



The impact of fast fashion on the environment and climate change

Kartika Sekar Kinasih^{1*}, Ardiyanto Wardhana²

^{1,2}Communication Science, Ahmad Dahlan University, 55166, Indonesia

*Corresponding author's email: skinasih13@gmail.com¹

ABSTRACT

Keywords

Trend
Fast fashion
Waste

In this modern era, people give demands for fashion needs that are constantly changing following a fast trend. The emergence of the internet makes it easier for people to see the latest fashion trends. Not only as body armor, fashion products are used as markers of social status in society. This causes people to not want to be outmoded and want to always look fashionable. Therefore the concept of fast fashion appears, where fashion products are produced quickly and at an affordable price. After the latest trends emerge on the catwalk, the fashion industry will try to adapt these trends and produce their own products. It can be seen that fast fashion outlets are increasingly mushrooming in the world, such as H&M, Bershka, Zara, Uniqlo, and many more, always releasing new products every week. This study aims to determine the relationship of trends with the fast fashion industry and the impact caused by the fast fashion industry on the environment.

1. Introduction

The fast fashion industry creates clothing in huge quantities at extremely low costs and with quick production cycles (Huang et al., 2019). The sector has expanded quickly in the last few decades to rank among the biggest in the world. But people are growing more concerned about how fast fashion affects the environment and climate change (Casaló et al., 2020).

Fashion is widely acknowledged as a significant social force that shapes people's behavior and impacts a country's social and economic life (Gomes de Oliveira et al., 2022). Among them is the idea of fast fashion, which evolved from items produced under manufacturing models to a "quick response" sector that produces new goods and pleasant shopping environments to draw customers in on a regular basis (Latif & Calicioglu, 2020).

The fast fashion business has a significant effect on climate change and the environment (Arroyo Figueroa et al., 2022). Large-scale clothing production puts a great deal of waste and strain on the environment's resources (Sellitto et al., 2022). Cotton and wool, two of the raw materials used to make

clothing, need a lot of water and pesticides to grow (Holroyd et al., 2023). Significant greenhouse gas emissions are also produced during the clothing production process (Détrée et al., 2023).

Consumer behavior is also influenced by fast fashion (Rahardjo, 2023). Customers are encouraged to buy more clothes and discard them more quickly by low prices and quick production cycles. This puts a great deal of strain on landfills and produces a lot of textile waste (Noris et al., 2021).

The effects of fast fashion on the environment and climate change have drawn the attention of numerous organizations and individuals in recent years. Numerous initiatives were started to bring attention to this problem and promote reform in the fashion sector. A few fashion labels are also beginning to take steps to lessen their influence on the environment, like using recycled materials and cutting down on waste during production (Nayak et al., 2022).

This essay will address the effects of fast fashion on the environment and global warming, along with the steps taken to lessen these effects. We'll examine this problem from several perspectives and offer suggestions for how to lessen the negative effects of fast fashion on the environment and climate change.

2. Method

This research methodology for secondary data analysis can be applied to the analysis of the paper "The Impact of Fast Fashion on the Environment and Climate Change" (Andi, 2022). Identify relevant secondary data sources: In this case, the relevant secondary data source is the paper "The Impact of Fast Fashion on the Environment and Climate Change" (Aiolfi & Sabbadin, 2019). In addition, other secondary data sources that can be used are scientific journals, research reports, and statistical data related to the impact of the fashion industry on the environment and climate change (Rifqi & Purnamasari, 2022).

Data collection: Thoroughly reading the paper "The Impact of Fast Fashion on the Environment and Climate Change" and making notes of pertinent details will help gather data (Domingos et al., 2022). Furthermore, information might also be gathered from other recognized secondary data sources (Hadit Prasetyo & Purnamasari, 2021).

Data analysis: The data that has been collected can be analyzed using qualitative or quantitative analysis methods. Qualitative analysis methods can be used to analyze descriptive data, such as excerpts from papers or research reports. While quantitative analysis methods can be used to analyze statistical data, such as graphs or tables (Kotler & Keller, 2016).

