



University of  
**Salford**  
MANCHESTER

# THE LINK BETWEEN FAST FASHION AND CLIMATE CHANGE

BUSINESS ETHICS AND SUSTAINABILITY MODULE



By: Katie Healey  
Tutor's Name: Dr Romas Malevicius  
Institution: Salford Business School  
Level of course: L6  
Category of entry: Undergraduate  
Email: [K.C.Healey@edu.salford.ac.uk](mailto:K.C.Healey@edu.salford.ac.uk)





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## **Abstract**

This report seeks to analyse the fast fashion industry and the impact this has on climate change. The report begins with an introduction to the industry, before then describing the theoretical concept of Carroll's CSR model, and how actions from the fast fashion industry relate to the model. The report identifies two challenges the industry faces including waste and high carbon footprint due to the type of materials used during production. The report then offers solutions to combat these challenges and the issue of climate change, including adopting a circular economy, educating consumers, and adopting a take-back scheme. The report finds that many brands within the industry continue to operate unsustainably through encouraging waste due to cheap production and carrying out unethical actions through polluting the atmosphere of local environments, due to the materials used in production. However, adopting a circular economy can encourage items to be re-used, therefore meaning less demand on production. The report finds a take-back scheme will encourage the use of recycled materials, meaning less fossil fuel would be needed during production. Despite these unsustainable actions, there are many other brands within the industry which have adopted new business models to encourage sustainability and create a greener environment.



# **1. Introduction**

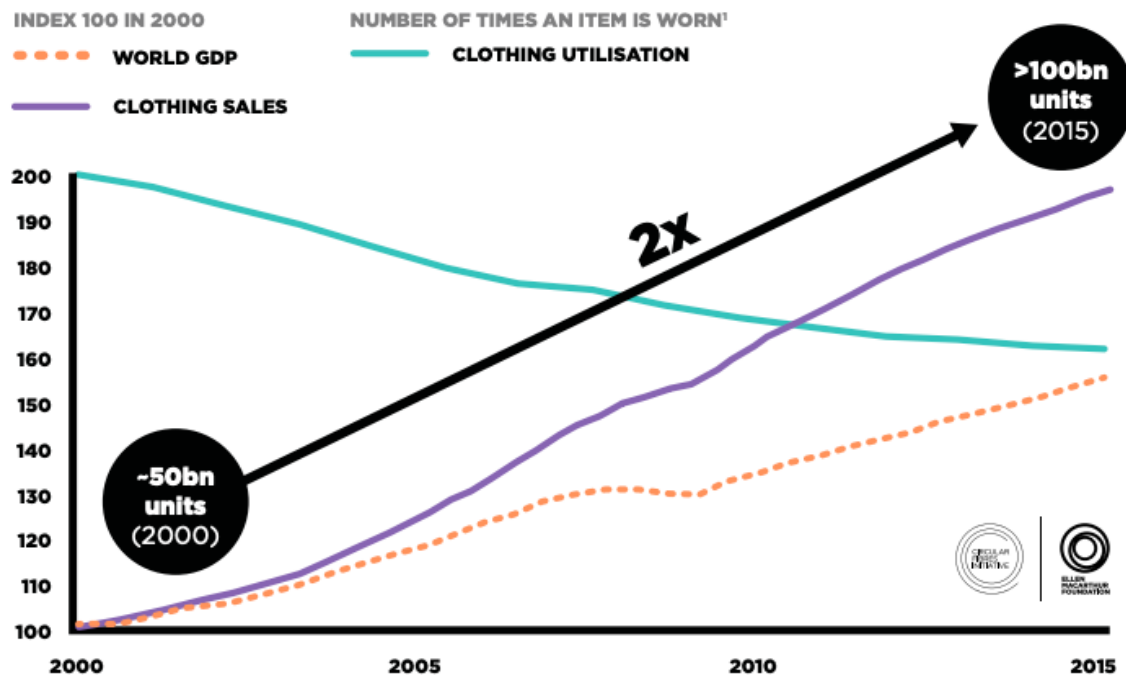
The aim of this report is to assess how the 21<sup>st</sup> century challenge climate change is affecting the fast fashion industry in terms of overconsumption and excessive waste, as well as a large carbon footprint used during manufacturing materials. The report further aims to introduce Carroll's (1991) sustainability model to identify the causes and consequences of the fast fashion industry before then providing solutions as to how businesses in this industry can address the challenge of climate change.

