

Environmental and Human Impacts of Fast Fashion

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Abstract: The fashion industry undergoes constant evolution driven by changes in consumer preferences. Fast fashion is loved by many by selling large quantities of different styles of clothing cheaply and updating them very quickly. However, with the increasing popularity of fast fashion as consumption trends, environmental concerns and human rights are gaining more attention. Issues such as resource overexploitation and injustice for workers are becoming prominent topics of discussion among the public. In this context, this study aims to provide a comprehensive analysis of the ecological and human impact of minimalist clothing and fast fashion, with a focal point highlighting the significance of environmental issues in the fashion industry. The study will examine key aspects such as resource consumption, waste production, and labour rights to discuss the impact of these fashion choices on the environment and humanity. The study concludes that the negative impacts of fast fashion are not only environmental but also human rights. These findings emphasize the need for the fashion industry to shift towards sustainability. By highlighting the environmental impact of fast fashion, this study seeks to inspire positive changes in consumer behavior and contribute to protecting workers' rights and ecosystems. Stakeholders such as consumers, brands and policymakers must unite to turn these insights into practical action to create a fairer, greener fashion industry.

Keywords: fast fashion, environmental concerns, ecosystem, human rights, minimalism

1. Introduction

With time, the fashion industry has undergone numerous transformations in response to changes in consumer consumption patterns. Especially when novel consumption trends like fast fashion increases significantly, they swiftly become the focal point of the fashion industry's attention and garner people's affection. However, as concerns about natural resources and waste production have intensified and the exploitation of workers' rights, there is a growing awareness of the profound human impact related to the fashion industry.

Fast fashion, as defined, refers to the rapid production model adopted by retailers to sell different styles of inexpensive clothing for consumers to purchase within a short period. It is undeniable that the fast fashion industry is favored by many people because of its inexpensive prices, and it also boosts the economy. However, this attraction often leads them to overlook or ignore the harmful effects of fast fashion, such as excessive consumption of resources, increased waste generation, and the vast labour demand resulting in an excessive burden on workers. In response to this pressing issue, this study will take a significant role in conducting a comprehensive analysis of fast fashion while

emphasizing the importance of environmental responsibility and labour rights in clothing consumption, in addition to proposing solutions centred on minimalism.

The current gap in the literature is the lack of contrast between fast fashion and minimalism for environmental and social responsibility. While fast fashion and minimalism have received a lot of attention, there are limitations to analyzing the connection between these two consumption patterns. Furthermore, the study of minimalism has been impeded by the swift rise of the fast fashion trend, as a growing number of individuals are embracing the convenience of fast fashion while potentially overlooking the more profound risks.

Overall, this paper examines waste generation, pollution impacts, and labour rights arising from fast fashion within the framework of available data. In addition, it advances several recommendations based on minimalism, thus striving to provide a thorough and detailed exploration of the injustices inherent in the fast fashion industry.

2. Fast Fashion

Fast fashion is known for its rapid release of new styles that allow consumers to keep up with fashion trends at a lower price. Undeniably, this consumption model has swiftly propelled the economic development of related industries, offering more opportunities to entrepreneurs in this field and positive impacts on the nation's economy. In addition, fast fashion provides an opportunity for low-income people to dress in similar styles as affluent people, thus reducing the class discrimination generated by clothing [1]. Overall, the textile and fashion industry contributes both economically and socially. However, concern exists about how rapid fashion affects the environment. The speed of fast fashion often comes at the expense of human health and the environment [2]. The fashion business has an influence on the environment since it generates more than 92 million tons of garbage each year and uses 1.5 trillion liters of water [3]. As the fast fashion trend continues to grow in popularity, the large number of orders further accelerates the harm caused by this model. This phenomenon not only has a severe environmental impact but also raises profound questions in terms of human rights.

3. The Impact of Fast Fashion

3.1. Pollution From Resource Consumption

Firstly, there is pollution due to resource consumption in the production process. The exponential depletion of ecosystems is exacerbated by the extensive usage of resources in order to meet the demand for the rapid production of these inexpensive garments.

Foremost is the waste and pollution of water resources. Cotton is in high demand in the fashion industry as the primary material for making garments. As the most beloved fabric, about 75% of all clothing contains cotton [4]. Yet, the unnoticed fact is that producing a single kilogram of cotton requires 20,000 liters of water [5]. This tremendous amount of water use has caused significant harm to water resources. On the other hand, the chemicals used in growing cotton should not be overlooked. Cotton consumes 25% of global insecticides and 10% of pesticides; in 2000, EPA associated these cotton pesticides with potential human carcinogens [6]. The poor treatment of wastewater has the potential to disrupt groundwater and destroy entire ecosystems because of the harmful chemicals used in the manufacturing process. For instance, in 2008, 60% of the water pollution and 34% of the chemical pollution in Cambodia were caused by the apparel industry. [3].