Data interpretation: Once the data is analyzed, the analysis results can be interpreted to identify the impact of fast fashion on the environment and climate change (Materialise, 2021). The results of the analysis can also be used to identify factors that influence the impact of fast fashion on the environment and climate change (Barreiro, 2021). Conclusion: An overview of the effects of fast fashion on the environment and climate change can be obtained by drawing conclusions from the analysis's findings. Conclusions can also be used to offer suggestions for steps that should be done to lessen the negative effects of fast fashion on the environment and climate change. References: The bibliography needs to accurately list all references from secondary data sources that were used.

3. Result and Discussion

The study examined the effects of fast fashion on the environment and climate change, looking at a number of factors such as consumer behavior, production methods, and the connections between these and the environment. A interdisciplinary approach was used to offer a thorough comprehension of the topic. Impact on the Environment According to the report, there is a major contribution from the fast fashion business to environmental deterioration. Pollution of the water and land is caused by the use of dangerous chemicals and dyes in the production process. Furthermore, the extensive use of water in the textile industry exacerbates the scarcity of water in many areas. Due to the lengthy breakdown time of synthetic fibers, which are frequently utilized in fast fashion, disposing of textile waste is a significant issue.

Consumer Behavior, The study also examined consumer behavior and found that reducing the environmental impact of fast fashion requires raising consumer knowledge. The value of making sustainable decisions is becoming more and more apparent to consumers. This knowledge causes a change in consumer behavior toward more ethical consumption, such as purchasing fewer, better products and endorsing companies that use sustainable business practices.

One important topic that was looked at was supply chain management. The supply chains in the fashion sector were found to be a key area for adopting more environmentally friendly procedures. Rethinking the industry's use of materials, procedures, and eco-friendly supplier procurement proved beneficial in lowering its environmental impact.

Psychological aspects were also covered, including the need for novelty among consumers and their perception of social standing. The ongoing need to follow trends and use clothing as a means of displaying social standing has accelerated the consumption and disposal of clothing, exacerbating its detrimental effects on the environment.

Media and Communication the study recognized the role of media and communication in shaping perceptions and behaviors. Raising public awareness about the environmental consequences of fast fashion is crucial. The media can contribute to this by highlighting sustainable alternatives and promoting a culture of responsibility.

Interaction with the Media The study recognized how media and communication influence people's beliefs and behaviors. Public education regarding the detrimental impacts of fast fashion on the environment is vital. The media might support this by highlighting eco-friendly solutions and promoting an accountability culture.

4.1. Presenting the Results

The study's main conclusions, which centered on how rapid fashion affects the environment and climate change, are presented in this section. The study utilized a transdisciplinary methodology to thoroughly investigate the topic, encompassing multiple facets of the fashion sector, consumer conduct, and ecological implications.

1. Impact on the Environment The study found that the fast fashion sector has serious negative effects on the environment. The industry's over reliance on dangerous chemicals and dyes in the production process is one of the main conclusions. As a result, soils and water supplies get contaminated with hazardous pollutants, which has a negative impact on ecosystems and public health. Uncontrolled chemical waste disposal is a serious issue that exacerbates environmental deterioration.
 - a) Production-Related Hazardous Chemicals, The industry's widespread usage of hazardous chemicals in the creation of fast fashion is one of the study's most important conclusions. According to research, a significant portion of these chemicals are released into nearby water sources and ecosystems, seriously polluting them. These substances include bleaches, different finishing agents, and hazardous colors. These dangerous compounds' pollution of water bodies has a negative impact on aquatic life and freshwater and marine ecosystems.
 - b) According to data, the textile sector is responsible for 20% of industrial water pollution worldwide. Some places, particularly those with a high concentration of fast fashion production, have reported dramatic rises in water pollution levels. For instance, the release of hazardous effluent from the textile industry has caused rivers and streams close to industrial clusters to have deteriorated water quality.
 - c) Water Consumption: Another concerning environmental effect of fast fashion manufacturing is the large amount of water used in its production. Research phase data revealed that the industry uses enormous amounts of water, frequently in regions where water is already scarce. For example, it has been discovered that the manufacturing of a single cotton T-shirt can use up to 2,700 liters of water, which is an astounding amount given the global reach of fast fashion.

