

Environmental Effects of Fast Fashion

Challenges of “Depeche Mode”

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Abstract:

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With this paper I wish to show the outcomes of fast fashion and its affects on our environment. By discussing CO2 emissions, and how the chemical filled water affects our environment, and also affects us. My objective is to also convince others to make a change on fashion to better impact the environment. While performing my research I used meany sources from books, websites, articles, and news channels to better understand the impact. While also reviewing, and considering some of the "positives" That fast fashion offers. Through (Moran et al.) I learnt that ^{double spaced} a big way for fast fashion to be sustainable is through circular economic principles/models. Using scoping review (Moran Et al.) goes over and breaks down on whether or not circular economic principles would allow the fashion industry to become more sustainable. Do to these findings I decided to dive even deeper to better understand this. It was found that circular economic principles along with (other things to slow the impact of fast fashion) was beneficial to our environment.

Introduction:

Fast fashion, the movement sweep to bring that catwalk look to you. A bustling business who's job is to take the newest trends, and fashion and mass produce it for the general public. It's every fashion novas dream but, our environments nightmare.

But, what is fast fashion really? Fast fashion is the increasing of production and concurrent drop in cost that provide the ideal environment for "Fast Fashion" to thrive and grow. This model allows for consumers to get fast copies of the new and latest trends. This quite often happening before the original hits the stores.

But, how much can they really produce? Well, "For a company such as Shein, an estimated 1,000 new styles are uploaded daily (...) manufactured ranging from 50- 100, according to the Shein website, this results in a minimum of 50,000 new garments created every day ("At What Cost? Unravelling the Harms of the Fast Fashion Industry")." Significantly speaking this also means that fast fashion truly is a rapidly growing industry. "(...) with the number of new garments made per year nearly doubling over the past 20 years and global consumption of fashion increasing by 400% ("At What Cost? Unravelling the Harms of the Fast Fashion Industry")."

(Fast fashion and it's oceanic affects)

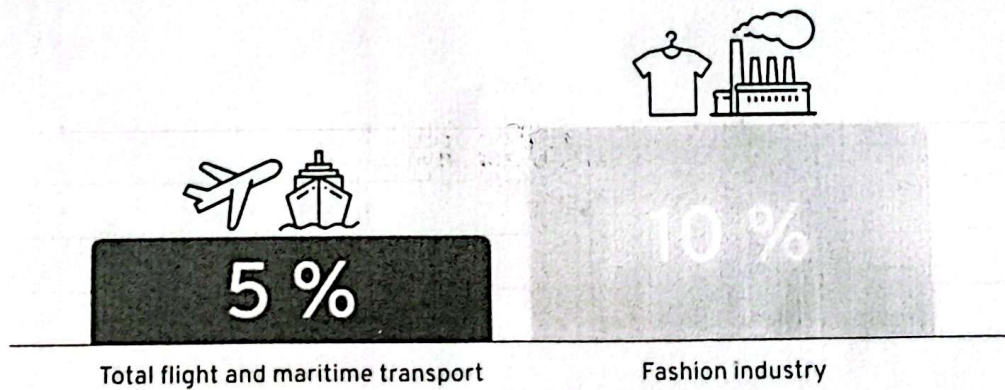
As said in a research article called "The challenge of "Depeche Mode" they state "If the fashion industry were a country, it would be the 4th largest emitter of CO₂ in the world currently (Moran et al.)." Which is in retrospect is horrifyingly true. But, not many people know or understand why the impact of large quantities of CO₂ is so bad. You see when we burn fossil fuels the carbon and oxygen molecules combine and they form greenhouse gasses. The more CO₂ there is in the atmosphere ^{double's pace} the more they will bond with oxygen molecules thus forming more greenhouse gas. How much greenhouse gasses though? Well, "The Ellen MacArthur Foundation reports that greenhouse gases (GHGs) from the fashion and textile industry amount to 1.2 billion tonnes annually (Moran et al.)." Think of it this way the ocean absorbs CO₂ when doing so oxygen levels can decrease. Acidification in turn will mess with many organisms in the ocean.