Additionally, the issue of marine pollution arises from the accumulation of marine waste. Due to the rapid update of fast fashion, the wastewater generated from washing polyester fibers, a primary fabric used, poses significant harm to the Earth. When polyester fibers are broken down into tiny microfibers, they eventually enter the ocean through wastewater and cannot be filtered out by wastewater treatment plants due to their small size. This leads to the accumulation of fibers being

ingested by marine organisms, resulting in irreversible harm when they enter the human body. [7]. In addition, textile dyeing is an essential part of the fashion industry. However, once untreated wastewater is discharged into the local water system, it releases heavy metal substances that can endanger the health of humans and animals [8].

3.2. Pollution From Clothing Disposal

The second point is improper disposal of garments leading to contamination. The purpose of fast fashion is to enable consumers to buy clothing frequently at low prices. However, this also results in a shortened lifespan of clothing, leading consumers to dispose of unneeded clothing more regularly.

As early as 1995, denim generated over 70 million kilograms of waste in the U.S., with textile waste accounting for approximately 4.5 percent of the total waste produced [9]. Annually, the average American discards about 80 pounds of clothing and textiles, constituting roughly 5% of the total capacity of all landfills [8]. Some discarded garments become solid waste, blocking water flows, green spaces and parks while posing additional environmental health risks in some countries [8]. Due to the vast amount of discarded clothing, most of it will be destroyed by incineration. Greenhouse gases (CO₂, CH₄, etc.) from incineration are the primary factors in global warming [10]. Subsequently, gaseous emissions were recognized as the textile industry's second-worst environmental issue [6]. Chemicals can release toxic substances such as formaldehyde during processing. In 2015, polyester textiles generated 1.5 trillion pounds of greenhouse gases [1]. Such a significant figure has a massive impact on global warming, which threatens not only ecosystems but also human health.

On the other hand, landfills are the main disposal option for waste in modern times [11]. However, some non-biodegradable materials in clothing, such as polyester fibers, it takes up to 200 years to decompose, and 72% of our clothing requires this material [12]. Thus can impose irreversible effects on the soil. The breakdown of these substances releases toxic greenhouse gases, contributing to direct or indirect pollution, this also means that the textile industry needs to do a proper management of wastes [13]. People's demand for textiles is gradually rising, an average of 99 million tons of clothing need to be produced each year to satisfy people's needs, and most of the clothes have long been unable to meet with polyester fiber. In order to save time and costs, textile factories must use synthetic and harmful dyes to mass-produce garments. As a result, these poor-quality materials can be a threat if they are improperly landfilled, especially since synthetics have the risk of not composting. [12].

3.3. Work's Right

The third issue is that due to the enormous production volume, many workers' rights are deprived by capitalists. To satisfy the growing demand for fast fashion and inexpensive clothing, some brands, in order to reduce production costs, not only use inferior materials but also deprive workers of their rights so that they can maximize their profits.

Many workers are experiencing harsh working environments, long hours and low incomes. In India, in some factories with large orders, including child labour, workers are forced to work continuously for 36 hours [6]. More importantly, these workers are often women who lack awareness of their rights and are frequently subjected to harassment and physical abuse, leaving them unable to resist in such a harsh environment [6]. In some garment-producing countries, the main reason why women quit their jobs is because of vulnerability to exploitation and abuse. Taking Bangladesh as an example, female employees in fast-fashion factories are often subject to discrimination, including human rights violations, gender inequality, abuse, and low wages. Due to their accessibility as low-cost labour, young women are preferred by factory managers [14].

Besides women, child labour is a widespread phenomenon. The terrible environment of garment factories causes irreversible physical and mental damage to children, seriously violates their childhood rights and deprives them of the opportunity to enjoy their childhood. Garment manufacturing factories can cause musculoskeletal, eye, and other physical injuries due to problems such as poor lighting, prolonged repetition of an action, and vision fatigue [14]. It is considered immoral to subject children to dangerous labour, to seek cheap labour, and to subject them to injuries that even adults cannot bear. Furthermore, as mentioned earlier, improper handling of fibre materials and cotton, being a primary part of the manufacturing process, can impact human health. In some low-income countries, the safety of working conditions is below standard, and poor ventilation, for example, can lead to workers suffering from respiratory infections and even lung disease or cancer [8].