The "fast fashion" industry can be described as clothing collections which are based on the latest fashion trends, produced at a low cost and with a very short lead time to market. Over the last decade and a half, the production of clothing has doubled (see figure 1) as the occurrence of fast fashion has took off, meaning lower prices and frequent new collections (Ellen MacArthur Foundation (EMF), 2017a). Globalisation has enabled businesses to move manufacturing overseas where there is often less strict environmental policies and awareness, which leaves the industry facing a challenge of high greenhouse gas emissions. Furthermore, demand on markets has resulted in the industry facing a further challenge of waste, from both the consumer and brands themselves (Nagurney & Yu, 2012). As reported by Mintel (2020), 87% of consumers view fast fashion brands such as Primark and Boohoo as unsustainable (see figure 2). Corporate Social Responsibility (CSR) which Fisher, Lovell & Nzstor Valero-Silva (2013) define as how businesses manage their social, environmental and economic impacts in the way it operates, minimising problems whilst maximising benefits.



The next section of this report is going to analyse how the fashion industry contributes to climate change, whilst analysing the economic and ethical responsibilities of the industry, with suggested solutions on how the industry can solve current challenges.

Figure 1: The Growth in Production of Fashion

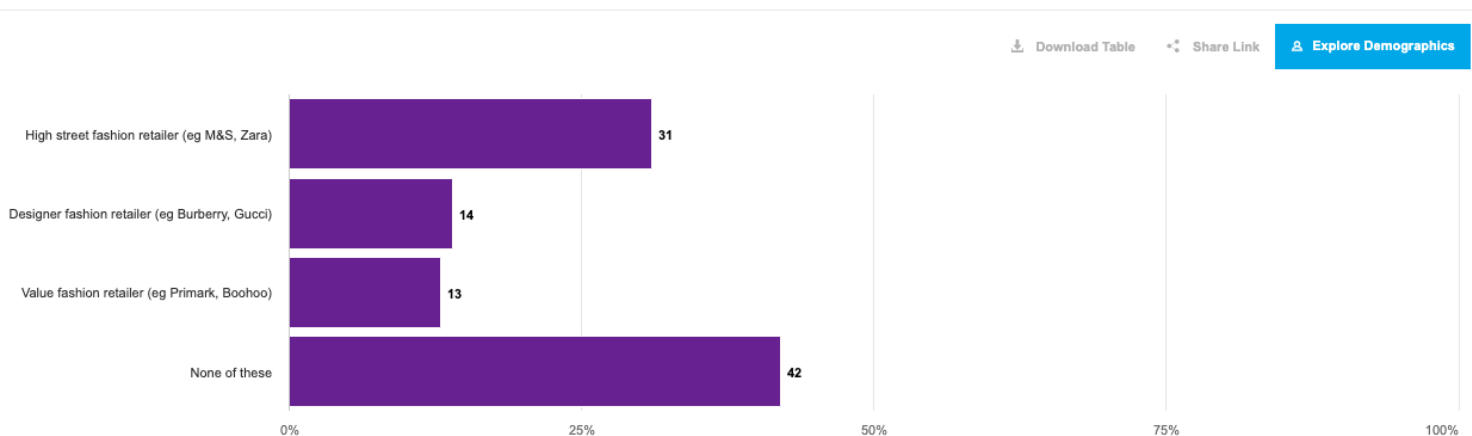


Source: Ellen MacArthur Foundation (EMF) (2017a, p.18).

Figure 2: Fashion brands viewed as sustainable

Type of fashion retailer viewed as sustainable

[Asked of internet users aged 16+](#)



Source: Mintel (2020).



