



Sustainability and sustainable development

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Editor



eISBN 978-83-8211-074-6

<https://doi.org/10.18559/978-83-8211-074-6>



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Poznań 2021



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5.

PRODUCT LIFE-CYCLE—PROBLEMS OF PRODUCT PLANNED OBSOLESCENCE AND FAST FASHION



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Abstract: Corporate Social Responsibility (CSR) is an idea according to which enterprises take responsibility for the effects of their activities and undertake actions aimed at reducing negative effects and improving quality of life of a broadly understood group of stakeholders. In turn, marketing is a concept according to which all activities of enterprises are undertaken with the intention of satisfying consumer needs in the best possible way—by creating and modifying products and services.

It would seem that they both—CSR and marketing, share the same goal—providing value to consumers in order to improve their quality of life. However, it can be seen that there is a whole scope of activities under the marketing instruments that primarily serve only to intensify sales. This would not raise any major objections if not for the fact that the occurrence of the demand for restitution is accelerated due to the planned shortening of the product life-cycle. This is in contradiction with the idea of CSR and sustainable development as well as sustainable consumption. So why is it a practice that does not cause widespread outrage and resistance from buyers? And how should it be dealt with?

Two widely implemented strategies of manufacturers and retailers are described in that chapter: the 1st one is planned product obsolescence, the second—fast fashion. Retail chains follow the fast fashion trend—offering customers short, frequently changing product lines.

However, seeing the effects of this type of strategies, it is possible to undertake a number of activities aimed at reducing the negative effects of these actions.

Keywords: fast fashion, greenwashing, planned product obsolescence, product life cycle, sustainability.

5.1. Planned product obsolescence—how to overcome the problem?

The deliberate shortening of the product life-cycle appeared in the 1st decades of the 20th century, including saturating the market with some products. This phenomenon was observed, among others, in the automotive industry, and consisted in launching changes to vehicles in order to stimulate the demand for new models (re-styling). The term was also used in the context of incandescent lamps that were designed to last 2,000 hours—meanwhile, manufacturers agreed and began to produce incandescent lamps that work for half the time (Krajewski, 2014).

According to the definition from 1977, planned product obsolescence means to accelerate the replacement and renewal needs of consumers by a planned reduction of consumer goods' operating life in order to support growth opportunities for a business (Hillmann, 1977; Schallmo, Brecht, Heilig, Kauffeldt, & Welz, 2012). Furthermore, in another definition by Guiltinan (2009), it is stated that the objective of planned obsolescence is to stimulate replacement buying by consumers. This is often achieved through frequent design changes, using nondurable materials, terminating the manufacture and availability of replacement parts as well as introducing a superior model of the product. According to Bulow (1986), “planned obsolescence” is the production of goods with uneconomically short useful lives so that customers will have to make repeat purchases. However, rational customers will pay for only the present value of the future services of a product.

Shortening life-cycle can be achieved by weakening the most vulnerable parts of a construction or using low-quality materials for production. Another trap is connected with sensitivity to certain conditions, while the use of the product, e.g. sensitivity to higher temperatures than ambient, susceptible to shocks or vibrations, not resistant to moisture, etc. Below, examples of techniques used in many industries to purposefully shorten product life-cycle can be found.

An extreme case of shortening the life-cycle is the production of **single-use** devices, e.g. cameras, which after taking pictures are not fit for use.

Another example of purposefully shortening the product life-cycle may be to create a **product** which wears out faster than it could work with other components, and as a result, it requires replacement, but the cost of operation and parts usually exceeds the desirability of doing so. It is usually decided early in the design of a complex product stage—how long it is designed to last so that each component can be made to those specifications. And since it is impossible for any designed object to retain its function forever; the whole products will ultimately break down, no matter what steps are taken, or they will require extremely high costs of repair. The durability is contrived by designers to secure financial plans of product profitability.

Planned obsolescence also occurs when it is decided early in the design of a complex product how long some **parts** of this product are designed to last or

work. Such products are often designed to be impossible to service. In such tactics, manufacturers may not secure replacement parts—and since they are unavailable or so expensive—it makes the product uneconomic to repair.

