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# THE IMPORTANCE OF THE IMPLEMENTATION OF A CIRCULAR ECONOMY IN THE UAE'S FASHION INDUSTRY

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## INTRODUCTION

In the modern corporate world, entrepreneurs adopt the linear economy that involves the basic 'take-make-dispose' phenomena, leading to increased amounts of air, land and water pollution. Businesses surrender to customer expectations of fast fashion in order to maintain their customer loyalty as rising competition always poses a threat to their market share. As a result, although firms are aware of the negative consequences of the linear economic model, it is often considered extremely beneficial because of its convenience and low cost.

Zooming into the linear economy in the fashion industry, most firm's corporate strategy involves three steps, namely: production of clothes, purchase and consumption by the consumers and finally disposal into landfills. Out of the 100 billion tonnes of garments produced annually, 92 million tonnes are dumped into landfills; meaning only 20% of textiles are recycled *(TheRoundup, 2023)*. The various non-biodegradable materials used to manufacture these clothes fail to decompose and instead act as toxic substances in the environment. Toxins from fabrics such as polyester, acrylic, nylon and polyurethane cause bioaccumulation and biomagnification as they pass through various trophic levels. The main reason behind the popularity of the linear economy in the fashion industry is the increased demand for cheap and fast fashion. It is predicted that the fast fashion industry will grow from $106.42 billion in 2022 to $122.98 billion in 2023 at a CAGR of 15.6% *(PR Newswire, 2023)*

On the other hand, a circular economy is defined as an economic system based on the reuse and regeneration of materials or products, especially as a means of continuing production in a sustainable and environmentally friendly way (*Oxford Languages)*. This principle can be applied in various industries globally if organisations decide to take the eco-friendly path and are willing to compromise on profitability for the benefit of the environment.

The circular economy has a key role when considering a more eco-friendly and sustainable method of apparel production. Adopting a circular economy in the fashion industry would mean replacing the disposal step and upcycling the fabric. This would mean firms would need to invest in adequate equipment using which fabrics are turned back down to fibres and then woven to form other products again, a very expensive process making it difficult to fit into modern corporate strategy.

### Sustainability in Businesses

When a business attempts to improve its sustainability, it needs to ensure that both its suppliers and distributors follow green practices too. If a business involved in the production of a good or service doesn't meet these expectations, the entire supply chain comes across as unsustainable. Many times start-ups in the primary sector fake their records in order to merge with businesses in higher sectors, consequently there is never any active involvement in making the business' practices green. This gives companies an easy way to lie on ESG ratings and Sustainability reports to make them seem environmentally friendly.

In order to solve this problem, scientists are carrying out research and development and are fermenting bio-based substitutes for livestock derived materials and fossil fuel-based synthetics *(Pucker, 2022)*. Although these are biodegradable and cause lesser harm to the natural capital and environment, the high cost of production and large amount of capital involved act as major disadvantages. Moreover, instead of purchasing new clothes for every occasion, renting them out is becoming more prevalent and is the greener option. Reusing clothes after cleaning them will reduce the number of clothes produced and therefore reduce the ominous impact the fashion industry has on the environment. Legislation has been introduced in many countries, for example in New York where brands with more than 100 million dollars in revenue that don't meet the environmental standards will be fined 20% of their revenue. *(Pucker, 2022)*

Greenwashing is another severe issue in the fashion industry where businesses convey a false impression or misleading information about how a company's products are environmentally sound *(Hayes, 2023).* This is done to deceive customers into believing that a company's products are environmentally friendly and are portrayed to have a positive environmental impact, completely overlooking reality. Greenwashing may also occur when businesses try to overshadow their involvement in environmentally harmful practices. This is done by the use of environmental imagery, misleading labels, hiding trade-offs along with rebranding, renaming and repackaging products. This has proven to have various negative impacts as discussed below.

**1. Risk on Brand Image**

In case businesses are found to greenwash, consumers' opinions regarding the business would take a hit. As these negative experiences are shared on social media or through word of mouth, the business would encounter a reduction in sales and revenue thereby reducing profitability of the business. Amidst this backlash, it is highly likely that customers attempt boycotting the company due to the perception of it being dishonest. After this, even if it decides to end the greenwashing and make genuine attempts to gain back their market share it would be immensely difficult because of their ruined brand image.

2. **Adverse Environmental Impact**

Greenwashing tends to mislead people who are consciously trying to make environmentally friendly decisions. The labels and tags make them feel that it has 'low environmental impact' when in reality the product could be environmentally harmful. This results in consumers supporting greenwashed products instead of those that are genuinely eco-friendly but have less prominent marketing.

**3. Greenhushing**

Greenhushing takes place when companies that are actively taking eco-friendly measures are afraid to speak up because of the hesitation that their actions will be labelled as greenwashing. This is extremely dangerous as spreading awareness and educating customers regarding sustainable measures taken by companies has the potential of making an immense positive environmental impact.