As Mentioned in my paper on the *Environmental Effects On The Plankton Community And The Changes It Causes To Our Ecosystem:*

Think of the ocean as one big set of dominos. If I knock over or remove some they don't fall the same. Your oxygen is the start of the chain. Many creatures rely on it. For example phytoplankton. But, let's say that domino was removed. Then, the next chain would be the zooplankton. Because the phytoplankton are removed the zooplankton loose their food source. Thus causing a chain to break. The dominos can't "fall" without the starting domino. Even just one being removed like sharks, or coral can break the line of dominos.

This shows that the impact is much larger than we would have originally thought, and can show detrimental impacts to our oceans, and environment as we know it.

CO2 consumption in comparison



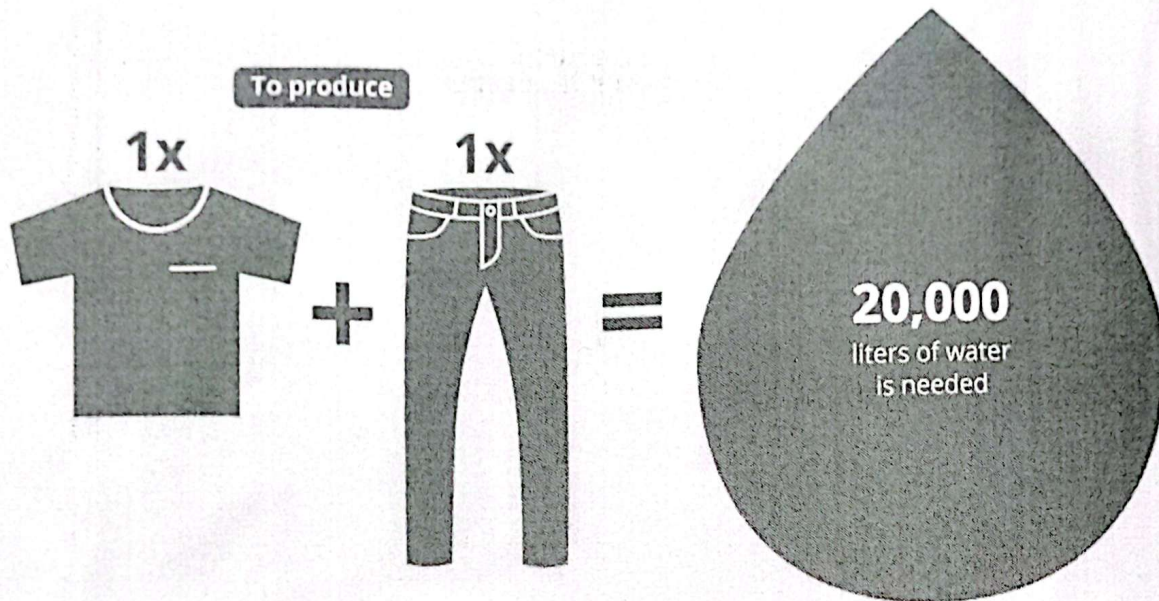
“The environmental impact of the fast fashion industry | Infographic & Stats.” *SANVT*, 12

March 2020, <https://sanvt.com/blogs/journal/environmental-impact-of-fast-fashion-infographic>.

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The Insatiable Thirst of Fashion

Estimated water required in the production of cotton clothing items*



@StatistaCharts

* Items depicted: one t-shirt and one pair of jeans

Source: Oxfam

statista

Armstrong, Martin. "Chart: The Insatiable Thirst of Fashion." *Statista*, 29 August 2019, <https://www.statista.com/chart/19164/insatiable-thirst-of-fashion/>. Accessed 7 December 2023.

(Fast fashion and its environmental affects)

There are many water based impacts to fast fashion. But, another thing to ponder is the environmental impacts. Manufacturing, and transporting fast fashion costs along with other factors requires enormous amounts of raw material. "Fashion is among the world's most polluting industries: it requires enormous quantities of raw materials, creates considerable levels of pollution,

leaves a significant carbon footprint, and generates alarming levels of waste (Brewer).” But it doesn’t stop there. They go on to mention that transporting products and manufacturing, our unwanted and unused clothing is creating an even larger mass of rubbish heaps, as our society as a whole is consuming, discarding, and even hoarding, new garments at unprecedented levels. “(...) estimates indicate that 11.9 million tons of clothing and footwear were discarded in 2015, of which 8.2 million tons ended up in landfills (Brewer).”