Non-replaceable **batteries** by the end-user after they have worn down is also an example of compulsory replacement of the product or the use of a service that increases costs for the user. The creation of laptops or mobile phones with integrated batteries has caused the shortened life-cycle of this type of equipment—making replacement a requirement. Some models of smartphones are designed so that replacing the battery is very difficult for the final user (because doing so might cause irreparable damage to the main board of the phone). The only solution for consumers is to send it off to be repaired by a professional repair service provider or by the manufacturer or... to buy a new phone (Finance reference, n.d.).

A further example of planned obsolescence is connected with fashion and frequent **modification in design**. Obsolescence of desirability or stylistic obsolescence occurs when designers change the design of products so customers will purchase them more frequently due to the decrease in the perceived desirability of unfashionable items. This is especially noticeable in the car industry, where after 1 or 2 years after releasing a new car model, some very soft changes in design are made (but visible outside the car), so for fun-users who like the newest models, it is a signal that they need to make a change to the refreshed model.

Also, in some cases, creating new—**upgraded software**—requires new hardware. As a result, this can also shorten the product life-cycle. Otherwise, it becomes unserviceable.

The lifetime of products can be extended at the design stage and while creating and getting to know the weak elements of the structure, followed by their strengthening. This can also be done by applying innovative solutions. And since on mature markets the phenomenon of planned obsolescence exists, organisations try to find solutions to continue their growth and, at the same time, not necessarily by reducing the lifespan of the products sold.

For example, the idea of sustainability can be interpreted in the context of the **software life cycle** as (Singh & Sandborn, 2006):

- a) maintaining an existing system operational (the ability to successfully complete its intended purpose);
- b) continuation to manufacture and field versions of the system that satisfy the original requirements;
- c) manufacturing and field revised versions of the system that satisfy evolving requirements.

Another interesting strategy is **piggy-backing**. It enables renewed functionality of a technologically obsolete product. This is achieved through the integration or add-on of a secondary device or component. Not to be confused with upgrading strategies, piggy-backing requires a device that fits adjacent to, upon, or within

the existing product's (parent product) architecture. Piggybacking is an attractive strategy for consumer electronic products that are particularly prone to technological obsolescence, as it offers a means to accommodate fast and slower changing technologies within a product (Rai & Terpenney, 2007).

To conclude, the causes of this phenomenon should be seen both on the part of the enterprises and consumers who decide to buy products despite “not using up the previous one”. The phenomenon of planned obsolescence has both its pros and cons—for some manufacturers—it is not a deliberate shortening of the life-cycle, but a natural process of technical progress and innovation. It is also an element of building prosperity and ensuring economic growth, as well as meeting the customer needs with innovative products that are more economical in many respects, more efficient and effective. And, in fact, manufacturers just react to consumer demand, no matter whether it is created through a real need or as a result of effective marketing. For others—it is unnecessary to buy new products that are not completely used up in a technical sense. This leads to littering the environment and what is more, the newly produced ones contribute to the devastation of the natural environment. How do we escape that trap?

Questions / tasks

1. Define planned product obsolescence.
2. Give examples for each type of planned product obsolescence.
3. What is the relationship between planned product obsolescence and product innovations, if any?
4. What are the side-effects of planned product obsolescence for the whole added value chain?
5. Should planned product obsolescence be legally forbidden?
6. How could consumers influence manufacturers to not practice planned product obsolescence?
7. What is your opinion of solutions implemented in the case of software? Do you see any limitations in such solutions? What are your propositions?

5.2. Fast fashion—on the way to sustainability or... greenwashing?

The clothing industry has greatly changed over the last few decades. First of all, the number of fashion seasons has increased significantly, which prompts consumers to buy clothes or footwear more frequently. Since consumer income does not grow fast enough for the changing supply, clothing must be decidedly more inexpensive,

which is ensured by producing clothing in cheap labour countries and shortening the life-cycle of products. As a result, consumers can adapt to the promoted fashion trends several times a year. However, this phenomenon leads, apart from the positive phenomena—in the form of job creation in manufacturing countries—to negative effects—in the form of destruction of the natural environment, increasing the amount of waste and violation of human and workers' rights.

