

Sustainable fashion as a part of the circular economy concept¹

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Abstract

It has been shown that the textile and clothing industry have a negative impact on both the environmental and socio-economic field. The current trend in fashion, called sustainable fashion, is part of a new concept of circular economy, in which textiles and clothing are kept in the highest quality throughout their life cycle and then put back into circulation. The aim of the paper is to focus and evaluate the current knowledge base in the field of sustainable fashion and to clarify the basic approaches and strategies of circular fashion. The article uses mainly the description and comparison of theoretical knowledge and synthesis of analytical data from consulting companies and research agencies.

Key words

Sustainable fashion, slow fashion, circular fashion, second hand

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Introduction

Nowadays, people and companies have begun to fight against the rapid consumerist lifestyle by slowing down. Whereas conventional retail chains undertake their first activities towards sustainable production, there are movements and types of businesses in which a conscious approach is directly in ideological base. They are often called by the adjective slow, which in this sense does not mean doing things slowly, but doing them at an adequate pace.

The term SLOW is used as an acronym for: S - Sustainable; L - Local; O - Organic; W - Whole.

The first pioneer of a lifestyle that prefers a slower approach to various aspects of life was the Italian gastronome and journalist Carlo Petrini, who founded the Slow Food movement in 1986. It was a response to the spreading globalization of food, increasing fast food operations and the gradual disappearance of local culinary traditions. The idea of "slowness" gradually spread to other areas of life. Slow Traveling, Slow Cities, Slow Money and Slow Fashion were created.

Slow fashion, as one of the categories of sustainable fashion, points to the slow process of production, purchase, wearing and subsequent disposal. Its goal is to increase the lifespan of clothes with an emphasis on quality and longevity, not on quantity and rapid trends. Slow fashion is becoming an important part of the new concept of circular

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economy, where the product and material are part of the cycle for as long as possible, thus reducing the amount of waste generated. In addition, it minimizes the negative environmental impacts of production and makes the industry more sustainable.

1 Methodology

The current trend in fashion, called sustainable fashion, is a part of the philosophy of sustainable design, where the product is designed and manufactured with the environment and social responsibility in mind.

In this context, the paper aims to evaluate and concentrate on the current knowledge base in the field of sustainable fashion and to clarify the basic approaches and strategies of circular fashion. At the same time, we intent to draw attention to the negative effects of the fashion industry on the environmental and socio-economic area.

The article mainly uses the description and comparison of theoretical knowledge dealing with the subject matter and analysis of the issue of sustainable fashion using data from studies of international consulting companies and research agencies. We also synthesized selected partial results of the primary survey on sustainable purchasing. The method of deduction was used to logically justify the conclusions from the generally valid pragmatic experience abroad.

2 Results and Discussion

2.1 Categories of sustainable fashion

By completing the process of individualization and democratization of fashion the so-called fast fashion is created, which is characterized not only by the speed of production, but also the speed of consumption. The result is a culture of disposable clothing that consumers buy at regular intervals and get rid of after several uses (Muthu, 2016).

The fashion industry is a gigantic industry with two to three trillion dollars a year. It is estimated that \$ 500 billion will be used in the global economy to buy unnecessary clothing that the consumer will barely wear. The life cycle of clothing is dramatically shortened: the average number of wears is 36 percent lower than 15 years ago (Tvardzík, 2018).

The philosophy of the so-called slow fashion talks about fashion that can afford to ignore trends. It is an initiative that prioritizes quality over quantity (Ležovičová, 2019). It includes, on the one hand, slow production but also conscious consumption.

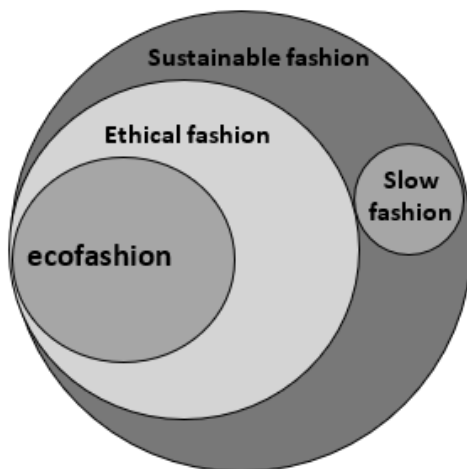
Slow fashion versus fast fashion recognizes a different concept of clothing production and use. Slow fashion is characterized by words such as awareness, diversity and balance. Slow fashion production does not abuse human labour or nature, products have a longer lifespan and are used for a longer time period compared to fast fashion clothing (Fletcher, 2007). According to Clark (2008), the movement does not aim to slow down fashion production, but rather to incorporate a holistic view of the issue. The emphasis

is mainly on the use of local materials, transparent production and quality products used for a longer time period.