On other notes, fast fashion isn’t made to last or naturally decompose. “Unlike natural fibers such as cotton or wool, synthetic fibers such as polyester, rayon, or nylon may take up to 200 years (...) to decompose (Brewer).” There is even a synthetic that takes many, many years longer than rayon, nylon, and other synthetic fibers to decompose. “(...) called polyester in the textile industry and the largest segment of the synthetic fiber sector, (...) with some scholars suggesting a single PET bottle may take approximately 800–1000 years to decompose in natural conditions (Brewer).”

While the synthetic fibers take years to even a thousand to decompose they also contain micro plastics that are ultimately toxic to us, and the environment. Scientist have even gone as far as to estimate that microfibers make up a whopping 85% of the man-made derbies found on ocean shores. Outside of the fact that microfibers are mixed in with wool, and a common use for clothes the animal-based textiles are enough to raise concern. As mentioned in an article ^{by} ~~or~~ *At What Cost? Unraveling The Harms of Fast Fashion* they state. "Animal-based textiles such as wool are responsible for greenhouse gas emissions, water pollution, widespread habitat loss from deforestation and grassland conversion, and other harms to wildlife (“At What Cost? Unravelling the Harms of the Fast Fashion Industry”).”

(How fast fashion affects people)

Fast fashion doesn’t only affect us through our environment but, also more directly. It has also found that we are self are becoming mixed up with the Microplastics just like our clothes. “(...) increasing body of literature suggests that microfibers have now entered the human food chain not only through the consumption of fish and other aquatic life but more disturbingly

through drinking water as well (Brewer).” Keeping in mind that shein alone produces roughly 50,000 new garments a day, and we ingest roughly 5 grams of Microplastics a week. Let's break it down into how much we ingest a year just because of Shine's production alone.

5 Grams ingested a week = 260 grams a year

50,000 new garments a day = 350,000 a week = 18,200,000 a year

A Garmment produces 1.7 grams per garment

85,000 grams produced a day = 595,000 a week = 30,940,000 a year

This means we roughly ingest 0.001% of the Microplastics they produce yearly. Looking at this some would say “Well that’s not a lot”. But, considering the math that makes you wonder how much is going into the environment alone, and that in itself also affects us. Now let's dive deeper. A company producing 50,000 new garments a day must have a very large staff list. About roughly 10,000 employees. How many garments do they each there self produce?

50,000 new garments a day = 350,000 a week = 18,200,000 a year

10,000 employees

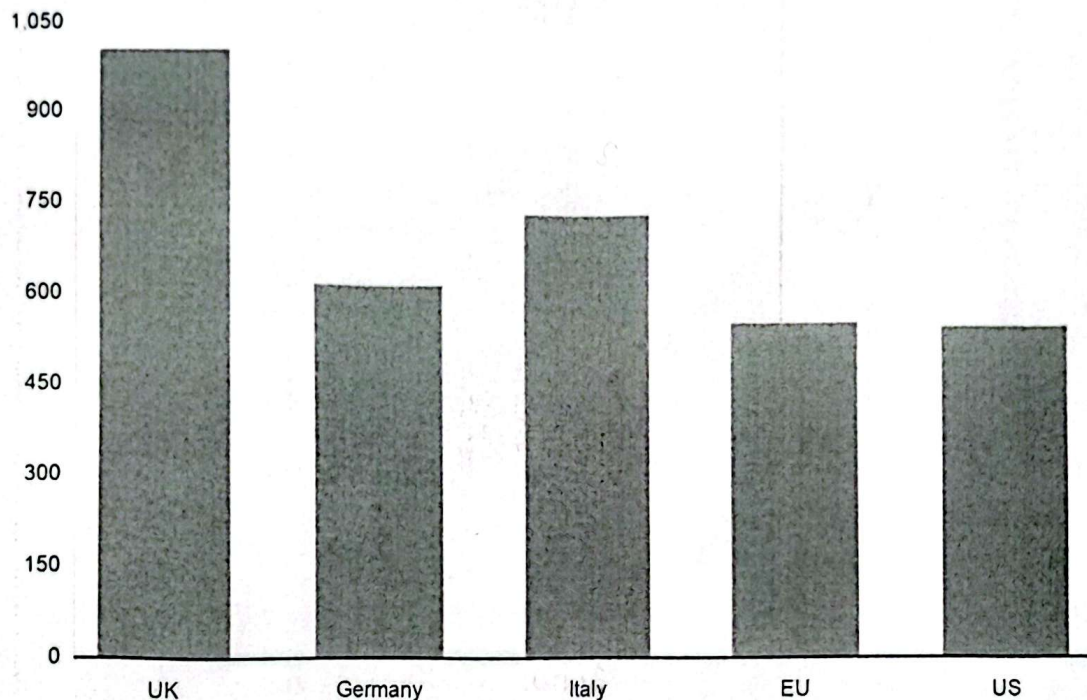
**The average Shein employee works 18 hours a day with only one day off
a month = 551 hours worked a month**

