

SUSTAINABILITY TRENDS IN THE FAST FASHION INDUSTRY

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Abstract

The Fast Fashion industry is a highly polluting industry generating much concern in the academic world. The paper maps the global sustainable trends in the fast fashion market found in 2 databases, Scopus and Web of Science, from January 2000 till July 2023 and contains a literature review of these trends and dimensions. The fact that we want to offer a complex view of the actual trends in the global fashion industry reflects our research gap, which may significantly impact tomorrow's sustainability. The trends are also further discussed and addressed and will be of high value as they better understand the barriers to adopting these sustainable trends on larger scales, leading practitioners to announce proactive solutions for a better and more sustainable future. From a theoretical point of view, we want to expand the knowledge of what the sustainability of the fashion industry on a global level can look like based on different components and dimensions. Similarities were found in analyzing the trend from the two databases as general directions for the international trends.

Keywords

circular economy; consumer behavior; fashion sustainability; fast fashion; fashion corporate social responsibility; eco-friendly fashion; sustainability trends

Introduction

On average, fast-fashion brands like Zara, H&M, and Nike introduce new clothing designs in stores every three to five weeks (Hu et al., 2014). This fact translates into a substantial adverse environmental impact and a social one. While on a social level, we are talking about long working hours, low wages, and child labor in less developed countries (Mukherjee, 2011), from an environmental perspective, we are looking at chemical pollution, textile waste, CO2 emissions, energy, and water use (Niinimäki, 2020). Brands like H&M, Zara, Forever 21, and Primark have "hit the front page after several environmental damages" (Brenot et al., 2019, p. 97). These brands sell an average of 50 collections annually, pushing customers to purchase continuously according to the newer trends. It has even led to governmental implications for finding sustainability solutions (Henninger, 2015). While many studies have approached this topic, many uninvestigated aspects still need further research.

The interest in sustainability in the fashion industry has grown exponentially in the last decade (McNeil et al., 2015). Studies focused on systematic literature review found that the field knowledge has advanced only after 2006 and is still exponentially increasing. It has been pointed out that studies in different countries will have very different findings as developed and developing markets have different sustainability

dimensions and contexts. In developed countries, consumers will view sustainability as a life choice. In contrast, in developing countries, consumers may see sustainability more as legal compliance or corporate philanthropy, although their awareness levels might be similar. The same happens with the sustainability trends; second-hand shopping has gained attention in developed and underdeveloped countries, while green branding and eco-labeling may usually occur in developed countries (Yang et al., 2017).

In the last few years, the fashion industry has been increasingly criticized because of the environmental and social problems it is creating (Niinimäki et al., 2020). Industrial activities are one of the main problems that lead to global environmental degradation and resource depletion (Sachs, 2015). Fast fashion offers every income category of people easy access to trends, which has led to an alarming increase in consumption. Globally, an average of 80 billion clothes are purchased annually, which briefly translates to around 1.2 trillion dollars in profit annually for the fashion industry. Although mass-market retailers like H&M, Nike, and Zara have introduced environmentally friendly materials such as Tencel, organic cotton, or recycled polyester, we are still facing other problems regarding the environmental aspects, such as the usage of toxic, hazardous chemicals from all Inditex Group fashion stores (Greenpeace, 2021) and of course social problems. Most of these clothes and accessories are made in China and Bangladesh, which translates into low wages, terrible working conditions, long working hours, and vulnerability to discrimination (Turker & Altuntas, 2014). As a result, practitioners and academicians have often discussed sustainability in the fashion industry in the last decade to address this problem (Martin et al., 2017). Although we can notice a strong push from consumers, media, and especially non-governmental organizations in the fast-fashion industry to adopt sustainable behavior (Gordon, 2015), we are still discussing the existence of a traditional linear economic model (make-use-dispose) in the present. In this context, the research focuses on identifying the current sustainable trends in the global fashion industry from a consumer and business perspective.

The research will provide a deeper understanding of the different sustainable global trends that can help the fashion industry achieve sustainability and sustainable development. Although many studies are related to sustainability and sustainable development in the fashion department, most focus on specific trends and dimensions. The fact that we want to offer a complex view of the actual trends in the global fashion industry reflects our research gap, which may significantly impact tomorrow's sustainability. Moreover, the study allows a deeper understanding of sustainability dimensions and global trends. Interconnected relations between economy, technology, society, and environment in the long term should be the answer to the possibility of achieving sustainability in the fashion industry.