- d) Subsequent investigation shows that disputes over water resources have arisen in some areas as a result of fast fashion companies' uncontrolled use of water, especially in nations where water scarcity is a major problem. These disputes demonstrate how urgently the industry needs to adopt more responsible water management techniques.
- e) Textile Waste Accumulation: The study also revealed textile waste accumulation to be a critical environmental issue. The study discovered that there is a significant accumulation of textile waste as a result of the high production volume connected with fast fashion and the widespread use of synthetic fibers. Textile waste is a long-term environmental problem because many synthetic materials decompose slowly.

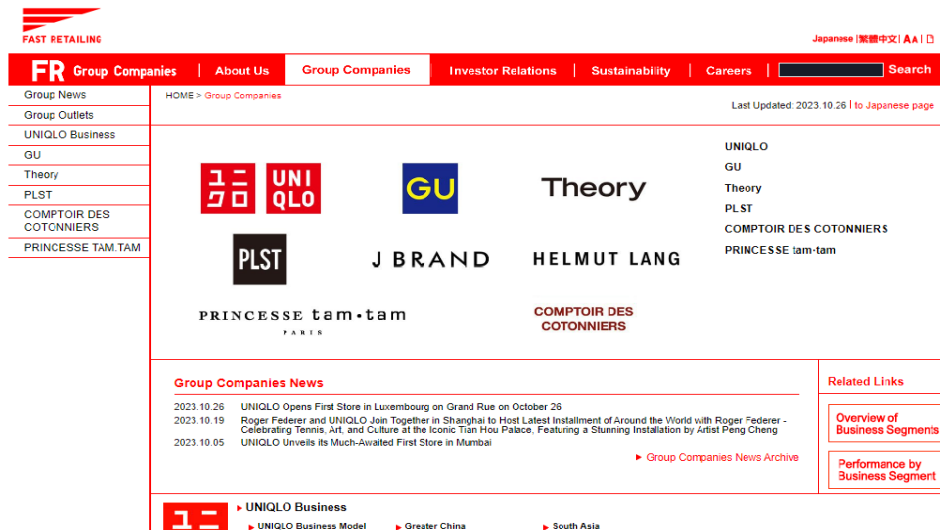


Fig. 1. global apparel manufacturers and retailers

Source: www.fastretailing.com

Knowing this, the quick expansion of the industry has a strong competitive impact on fast fashion companies in the face of actor competition for client loyalty, which can be achieved in part by raising the standard of Brand Engagement in Self-Concept. The process of fostering an emotional bond between customers and brands that positively affects their intention to make a purchase is known as brand engagement in self-concept. Scholars and practitioners have given Brand Engagement in Self-Concept a great deal of attention (Brodie et al., 2011; Calder et al., 2009; Hollebeek et al., 2014).

Building brand attachment with consumer self-image is the idea behind the term "brand engagement in self-concept," which alludes to consumers' propensity to use brands as an extension of who they are (Spratt et al., 2009).

According to information gathered during the research phase, a significant amount of the non-biodegradable waste in the world is caused by the fashion industry. This waste impedes recycling efforts and puts additional strain on landfills because it mostly consists of discarded clothing items. Because of this, textile waste is frequently burned or dumped in landfills, taking up valuable space and adding to the burden on the environment.

In summary, the fast fashion industry has a huge negative impact on the environment. A lot of evidence suggests that it pollutes water sources, uses a lot of water, and generates a lot of non-biodegradable textile waste. These results highlight how urgent it is for the industry to implement more environmentally friendly procedures and guidelines in order to lessen these negative effects on the environment. To properly handle these problems and guarantee the planet's long-term health, cooperation between industry players, governmental institutions, and environmental organizations is crucial.