**That’s roughly 1,8000 garments made packaged and produced a year per
worker.**

"An investigation last year into Shein, (...) found that Shein factory workers work 18 hours per day (...) with just one day off per month (Baum)." Could you ever imagine working eight-teen hours a day with only one day off in a month? Following forward with this how much is there pay vs. the amount the average Shein garment costs? The average garment is roughly \$10 with shipping being about \$3.99 so, \$13.99 with the average worker getting paid 4,000 yaun/\$562.61 a month or 48,000 yaun/\$6,751.35 a year. So, for making 1,8000 garments they make a whopping \$26.66 yaun per garment or \$3.75 while Shein gets \$13.99 per garment. That's 26.8% profit for Shein.

Other then overworking conditions, and the low pay rate there can't possible be more impact on the people? Sadly to say no... There is a lot more. The pay, and treatment is just the tip of the ice berg. "(...) industrial waste water from the textile industry often contains high levels of dangerous dyes and other chemicals, (...) harmful to human health, particularly as a number of dyes are known to contain carcinogens that have been shown to cause several cancers (Brewer) ." Outside of they cancer risk there is also risk of other health issues. "The health impacts of working long hours are manifold: increased risk of cardiovascular disease, mental illness, and addiction (Baum)."

Now let's talk about who contributes to this? "Young people top that list. A recent survey by environmental charity Hubbub found that more than two-fifths of 16 to 24-year-olds buy clothes online at least once a week, compared to 13% on average for other age groups (BBC)." With the Uk and Italy being the heaviest spenders.

Annual spend on clothes per person (£)

Stallard, Esme. "Fast fashion: How clothes are linked to climate change." *BBC*, 29 July 2022, <https://www.bbc.com/news/science-environment-60382624>. Accessed 30 November 2023.

(Advantages of Fast Fashion)

The "Advantages of Fast Fashion" obviously by this point your brain isn't thinking that there are any advantages. But, based off a web article by *Medium* there seems to be many. From affordability and accessibility, variety and trends, instant gratification, job creation and economic impact, and even promoting self-expression and confidence. So, for the sake of this paper let's go over each one and discuss the advantages.

Affordability and Accessibility, as perviously mentioned in (Fast fashion and it's environmental affects). We discussed the cost of each garment. With the price being roughly Ten dollars plus shipping. Considering the cost of smaller business this is approximately twenty

dollars cheaper. So, cost wise this is considerably cheaper. "This accessibility enables individuals from diverse socioeconomic backgrounds to express their personal style without breaking the bank ("The Advantages of Fast Fashion: A Closer Look at its Benefits")."

Variety and Trends, every fashion nova knows the golden rule of looking good. "Keep up with trends" with the ever changing social media platforms fads come in just as fast as they die out. "Fast fashion offers a wide variety of options, catering to different tastes and preferences, and keeps pace with the ever-changing fashion landscape ("The Advantages of Fast Fashion: A Closer Look at its Benefits")."

Job Creation and Economic Impact, with the rising production, and fast movement of the fashion pieces you need just as many workers. "The fast fashion industry has a significant positive impact on the economy by creating jobs and driving economic growth ("The Advantages of Fast Fashion: A Closer Look at its Benefits")." This means a significant rise in job opportunities, and positions from shipping, to packing, and assembling.