On a practical level, we will highlight how actual and relevant this research can be for fashion industry practitioners. Most industry practitioners have unfortunately adopted the mindset of continuously extracting resources without a plan for regeneration or reuse of the environmental resources (Provasnek et al., 2017). Due to this matter, we observe severe negative impacts from an environmental, social, and economic point of view, ranging from general pollution, climate changes, and economic crisis because of climatic disasters, which are putting both well-being and human health at risk (Didenko et al., 2018). There is an urgency to combat the adverse effects from a

practical point of view of the fast fashion industry. This cannot be done without studies and collaborations between academicians and practitioners (Saha et al., 2021).

Additionally, this paper will provide findings that will serve as insights for practitioners in developing proactive environmental strategies on all three levels, both from the consumer and societal perspectives. It will also provide a business perspective that can change the fashion market and get us closer to achieving sustainable development, as the pressure for such a change is increasing daily. By better understanding fashion consumers and organizations and global sustainable trends, companies can design sustainability strategies better and develop proactive solutions toward increasing sustainability. It is also important to remember that the market faces massive pressure from consumers, media, and especially non-governmental organizations to adopt sustainable behavior (Gordon, 2015; Martin et al., 2017). Pablo Isla, the Inditex CEO, has declared that by 2025, 100% of the cotton, polyester, and flax used for their clothes will be sustainable, recycled, and ecological (Muller, 2020). Although mass-market retailers have declared that they will use only friendly materials such as Tencel, organic cotton, or recycled polyester, we are still questioning if this is not only another marketing movement. We cannot deny that the fashion industry implies, without a doubt, a very long and complicated supply chain that is associated with many external and internal stakeholders (Ki et al., 2020). Therefore, without a doubt, reaching sustainability also lies in the customer's hands by consuming less fashion. From a practical point of view, we want to see if consumers can learn to "value and know the object" (Conell, 2010) and if the companies are willing to combat barriers to adopting global sustainable trends.

Literature review

When discussing sustainable development or sustainability in a sector, we usually refer to the three dimensions or pillars: environmental, social, and economic (Barbier, 1987). While other scholars and thinkers have added other pillars, such as technical, institutional, or political (Hill & Bowen, 1997), the concept of the three pillars is still broadly accepted. It has been continuously developed through the triple bottom line of sustainability as an assessment tool, which John Elkington first announced in 1994 (Nogueira, Gomes, & Lopes, 2022). The model of the triple bottom line took off in late 1990 and is also referring to 3 dimensions of corporate sustainability: profits (economic pillar), planet (environmental pillar), and people (social pillar). Hence, while the consequences from an environmental, social, and economic point of view are growing exponentially in the fashion industry, there are still some movements toward a shift in the sustainability paradigm and a focus on the triple bottom line model, even in newer literature (Connell & Kozar, 2017; Hiller Connell, & Kozar, 2017; Wang, Yang & Cheng, 2019).

Therefore, achieving sustainability may not lay individually in each sphere but in their relationships. A sustainable development strategy in the fashion department cannot only focus on creating jobs and clothes to satisfy the internal and external public while ignoring environmental issues. The three pillar models (Barbier, 1987) have been mainly used to justify a multifaceted approach; therefore, achieving sustainable development should be seen as a complex system of problems interconnected between economy, technology, society, and environment (Plessis, 2007). We will briefly present these three pillars and move towards trends, barriers, and customer awareness.

One of the first relevant articles debating sustainability in the fashion industry was written in 2008, arguing how the sustainability movement has impacted the fashion retail supply chain. The study focused on industry stakeholders and concluded there was still an incompatibility between economic growth and sustainability (Brito, Carbone, & Blanquart, 2008). The subject is still sensitive and needs further research; however, it has been shown that sustainable fashion is still a subjective construct and that each company should indicate its sustainable priorities. Therefore, a matrix should display these aspects (Henninger et al., 2015). Because our study considers many sustainable trends, it will help provide meaningful information in this direction. Also, the above research points out the importance of communicating these priorities to stakeholders; therefore, understanding each company's way of attaining sustainable fashion is vital for preventing greenwashing.