“Fast fashion” is a term used to describe a new accelerated fashion business model that has evolved since the 1980s. It involves increased numbers of new fashion collections every year, quick turnarounds and often lower prices. Reacting rapidly to offer new products to meet consumer demand is crucial to this business model (*Fixing fashion: clothing consumption and sustainability*, 2019).

Sustainable consumption is an idea according to which consumers guide their purchasing and consumer decisions in such a way that they do not expose future generations to deterioration in their quality of life. It consists, inter alia, of consciously making purchases and limiting consumption if it has negative consequences for future generations, e.g. due to the production of large amounts of waste, consumption of water or energy. Examples of consumer behaviours which fall within the scope of sustainable consumption include: the recycling of household waste, purchase of ‘sustainable’ products, using energy-efficient appliances, choosing green electricity tariffs, composting garden and kitchen waste, investing in ‘ethical’ funds, conserving water or energy, buying organic food, returning electrical goods for re-use or recycling, switching transport mode, changing travel behaviours, buying remanufactured or reused goods, reducing material consumption, pursuing ‘voluntary simplicity’, and so on (Jackson, 2005).

The phenomenon observed in the clothing industry allows to indicate different consumer behaviours—they favour the policy applied by global retail chains, abbreviated as “fast fashion”.

In the second half of the 20th century, retailers developed a business model in which the production of clothes, due to low labour costs, takes place in overseas countries—Bangladesh, India, Pakistan, Vietnam, Cambodia, Indonesia or China, while their sale—occurs in Europe or the USA. This model is used by global networks, thus, effectively separating the location of production from the place of consumption. The interest of retailers in acquiring cheap sources of production has significantly changed the economy of countries in which production has been commissioned. For example, in Bangladesh, over 5,500 jobs were created after 1990 at factories employing nearly 4 million people. In 2019, there were about 4,620 garment factories in Bangladesh. Although this increased compared to the previous year, this was a decrease in contrast to 2013, in which there were approximately 5,880 garment factories in Bangladesh. In 2019, the export value of ready-made garments (RMG) in Bangladesh amounted to approximately just over 34 billion U.S. dollars and roughly 80% of the country's export earnings came from clothing

sales abroad, with global retailers such as H&M, Primark, Walmart, Tesco and Aldi among the main buyers (Statista, 2021).

Bangladesh is the 2nd largest clothing manufacturing market in Asia after China. The minimum monthly salary of employees is about \$95, which is similar in Myanmar, and less only in Ethiopia (compared to over \$300 in China). Due to the working conditions at sewing factories, sometimes called “sweatshops”, safety standards are very low, the conditions difficult to work in, while the rights of children and workers are not respected and the employees are subject to discrimination. A fire in 2012 at a production plant for Walmart in Dhaka, which killed 117 people, and a few months later, in 2013, the collapse of a building containing factories sewing clothes for European and American clothing chains (Rana Plaza), also in Dhaka—1,136 people died there—made the media return to the topic of inhumane conditions for the production of clothes that Europeans and Americans buy in retail chains. The industry is also facing a problem regarding the lack of qualified middle-management. Anxiety is further caused by the automation of production processes.

‘Fast fashion’ is a term used to describe a new accelerated fashion business model that has evolved since the 1980s. It involves increased numbers of new fashion collections every year, quick turnarounds and often lower prices. Reacting rapidly to offer new products to meet consumer demand is crucial in this business model. In accordance with the model, clothing should be replaced with new products several times a year, while old, even undamaged garments or shoes, should be discarded. Fast fashion is a “disposable” fashion, for immediate- and short-term consumption. Clothing is designed to be used for 1-2 months, thrown away and buying something new with the appearance of a new collection. New fashion seasons are imposed, as a result of which, instead of the classic periods of changing clothes lines, i.e. spring/summer and autumn/winter, additional—preceding and closing periods with very intensive promotion, are introduced. In the literature, this trend is described, among others, within the context of changes in retail business models (Sempruch-Krzemińska, 2014) or consumer attitudes (Wanat, 2016).

