three out of five clients have stated that the promotion of sustainability by brands is a crucial factor in the decision making process (Amed et al., 2021; Business of Fashion, 2021).

Clear signs have converged to the conclusion that those who buy fashion products are demanding a better treatment regarding the collaborators included in the value chain. Thousands of consumers around the world are participating in the *#PayUp* campaign, conceived to get the attention of brands that didn't compromise with the payment of their orders during the pandemic, leaving millions of workers at risk (Amed et al., 2021; Business of Fashion, 2021).

According to (McMaster et al., 2020), companies that engage in sustainability practices, usually concentrate in the construction of sustainable supply chains, both upstream and downstream. On the other hand, (Galli & Bassanini, 2020) posit that there are different approaches regarding sustainability that depend on the geographical location of the companies. The involvement of the public in this process becomes clearly necessary, and brands should find a way of talking about this topic with clarity and simplicity.

Social media are, broadly speaking, the most important means to educate and involve the consumers in the impact caused by the fashion industry, both environmentally and socially, allowing social media users to share information, thus contributing to maintain sustainability as a trend topic around the world (Schumann, Wied & Krahl, 2021).

The term 'sustainable fashion social media influencers' is used to describe influential content creators who discuss sustainable fashion on social media (Jacobson & Harrison, 2022).

This is also important when the purpose is to improve the conscience level of this type of fashion (Nayak, Panwar & Nguyen, 2020; Pandit, Annaldewar, Nautiyal, Maiti & Singha, 2020). Functioning as indicators of the growing concern of the public over this topic, internet research for 'sustainable fashion' has tripled from 2016 to 2019, and the use of the hashtag *#sustainablefashion* increased fivefold in that period, both in Europe and in the United States (Berg et al., 2019).

Consumers are not sure about the meaning of this term, and they don't know how to identify sustainable brands, therefore they are expecting improved enlightening information on this topic (Berg et al., 2019). Considering the difficulties felt by consumers and the related parties in the identification of the players in the supply chain, the brand owners become the main responsible drivers for the compliance with sustainability along the chain (Hartmann & Moeller, 2014; Zhou et al, 2023). The study of Nandkeolyar and Chen (2023) is in line with this perspective, as the authors state that more sustainable production practices should be induced, not only by governments, but mainly by all the stakeholders involved in the process.

A sustainable conduct may allow a greater competitive advantage and a better reputation and differentiation on behalf of the companies.

Sustainability is going to be a main drive, in terms of purchase decisions, and it is also likely that, in a near future, it may even become a critical success factor. Mandarić et al. (2022) have confirmed this assertion when they found a clear correlation between the importance of fashion brand sustainability and the consumers' purchase decisions within the scope of clothing related products. In this scope, ethics and responsibility are also key sustainability drivers that may be crucial to provide positive insights to the consumers' decision-making process (Ezell, Bush, Shaner, Vitele & Huang, 2023).

The Kering Group, which owns brands such as Gucci, Bottega Veneta, Balenciaga, and Yves Saint Laurent, was acknowledged by the World Economic Forum for its commitment with green production. The LVMH Group, which includes Dior and Fendi, has introduced a program designated as LIFE, with the purpose of reducing the Co2 emissions. Prada supports the sustainability manifesto for Italian fashion and is a member of the Commission for Sustainability, Ecology, and the Environment. Valentino was one of the first brands to join the Greenpeace's Detox protocol, a campaign aiming at the removal of malicious chemicals from the production chain (D'Adamo & Lupi, 2021).

Nevertheless, current practices are oriented to the reduction of negative impacts associated with current operations, falling short of the radical strategies needed to address root causes and embrace sustainability at large (Karaosman, H., Perry, Brun & Morales-Alonso, 2020).

It has become clear that the consumers' pressure is crucial in this process, as well as a better industry related regulation, thus allowing the fashion industry to perform all the changes that are urgently needed.

2. Methodology

The present analysis traces the changes that have been happening in the fashion industry during the COVID-19 pandemic, namely within online purchase of fashion products, in the use of sportswear, in the pondering moments before the purchase, and in the importance of sustainability. In this sense, the hypotheses defined for our research are that COVID-19 pandemic led to: an increase in the online purchase of fashion products (H1); an increase in the use of sportswear (H2); an increase in the pondering moments before the purchase (H3); and an increase in the importance of sustainability (H4) (Figure 1)

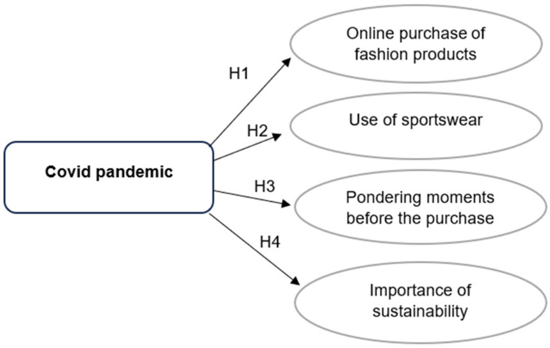

Figure 1 Methodological Framework
Source: the authors

This paper was focused on a sample of 107 valid answers, gathered during May 2021 through the dissemination on the social networks

(Facebook and Instagram) of the survey (Annex I) elaborated in the format of the Google Forms. Before being applied, the questionnaire was tested online in a group of 15 people of different genders, levels of education, and ages between 18 and 65 years old. In this pre-test, the clarity of the questions and statements and the variability of the answers were checked. The non-probability sample included the accidental and snowball modalities.

We have performed a literature review, presenting a theoretical framework related to the main topic of the research and other specific aspects connected with our hypotheses, as well as an observational data collection technique through the application of a survey by questionnaire. For data analysis, we used IBM SPSS Statistics (version 28) and STATA (version 18) software.

2.1. Sample characterization

Within the context of the sociodemographic characteristics of the collected sample, we have analysed gender, age, marital status, educational level, professional situation, and country of residence (Table 1). All these variables presented a symmetric distribution, with the value of 0.46.

Table 1 Sociodemographic Characteristics

Variable	Percentage
Gender	
Female	59.80%
Male	40.20%
Age	
Average	
Marital Status	
Single	77.60%
Married	20.60%
Divorced	1.90%
Level of Education (complete)	
Superior	70.10%
Secondary	26.20%
Basic	3.70%
Working Conditions	
Student	33.60%
Self-employed	10.30%
Employee	49.50%
Unemployed	6.50%
Country	
Portugal	91.60%
Brazil	6.50%
Spain	0.90%
Netherlands	0.90%

Source: the authors

We have observed that 59.8% of the sample are females and 40.2% males. The average age of the respondents is around 29 years old.