Another research focused on mapping the sustainable practices and trends in the actual textile industry identified the following trends: Eco-friendly textiles, the 3 R: Recycle, Reuse, Repair, Manufacturing in a sustainable way, Green manufacturing, Circular fashion, and CSR in the fashion industry (Islam et al., 2020). Their findings were drawn from articles published from 2010-2020; the authors highlighted that the interplay between sustainability's social and economic dimensions and consumer behavior could also be considered in further studies.

Another study by Gazzola, Pavione, Pezzetti, and Grechi (2020) refers to the following sustainable trends in the fashion industry: digitalization, technological improvement, attention to sustainability, circular economy, personalization, AI, and social media. The study states that the nature of the fashion business, which is a highly competitive business, translates into a permanent change and evolution in the field; therefore, more and more trends are coming out each year. Another new technological trend is the metaverse, which has already opened new opportunities (Sayem, 2022). Although many luxury brands have entered the digital environment, like Gucci with the world's first virtual sneaker and Bvlgari with brand extensions via AI & NFT, many other luxury brands still seem cautious about the metaverse and AI opportunities. Therefore, being more informed and experienced will lead to exploring new revenue streams. (Joy, Peña, & Brouard, 2022). As Johnson (2016) presented in his paper, avatar customization has become an industry, and the need for gratification influences the adoption of virtual fashion. Digitalization allows interaction with and attracts younger audiences while ensuring the broader sustainability of fashion products (Meli, 2021). Still, as it states, permanent change and evolution are happening due to the nature of the fashion industry. Therefore, new trends, the social dimension of sustainability, and the consumer perspective must be further discussed.

Another aspect to consider is that ethical consumerism and environmental responsibility will play a role in achieving sustainability. Studies have shown that the corporate social responsibility approach taken by fashion industry managers influences sustainability to a high degree. The link between CSR and sustainability is also related to the economic success of fashion and the legal and ethical aspects of consumer purchasing behaviors (Thorisdottir & Johannsdottir, 2020). The need to move to a more circular fashion economy has never been so drastic (Spring & Araujo, 2017). Combining economic regulations and a circular economy can be a potent tool in influencing customers to choose and prefer sustainable fashion over cheaper fast fashion (Mizrachi & Tal, 2022). Defining the circular economy concept is

difficult as the industry has its perspective, perception, and approach toward implementing it in the fast fashion market (Wang et al., 2020). A circular economy and the potential of achieving it have often been discussed in the fashion industry. This translates into an economic model that implies maximizing the raw materials and minimizing the waste, generating a positive outcome for the environment and society, but this may only be approached through a multi-faced strategy and effort from both business and consumers (Castro-Lopez et al., 2021; Martin et al., 2017).

Methodology

There are two ways to approach academic research: Qualitative and Quantitative. According to Brannen (2017), a variable can take more than a value, and this value can be numbers, words, or personal experience. One of the limitations of qualitative researchers is that they "are often accused of reading into texts, things that are not there or not being specific enough, making interpretations and having subjective opinions, etc." (Berger, 2018, p. 28). Conversely, quantitative research is accused of lacking an in-depth view of the problem.

From a methodological point of view, we focused our attention on VOSviewer analysis to map the current international sustainable trends and literature review based on secondary data, therefore analyzing information from published articles, academic books, and websites to gain more pieces of information about the nowadays environmentally friendly trends on a global level, that can serve as a starting point in developing more trends and solutions to address the fast fashion sustainability issues.

One of the limitations of the actual study lies in the fact that the research is literature-based. The Viewer analyses offer us only a general view of the matter, as surveys or interviews would have provided a more comprehensive range of data and information. However, the study will be further developed to include more research instruments in the future. The author knows these limitations and that the study consists of information and scenarios that the author considered relevant.

Research objective and question

To provide solutions for the stated problem, our research objectives will be:

Objective: To map sustainability trends on a global scale

Research question: What are the current sustainability trends in the fashion industry on a global level?