## **2. The Link Between Fast Fashion and Climate Change**

### **2.1 What is Climate Change and How Does This Link to The Fast Fashion Industry?**

Climate change is a current problem which the world faces. Fossil fuels feature a large amount of carbon, when these are burnt this realises carbon dioxide into the air. This greenhouse gas traps heat within the earth which raises the earth's temperature, thus contributing to extreme weather such as heatwaves and floods (Royal Geographical Society, 2014). Within the fast fashion industry, the current business model causes environmental pollution due to waste from over-production and consumption (Roozen & Raedts, 2020). Furthermore, the production of certain materials within the industry contributes to high greenhouse emissions (Independent, 2018). The industry has been subject to a wide range of criticism, with industry leaders found operating in unethical and unsustainable ways through exploiting resources, thus raising the question as to whether the supply chain is sustainable, which is further backed up through the industry being labelled as the second largest polluter (Niinimäki et al, 2020). In 2019, the 2<sup>nd</sup> warmest year on record was recorded (Lindsey & Dahlman, 2020), with the average global surface temperature rising to over 1.6 degrees since the 1900's (National Geographic, 2019); the fashion industry only contributes to this problem when acting unsustainably.

Despite many brands still operating unsustainably, on the other side the industry has positively saw the creation of innovative business models, which have a mission to tackle growing ethical concerns regards the environment and worker conditions. For example, a brand named A.BCH labels themselves as circular and creates clothes



which are all made from recycled materials, whilst encouraging a take-back scheme (A.BCH, 2020).

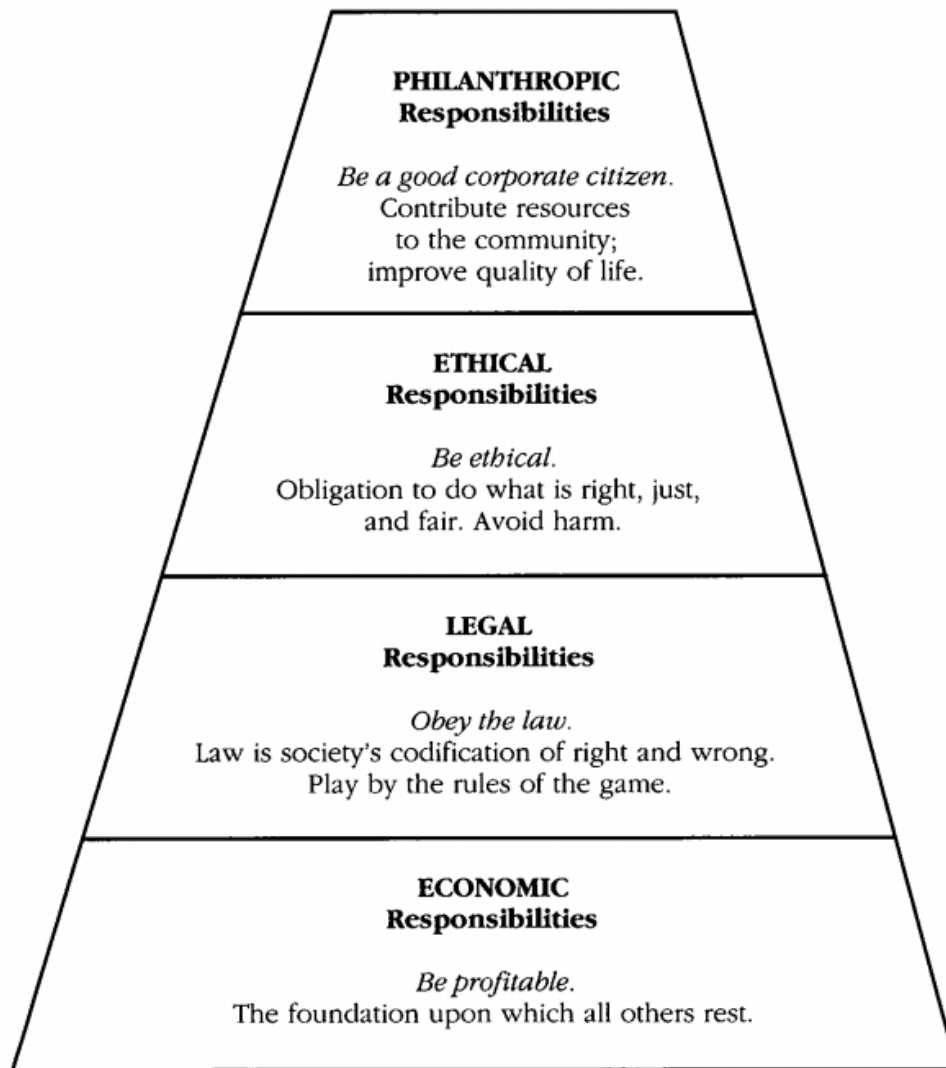


### **3. Carroll's Theoretical Approach to CSR**

Carroll (1991) introduced a theory which defines CSR for businesses. This method was introduced through a pyramid which includes four layers containing responsibilities in which Carroll recommends businesses should consider in order of importance; starting with economic, followed by legal, then ethical and finally philanthropic (see figure 3). For the purposes of this report, the report will concentrate on the economic and ethical layers, however a breakdown of each responsibility can be found in figure 4.