4. Solution

The rapid development of fast fashion has brought about the dangers of excessive resource consumption, environmental pollution and workers' injustice. In particular, mass production and low costs have led to heavy use of water resources and chemicals, which have aggravated the decline of ecosystems. However, the problems caused by fast fashion are not insurmountable, with minimalism being an effective solution. In recent years, the idea of a minimalist closet has gained significant attention. The aim is to preserve environmental sustainability while embracing a more straightforward and organized lifestyle. Minimalist fashion consumption supports the circular economy and focuses on quality rather than quantity, thus promoting sustainable consumption [15]. Considering the significant environmental impact of the garment industry and aiming to maximize the benefits of the circular economy, the fashion industry should lead consumers to change their views on recycled products and services [16]. Hence, what dimensions can minimalism contribute to the advancement of sustainable development? The essence of minimalism is to reduce impulse shopping habits and foster the development of conscious shopping. This shift affects overall consumption, leading to a steady reduction in resource consumption and waste generation.

First of all, a minimalist closet achieves resource conservation by reducing the number of clothes. Minimalist consumers shift their behavior from resource wastage to resource conservation, exemplified by precise counting and purchasing only what they truly need [17]. Minimalism reduces the need for textile materials by reducing the number of clothes purchased, thus reducing the consumption of raw materials such as cotton and polyester fibers. This also signifies a reduction in the amount of water resources needed and air pollution generated during clothing production, as well as a decrease in the generation of discarded clothing, thereby achieving minimal pollution.

Next, narrow down the closet and make clothes circulate. Contrary to the idea of fast fashion, minimalism promotes a recycled mode of clothing. A minimalist closet doesn't just throw away clothes after a short period of use; instead, it encourages individuals to extend the lifespan of each garment. The research suggests that Reusing 100 cotton t-shirts reduces the global warming burden by 14%, while using 65/35 polyester/cotton pants reduces the global warming burden by 23% [18]. Recycling garments is a better option than incineration. On the other hand, donating clothes is also part of the recycling model. Between 400,000 and 700,000 tons of discarded clothing are burned or landfilled annually, but most of this clothing still has a life expectancy of 70% [19]. Even clothes that are considered outdated should not be thrown into trash bins; instead, they should be donated to organizations that can provide warmth to those in need. Consequently, recycling lowers trash production and is crucial to sustainability [20].

Last but not least, people should be more aware of sustainability. After witnessing the deteriorating ecosystems, people should realize that the changes in the environment are a result of their lifestyle habits. Although some consumers are concerned about sustainability, there is a lack of awareness

about sustainable practices in fashion brands. The impact of sustainability factors is often overlooked when purchasing clothes, and addressing this issue requires focusing marketing on the consumer [21]. Consumer disposal and environmental awareness throughout the textile life cycle are critical to minimizing waste, and the amount of textile waste can be significantly reduced through reuse and recycling rather than landfill [12].

All in all, the fashion industry should take environmental protection as the central premise and put quality in the first place. Aiming for durability and high quality in production is not only a moral demand but also a crucial step in ensuring the minimization of harm to the Earth. Consumption patterns should be reevaluated to lessen the harmful effects of fast fashion on the environment and society. In shifting consumption patterns, producers and consumers have a crucial role in preserving the environment and the well-being of society.

5. Conclusions

This paper provides an in-depth analysis of how fast fashion affects the environment and human rights and offers some solutions. By encouraging people to adopt conscious consumption patterns, the problem of minimizing the pollution of the earth's resources can be achieved.

Fast fashion offers consumers a wide variety of stylish choices and is loved by people of all ages at affordable prices. Nevertheless, there are many hidden dangers concerning fast fashion. Whether it's the irreversible pollution of water sources and air due to excessive exploitation of Earth's resources caused by massive orders; or the land contamination caused by the improper disposal of vast quantities of discarded clothing, not to mention the deprivation of workers' rights, the drawbacks of fast fashion should not be minimized. Minimalism, as a sustainable consumption pattern, emphasizes the importance of choosing high-quality products, thereby reducing the frequency of purchases and the consumption of resources. Minimalism stands in stark contrast to fast fashion and contributes significantly to the protection of the earth's resources. However, there are some limitations to this paper. Due to limited length and resources, this study is only based on existing data and research, and secondly, the correlation between fast fashion and minimalism is still lacking.

For future research, consumer perceptions of sustainability in different regions could be further explored. Secondly, consideration should be given to how minimalist consumption patterns can be promoted. In conclusion, given the degradation of the ecological and working environments caused by fast fashion, shifting consumption patterns to sustainability will create a much greener world for people and future generations.

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