Concerning their marital status, the singles were predominant, with a percentage of 77.6%, followed by the married with 20.6% and the divorced with 1.9%.

As far as education is concerned, most part has university education, with 70.1%, followed by secondary education, with 26.2%, and finally basic education, with 3.7%.

Regarding their professional environments, 49.5% work for an employer, 33.6% are studying, 10.3% are self-employed and 6.5% are currently unemployed.

Our sample is composed of 91.6% of residents from Portugal, 6.5% from Brazil, 0.9% from Spain and 0.9% from The Netherlands. Therefore, the sample mainly reflects the reality of the European socioeconomic context after living one year in the above mentioned pandemic conditions.

3. Results

3.1. Data analysis

When we questioned the individuals about their escalation regarding online shopping during the pandemic, 63,6% answered positively, confirming an increase in that specific behaviour. Considering clothing, footwear, or accessories, clothing obtained the highest level of frequency among the three of them (Table 2).

Table 2 Online purchase of fashion products

Questions:	Yes	No			
P1 During the pandemic, have you increased de habit of buying fashion products online?	63.6	36.40			
P2. Purchase frequency:	NEV (%)	RAR (%)	OCC (%)	FREQ (%)	V.FR (%)
P2.1 If so, what was the frequency of your purchases? [Clothing]	16.7	13.1	36.9	22.6	10.7
P2.2 1 If so, what was the frequency of your purchases? [Footwear]	27.4	27.4	22.6	20.2	2.4
P2.3 1 If so, what was the frequency of your purchases? [Accessories]	31.7	28	23.2	13.4	3.7

Note: NEV = never; RAR = rarely; OCC = occasionally; FREQ = frequently; V.FR = very frequently.

Source: the authors

The question about the habit of using sportswear before the pandemic was confronted with 73.8% of respondents who confirmed they already had that practice (Table 3). After performing an analysis between variables, we also concluded that those who already used sportswear have reinforced that use and purchase.

Table 3 Use of the sportswear

Questions:	Yes	No			
P3 Before the pandemic, did you use sportswear?	73.8	26.2			
P4. Indicate your degree of agreement with the following statements:	**CDIS (%)**	**DIS (%)**	**INDIF (%)**	**AGR (%)**	**CAG (%)**
P4.1. I make more online purchases of fashion products.	22.4	16.8	12.1	39.3	9.3
P4.2. I buy more fashion products.	19.6	21.5	17.8	33.6	7.5
P4.3. I buy fewer fashion products.	19.6	38.3	21.5	15.9	4.7
P4.4. I wear sportswear more often.	5.6	21.5	13.1	41.1	18.7
P4.5. I make more purchases of sportswear.	11,2	29,9	18,7	32,7	7,5

Note: NEV = never; RAR = rarely; OCC = occasionally; FREQ = frequently; V.FR = very frequently.

Source: the authors

Relatively to the current level of pondering before completing an online purchase of fashion products, 73.8% stated that they have improved their levels (Table 4). Analysing the variables, it was possible to observe that those who have increased that level of pondering had the tendency to consider this purchase as a very important one, thus granting a great deal of concern with that decision process.

Table 4 Pondering moments before purchase

Questions:	**Yes**	**No**			
P5 Nowadays, do you ponder more before purchasing fashion products online?	73.8	26.2			
P6. Indicate your degree of agreement with the following statements:	**CDIS (%)**	**DIS (%)**	**INDIF (%)**	**AGR (%)**	**CAG (%)**
P6.1. The decision to buy fashion products is very important to me.	9.3	21.5	21.5	32.7	15
P6.2. The decision to buy fashion products is not important.	17.8	31.8	23.4	21.5	5.6
P6.3. I am very concerned about the decision to buy fashion products.	12.1	25.2	22.4	30.8	9.3

Note: NEV = never; RAR = rarely; OCC = occasionally; FREQ = frequently; V.FR = very frequently.

Source: the authors

Regarding sustainability, 94.5% of the respondents mentioned that sustainability is a very important matter to them, 75.7% considered that its importance was enhanced, 75.7% highlighted the importance of brand sustainability, but only 53.3% mentioned they would prioritise sustainable brands (Table 5).

Table 5 Importance of sustainability

Questions:	**Yes**	**No**			
P7. In your opinion, is sustainability important?	94.4	5.6			
P8. Indicate your degree of agreement with the following statements:	**CDIS (%)**	**DIS (%)**	**INDIF (%)**	**AGR (%)**	**CAG (%)**
P8.1. The importance of sustainability has increased.	1.9	7.5	15	50.5	25.2
P8.2. Brand sustainability is important.	0	6.5	17.8	52.3	23.4
P8.3. I give priority to sustainable brands.	3.7	15	28	38.3	15
P8.4. I am willing to buy the same product in a sustainable brand, to the detriment of another non-sustainable one.	0.9	14	15.9	49.5	19.6
P8.5. I am willing to buy the same product in a sustainable brand, to the detriment of another non-sustainable one, for the same value.	0.9	5.6	15	50.5	28

P8.6. I am willing to buy the same product in a sustainable brand, to the detriment of another non-sustainable one, for an added value.	5.6	21.5	23.4	38.3	11.2
P8.7. I am willing to change the product I intended to buy if the alternative is sustainable.	4.7	13.1	25.2	42.1	15
P8.8. I am willing to change the product I intended to buy if the alternative is sustainable, even if the value is increased.	6.5	21.5	29	30.8	12.1
P8.9. "Buy less, buy better".	0	7.5	15.9	35.5	41.1

Note: NEV = never; RAR = rarely; OCC = occasionally; FREQ = frequently; V.FR = very frequently.

Source: the authors

Concerning the purchase of a sustainable product instead of a non-sustainable one, 78.5% were favourable to this decision. However, considering the purchase of a sustainable brand rather than a non-sustainable one, adding some value to it, only 49.5% stated their agreement.

Considering the possibility of opting for another product in order to buy a sustainable alternative, 57% of the respondents said they would do it. However, if the very same operation implied a specific added value, only 43% stated their agreement. As for the statement 'buy less, buy better', 76.6% of the sample have agreed with this assertion.

Finally, after cross-checking the variables, we concluded that the individuals that stated they would assume sustainability as an important factor, were also willing to give priority to sustainable brands, to pay more for those products and to exchange the product for a sustainable alternative. However, when the question addressed the exchange of the product for an alternative one, but with an added value to it, despite some level of agreement, there was also an increase in the indecision levels. Finally, in what concerns the statement 'buy less, buy better', they strongly agreed with this notion.

3.2. Factorial analysis

The results obtained from the exploratory factorial analysis are presented in Table 6.