Sample

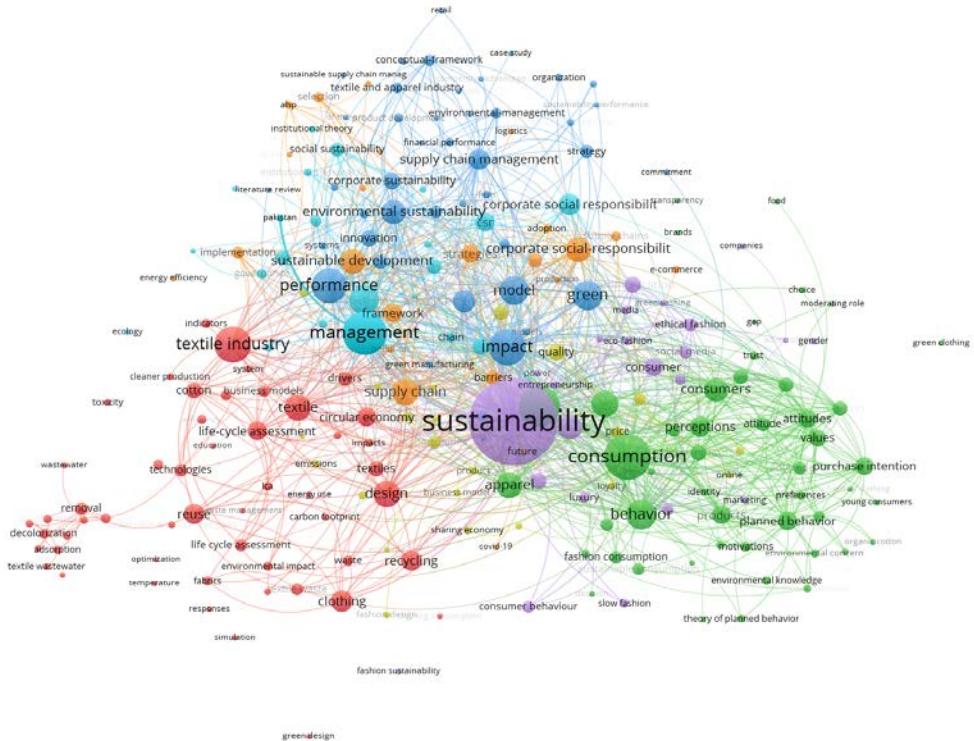
The article sample was retrieved from the Web of Science (WoS) and Scopus databases, the most used scholarly databases nowadays. The articles taken into consideration were between 01.01.2000 and 13.07.2023. The following search string was used and refined after several searches:

("TEXTILE INDUSTRY" OR "TEXTILE SECTOR" OR "CLOTHING" OR "CLOTHES" OR "GARMENT FOR FASHION" OR "APPAREL" OR "FASHION") AND ("GREEN TRENDS" OR "ENVIRONMENTAL TRENDS" OR "SUSTAINABILITY TRENDS" OR "SUSTAINABILITY" OR "GREEN" OR "ENVIRONMENTAL" OR "REUSE" OR "RECYCLING" OR

"ECO-FRIENDLY" OR "ENVIRONMENTALLY FRIENDLY" OR "LCA" OR "SUSTAINABLE DEVELOPMENT" OR "CORPORATE SOCIAL RESPONSIBILITY"

Results

In the Web of Science database, 879 results were retrieved from 2000 till today, which will be further detailed. Articles from the previous year, 2000, were not considered as their actuality is questionable.



**Figure 1. Web of Science analysis
(Source: Author's own research results)**

As we can notice, 7 clusters were found.

1. The purple cluster is related to consumer behavior, eco-fashion, social media, ethical fashion, and greenwashing;
2. The green cluster is exclusively related to consumption, behavior, consumers' perceptions, intentions, knowledge, values, attitudes, and motivators;
3. The red cluster is linked to design, recycling and reuse, waste, fabrics, and materials;
4. The turquoise cluster was linked to CSR, social sustainability, and management;
5. The orange cluster included supply chain barriers and development strategies;
6. The blue cluster included supply chain management, impact, and green model;
7. The yellow cluster is linked to fashion design, price, shared economy, business model, and quality.