Figure 3: Carroll's model of CSR





Source:  
Carroll

(1991, p.42).

Figure 4: A table containing the characterises of Carroll's (1991) CSR model.

Carroll's layers	CSR	Characteristics of the responsibility
Economic		<ul style="list-style-type: none"> <li>• Produce products and services and make maximum profits</li> <li>• Be competitive</li> <li>• The starting level - Without this level, other levels are not worthy of consideration</li> </ul>
Legal		<ul style="list-style-type: none"> <li>• Accomplish economic responsibilities but ensure to comply with the law</li> </ul>



	<ul style="list-style-type: none"> <li>• <b>Products and service must meet minimum legal requirements</b></li> </ul>
<b>Ethical</b>	<ul style="list-style-type: none"> <li>• <b>Perform in a way that society sees as moral and ethical</b></li> <li>• <b>Acknowledge new and evolving concepts of what is morally and ethically right</b></li> </ul>
<b>Philanthropic</b>	<ul style="list-style-type: none"> <li>• <b>Philanthropic responsibilities are different to ethical responsibilities as philanthropic are not expected in an ethical way, but more of a desire of what communities would like to see</b></li> <li>• <b>These responsibilities may include donating money and employee time to humanitarian programs</b></li> <li>• <b>These are voluntary actions, however society does expect it</b></li> </ul>

Source: Created from Carroll (1991).

### **3.1 Challenges in the Fast Fashion Industry – Over Consumption and Waste**

Carroll's model of CSR specifies that Economic responsibilities are based around a business producing products and services based on the needs of consumers, and that businesses should consider making satisfactory or even maximum profit during the process. To do this, many fast fashion brands outsource to developing countries such as Bangladesh where wages are low (Ozdamar-Ertekin, 2017), thus creating low prices and profits for the brand. Therefore, a criticism of the economic layer is that as brands focus on maximising profit from outsourcing production; they create a challenge of encouraging waste and over-consumption due to cheap prices (Environmental Audit Committee, 2019). In a study conducted by Moore and Robinson (2002) cited in Fisher, Lovell & Nzstor Valero-Silva (2013); as companies increase their income, their social performance can decline and vice versa. This cheap manufacturing business model encourages consumers to perceive clothing as disposable which is unsustainable (Bick, Halsey & Ekenga, 2018).



Chau (2012, cited in Joung, 2014) reported how clothing made from cheap materials results in consumers wearing items once or twice, before then throwing them away, thus creating a wasteful culture which in turn has consequences on the environment. As of 2019, 3 in every 5 clothing pieces produced ended up in landfill, with less than 1% being recycled into new clothing (Magnin & Hedrich, 2019). Clothes which are buried in landfill release greenhouse gas emissions and groundwater pollution (Yacout & Hassouna, 2016), contributing to global warming. Additionally, clothes thrown away by consumers which don't end up in landfill are incinerated which consequently releases high CO<sub>2</sub> emissions into the environment. Fossil fuels such as natural gas and coal are used during the burning process of incineration (Yacout & Hassouna, 2016). These greenhouse gases trap heat within the earth, thus causing the earth's temperature to rise which results in extreme weather and forest fires (Royal Geographical Society, 2014).

Fast fashion brands themselves are also responsible for contributing directly to climate change through unethical practices of burning excess waste because of over production. Fast fashion brands are producing new collections every week and as a result excess waste occurs. H&M were found to have incinerated 60 tonnes of unsold clothing over the years (Hackwill, 2017). However, some fast fashion brands are recognising their need to be more sustainable such as PrettyLittleThing (2020), who have launched a recycled clothing range in an attempt to increase their sustainability and minimise environmental impacts.