Fast fashion is in conflict with the idea of sustainable consumption—it does not make consumers think about the impact of increased purchase or consumption frequency on the natural environment and living conditions in both countries of production and consumption.

This business model encourages over-consumption and generates excessive waste. It hurts—again—both the countries of production and consumption.

Pressure from consumer and human rights organisations has had impact on clothing retailers to make sure products from their stores do not raise concerns about the conditions in which they are produced. Enterprises have taken steps to tighten the criteria for selecting suppliers. A number of non-profit organisations, associating retailers and producers, have been established to ensure respect for human rights, environmental protection and implementation of SD goals (Table 1).

Table 1. NGOs engaged in the textile industry—examples

Organisation (NGOs)	Members—examples*
<p>Action, Collaboration, Transformation Since 2016, 21 retailers have signed the Memorandum of Understanding (MoU), a framework which outlines actions to establish freedom of association, collective bargaining and living wages within global supply chains. https://actonlivingwages.com/who-we-are/</p>	<p>Members: C&A, H&M, Lidl, Tesco, Inditex, Espirit, Next, New Look, Tchibo, Zalando Vero Moda, Wallis, Target, Zara, Bershka, Stradivarius, Uterque, Zara Home, Massimo Dutti</p>
<p>Better Cotton Initiative, BCI BCI aims to do this by reducing the environmental impact of cotton production, improving livelihoods and economic development in cotton producing areas, and securing commitments to Better Cotton throughout the supply chain. https://bettercotton.org/</p>	<p>Members (all: 1992). Among retailers: Adidas, Zeeman, Marqet, Ralph Lauren, Nike, John Lewis, Kmart, Kohl's, S'Oliwer, Tesco, Splash, Marimekko, Brothers, House of Anita Dongre, Z8, Tommy Hilfiger, Zalando</p>
<p>Ethical Trading Initiatives, ETI The Ethical Trading Initiative (ETI) is a leading alliance of companies, trade unions and NGOs that promotes respect for workers' rights around the globe. Companies with a commitment to ethical trade adopt a code of labour practice that they expect all their suppliers to work towards. Such codes address issues like wages, hours of work, health and safety and the right to join free trade unions. https://www.ethicaltrade.org/about-eti</p>	<p>Members: Aldi, Alsico, Apetito, ASDA, ASOS, Bidfresh, Bonmarche, Burberry, C&A, Clarks, Co-operative Retail, Commercial Group, Ethical Apparel Africa Association, Gap, H&M, Inditex, Jack Wills Ltd, KappAhl, Marks&Spencer, Marshalls, Matrix APA, Missguided, Morrisons, Mothercare, Mr Price, New Look, Next, Orsay, Oxfam, Partner Africa, Primark (ABF Limited), J Sainsbury plc, Tesco, The Body Shop International, The Fair Trade Foundation, Unicef</p>
<p>Make Fashion Circular This aim is to stimulate the level of collaboration and innovation necessary to create a new textiles economy, aligned with the principles of circular economy. The vision is to eliminate the negative consequences of the current extractive operating models and move towards regenerative ones demands people to rethink every aspect of our working practices, their scale and pace. It ensures that products (apparel, footwear, accessories) are used more made to be made again, made from safe and recycled or renewable inputs. https://www.ellenmacarthurfoundation.org/our-work/activities/make-fashion-circular</p>	<p>Members: Burberry, Gap Inc., H&M Group, HSBC, Inditex, PVH and Stella McCartney as Core Partners. The initiative brings leaders together from across the fashion industry, including brands, cities, philanthropists, NGOs, and innovators</p>
<p>Microfibre Consortium The Microfibre Consortium (TMC) facilitates the development of practical solutions for the textile industry to minimise fibre fragmentation and release to the environment from textile manufacturing and product life-cycle. The organisation presents the opportunity to align globally as an industry through its connection through its member base at the brand, retail, supplier, research, industry organisation and policy level. https://www.microfibreconsortium.com/about/</p>	<p>Members: Adidas, Helly Hansen, M&S, Primark, Asda, boohoo, Decathlon, H&M Group, Inditex, Home Sense, Jack Wolfskin, John Lewis & Partners, Lululemon, Mamut, Morrisons, Next, Nike, The North Face, Patagonia, Pentland, Puma, Repreve, Target Tchibo, TK Maxx</p>