Reduced Clothing Waste through Repurposing, sense there is a large flush of people constantly changing up there wardrobe this offers second hand stores to have a larger supply of gently used second hand clothing "(...) this creates opportunities for fashion enthusiasts to explore sustainable practices by giving pre-loved clothing (...) Upcycling and repurposing efforts can help reduce the environmental impact of fast fashion by extending the lifespan of garments ("The Advantages of Fast Fashion: A Closer Look at its Benefits")."

(Conversation on the Double Edge Sword)

The ever so wondrous “positives” of fast fashion. Are they really good or are they a double edge sword? In the last section (Advantages of Fast Fashion) we went over the advantages and discussed what those advantages have to offer. Now we will go over if they are actually a double edge sword in disguise.

Affordability and Accessibility, as said in the previous section fast fashion is affordable and accessible by all due to their cheap construction costs. But, because it is cheaper it's made of cheaper material. For example, Shein shoes will last less than a year on average. Going against shoes bought from a smaller business, or hand made shoes bought these will last 3+ yrs or even more depending on how often you wear them, and how they are cared for. Therefore you are spending more in the long run to buy from the fast fashion company. Let's say you want a pair of sneakers below we will go over cost, and life-span. This is assuming you want that exact pair for a long time. Doing so I'll use reviews from their websites.

Size 7 Sneakers from Shein \$11.76 (“Women Lace-Up Front Chunky Breathable Mesh Sneakers”)

Size 36 Sneakers from Good Guys Go Vegan \$265 (“BABER-GV vegan running shoes”)

Now comparing prices the small business owned ones are \$253.24 more. This price wise is a very large gap in price. Though this price gap doesn't go for every shoe because the average is between \$79-100. Now for comparison, the shoes by shein last roughly two months assuming

you wear them everyday, and the shoes by Good Guys Go Vegan last roughly five years. Now let's do the math.

Size 7 Sneakers from Shein \$11.76 for two months = 352.80 for five years

Good Guys Go Vegan \$265 for five years

Investment wise the Good Guys Go Vegan is \$87 cheaper not counting shipping costs added to Shein's prices.

Variety and Trends, with the large variety and ever changing trends fast fashion keeps up. But, because of this the clothes are being worn less, and thrown out a lot faster thus causing more waste than the usually fashion seasons from before. But, with Job Creation and Economic Impact, we are able to offer more jobs and opportunities to people. With the cost of these jobs being that they are mostly overseas, and the people are over worked and underpaid, while also being exposed to danger constantly.

Reduced Clothing Waste through Repurposing, as mentioned previously a lot of these items can be "donated". Or that's what ("The Advantages of Fast Fashion: A Closer Look at its Benefits") believes. But, because the clothes are made cheaply, and to be produced faster at lower prices, they are typically only good for a few months if that. Because of this most clothes that have large rips and damages that aren't accepted by second hand stores, and the owners usually trash them.

(Lessening the Impact)

We now know and understand the causes and impact of fast fashion. But, the bigger question is what can we do to lessen this impact to better our environment and care of the

people. One idea is through circular economy. Well, what is circular economy? A circular economy is an economy in which everyone has access to clothes they need. This includes whenever they need them. This business model gives customers more flexibility on what clothes they'd like to wear. As well as provide access to clothes that might not be affordable via traditional sales. The clothes are designed and produced to be high quality, and durable. "In a circular economy for fashion, clothes are used more often, which allows their value to be captured fully. Once clothes cannot be used anymore, recycling them into new clothes allows the value of the materials to be captured at different levels ("Fashion and the circular economy – deep dive")."

Other ways we could lower our environmental impact from fast fashion is boycotting sales, and make it known to companies that we want a more environmentally friendly option for our fashion. You can also go about this by not following as many trends, or keeping a few year rule where you follow that trend or wear the clothes till a hole forms, or when it becomes wore out. Though the wear out option would mean less donations to second hand stores so, its suffice to say a better rout would be to wear then to the point where there worn but, still in otherwise good condition, and then donate them. Or take tips from punk fashion, and self repurpose clothes that can no longer be worn into brand new ones.

(Conclusion)

In conclusion, fast fashion is detrimental to our environment, and is full of more negatives than positives. It is a sad thing to know about, and understand. But, it is important that

others learn it so that they themselves can make more economically friendly decisions.

Especially when there is so many better options to do so.

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