Table 6 Factorial analysis

<table>
<tr><th rowspan="2">Variables</th><th rowspan="2">Items</th><th colspan="2">Factor Loadings</th><th rowspan="2">% Of the Extracted Variance</th><th rowspan="2">% Total Extracted Variance</th><th rowspan="2">KMO</th><th rowspan="2">Cronbach Alpha</th></tr>
<tr><th>Factor 1</th><th>Factor 2</th></tr>
<tr><td rowspan="5">P4</td><td></td><td>(Fashion products)</td><td>(Sportswear)</td><td></td><td colspan="3"></td></tr>
<tr><td>P4.1</td><td>0.838</td><td rowspan="2"></td><td rowspan="2">F1 – 50.046</td><td rowspan="4">F1 + F2 = 85.166</td><td rowspan="4">0.522</td><td rowspan="2">F1- 0.850</td></tr>
<tr><td>P4.2</td><td>0.701</td></tr>
<tr><td>P4.4</td><td rowspan="2"></td><td>0.724</td><td rowspan="2">F2 – 35.120</td><td rowspan="2">F2 – 0.764</td></tr>
<tr><td>P4.5</td><td>0.555</td></tr>
<tr><td rowspan="4">P6</td><td></td><td>(Purchase decision)</td><td>-</td><td></td><td colspan="3"></td></tr>
<tr><td>P6.1</td><td>0.887</td><td rowspan="3">-</td><td rowspan="3">-</td><td rowspan="3">F1 = 72.715</td><td rowspan="3">0.554</td><td rowspan="3">0.810</td></tr>
<tr><td>P6.2</td><td>0.620</td></tr>
<tr><td>P6.3</td><td>0.674</td></tr>
<tr><td rowspan="8">P8</td><td></td><td>(Sustainable purchase: alternative)</td><td>(Sustainable purchase)</td><td></td><td colspan="3"></td></tr>
<tr><td>P8.2</td><td rowspan="4"></td><td>0.718</td><td rowspan="4">F2 – 17.659</td><td></td><td rowspan="7">0.757</td><td rowspan="4">F1 – 0.855</td></tr>
<tr><td>P8.3</td><td>0.737</td><td></td></tr>
<tr><td>P8.4</td><td>0,782</td><td></td></tr>
<tr><td>P8.5</td><td>0.796</td><td>F1 + F2 = 77.623</td></tr>
<tr><td>P8.6</td><td>0.736</td><td rowspan="3"></td><td rowspan="3">F1 – 59.964</td><td></td><td rowspan="3">F2 – 0.871</td></tr>
<tr><td>P8.7</td><td>0.832</td><td></td></tr>
<tr><td>P8.8</td><td>0.833</td><td></td></tr>
</table>

Source: the authors

To proceed with the analysis of the variables, it is necessary to consider that each item should have a communality value over 0.500, in order to validate the item in the scope of the construct. Relatively to variable P4 (Online shopping), an item from the scale was removed, considering that its communality was below 0.5 (P4.3 = 0.489), lacking the necessary correlation to load in the P4 factors. The same happened with variable P8 (Sustainability), where items P8. 1 (0.377) and item P8.9 (0.456) were removed.

After applying the factorial analysis, we observed that variables P4 and P8 presented two factors. Consequently, it was necessary to identify the variables that supported these factors, which lead to the conclusion that variable P4 (Factor 1 – Fashion products) included items P4.1 and P4.2. On the other hand, variable P8 Factor 1 – Sportswear) is formed by items P4.4 and P4.5. As for variable P8 (Factor 1 – Alternative sustainable purchase) the items associated were P8.6, P8.7 and P8.8, while variable P8 (factor 2 – Sustainable Purchase) comprised items P8.2, P8.3, P8.4 and P8.5. On the other hand, variable P6 presented only one factor (Factor 1 – Purchase decision), integrating items P6.1, P6.2 and P6.3.

Considering the analysis of the Kaiser-Meyer-Olkin (KMO) statistics, which varies between 0 and 1, it is necessary to posit that the factorial analysis will be more effective if the KMO value approaches the unit, i.e. value 1. We could observe that variables P4, P6 and P8 presented KMO values that ranged from 0.522 (P4) to 0.757 (P8), thus indicating that the exploratory factorial analyses of these variables are satisfactory, considering that the value is higher than 0.500.

Concerning the analysis of the Extracted Variance Percentage, it should be noted that, the closer the value is to 100, the higher will be the correlation level between the items of the variable under study. Variables P4 and P8 present two factors to analyse. When considering all the variables under study (P4, P6 and P8) it is possible to conclude that the total percentage of the variance extracted was positive in variable P4, while variables P6 and P8 presented a satisfactory percentage of the variance extracted, thus implying that all these variables present a good correlation between the items under study.

When we were analysing the Cronbach Alpha, we had to consider that the values may vary between 0 and 1, and the closer the values are to 1, the more the variable measurement will be reliable, thus granting more weight to this study. The analysis of the results related to variables P4, P6 and P8 allowed us to conclude that variables P4 (factor 1), P6, P8 (factor 1) and P8 (factor 2), present a value between 0.800 and 0.900, which implies that there is a good internal consistency in the scale, allowing us to trust in these variables. Variable P4 (factor 2) presents a reasonable internal consistency, meaning that there is a satisfactory level of trust concerning this variable.

3.3. Correlation

The analysis of the correlation was performed using three tests (Table 7). A parametric test (Pearson's correlation), and two non-parametric tests (Kendall's tau b and Spearman's rho). It was possible to confirm that the results of the parametric and non-parametric tests were similar.

The correlation level should be between 0 and 1, to provide an intensity in the positive association among the variables.

Table 7 Correlation and Pearson's Chi-Square Test

	Correlation				
	Tests	P1	P2.1	P2.2	P2.3
P1 During the pandemic, have you increased de habit of buying fashion products online?	Pearson's correlation		0.544	0.520	0.365
	Kendall's tau b		0.471	0.494	0.344
	Spearman's rho		0.520	0.543	0.377
P2.1 If so, what was the frequency of your purchases? [Clothing]	Pearson's correlation	0.544		0.647	0.573
	Kendall's tau b	0.471		0.578	0.503
	Spearman's rho	0.520		0.640	0.572
P2.2 1 If so, what was the frequency of your purchases? [Footwear]	Pearson's correlation	0.520	0.647		0.570
	Kendall's tau b	0.494	0.578		0.496
	Spearman's rho	0.543	0.640		0.560
P2.3 1 If so, what was the frequency of your purchases? [Accessories]	Pearson's correlation	0.365	0.573	0.570	
	Kendall's tau b	0.344	0.503	0.496	
	Spearman's rho	0.377	0.572	0.560	

Pearson's Chi-Square Test

Variable	Item	Pearson's Chi-Square Test
P1 During the pandemic, have you increased de habit of buying fashion products online?	P2.1 If so, what was the frequency of your purchases? [Clothing]	Value: 32.264 Gl: 4 Sig.: 0.000
	P2.2 If so, what was the frequency of your purchases? [Footwear]	Value : 36.125 Gl: 4 Sig.: 0.000
	P2.3 If so, what was the frequency of your purchases? [Accessories]	Value : 11.868 Gl: 1 Sig.:0.018

Source: the authors

After analysing the Table 2, it is possible to confirm that in the three tests there's always an intensity in the positive association among all variables, which implies that those variables are not independent.