Utilization of Water and Resources, The shocking finding is that fast fashion is linked to excessive water use. The extensive use of water in the textile industry depletes water supplies and can occasionally cause disputes with nearby communities over water access. This result emphasizes the

necessity of water-efficient production techniques and conscientious water resource management. One of the biggest environmental challenges facing the fast fashion industry is its extensive water consumption. This section explores the problem in more detail, emphasizing particular statistics and findings that highlight how serious the issue is.

The Scale of Water Use: The study's most shocking conclusion is how much water is used in the manufacturing of fast fashion. According to research, the fashion industry uses a significant amount of water throughout the whole process, from cotton farming to the dyeing and finishing steps. For instance, information gathered during the study stage showed that up to 7,000 liters of water could be needed in the manufacturing of a single pair of jeans. This startling statistic illustrates the industry's high water demands, particularly in areas where water scarcity is already a problem.

Regional Water Scarcity: The study's most shocking conclusion is how much water is used in the manufacturing of fast fashion. According to research, the fashion industry uses a significant amount of water throughout the whole process, from cotton farming to the dyeing and finishing steps. For instance, information gathered during the study stage showed that up to 7,000 liters of water could be needed in the manufacturing of a single pair of jeans. This startling statistic illustrates the industry's high water demands, particularly in areas where water scarcity is already a problem.

Environmental Consequences: The water consumption of the industry has a significant impact on the environment. Large-scale water use depletes nearby water sources, reducing the supply of water for drinking, sanitation, and agriculture. Additionally, the discharge of untreated or inadequately treated wastewater from the textile industry can contaminate nearby bodies of water, harming aquatic ecosystems and having an adverse effect on public health. **Efforts Toward Water Efficiency**

Although a few fast fashion retailers have started introducing water-saving procedures and equipment, the data indicates that these initiatives are still insufficient to lessen the industry's overall influence on water resources. There is still a significant amount of fast fashion production that uses traditional, water-intensive methods. In conclusion, the fast fashion industry poses a significant environmental challenge due to its excessive use of water and resources. The data emphasizes the amount of water used, the issues surrounding local water scarcity, and the effects this high consumption has on the environment. To tackle these problems, the fashion industry needs to make a stronger commitment to sustainability and adopt water-efficient practices and responsible water management. For water resources to be managed more sustainably and the environmental impact to be minimized, cooperation between industry players, environmental organizations, and local communities is essential.

Build-Up of Textile Waste The problem of textile waste was also noted by the research as a significant environmental concern. Textile waste accumulates as a result of the high volume of fast fashion production and the widespread use of synthetic fibers, which decompose slowly. The environment is further strained by the fact that this waste frequently ends up in landfills (Ellen, 2017). One of the biggest environmental concerns is the amount of textile waste that is produced, most of it from the fast fashion sector. In order to demonstrate the scope of the issue, we delve deeper into it in this section and offer pertinent data and specific insights.

The Scale of Textile Waste: The study found that an astounding amount of textile waste is produced by the fast fashion industry. Reputable sources of data, such as the fashion industry report from the Ellen MacArthur Foundation, show that every second, the equivalent of one garbage truck's worth of textiles is burned or landfilled. This equates to millions of tons of discarded clothes each year.

Synthetic Fiber Challenges: Polyester and nylon are two examples of the synthetic fibers that make up a sizable amount of textile waste. These substances have a reputation for breaking down slowly, which adds to their long-term negative effects on the environment. For example, the degradation of polyester can take hundreds of years, during which time microplastic particles may be released into the environment. It is well known that microplastics damage ecosystems and marine life.

Impediments to Recycling: The study discovered that although recycling textiles is a practical way to cut waste, the fast fashion model encourages a "throwaway" culture, which makes recycling more

difficult. Clothing is frequently thrown away by consumers after little use, which makes it challenging to set up efficient recycling systems.

Environmental Impact of Textile Waste: As textile waste breaks down in landfills, it releases greenhouse gases in addition to taking up valuable space. Natural fibers like cotton can break down to release methane, a strong greenhouse gas. Additionally, burning textiles aggravates environmental problems and adds to air pollution.