The authors Jung and Jin (2014) defined five dimensions of slow fashion. The first dimension is equality and justice, especially in the area of fair remuneration of workers and the overall improvement of working conditions. Another dimension is authenticity, which recognizes the quality, traditional techniques and crafts that make the product unique. Functionality as the third dimension focuses on the maximum use, usefulness and versatility of the purchased product. Another dimension is the emphasis on locality in the form of support for local producers using local raw materials in the production. The last dimension is exclusivity, which aims at unique pieces of clothing with which consumers express their personality. By exclusivity, we can also understand the joy and pleasure of fashion, which are associated with responsibility and awareness. An important aspect of slow fashion is the connection between producer and consumer. Not only can the consumer support a particular manufacturer, but he can also be a co-creator of his clothing (Cataldi, 2010).

In the process of slow fashion, the main subjects are consumers, who should lean towards quality instead of quantity and not be subject to fashion trends when choosing clothes, but to create their own style. Fashion designers also play an important role, according to Johansson (2010) to design clothes that arouse emotions in people. At the same time, it is important to be aware of the environmental and social consequences of production. Produce locally, thus preserving local traditions, practices and materials. Produce in small quantities and thus preserve diversity in fashion. Use less stressful materials and those that do not require washing at high temperatures (Ježková, 2016).

More environmental and socially friendly, so-called sustainable fashion is currently referred in various terms: eco-fashion, ethical fashion, or slow fashion (Figure 1). We use ecofashion in professional terminology, where it emphasizes the quality of materials. These should be produced with minimal impact on the environment. These are mainly natural materials from organic production. Ethical fashion involves the same strategy as eco-fashion, but at the same time integrates social issues into its approach. This concerns not only the working conditions of employees working in all parts of the production chain, but also the health of consumers. None of these categories, unlike slow fashion, deals with the role of the consumer in the fashion system. Slow fashion coordinates all components, from fashion designers, through material suppliers, producers, distributors, to end customers.

Fig. 1 Categories of sustainable fashion

Source: Modified by Salcedo, E. 2014, pp. 32

2.2 Environmental and socio-economic impacts of the fashion industry

The fashion industry contains a wide range of processes from obtaining the primary raw material to the final product. It is currently one of the most polluting industries in the world, as it covers the production of materials, their dyeing, sewing, the effects of wearing clothes, and the problems associated with disposing of them.

According to the French Ministry of the Environment, the textile industry is responsible for six percent of greenhouse gases, 10 to 20 percent of pesticides consumed and one fifth of water polluted during any industrial production (Radačičová, 2020). The clothing releases half a million tonnes of microfibers a year into the seas and oceans, equivalent to more than 50 million plastic bottles. The fashion industry produces more carbon dioxide emissions than international flights and shipping together. Unless developments change, emissions from this sector are projected to increase by up to 60% by 2030. Ultimately, this will also affect the climate change and global warming (McFall-Johnsen, 2019).

From an ecological point of view, the growing amount of textile waste is also a huge problem. It is more advantageous for consumers to buy a new piece of clothing than to repair a damaged one. Frequent changes in fashion trends are also one of the reasons for fast removal of clothing.

Garment production is one of the most complex industries in terms of number of inputs and production steps. For example, making one pair of jeans requires hundreds of gallons of water, pesticides, cleaners, and thousands of miles of travel before the clothes get into the store. Cotton is usually produced in India; fibre spinning takes place in China. Jeans can be sewn and washed in Guatemala according to Italian design. The

zipper can come from Germany, the buttons from Great Britain and labels from the USA. Thus, one pair of jeans can "travel" up to 65,000 kilometres until it reaches Europe. And all this without taking in mind the production of chemicals used for cleaning, bleaching and dyeing.

The fashion industry thus not only has environmental impacts, but also of social and economic impacts. Most clothing is produced in countries with the cheapest labour and low or no standards in terms of working conditions, safety and environmental standards. As the use of protective clothing is not common in third countries, health problems are often associated with the performance of work. And not only by manual work but also by breathing in fumes. In addition, work in these countries is underestimated and employees often have to wait several months for pay, forcing them to stay in the factory longer even in inhumane conditions and continuous working. Following the collapse of the Rana Plaza textile factory building in Dhaka, Bangladesh, in 2013, where more than 1,100 employees lost their lives, consumers became more interested in where their clothes were made (Westervelt, 2015). This tragedy has highlighted the indecent conditions of people working on the orders of large textile companies. The event revealed the state of the fashion industry and why it needs change.