In the Scopus database, 1298 were retrieved from 2000 until today.

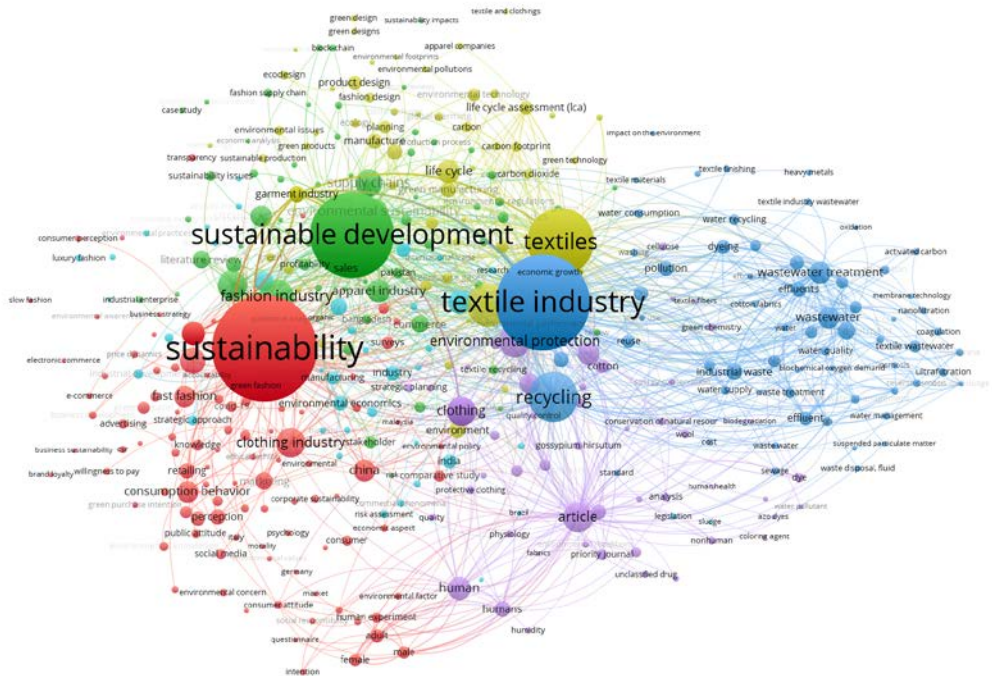


Figure 2. Scopus analysis
 (Source: Author's own research results)

The second analysis shows similar results in the two databases with sputtering between the following clusters:

1. the yellow cluster was associated with LCA, Green Design, Product Design, Carbon footprint, and green technology, similar to the red cluster found in WoS;
2. the red cluster was linked to consumption behavior, consumer knowledge, perceptions, psychology of consumers, attitudes, and willingness to pay extra, similar to the green cluster from WoS;
3. the green cluster was associated with sustainable development and the supply chain, and similarities were identified in the blue cluster from WoS;
4. the blue cluster from Scopus was associated with water waste, textile waste, and water supply, similar to the red WoS cluster;
5. the turquoise cluster from Scopus was associated with manufacturing, strategic approach, and international trade, similar to the WoS turquoise cluster;
6. the purple cluster was linked to natural resources, conservation, cotton, and fabrics; keywords were also included in the red WoS cluster.

As noted, there are some general directions that the trends follow based on specific problems that the industry faces from three dimensions: economic, social, and environmental.

Discussion

As mentioned in the theoretical section, when discussing sustainability, we refer to three dimensions or pillars that need to be addressed through specific sustainable trends.

The environmental pillar is linked to the organization's efforts toward doing good for the environment. The main areas of concern in the fashion department related to environmental problems are manufacturing, transport, and materials (Mustapha, Manan & Alwi, 2016). When referring to environmental issues caused by the fashion industry, we mainly refer to chemical usage, cotton usage, textile waste, carbon footprints, and water waste (Niinimäki et al., 2020). Manufacturing in the fast fashion industry requires much cotton, which translates into many pesticides to protect the crops. These pesticides pollute water and translate into general pollution, especially in developing countries with uncommon environmental regulations and factory monitoring. We also discuss greenhouse gases that pollute the air during manufacturing (M.S.L.J, 2017). Approximately 80 billion pieces of new clothing are being purchased yearly globally (Bick et al., 2018), and about 70% of the Romanian thrown clothing is sent to landfills as solid waste (PROTV, 2020). Therefore, the environmental aspect needs to be further discussed to provide a deeper understanding of the topic, develop proactive strategies, and adopt greener trends like recycling, ethical fashion, developing green models, and green technologies.