Slow Progress Towards Circular Fashion: The fast fashion industry's business model is still based on high-volume, low-cost production, which feeds the waste accumulation problem even in the face of efforts to promote circular fashion. Fast fashion often consists of pieces that are worn only a few times before being thrown away, following the "make, use, dispose" philosophy.

The buildup of textile waste has a significant impact on the environment, resulting in greenhouse gas emissions from landfills and the slow breakdown of synthetic fibers. The information emphasizes how urgent it is for the fashion industry to change to one that is more sustainable and circular. This change would call for a reassessment of methods of production, consumption, and disposal in addition to a stronger focus on ethical, long-lasting fashion choices.

Customer Conduct The study examined consumer behavior and discovered that addressing the environmental impact of fast fashion requires a strong consumer awareness campaign. Notably, buyers are growing more conscious of the ethical and environmental consequences of the products they buy. Consumer behavior has changed as a result of this awareness, with more people choosing to consume responsibly. Customers are demonstrating their support for brands that put sustainability first by purchasing fewer, higher-quality goods.

Understanding the effects of fast fashion on the environment requires an understanding of consumer behavior. This section explores the intricacies of consumer behavior in greater detail, providing pertinent data-driven insights. (McKinsey & Company, 2020).

The study's main conclusion is that consumer awareness has a big impact on how the fashion industry adopts sustainable practices. Studies reveal that buyers are growing more aware of the ethical and environmental consequences of the clothes they buy. People have a tendency to think about the origins of the goods they buy and the policies of the companies they support. The way that consumers behave has changed noticeably as a result of this awareness.

More and more customers are choosing quality over quantity, according to data from surveys and consumer studies. Clothes that are timeless, long-lasting, and composed of sustainable materials are now highly valued by many. This change indicates that buyers are favoring more durable goods and eschewing throwaway clothing, which lowers the frequency of purchases.

According to the study, consumer support for sustainable brands is on the rise. Customers are gravitating toward brands that emphasize ethical sourcing, ecologically friendly production processes, and conscientious labor standards. Their willingness to invest in these brands' products reflects their willingness to match their fashion choices with their values.

Studies reveal that resale and second-hand markets are becoming more and more popular. In order to prolong the life of clothing and keep it out of landfills, many consumers are buying and selling used clothing items. With the aid of digital platforms and apps devoted to vintage clothing, these markets have grown in popularity.

There are still difficulties in spite of these improvements. The fast fashion cycle is sustained by the attraction of inexpensive prices and quickly evolving trends. The affordability of fast fashion continues to draw in some customers, so it's critical to discuss the financial aspects of sustainable fashion.

In the endeavor to lessen the fashion industry's negative environmental effects, consumer behavior is a dynamic force. The study's conclusions show how consumer awareness is rising, people are choosing quality over quantity, they are supporting sustainable brands, and resale markets are expanding, all of which are leading to more sustainable decisions. To achieve long-lasting change, overcoming the obstacles to behavioral change is still a continuous process that calls for a multifaceted strategy.

Management of the Supply Chain The supply chain management analysis made clear how critical it is to review industry practices. The fashion industry can lessen its environmental impact by using sustainable materials, sourcing from ethical suppliers, and implementing eco-friendly sourcing and production practices. In the fast fashion industry, supply chain management is essential to understanding the industry's environmental impact. A more thorough examination of the effects of supply chain management, as well as possible solutions, is provided in this section.

Studies show that one of the most important ways to reduce the environmental effect of the fashion industry is to switch to more environmentally friendly sourcing and production practices. This entails using eco-friendly materials, using less energy and water, and producing products with as little waste as possible. Working with ethical suppliers is essential to sustainable supply chain management, according to the study. Brands that place a high priority on just compensation, safe working conditions, and ethical labor practices help create a more moral and sustainable supply chain. A key factor in changing the fashion industry for the better is supply chain management. In order to lessen the environmental impact of the industry, the study emphasizes the potential for eco-friendly sourcing and production practices, careful supplier selection, and enhanced efficiency and transparency. It will take coordinated efforts from industry stakeholders, consumers, and advocacy groups to address the implementation challenges.