The Chi-Square test is used to confirm if there is a relation between two variables. After the analysis of the results, it was possible to conclude that: (1) there is a dependent relation between variable P1 (During the pandemic, have you increased the habit of buying fashion products online?) and item P2.1 (If so, what was the frequency of your purchases? [Clothing]); (2) There is a dependent relation between variable P1 (During the pandemic, have you increased the habit of buying fashion products online?) and item P2.2 (If so, what was the frequency of your purchases? [Footwear]); (3) there is a dependent relation between variable P1 (During the pandemic, have you increased the habit of buying fashion products online?) and item P2.3 (If so, what was the frequency of your purchases? [Accessories]). This analysis confirms that during the pandemic there was an increase in the online purchase of clothing, footwear, and accessories.

4.4. Logits

Binary logistic regressions were performed (Table 8), to verify if the independent variables P4_F1_m (Fashion products), P4_F2_m (Sportswear); P6_m (Purchase decision); P8_F1_m (Alternative sustainable purchase) and P8_F2_m (Sustainable purchase) are forecasts of the dependent variables (P1) (During the pandemic, have you increased the habit of buying fashion products online?), (P3) (Before the pandemic, did you use sportswear?), (P5) (Nowadays, do you ponder more before purchasing fashion products online?) and (P7) (In your opinion, is sustainability important?).

Table 8 Logits

Variable	Item	Beta	Wald	Sig.	Exp (B)	95% C.I. to Exp (B)	
						Lower	Upper
P1 During the pandemic, have you increased de habit of buying fashion products online?	P4_F1_m (Fashion Products)	1.493	31.729	.000	4.452	2.648	7.484
	Constant	-3.505	22.308	.000	.030		
P3 Before the pandemic, did you use sportswear?	P4_F1_m (Fashion Products)	-.336	2.949	.086	.715	.487	1.049
	P4_F2_m (Sportswear)	.454	4.289	.038	1.575	1.025	2.422
	Constant	.633	.591	.442	1.883		
P5 Nowadays, do you ponder more before purchasing fashion products online?	P6_m (Purchase Decision)	1.342	11.500	.001	3.828	1.762	8.317
	Constant	-2.798	6.186	.013	.061		
P7 In your opinion, is sustainability important?	P4_F2_m (Sportswear)	-1.516	5.076	.024	.220	.059	.821
	P6_m (Purchase Decision)	2.239	7.971	.005	9.384	1.983	44.408
	Constant	2.367	.791	.374	10.662		

Source: the authors

Regarding variable P1 (intensification of the shopping habits during the pandemic), we observed that, for Wald's test, the independent variable P4_F1_m (Fashion products), is statistically significant ($x^2 = 31.729$; $p = 0.001$) and the Exp (B) (Odds Ratio - OR) has indicated that the independent variable is a significant forecast (OR = 4.452; IC 95% = 2.648 – 7.484), leading to the conclusion that during the pandemic, the habit of purchasing fashion products online is four times bigger, when comparing with the time before the pandemic, i.e. 35.4% ((4.452-1)×100%).

In relation to variable P3 (purchase habits before the pandemic), we have observed that considering Wald's test, the independent variables P4_F1_m (Fashion products) and P4_F2_m (Sportswear) are statistically significant. Variable P4_F1 (Fashion clothing) tells us that ($x^2 = 2.949$; $p = 0.086$) and the Exp (B) (Odds ratio - OR) has indicated that the independent variable is a significant predictor (OR = 0.715; IC 95% = 0.487 – 1,049), thus confirming that, before the pandemic, the purchase of fashion products has decreased 24.9% (0.751-1)×100%). On the other hand, variable P4_F2_m (Sportswear) presented the following results ($x^2 = 4{,}289$; $p = 0{,}038$) and the Exp (B) (Odds ratio - OR) indicated that the independent variable is a significant predictor (OR = 1,575; IC 95% = 1,025 – 2,422), which corroborates the fact that people, before the pandemic, were already using sportswear.

Concerning variable P54 (purchase pondering), we have observed that after performing Wald's test, the dependent variable P6_m (Purchase Decision) is statistically significant ($x^2 = 11{,}500$; $p = 0{,}001$) and the Exp (B) (Odds ratio - OR) confirmed that the independent variable is a significant predictor (OR = 3.828; IC 95% = 1.762 – 8.317), thus implying that people ponder up to three times more the purchase of fashion products.

In the case of variable P7 (the importance of sustainability in the purchase), we have observed that considering Wald's test, the independent variables P4_F2_m (Sportswear) and P6_m (Purchase Decision) are statistically significant. Variable P4_F2_m (Sportswear) tells us that ($x^2 = 5.076$; $p = 0.024$) and the Exp (B) (Odds ratio - OR) confirmed the independent variable as a significant predictor (OR = 0.220; IC 95% = 0.059 – 0.821), which ascertains that sustainability is an important factor when considering the purchase of sportswear. Variable P6_m (Purchase Decision) presented the following results ($x^2 = 7.971$; $p = 0.05$) and the Exp (B) (Odds ratio - OR) demonstrated that the independent variable is a significant predictor (OR = 9.384; IC 95% = 1.983 – 44.408), which implies that sustainability is an important factor in the purchase of fashion products.

4. Discussion

Comparing the results obtained in the present study with the main authors of our literature review, it is possible to scrutinise and discuss the results.

First of all, this study has confirmed that there was a clear increase in the purchase of fashion products (cf. 4.3 – Correlation), which in in line with the bibliographical sources (cf. 2.1 – COVID 19 and online shopping of fashion products), considering that from those contributions it became clear that approximately half of the consumers, since the beginning of the confinement situations, bought less in physical stores (cf. Business of Fashion, 2021). The current research, therefore, is consistent with the literature review, having in consideration that even before the pandemic, 24.9% of the consumers were buying less in physical stores (cf. 4.4 – Logits). The pandemic has clearly accelerated the pace of digitalisation, thus increasing online shopping of fashion products such as clothing, footwear, and accessories. The present study goes even further, stating that the increment in online shopping of fashion products was four times superior in comparison with the time before the pandemic (cf. 4.4. – Logits).