More than 98% of people working in the fashion industry do not earn a living wage (Thomas, 2019). Over the last few years, the clothing industry has begun to gradually move from China to other, cheaper countries. Today, China pays workers more, factories provide better working conditions. A large percentage of them already comply with laws and standards. Production is therefore moved to Bangladesh, Cambodia or Africa to maintain high profits (Ľuptáková – Maleš – Csefalvayová, 2020).

2.3 Circular fashion

All the above facts about the negative environmental impact of the textile and clothing industry are the reasons for accelerated systemic change. If a functioning circular system could be created in this area, it would bring new economic opportunities.

The linear direction in the consumer clothing chain progresses from the primary non-recycled raw materials from which clothing is made, through its use to the end in a landfill or incinerator. By incorporating some green strategies, we can begin to consider the so-called circular fashion. The essence of the circular fashion lies in the creation of products adapted for re-use, reparations, transformation to recycling or complete biodegradation. Circular Fashion Agency (2016) defines 15 basic principles of circular fashion: 1) to design clothing so that it is not only the object of momentary use and subsequent disposal, 2) resistance of clothing, 3) biodegradability, 4) recyclability, 5) use of local materials and local producers, 6) without toxic substances, 7) energy efficiency in production, 8) renewable resources, 9) production ethics, 10) customer service, 11) re-use, recycling and composting, 12) cooperation, 13) pay attention to the appropriate way of washing and maintenance, 14) sharing, 15) preference for quality over quantity.

The main goal of circular fashion is to extend the lifespan of clothing and materials. The basic strategies of circular fashion currently include (Ľuptáková - Maleš - Csefalvayová):

5. changes in design and materials,
6. improvement of consumers' purchasing decisions,
7. extension of the product usage
8. efficient collection for reuse, repair and upcycling,
9. improvement in sorting and recycling.

1) Change of design

According to the principles of circular design, products should be durable, timeless, allowing consumers the opportunity to repair, quilting and reshaping. The most important principle of circular design is good recyclability of the product.

Recycling is technological processing into the form of fibres of lower quality than the original textile before processing. A prerequisite for efficient textile recycling is the production of products from single-species materials. Mixed materials are still problematic for efficient recycling.

2) Improvement of consumers' purchasing decisions

Consumers decide what they buy, what impact it will have on the environment and the climate. It is therefore important to raise their awareness and offer them clear information and tools to guide them to make responsible purchasing decisions.

Consumer awareness is especially increased by education, the content of which is the issue of fashion industry, in the form of online campaigns, lectures and public discussions.

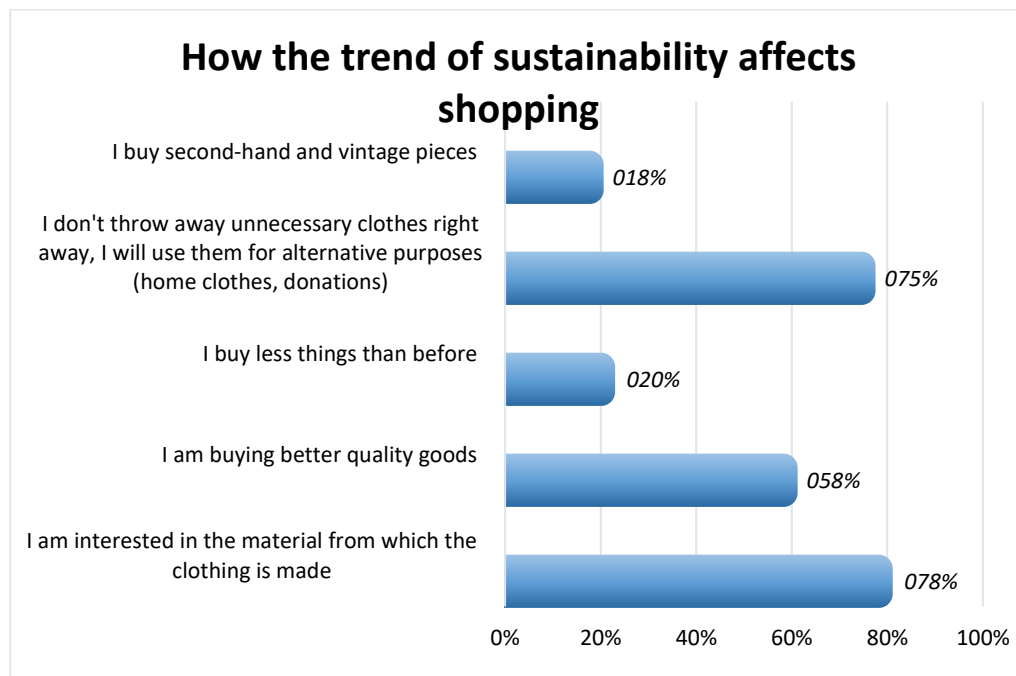
3) Extension of the product usage

Longer lifespan of textiles and clothing in circulation is key in the context of systemic change. It would significantly increase resource efficiency (Ellen MacArthur Foundation, 2017).