Psychological Factors, We also talked about psychological factors like the need for novelty and the pursuit of social status via clothing choices. These elements were shown to be the driving forces behind the fast-paced cycle of clothing consumption and disposal, exacerbating the negative environmental effects of the sector.

Communication and the Media The study acknowledged the important role that communication and the media play in shaping attitudes and actions concerning fast fashion. The media can help create a culture of responsible consumption, promote sustainable alternatives, and increase public awareness of the negative environmental effects of fast fashion. An important factor to consider is how communication and the media shape attitudes, actions, and knowledge about the environmental impact of fast fashion. A more thorough examination of the connection between media and the environmental effects of fast fashion is given in this section.

Raising Public Awareness: According to the research, media and communication channels play a big part in educating the public about the negative environmental effects of fast fashion. Media outlets possess the authority to draw attention to the environmental issues facing the industry and the pressing need for reform through news reports, documentaries, and investigative journalism.

Promoting Sustainable Alternatives: The media may be an effective instrument for promoting sustainable substitutes. Environmentally conscious and sustainable fashion brands and practices are becoming more and more prominent in fashion magazines, websites, and social media influencers. The media can encourage consumers to make more ethical and well-informed fashion decisions by highlighting brands that are dedicated to sustainability and by presenting responsible fashion choices.

Fostering a Culture of Responsibility: Campaigns for communication and media attention help to promote a culture of accountability. They urge customers to consider carefully both the environmental effects of their fashion decisions and their own choices. Media outlets have the ability to influence societal values and norms by portraying sustainability as an appealing and feasible way of living.

Challenges and Opportunities: Although communication and the media present chances to promote positive change, they also present difficulties. Fast fashion companies frequently have large advertising budgets, which can affect how they are covered by the media. It's still difficult to strike a balance between ethical reporting and advertising profits.

Economic Aspect: Finally, the study discussed some economic issues. There are short-term expenses and long-term benefits associated with the fashion industry's shift to more environmentally friendly procedures. Even though initial investments in sustainability may be higher, there is a strong economic case for change given the possibility of financial rewards in the form of customer loyalty and the positive branding of ethical behavior.

Knowing the financial aspects of the fast fashion industry is crucial to comprehending the opportunities and difficulties involved in making the switch to more environmentally friendly

practices. The economic aspects of the industry's environmental impact are covered in detail in this section, along with the argument in favor of using sustainable business models.

Initial Investments in Sustainability: According to the study, making the switch to more sustainable practices frequently necessitates upfront costs. It may be necessary for brands and manufacturers to make investments in environmentally friendly production methods, sustainable materials, and moral labor standards. In the short run, these investments may result in higher production costs.

Long-Term Economic Benefits: The data suggests that adopting sustainability has major long-term economic benefits, even though initial investments can be high. Businesses that embrace environmentally friendly methods and highlight sustainability in their advertising frequently gain a solid reputation and win over loyal customers. Over time, these brand loyalistas may result in increased revenue and earnings.

Consumer Loyalty to Responsible Brands: Studies indicate that an increasing proportion of consumers actively search out and endorse brands that adhere to sustainable and ethical practices. According to this trend, companies that put sustainability first can develop a loyal clientele. Brands can prosper financially by having a devoted customer base that generates a consistent stream of income.

Economic Viability of Circular Fashion: There are financial opportunities associated with circular fashion, which prioritizes recycling, upcycling, and resale. In particular, the resale market has expanded dramatically. Reselling is expected to surpass fast fashion in the upcoming years, according to data, which presents financial opportunities for companies that adopt circular fashion.