Secondly, this study was able to ascertain that the COVID 19 pandemic has resulted in an increase in the online purchase of sportswear (cf. 4.1 - sample characterization). This makes sense, considering that, as previously stated (2.2) in the literature review, people were forced to remain confined, and many of them have shifted to a telework environment, searching for more solutions in terms of comfortable and relaxing clothing (namely sportswear), which contributed to a decrease in the use of formal clothing (Business of Fashion, 2021).

As a matter of fact, formal clothing was already experiencing a decrease before the pandemic, which was naturally enhanced by the outbreak of COVID-19 virus. This pandemic has even disrupted the consumption of fashion clothing (cf. 2.2, Liu et al, 2021).

It was also possible to confirm that this outbreak has led to a greater level of pondering before completing a specific purchase (cf. 4.4. – Logits), which once again is aligned with the contributions of the bibliographical sources. People aim at buying more durable and better-quality products, thus forcing companies to re-educate themselves in order to reduce the complexities inherent to the purchase processes and to redefine the appropriate strategies and methods to meet the real needs of the consumers (cf. Business of Fashion, 2021). We have also concluded that people ponder up to three times more in their decision-making processes regarding fashion products (cf. 4.4. – Logits).

Finally, through this research, it was also possible to understand that sustainability has been raising its level of importance. More and more people are willing to pay substantial amounts for sustainable products, to allow their future recycling and reusing (cf. Cantwell et al, 2019). The results of the study also confirm that sustainability is also a crucial factor within the scope of the decision-making process related to the purchase of sportswear (cf. 4.4. – Logits). The results have demonstrated that the outbreak of this pandemic has contributed to a fast growth in digital acceleration and a significant increment in online shopping (in line with Kim et al., 2021), which in turn represented a downturn in the context of purchasing at physical stores, thus implying that some of these stores will have to close in the near future due to their lack of profitability. In its turn, the use of sportswear has increased, mainly due to the fact that people were confined inside their houses and under a telework environment, searching for more comfort at home, namely in the clothes they were wearing, which led to a significant decrease in the purchase and use of formal clothing (as stated by Amed et al., 2021), 2.2 in the literature review).

After the surge of the pandemic, people have become increasingly concerned with their purchases' decision-making processes, thus choosing products with higher levels of quality and durability (cf. 4.1). In these situations, companies had to define new strategies to answer their consumers' real needs. Finally, the present study has confirmed that sustainability is becoming a very important issue for the consumers, thus becoming a significant factor in the decision-making process of new products (cf. 4.4 – Logits). This is in line with the theoretical background (cf. 2.4 – Sustainability as a strategic factor in fashion): while the consumers were becoming more aware of the existence of these issues in the fashion industry, the search for sustainable fashion rapidly increased (Kim & Oh, 2020).

Conclusion

The COVID-19 pandemic has created a world crisis that demanded unusual measures. This global phenomenon has implied a sudden change in the individuals' routines all over the world, interfering with their behaviours and priorities, which have also changed in so many levels. In this scope, in order to keep track of their clients, brands must be well prepared and informed.

The present study's main goal was to understand the changes that have occurred in the fashion industry during the pandemic in the Portuguese socioeconomic context. The purpose was to evaluate whether the type of products and their consumption have shifted, whilst trying to ascertain if the level of importance granted to sustainability remained the same.

This paper was focused on a sample which included 107 valid answers, gathered during the month of May 2021. This particular time window allowed us to gather very significant data, considering that in the months prior to the survey, Portugal lived under two confinement periods: March 2020 and January 2021. Therefore, the data collected during this time range covered the pre and post confinement environments, thus bestowing enhanced credibility to the results of the enquiry. We elaborated a literature review and used a quantitative methodology, through a survey by questionnaire. After considering the literature available on the subject and the results of the questionnaire, it became clear that due to the COVID-19 pandemic there was an increase in the online shopping of fashion products (H1), (which began in the first weeks of the first confinement period), that the use of sportswear has been rising (H2), that the level of pondering before purchase is higher (H3); and that the growing importance of sustainability is unquestionable (H4).

It is expected that the fashion industry has been somehow affected, thus becoming susceptible to changes. Brands must pay more attention to the consumers, their behaviour patterns, and shifts, in order to better adapt and grasp the new opportunities. This way, brands will improve their sales and the market will surely become more stable and refined. Mandarić et al., (2022) state that the fashion industry should consider the adoption of new sustainable business models to address the current market, thus assuring a co-creation process between the various stakeholders and the consumers. This approach is shared by Brydges et al., (2022, p. 367) who suggest that 'a robust understanding of sustainability should be participatory, informed by a practice-based approach that further outlines actionable tasks and is linked to consumer-centred strategies'. Finally, it would certainly be interesting to reproduce or even carry this study a little bit further in the future, namely after the pandemic, thus allowing us to understand more clearly the breadth of all the effects caused by COVID-19 in this particular industry.

Although this study provides some novel insights, which are in line with the topic's theoretical background references, the present research has some limitations. The first one is related to the non-probabilistic sample we used, which prevents the possibility of extrapolating general conclusions, statistically accurate, about the population in general.

At the same time, it could also be posited that a more balanced and stratified sample, regarding, for example, the segmentation variables concerning gender and age – cf. Generation X and Baby Boomers), would be relevant in future studies. These options could strengthen the robustness of these results and increase the pertinence of the conclusions. In addition, the scales used were inspired by the literature review, but validated scales were not applied, since none of them followed the main objectives of the study. In the future, it is suggested to validate the scales. A 5-point Likert scale was used to describe the frequency of behaviour with regard to buying clothing, footwear, and accessories but it wasn't actually executed, which could cause some ambiguity. In further investigation, the frequency with which each scale item correlates is another possible avenue of research.

References

Addo, P. C., Jiaming, F., Kulbo, N. B., & Liangqiang, L. (2020). COVID-19: fear appeal favoring purchase behavior towards personal protective equipment. *The Service Industries Journal*, *40*(7-8), 471-490. Retrieved October, 25, 2022, from https://doi.org/10.1080/02642069.2020.1751823

Al-Hattami, H. M. (2021). Determinants of intention to continue usage of online shopping under a pandemic: COVID-19. *Cogent Business & Management*, *8*(1), 1-16. Retrieved October, 25, 2022, from https://doi.org/10.1080/23311975.2021.1936368

Alves, S. R., Ribeiro, H., & Saravanan, R. (2020). The digital transformation of traditional fashion retail for sustainable growth. *Economic and Social Development: Book of Proceedings*, 236-245.