Organisation (NGOs)	Members—examples*
<p>Sustainable Apparel Coalition</p> <p>The Sustainable Apparel Coalition is the apparel, footwear and textile industry's leading alliance for sustainable production. Over 250 members: retailers and manufacturers.</p> <p>https://apparelcoalition.org/</p>	<p>Members:</p> <p>Abercrombie&Fitch, Amazon, Amer Sport, United Colors of Benetton, Bestseller, boohoo, Brooks C&A, Camper, Patagonia, Carter's, Disney, Fjallraven, Gap Inc, Guess, H&M Group, Inditex, J. Crew, JC Penney, KappAhl, Kathmandu, Kering, Kohl's, Levis, Lululemon, Macy's, Mamut, Mango, M&S, New Look, Nike, Nordstrom, Orsay OVS, Primark, Puma, Ralph Lauren, Target, Tesco, Walmart, Zalando</p>
<p>Textile Exchange</p> <p>It inspires and equips people to accelerate sustainable practices in the textile value chain. We focus on minimising the harmful impact of the global textile industry and maximising its positive effects. Goals: embedding sustainability into evolving business and supply chain strategies, making it easier for companies to adapt to changing opportunities and requirements in textile sustainability, ensuring that actions taken towards sustainability result in real and meaningful change.</p> <p>https://textileexchange.org/about-us/</p>	<p>Members:</p> <p>3M, Amazon, Textile Exchange, Balenciaga, Bestseller, United Colors of Benetton, Bellandi, Better Cotton Initiative, C&A, Esprit, Gap, Fjal Raven, Guess Inc, H&M Group, Gucci, IKEA, Inditexm, John Lewis, J. Crew, KappAhl, Kathmandu, Lacoste, Kering, M&S, LVMH, Mayamiko, NB, Primark, Tchibo, Vans, Walmart, Zalando, Wrangler</p>

*Full list of members available on NGO websites.

Source: Own work based on websites.

Factory supervision programmes have been developed, salaries as well as work safety standards raised, and the supplier monitoring system intensified. The factories that did not pass the inspection were either closed or cooperation with them was terminated. However, the number of contractors with whom global trading companies cooperate is so large that it is not always possible to ensure standards are consistent with CSR.

Other activities addressed to consumers include, among others: encouraging customers to return used clothes and buy new ones with discounts, providing information on using ecological cotton, sustainable sources or recycled materials for the production of new clothes, promoting social and ecological programmes implemented by companies and inviting their clients to participate in them (Stefańska & Pilarczyk, 2015). Some companies introduce product lines that were created as a result of recycling. In addition, they provide innovative solutions in the area of logistics, use renewable energy sources, and in the case of factories at which sewing is commissioned—they increase production supervision (Stefańska & Śmigielka, 2016). They disclose information about their activities in reports on their websites, also at the point of sale—on displays or product labels.

With the above initiatives, retail chains are trying to fit into the sustainable development trend, adhering to the fast fashion business model. They undertake

a number of activities to emphasize their commitment to the implementation of the 3P model, taking responsibility for their business. However, the concept of 3P, i.e. People-Planet-Profit or 5P (People-Planet-Prosperity-Peace-Partnership), becomes very difficult to implement by retailers offering clothing, and even more difficult to advertise, because communication messages would have to confirm the pursuit of social and socio-ecological goals, without limiting the pursuit of economic goals expected by shareholders.

Questions / tasks

1. Consumer hypocrisy—fast fashion and sustainable consumption—all in one?
2. What is greenwashing?
3. Sustainable consumers and fast fashion—the perspective of global retailers—greenwashing or really good will?
4. As a manager of a retail company—what would you recommend to do to push the company in a more sustainable direction?

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