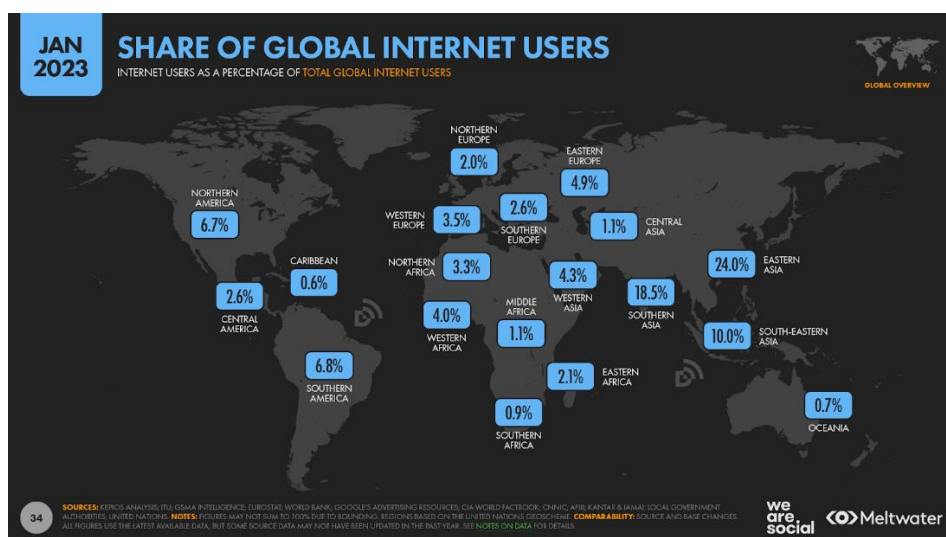


Fig. 2. Internet Use By Country

Source : WeAreSocial (2023)

The most recent information on fashion trends can be quickly and easily accessed via the Internet. Users can easily learn about the newest fashion trends from a variety of sources, including well-known designers, celebrities, and fashion influencers, by using websites, social media, and e-commerce platforms. This generates demand for fashion items that adhere to current trends. The internet has made fast fashion more popular and made it easier to get fashion products, but it has also led to a number of environmental problems, like the need to keep up with the latest trends and rapid production increases. As a result, it's critical to take into account how fast fashion trends influenced by internet use may affect society and the environment.

The degree to which someone will follow trends is influenced by buyer loyalty, but it also depends on personal preferences. While some consumers might be more inclined to stick with their current style, others might be more receptive to trying out new trends. In any event, purchasing decisions can be influenced by the interaction between trends, personal style preferences, and online shopper loyalty.

In the fashion industry, the economics of sustainability are multifaceted. Adopting sustainable practices has upfront costs, but there is a strong economic argument for change given the possibility of long-term financial gains, such as increased consumer loyalty and the expansion of the circular fashion industry.

4. Conclusion

The study's conclusions highlight the critical need for a paradigm change in the fashion industry. As fast fashion emphasizes speedy production and overindulgent consumption, it is becoming increasingly necessary to adopt a more sustainable model. This change entails lowering product turnover, prioritizing quality over quantity, and raising customer awareness of how their purchases affect the environment and society. In order to create a more sustainable and responsible fashion industry, cooperation between various stakeholders—including the government, business community, and industry—is crucial. The fashion industry can play a constructive role in reducing climate change and protecting the environment by implementing these changes.