Amed, I., Balchandani, A., Berg, A., Hedrich, S., Jensen, J. E., Le Merle, L., & Rölkens, F. (2021). State of fashion 2022: an uneven recovery and new frontiers. *Mckinsey & Company*. Retrieved October, 25, 2022, from https://www.mckinsey.com/~/media/mckinsey/industries/retail/our%20insights/state%20of%20fashion/2022/the-state-of-fashion-2022.pdf 1

Ben Hassen, T., El Bilali, H., & Allahyari, M. S. (2020). Impact of COVID-19 on food behavior and consumption in Qatar. *Sustainability*, *12*(17), 6973. Retrieved October, 25, 2022, from *https://doi.org/10.3390/su12176973*

Berg, A., Hedrich, S., Ibanez, P., Kappelmark, S., Magnus, K.-H., & Seeger, M. (2019). Fashion's new must-have: sustainable sourcing at scale. *McKinsey Apparel CPO Survey*. Retrieved December 18, 2021, from https://www.mckinsey.com/industries/retail/our-insights/fashions-new-must-have-sustainable-sourcing-at-scale 1

Brydges, T., Henninger, C. E., & Hanlon, M. (2022). Selling sustainability: investigating how Swedish fashion brands communicate sustainability to consumers. *Sustainability: Science, Practice and Policy*, *18*(1), 357-370. Retrieved May, 2, 2023, from https://doi.org/10.1080/15487733.2022.2068225

Buckley, C., & Clark, H. (2012). Conceptualizing fashion in everyday lives. *Design Issues*, *28*(4), 18-28. Retrieved December 18, 2021, from https://doi.org/10.1162/DESI_a_00172

Business of Fashion. (2021). Selling 'Office' Clothes to the Work-From-Home Woman. Retrieved May 11, 2022, from https://www.businessoffashion.com/articles/retail/selling-office-clothes-to-the-work-from-home-woman/ 1

Butu, A., Brumă, I. S., Tanasă, L., Rodino, S., Dinu Vasiliu, C., Doboș, S., & Butu, M. (2020). The impact of covid-19 crisis upon the consumer buying behavior of fresh vegetables directly from local producers. Case study: the quarantined area of Suceava County, Romania. *International journal of environmental research and public health*, *17*(15), 5485. Retrieved May, 2, 2023, from https://doi.org/10.3390/ijerph17155485

Callahan, C. (2020). How coronavirus could alter the way we shop for clothes from now on. Retrieved May 11, 2022, from Geraadpleegd via https://www.today. com/style/how-coronavirus-could-alter-way-we-shop-clothesnow-t180039 1

Cantwell, G., Nolan, M., & Corser, M. (2019). More than half of consumers would pay more for sustainable products designed to be reused or recycled, accenture survey finds. Retrieved September 5, 2021, from https://newsroom.accenture.com/news/more-than-half-of-consumers-would-pay-more-for-sustainable-products-designed-to-be-reused-or-recycled-accenture-survey-finds.htm 1

Cao, Y. (2023). Green Products: a review with the consumer buying process framework. *Journal of Environmental Management and Tourism, 1*(65), 52-66 Retrieved September, 4, 2023, from https://doi:10.14505/jemt.v13.1(65).06

Cope, J. (2020). Motivation and the fashion consumer. In *Communicating Fashion Brands* (pp. 57-78). Routledge. Retrieved May, 2, 2023, from https://doi.org/10.4324/9780429464423-4

D'Adamo, I., & Lupi, G. (2021). Sustainability and resilience after COVID-19: a circular premium in the fashion industry. *Sustainability*, *13*(4). Retrieved May, 2, 2023, from https://doi.org/10.3390/su13041861

Daukantienė, V. (2023). Analysis of the sustainability aspects of fashion: a literature review. *Textile Research Journal, 93*(3-4), 991-1002. Retrieved September, 4, 2023, from https://doi.org/10.1177/00405175221124971

Eger, L., Komárková, L., Egerová, D., & Mičík, M. (2021). The effect of COVID-19 on consumer shopping behaviour: generational cohort perspective. *Journal of Retailing and Consumer Services*, *61*. Retrieved February 15, 2022, from https://doi.org/10.1016/j.jretconser.2021.102542.

Erez, R. (2019). Sustainability in retail: good for business, great for humanity. Retrieved December 18, 2021, from https://www.forbes.com/sites/royerez/2019/10/01/sustainability-inretail-good-for-business-great-for-humanity/#6c769ab46dec1

Ezell, D., Bush, V., Shaner, M. B., Vitele, S., Huang, J. (2023). Challenging the good life: an institutional theoretical investigation of consumers' transformational process toward sustainable living. *Journal of Business Ethics, 183*, 783-804. Retrieved September, 4, 2023, from https://doi.org/10.1007/s10551-021-05009-6

Galli, D., & Bassanini, F. (2020). Reporting sustainability in China: evidence from the global powers of luxury goods. *Sustainability*, *12*(9), 3940. Retrieved May, 11, 2023, from https://doi.org/10.3390/su12093940

Grashuis, J., Skevas, T., & Segovia, M. S. (2020). Grocery shopping preferences during the COVID-19 pandemic. *Sustainability*, *12*(13), 5369. Retrieved September, 4, 2023, from https://doi.org/10.3390/su12135369

Hartmann, J., & Moeller, S. (2014). Chain liability in multitier supply chains? Responsibility attributions for unsustainable supplier behavior. *Journal of operations management*, *32*(5), 281-294. https://doi.org/10.1016/j.jom.2014.01.005

He, Z. (2020). What further should be done to control COVID-19 outbreaks in addition to cases isolation and contact tracing measures? *BMC medicine*, *18*, 1-3. Retrieved September, 4, 2023, from https://doi.org/10.1186/s12916-020-01551-8

Hesham, F., Riadh, H., & Sihem, N. K. (2021). What have we learned about the effects of the COVID-19 pandemic on consumer behavior? *Sustainability*, *13*(8), 4304. Retrieved September, 4, 2023, from https://doi.org/10.3390/su13084304

Hobbs, J. E. (2020). Food supply chains during the COVID-19 pandemic. *Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie*, *68*(2), 171-176. Retrieved September, 4, 2023, from https://doi.org/10.1111/cjag.12237

Jacobson, J., & Harrison, B. (2022). Sustainable fashion social media influencers and content creation calibration. *International Journal of Advertising, 41*(1), 150-177. Retrieved September, 4, 2023, from https://doi.org/10.1080/02650487.2021.2000125

Japutra, A., Loureiro, S.M.C., Wang, S.,& Primanti, H. (2023). How can brands become central in the consumers' life?. *Spanish Journal of Marketing, 27(*1), 39-59. Retrieved September, 4, 2023, from https://doi.org/10.1108/SJME-05-2022-0094

Javed, T., Yang, J., Gilal, W. G., & Gilal, N. G. (2020). The sustainability claims' impact on the consumer's green perception and behavioral intention: a case study of H&M. *Advances in Management and Applied Economics*, *10*(2), 1-22.