When interpreting Carroll's CSR pyramid of economic responsibilities, as well as making a profit, this layer may also refer to the responsibility of providing job opportunities. Thus, a positive aspect of the fashion industry is that this provides jobs in developing countries, thus increasing foreign direct investment and enabling citizens to earn money (Gupta, Gupta & Chopra, 2015). However, as reported by the Environmental Audit Committee (2019) the competition for low wages means the wages received by citizens in developing countries is not sufficient to provide a decent life.

### **3.2 Challenges in the Fast Fashion Industry – High Carbon Footprint During Production of Materials**

According to Carroll's (1991) theoretical approach to CSR, businesses must consider ethical responsibilities. Ethical responsibilities consider the expectations of society regards concerns of what consumers, suppliers and other stakeholders view as fair and just, despite them not being implemented in law. Carroll's (1991) theory sets out how businesses should conform to ethical norms and social morals and when achieving organizational goals, ethical norms must not be compromised. Positive CSR improves company benefits, brand reputation and competitiveness thus unethical practices can affect these factors negatively (Li, Zhao, Shi & Li, 2014).

An ethical challenge facing the fast fashion industry is the large amounts of carbon footprint that is used during the production of materials. This causes pollution in local environments, thus contributing to climate change and poor worker health. Total greenhouse gas emissions from textiles production equates to over 1 billion tons per year, which means this industry emits higher amounts than that of the airline and maritime ship industries combined (Magnin & Hedrich, 2019). Polyester which is the



most common material used in production is known to emit extremely high emissions due to requiring fossil fuels for production, such as up to 70 million barrels of oil in one year (Our Changing Climate, 2018). Consequently, this leads to local environments where the materials are manufactured being subject to air pollution (Hoskins, 2017), something which consumers would likely view as unethical. The manufacturing of such material using fossil fuels can result in methane pollution (Young, 2019). When methane pollutes the environment, heat is trapped within the earth causing the earth's temperature to warm up, thus contributing to climate change (National Geographic, 2019).

Workers which are subject to the pollution of fossil fuels daily are therefore exposed to health risks such as heart attacks, respiratory diseases and asthma (Kampa & Castanas, 2008). According to Bruce & Moore (2004) ethical concerns exist within consumers regards the environmental impact of such production and the impact this has on worker's health; therefore businesses should recognise the use of more environmentally friendly fabrics to improve their ethical considerations. However, a benefit of using material such as Polyester is that it is cheap and therefore brings the price of manufacturing a garment right down, thus allowing businesses to sell affordable clothes to consumers (Our Changing Climate, 2018).

Brand such as North Face are known to rely on fossil fuels during manufacturing (Stand.Earth, 2020), however other brands have proved this reliance can be minimised. Zara and Bershka have pledged to be more ethical and sustainable, pledging to only sell sustainable clothes by 2025, through using polyester which is either sustainable or recycled (BBC, 2019), which therefore cuts down on the amount



of fossil fuels being used as less manufacturing for new products would be required; thus reducing the risk to workers health. A fashion brand already operating with ethical practises is Patagonia (2020) who have implemented high organic cotton practices, changing elements of fossil fuel farming to organic farming instead thus helping to lower the effects the fashion industry has on climate change.

## **4. Solutions**

### **4.1 United Nations Sustainable Development Goals**

The United Nations introduced Sustainable Development Goals which strive for a better and more sustainable future for everyone, addressing the worldwide challenges people face. Therefore, it is important businesses contribute towards such goals.

### **4.2 Solving the Issue of Over Consumption and Waste**

For the fast fashion industry to improve the challenge of overconsumption and waste whilst also addressing climate change, a suggested solution would be for the industry to adopt a circular economy. This would also contribute towards meeting the United Nations sustainability development goal of reasonable consumption and production. This goal aims to target over consumption, reduce waste in the environment and create low carbon economies through sustainable consumption and production (United Nations, 2020a). The EMF (2017a) have introduced the idea of a new textile's economy based on a circular economy. The idea is that clothes would be designed for more uses, to last longer through higher quality and be recycled or rented. Therefore, clothes would continue to enter the economy, meaning zero waste which reduces the pollution that would usually be created from clothes buried in landfill or incinerated. If the industry adopts this principle and eliminates wastefulness, it will be vital to help