How we consume clothing is also critical, as we use water and electricity to wash, dry, and iron. A trend that might help minimize the environmental effect is the rise of the 3 R's: Repair, re-wear, and resale. Also, consumer behavior and perceptions need to be changed and further researched. Studies showed that sustainable clothing purchase behavior is linked to green confidence, environmental awareness, environmental attitudes, social media usage, labeling satisfaction, perceived regulatory behavior, and subjective norms (Abbate et al., 2023; Dhir et al., 2021; Hwang et al., 2020).

The social dimension, ethical fashion, and social fashion can help some companies achieve sustainable development in the future. The social pillar is related to meeting the interests of the employees and community and providing good value for them. Nowadays, we are talking about the impact of globalization in the fast fashion industry, which translates into global brands in developing countries, providing workplaces to people and the opportunity to escape poverty. Sadly, the process is imperfect, resulting in low wages, poor working conditions, inadequate safety and health measurements, and long working hours with no contracts (Mukherjee, 2015). We also discuss a growing feminization in the industry that translates into a segmented labor market as females and children are preferred in this work area.

Consequently, sexual harassment of women in factories is not unusual, and verbal and physical violence frequently occurs (Mukherjee, 2011). Child labor in developing countries is also a problem to be taken into account that needs to be controlled by law and government (Turker & Altuntas, 2014). The potential trend to address these issues is related to more CSR actions and social media usage that can help expose these social truths. More studies have shown that the main drivers for CSR actions are the competitive context, managers' knowledge, the internal culture of the company, and the potential to build a reputation with the government and stakeholders

(Govindasamy & Suresh, 2018; Guedes et al., 2017; Koeksal & Straehle, 2018; Van & Nguyen, 2019).

Although in the sustainability literature, the economic pillar was often associated with the social and environmental pillars, the economic dimension is related to the ability to incorporate sustainable trends in the strategies of the business (Peralta, Bárcena, & González, 2016). Ensuring the strategy's economic and technological viability is vital to achieving those sustainable strategies. Therefore, the economic dimension is a topic where knowledge management or innovation purchase and technology development also play a significant role in achieving the economic and financial aspects (Goel, 2018). Circular economy trends have significantly improved sustainability from how textiles are produced to how they are consumed and disposed of (Staicu & Pop, 2018).

This sustainable trend needs to be further addressed from both business and consumer perspectives. Hopefully, it will lead to a fair fashion trade where ethical reasons are considered (Fuxman et al., 2022).

Conclusions

This research is exciting because our outcomes can help practitioners and academics. Academics can better understand the fashion trends that may play a significant role in reaching sustainability in the future. The paper's originality lies in the fact that the trends were identified in general directions, offering a complex view of the actual trends in the global fashion industry, which reflects our research gap, which may significantly impact tomorrow's sustainability.

From a practitioner's point of view, this paper will be valuable since it provides real insights and practical strategies for creating a multi-faced strategy approach when discussing sustainable development. Our natural resources are limited and likely to end in the following years, so these strategies will likely be valuable to prevent the inevitable from happening and control and minimize the effects.

From an ethical point of view, this research will discuss how to minimize pollution in the fashion industry, which, as stated before, is the second most polluting industry on the planet. Therefore, I hope this paper can provide a wake-up call and spread awareness of the topic, as well as a call to action from consumers and companies.

Among the risks we may encounter during this research and further research on the topic, we must mention the pandemic and war, which are still causing uncertainty in any industry. Also, the evolution of the fashion industry, in general, is still unknown because of a highly competitive environment. This limitation can be solved by constantly updating and researching the topic to a certain extent because the economic, social, and possibly environmental consequences are still unpredictable. There is also the possibility of this research being too general due to the lack of access to the in-depth perspectives of the fashion industry, but further investigation may address this potential limitation.

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