Jaworek, M., Karaszewski, W., & Kuczmarska, M. (2021). Source of success of the most valuable sportswear brands in the world. *Journal of Physical Education and Sport, 21*, 1050-1056. Retrieved September, 5, 2022, from https://doi.org/10.7752/jpes.2021.s2131

Kannan, P., & Kulkarni, G. (2022). The impact of Covid-19 on customer journeys: implications for interactive marketing. *Journal of Research in Interactive Marketing*, *16*(1), 22-36. Retrieved September, 4, 2023, from https://doi.org/10.1108/JRIM-03-2021-0078

Karaosman, H., Perry, P., Brun, A., & Morales-Alonso, G. (2020). Behind the runway: extending sustainability in luxury fashion supply chains. *Journal of Business Research, 117*, 652-663. Retrieved September, 4, 2023, from https://doi.org/10.1016/j.jbusres.2018.09.017

Kim, E., Fiore, A. M., Payne, A., & Kim, H. (2021). *Fashion trends: Analysis and forecasting*. Bloomsbury Publishing. Retrieved October 21, 2022, from https://www.bloomsbury.com/uk/fashion-trends-9781350099012/1

Kim, Y., & Oh, K. W. (2020). Which consumer associations can build a sustainable fashion brand image? Evidence from fast fashion brands. *Sustainability*, *12*(5), 1703. Retrieved September, 4, 2023, from https://doi.org/10.3390/su12051703

Köksal, D., & Strähle, J. (2021). Social sustainability in fashion supply chains—understanding social standard implementation failures in Vietnam and Indonesia using agency theory. *Sustainability, 13*(4), 2159. Retrieved October, 21, 2022, from https://doi.org/10.3390/su13042159

Laato, S., Islam, A. N., Farooq, A., & Dhir, A. (2020). Unusual purchasing behavior during the early stages of the COVID-19 pandemic: the stimulus-organism-response approach. *Journal of Retailing and Consumer Services*, *57*, 102224. Retrieved September, 4, 2023, from https://doi.org/10.1016/j.jretconser.2020.102224

Liu, C., Xia, S., & Lang, C. (2021). Clothing consumption during the COVID-19 pandemic: evidence from mining tweets. *Clothing and Textiles Research Journal*, *39*(4), 314-330. Retrieved September, 4, 2023, from https://doi.org/10.1177/0887302X211014973

Mandarić, D., Hunjet, A., & Vuković, D. (2022). The impact of fashion brand sustainability on consumer purchasing decisions. *Journal of Risk and Financial Management*, *15*(4), 176. Retrieved September, 4, 2023, from https://doi.org/10.3390/jrfm15040176

Martin, R. H., & Koda, H. (1995). *Haute Couture*. Metropolitan Museum of Art. Retrieved February 15, 2022, from Retrieved May, 11, 2022, from https://www.metmuseum.org/art/metpublications/Haute_Couture1

Mason, A., Narcum, J., & Mason, K. (2020). Changes in consumer decision-making resulting from the COVID-19 pandemic. *Journal of Customer Behaviour*, *19*(4), 299-321. Retrieved September, 4, 2023, from https://doi.org/10.1362/147539220X16003502334181

McMaster, M., Nettleton, C., Tom, C., Xu, B., Cao, C., & Qiao, P. (2020). Risk management: rethinking fashion supply chain management for multinational corporations in light of the COVID-19 outbreak. *Journal of Risk and Financial Management*, *13*(8), 173. Retrieved September, 4, 2023, from https://doi:10.3390/jrfm13080173

Mesjar, L., Cross, K., Jiang, Y., Steed, J. (2023). The intersection of fashion, immersive technoligy, and sustainability: a literature review. *Sustainability*, *15*, 3761. Retrieved September, 4, 2023, from https://doi.org/10.3390/su15043761

Mohr, I., Fuxman, L., & Mahmoud, A. B. (2021). A triple-trickle theory for sustainable fashion adoption: the rise of a luxury trend. *Journal of Fashion Marketing and Management: An International Journal*. *26*(4), 640-660. Retrieved September, 4, 2023, from https://doi.org/10.1108/JFMM-03-2021-0060

Moss, F., Damais, J.-F., & Ansons, T. (2020). Staying close to your customers. Why customer experience still matters amid COVID-19 and social distancing. Retrieved October 21, 2022, from https://www.ipsos.com/sites/default/files/ct/publication/documents/2020-04/ipsos-staying-close-to-your-customers.pdf1

Muñoz-Torres, M. J., Fernández-Izquierdo, M. A., Ferrero-Ferrero, I., Escrig-Olmedo, E., Rivera-Lirio, J. M. (2022). Social life cycle analysis of textile industry impacts for greater social sustainability of global supply chains. *Systems, 11*(1):8. Retrieved June 3, 2023, from https://doi.org/10.3390/systems11010008

Nandkeolyar, O., Chen, F. (2023). Credibility, transparency, and sustainability in fashion: a game-theoretic perspective. *Agricultural and Resource Economics Review, 52*, 43-70. Retrieved September, 4, 2023, from https://doi.org/10.1017/age.2022.24

Nayak, R., Panwar, T., & Nguyen, L. V. T. (2020). Sustainability in fashion and textiles: a survey from developing country. *Sustainable technologies for fashion and textiles*, 3-30. Retrieved September, 4, 2023, from https://doi.org/10.1016/B978-0-08-102867-4.00001-3

Pandit, P., Annaldewar, B. N., Nautiyal, A., Maiti, S., & Singha, K. (2020). Sustainability in fashion and textile. *Recycling from Waste in Fashion and Textiles: A Sustainable and Circular Economic Approach*, 177-198. Retrieved September, 4, 2023, from https://doi.org/10.1002/9781119620532.ch8

Pavia, T. M., & Mason, M. J. (2004). The reflexive relationship between consumer behavior and adaptive coping. *Journal of Consumer Research*, *31*(2), 441-454. https://doi.org/10.1086/422121 Retrieved February, 15, 2022, from

Rodrigo, P., Khan, H., & Valaei, N. (2023). Country-of-origin effects on consumer cognitive structures and preference for foreign brands among elites. *Journal of Fashion Marketing and Management: An International Journal*, (ahead-of-print). Retrieved September, 4, 2023, from https://doi.org/10.1108/JFMM-05-2022-0107

Rzyczycki, A. (2023). Sustainability in the fashion industry. *Journal of Multidisciplinary Research, 15*(1), 33-39.