One way to prolong the usage of things is to use the capsule wardrobe philosophy and slow fashion. Creating a capsule wardrobe is an effective way to wear clothes. Its principle speaks of a limited number of pieces of clothing (around 20 - 40), which are easily combined with each other due to their timelessness, cut or colour. It is also recommended to prioritize quality products that last a long time.

Slow fashion is about voluntary modesty, about rejecting everything unnecessary and about realizing meaningful values. Despite the higher prices for individual pieces, the consumer can save money, time and the environment with this approach.

In Slovakia, too, consumers are already beginning to follow the principles of sustainable fashion and declare that their shopping behaviour is influenced by a sustainable approach to nature. This is also confirmed by the results of a marketing survey focused on the issue of slow fashion and sustainable shopping (Graph 1). We carried out the primary survey in question using the standardized survey method in April and May of 2020. We carried out the survey using a questionnaire, which we distributed electronically. Overall, 214 respondents took part in the survey, of which 149 were women (69,6%) and 65 men (30,4%).

Graph 1 How the trend of sustainability affects shopping

Source: own processing based on the results of primary survey

The results of the survey also showed that there is a growing interest in purchasing sustainable fashion in Slovakia, but there is a lack of basic understanding of the concept of sustainable fashion, as well as which fashion brands are sustainable. For example, more than half of respondents (50.2%) do not know the concept of slow fashion and only 13.4% of respondents know which stores offer products from sustainable brands. There is also a growing interest in buying Slovak local fashion, but the barrier is the fact that people do not know where to buy this kind of fashion.

4) Efficient collection for reuse, repair and upcycling

Ensuring collection points for unwanted clothing is an important step in prolonging the use of clothing and textiles. Some companies have started collecting used clothing of various brands in their stores, from where it goes, for example, for recycling purposes or to charitable second-hand for sale.

Second-hands are sought by consumers who want to save money or are looking for something else that is not normally offered in clothing stores. Customers who want to reduce the impact of their consumption on the environment also find an opportunity here. In addition to the traditional ones, luxury, children's and internet second-hand are also sought after today.

Company GlobalData found that in 2018, 56 million women worldwide bought second-hand products, an increase of 12 million new customers over the previous year. Interest in second-hand shopping is also growing in Slovakia; the largest companies include four companies: Textile House, Humana, Kilovka and Genesis (Ryník, 2019).

Another suitable choice for increasing material efficiency is upcycling, i.e. the conversion of waste into new products with higher value and quality, as well as the repair of damaged items. Several brands come up with the concept of upcycling in fashion, i.e. with the transformation of unnecessary or old clothes, which they transform into modern, re-wearable pieces.

5) Improvement in sorting and recycling

Even if all the above approaches are applied in the field of circular fashion, there will always be a share of waste that will need to be recycled. Current materials and product design methods do not comply with the principles of simple and efficient material recycling. According to the "Pulse of the Fashion Industry Report 2017" study (The Global Fashion Agenda & Boston Consulting Group, 2017) only 10 percent of clothing worldwide is recycled.

At present, almost all input material in the recycling process loses the quality of textile fibres, and therefore it is no longer possible to produce new textiles from it (downcycling). However, processors who can recycle fibres more efficiently are also starting to appear on the market. Recycling textile waste into new fibres without loss of quality is essential for creation of a closed cycle.

Conclusion

The current fashion paradigm is to see fashion as cheaply produced items available to a wide range of consumers. Such cheap clothing brings the exploitation of workers and poor working conditions, the suffering of large numbers of animals, the accumulation of waste in landfills and in the wild, the release of pollutants into the environment, or the production of greenhouse gases associated with climate change.

The opposite of cheap, fast fashion is slow or sustainable fashion. The characteristic features of slow fashion include timelessness, long use of clothing, as well as "rescue" of old clothing in the form of upcycling. The purpose of the slow fashion is to minimize the generation of textile waste and reduce the demands on production resources. In recent years, many fashion brands have been introducing products from sustainable sources as part of their marketing.

All the negative environmental and social impacts of the fashion industry are a serious reason for accelerated systemic change. The radical change is the transition to a circular economy, a system in which textiles and clothing are kept in the highest quality throughout their life cycle and then put back into circulation.

Many studies, analyses and practical examples already show how to create a functional circular system. Specific approaches and proposals mainly concern product design changes, improvements in the processing and production phase, improved consumer purchasing decisions, extended product use, efficient collection for reuse and repair of clothing, as well as improvement in textile sorting and recycling.

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