5. References

- Aiolfi, S., & Sabbadin, E. (2019). Fashion and new luxury digital disruption: The new challenges of fashion between omnichannel and traditional retailing. In ... *Journal of Business and ...* pdfs.semanticscholar.org. <https://pdfs.semanticscholar.org/d3c8/be95d004c2e2160c03eed0b9db8f31422882.pdf>
- Andi, A. S. (2022). Analysis of the digital marketing strategy of anak hebat Indonesia publisher through Instagram. *COMMICAST*, 3(2), 1–10. <https://doi.org/10.12928/commicast.v3i2.5906>
- Arroyo Figueroa, G., Dzul Cauch, J. G., Medina Saavedra, T., & García Vieyra, M. I. (2022). Dyeing and colour fastness in cotton and wool, using natural extracts of sunflower petals, onion peel and cocoa shell. *Journal of Natural Fibers*, 19(14). <https://doi.org/10.1080/15440478.2021.1950097>
- Barreiro, A. M. (2021). Sustainability In Fashion Studies. *Athenea Digital*, 21(1). <https://doi.org/10.5565/REV/ATHENEA.2728>
- Casaló, L. V., Flavián, C., & Ibáñez-Sánchez, S. (2020). Influencers on Instagram: Antecedents and consequences of opinion leadership. *Journal of Business Research*, 117. <https://doi.org/10.1016/j.jbusres.2018.07.005>
- Détrée, C., Labbé, C., Paul-Pont, I., Prado, E., El Rakwe, M., Thomas, L., Delorme, N., Le Goïc, N., & Huvet, A. (2023). On the horns of a dilemma: Evaluation of synthetic and natural textile microfibre effects on the physiology of the pacific oyster *Crassostrea gigas*. *Environmental Pollution*, 331. <https://doi.org/10.1016/j.envpol.2023.121861>
- Domingos, M., Vale, V. T., & Faria, S. (2022). Slow Fashion Consumer Behavior: A Literature Review. In *Sustainability (Switzerland)* (Vol. 14, Issue 5). <https://doi.org/10.3390/su14052860>
- Gomes de Oliveira, L., Miranda, F. G., & de Paula Dias, M. A. (2022). Sustainable practices in slow and fast fashion stores: What does the customer perceive? *Cleaner Engineering and Technology*, 6. <https://doi.org/10.1016/j.clet.2022.100413>
- Hadit Prasetyo, S., & Purnamasari, O. (2021). Empathy-based marketing communication as a strategy to win the hearts of consumers during the covid-19 pandemic. *COMMICAST*, 3(1), 75–82. <https://doi.org/10.12928/commicast.v3i1.5104>
- Holroyd, A. T., Gordon, J. F., & Hill, C. (2023). Historical Perspectives on Sustainable Fashion. In *Historical Perspectives on Sustainable Fashion*. <https://doi.org/10.5040/9781350160460>
- Huang, T. L., Mathews, S., & Chou, C. Y. (2019). Enhancing online rapport experience via augmented reality. *Journal of Services Marketing*. <https://doi.org/10.1108/JSM-12-2018-0366>
- Kotler, P., & Keller, K. L. (2016). *A Framework for Marketing Management* (6th, Global ed.). Pearson Education Limited.

- Latif, S., & Calicioglu, C. (2020). Impact of social media advertisement on consumer purchase intention with the intermediary effect of brand attitude. *International Journal of Innovation, Creativity and Change*, 11(12).
- Materialise. (2021). *Iris van Herpen Debuts Wearable 3D Printed Pieces at Paris Fashion Week | Materialise - Innovators you can count on*. Materialise.
- Nayak, R., Jajpura, L., & Khandual, A. (2022). Traditional fibres for fashion and textiles: Associated problems and future sustainable fibres. In *Sustainable Fibres for Fashion and Textile Manufacturing*. <https://doi.org/10.1016/B978-0-12-824052-6.00013-5>
- Noris, A., Nobile, T. H., Kalbaska, N., & Cantoni, L. (2021). Digital Fashion: A systematic literature review. A perspective on marketing and communication. *Journal of Global Fashion Marketing*, 12(1). <https://doi.org/10.1080/20932685.2020.1835522>
- Rahardjo, R. A. (2023). Implementation of Ambush Marketing in 10 Local Brands at “Paris Fashion Week 2022” Phenomena. *COMMICAST*, 4(1), 16–24. <https://doi.org/10.12928/commicast.v4i1.7241>
- Rifqi, R. A. C., & Purnamasari, O. P. (2022). effect of Indomie advertising on Instagram on purchase decisions (survey on Instagram account @indomie). *COMMICAST*, 3(2), 116–127. <https://doi.org/10.12928/commicast.v3i2.5946>
- Sellitto, M. A., Valladares, D. R. F., Pastore, E., & Alfieri, A. (2022). Comparing Competitive Priorities of Slow Fashion and Fast Fashion Operations of Large Retailers in an Emerging Economy. *Global Journal of Flexible Systems Management*, 23(1). <https://doi.org/10.1007/s40171-021-00284-8>