Schumann, A., Wied, L., & Krahl, M. (2021). Sustainability and Digitalization in the Global Textile Value Chain. In *Sustainable Textile and Fashion Value Chains* (pp. 437-453). Springer. Retrieved September, 4, 2023, from http://dx.doi.org/10.1007/978-3-030-22018-1_23

Sharma, A., & Jhamb, D. (2020). Changing consumer behaviours towards online shopping-an impact of Covid 19. *Academy of Marketing Studies Journal*, *24*(3), 1-10.

Sumarliah, E., Usmanova, K., Mousa, K., & Indriya, I. (2022). E-commerce in the fashion business: the roles of the COVID-19 situational factors, hedonic and utilitarian motives on consumers' intention to purchase online. *International Journal of Fashion Design, Technology and Education, 15*(2), 167-177. Retrieved September, 4, 2023, from https://doi.org/10.1080/17543266.2021.1958926

Tan, S. F. (2020). Managing innovation: technology, consumer and sustainability perspective, and the challenges. In *Leveraging Consumer Behavior and Psychology in the Digital Economy* (pp. 205-216). IGI Global. Retrieved December 18, 2021, from https://www.igi-global.com/chapter/managing-innovation/255447 1

Thorisdottir, T. S., & Johannsdottir, L. (2020). Corporate social responsibility influencing sustainability within the fashion industry. A systematic review. *Sustainability, 12*(21), 9167. Retrieved September, 4, 2023, from https://doi.org/10.3390/su12219167

Vargas-MErino, J. A., Rios-Lama, C. C. & Panez-Bendezú, M. H. (2023). Sustainable consumption: conceptualization and characterization of the complexity of being a sustainable consumer - a systematic review of the scientific literature. *Sustainability, 15*(10), 8401. Retrieved September, 4, 2023, from https://doi.org/10.3390/su15108401

Vladimirova, K., Henninger, C. E., Joyner-Martinez, C., Iran, S., Diddi, S., Durrani, M., ... & Wallaschkowski, S. (2022). Fashion consumption during COVID-19: comparative analysis of changing acquisition practices across nine countries and implications for sustainability. *Cleaner and Responsible Consumption, 5(*1), 100056. Retrieved September, 4, 2023, from http://dx.doi.org/10.1016/j.clrc.2022.100056

Woodside, A. G., & Fine, M. B. (2019). Sustainable fashion themes in luxury brand storytelling: the sustainability fashion research grid. *Journal of Global Fashion Marketing*, *10*(2), 111-128. Retrieved October, 21, 2022, from http://dx.doi.org/10.1080/20932685.2019.1573699

Workman, J. E., & Lee, S. H. (2022). US consumer behavior during a pandemic: precautionary measures and compensatory consumption. *Journal of Open Innovation: Technology, Market, and Complexity, 8*(4), 201. Retrieved September, 4, 2023, from https://doi.org/10.3390/joitmc8040201

Zhao, L., & Kim, K. (2021). Responding to the COVID-19 pandemic: practices and strategies of the global clothing and textile value chain. *Clothing and Textiles Research Journal, 39*(2), 157-172. Retrieved September, 4, 2023, from https://doi.org/10.1177/0887302X21994207

Zhou, N., Pan, L., Tian, Y., Zhu, N., Cai, X., Gao, J. (2023).How sustainable business model innovation and green technology innovation interact to affect sustainable corporate performance. *Frontiers in Environmental Science*, .11:1049295. https://doi.org/10.3389/fenvs.2023.1049295

✉ **Correspondence**

Ana Pinto Borges

ISAG – European Business School
Rua dos Salazares 842,A Porto 4100-442, Portugal

E-mail: anaborges@isag.pt

Annex

SURVEY

P1 During the pandemic, have you increased the habit of buying fashion products online?
Note: ("Yes/No" answer)

P2.1 If so, what was the frequency of your purchases? [Clothing]
P2.2 1 If so, what was the frequency of your purchases? [Footwear]
P2.3 1 If so, what was the frequency of your purchases? [Accessories]
Note: According to the scale: 5-very frequently, 4-frequently, 3-rarely, 2-occasionally, 1-never.

P3 Before the pandemic, did you use sportswear?
Note: ("Yes/No" answer)

P4. Indicate your degree of agreement with the following statements:
P4.1. I make more online purchases of fashion products.
P4.2. I buy more fashion products.
P4.3. I buy fewer fashion products.
P4.4. I wear sportswear more often.
P4.5. I make more purchases of sportswear.
Note: According to the scale: 5-totally agree, 4-agree, 3-neither agree nor disagree, 2-disagree, 1- totally disagree

P5 Nowadays, do you ponder more before purchasing fashion products online?
*Note: ("Yes/No" answer)*P6. Indicate your degree of agreement with the following statements:
P6.1. The decision to buy fashion products is very important to me.
P6.2. The decision to buy fashion products is not important.
P6.3. I am very concerned about the decision to buy fashion products.
Note: According to the scale: 5-totally agree, 4-agree, 3-neither agree nor disagree, 2-disagree, 1- totally disagree

P7. In your opinion, is sustainability important?
Note: ("Yes/No" answer)

P8. Indicate your degree of agreement with the following statements:
P8.1. The importance of sustainability has increased.
P8.2. Brand sustainability is important.
P8.3. I give priority to sustainable brands.
P8.4. I am willing to buy the same product in a sustainable brand, to the detriment of another non-sustainable one.
P8.5. I am willing to buy the same product in a sustainable brand, to the detriment of another non-sustainable one, for the same value.
P8.6. I am willing to buy the same product in a sustainable brand, to the detriment of another non-sustainable one, for an added value.
P8.7. I am willing to change the product I intended to buy if the alternative is sustainable.
P8.8. I am willing to change the product I intended to buy if the alternative is sustainable, even if the value is increased.
P8.9. "Buy less, buy better".
Note: According to the scale: 5-totally agree, 4-agree, 3-neither agree nor disagree, 2-disagree, 1- totally disagree

Socio-demographic characteristics.

P9. Indicate your gender.

P10. Indicate your age.

P11. Please indicate your marital status.

P12. Indicate your level of education.

P13. Please indicate your working conditions.

P14. Please indicate your country of residence.