keep the average global warming limit within 2 degrees (EMF, 2017a). In line with the circular economy theory, the industry would need to set up more clothing rental businesses. A business adopting this solution and therefore operating more sustainably are YCloset, an online fashion subscription service. Consumers sign up to access up to 30 items each month and pay a subscription fee. This enables people to try the desired clothes without making purchases, thus meaning the items can continue entering the economy without being discarded after a few uses (EMF, 2017b). Clothing rental businesses would help significantly reduce waste in the industry through items continually being reused and staying within the economy, rather than consumers purchasing items to throw away after a few uses. Adopting a circular economy would contribute to one of the United Nations aims within the reasonable consumption and production goal, of reducing the waste generation by 2030 through reusing and recycling. According to a survey conducted by Penn Schoen Berland (2010) treating the environment responsibly is one of the main ways for an organisation to be socially responsible, thus adopting these solutions would improve consumers perception of an organisations value of CSR.

In a further attempt for the industry to combat the problem of waste, brands need to also educate consumers on the impact their clothing use has on the environment. This would contribute towards the United Nations (2020a) reasonable consumption and production goal, as it would help achieve the goal of ending the waste generation. To address this, a fashion company named ThredUp launched a footprint calculator, which enables consumers to view the impact their clothing purchases has on the environment in terms of carbon footprint (Moore, 2020). Therefore, this contributes to



striving for a low carbon footprint and a greener economy as specified in the United Nations (2020a) development goal.

## **4.2 Solving the Issue of Over High Carbon Footprint from Materials**

For the industry to combat the challenge of high carbon footprint used during the production process, a suggested solution would be for brands to implement a take-back scheme to help recover products at the end of their life. This would also help the industry to meet the United Nations Sustainability Goal of Climate Action. This goal aims to reduce carbon dioxide and greenhouse gas emissions (United Nations, 2020b), which is present in the fashion industry due to the fossil fuels burnt during the production of materials like polyester. Schemes like the take-back one, persuade consumers to deposit clothing in fashion stores which they no longer wish to use, thus allowing them to be sold to recyclers or donated (Environmental Audit Committee, 2019). An example of an organisation which have successfully implemented this scheme are H&M which offer a garment drop off service and in return, reward consumers with a voucher. In 2019, due to the scheme over 29,000 tones of clothing world-wide were collected to be recycled (Statista, 2020). If clothes are recycled, materials like polyester can be re-used for new garments which means demand on production of polyester would be decreased, thus meaning less fossil fuel is required and therefore less greenhouse gas pollution (Shen, 2014). Recycled polyester emits between a quarter to a half of the emissions than usual polyester (Ro, 2020), therefore this solution enables businesses within the industry to contribute to reducing greenhouse gas emissions under the climate change develop goal.



## **5. Conclusion**

In conclusion, the fast fashion industry contains a combination of companies operating in a sustainable manner, and others which aren't. However, as the fast fashion industry is the second most polluting industry, it is vital more sustainable methods of production and consumption are adopted to contribute towards reducing the impact of climate change. Carroll's CSR theoretical model encourages businesses to be more ethical, however through implementing profit maximisation as a core layer, brands can abuse this responsibility by taking advantage of manufacturing in developing countries; thus selling clothes so cheap that consumers view them as disposable. The idea of a circular economy should be implemented by more fashion brands to be effective towards reducing the industry's contribution to climate change. A circular economy contributes towards re-using items and zero waste as the products never leave the economy; instead, they continue to re-enter. Also, more fashion businesses should implement a clothes takeback scheme which enables materials to be re-used. Adopting the solutions allows consumers to view brands positively when acting more sustainable and ethical, thus improving CSR.



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## **7. Appendix 1 Assessment task**

As an individual, you should choose ONE of the 21st century challenges (<https://21stcenturychallenges.org/discover/>) and - linking with the United Nations Sustainable Development Goals (SDGs) - answer the following assignment questions:

- (B1) Critically assess how ONE of the 21st century challenges is affecting ONE industry. Using ONE theory introduced in this module, investigate and identify the major causes and consequences.
- (B2) Provide solutions on how businesses operating in your selected industry could improve towards addressing that challenge.