An extremely successful public limited fast fashion company, H&M was recently found to be greenwashing which had taken a toll on their brand image. The company was using a scorecard system to portray how environmentally sound each of their products were but a survey by Quartz labelled the company's environmental efforts with greenwashing. They gave evidence for the claims which proved that H&M's scorecards were far from reality and their products weren't as sustainable as they showed them to be. Just Style reported that the company only divulged averages of the environmental impact of the textile and kept the impact of the manufacturing and sale hidden. Errors on the scorecards were spotted out too- the company claimed that they use 30% less water to make certain products when in reality they used 30% more water than usual. *(Forbes, 2022)*

**Fashion Industry of the UAE**

UAE's fashion industry has a major contribution in supporting the economy of the country and is still booming despite the ominous repercussions of the COVID-19 pandemic. According to Statista Market Forecast, revenue of the fashion industry is predicted to grow 11.88% annually and reach a projected market volume of $3662 million by 2025, with increases in sales being driven by digitisation. The leading fashion retailer in the region, Max Fashion UAE, has seen an increase in their online sales greatly contributing to their overall revenue. In 2022 e-commerce generated a revenue of USD 84.6 million for the company *(ecommerce DB, 2022)* Although the retail market staggered and faced a 12% drop during the pandemic, with the help of e-commerce, businesses were able to stabilise the situation. Studies prove that 7-9% of fashion purchases now take place online and this is a 30% increase since February 2021.

Other than digitisation, another key factor influencing consumer behaviour and buying patterns is awareness. With the increased knowledge of climate change and carbon emissions, customers are more conscious about their choices and have started taking eco-friendly decisions. From F5 to Reemami, many businesses are trying to reduce their carbon footprint and make operations greener.

Traditionally, people preferred walking into stores and trying on each item personally instead of depending on the estimates available online. However, with advancing technology online shopping has become even more reliable. Companies such as Perfitly have introduced features where shoppers can make a mannequin of their body type online and try each item they are purchasing before confirming the order. This increases consumer satisfaction and the number of returns reduces too.

The Dubai Design District has also implemented the global initiative, 'Dubai Sustainable Fashion Pact' in 2020. The pact revolves around three major environmental goals: stopping global warming, restoring biodiversity and protecting the oceans. Despite the sustainable efforts taken by the government and the people of UAE themselves, clothes are discarded at the end of their life cycle. So, although the production methods are becoming increasingly sustainable there is still a dearth of recycling and upcycling of these clothes. As a result, resources are scarce and producing more clothes becomes difficult. Therefore, implementing a circular economy has become even more important to preserve resources for future generations. *(Al Tamimi and Co.)*

**Environmental Challenges**

Fast fashion is the main reason behind the various environmental challenges brought up by the fashion industry. The main elements of the industry that pose issues in the environment are: dyeing and fishing, yarn preparation and fibre production. Fibre production majorly causes freshwater withdrawal and ruins ecosystem quality because of cotton cultivation, while dyeing, fishing, and yarn preparation cause pollution due to the energy intensive processes fuelled by non-renewable sources of energy. With the accelerated growth of the industry, it accounts for more than 10% of global carbon dioxide emissions annually. The UN Framework Convention on Climate Change predicts that textile manufacturing emissions will skyrocket to reach 60% by 2030. This is insight on how rapidly the environmental impact is worsening. *(Earth.org, 2023)*

Moreover, another concerning impact of the fast fashion industry is its water consumption. The fashion industry is the second largest consumer industry of water. It takes 700 gallons to produce a cotton shirt and 2000 gallons to produce a pair of jeans. A report from Business Insider also states that water leftover from the dyeing process is dumped into ditches, streams or rivers. This proves to be extremely toxic for aquatic life as it hampers reproduction leading to endangerment and, sometimes, extinction. *(earth.org)*

In order to reduce costs, a majority of brands resort to using synthetic fibres such as polyester, nylon and acrylic. Some of these fibres end up in water bodies while the rest take over a hundred years to decompose on land. A report written by the International Union for Conservation of Nature in 2017 states that around 35% of all microplastics end up in oceans because of laundering synthetic fibres.

The production of leather too poses many environmental challenges as it requires large amounts of feed, land, water and fossil fuels to raise livestock. The most toxic stage of the process would be tanning the leather because the chemicals used (including mineral salts, formaldehyde, coal-tar derivatives and various oils and dyes) are not biodegradable and contaminate water sources. They accumulate on the surface of the water preventing photosynthesis and stunting plant growth. This proves to be deadly for various aquatic autotrophs and disrupts the food chain. The process of converting plastic fibres into textiles is energy intensive, requires large amounts of petroleum and releases volatile particulate matter and acids like hydrogen chloride. These emissions increase the acidity in the atmosphere and worsen the problem of acid rain. Already, vehicles emit large amounts of nitrogen oxides and sulphur dioxides into the atmosphere which mix with the water vapour and result in acid rain. When hydrogen chloride and volatile particulate matter diffuse into the air too, they further increase the acidity of the rain which harms trees, wildlife and also corrodes buildings and structures.

Additionally, producing cotton poses major threats to the environment too. Pesticides are essential for the growth of cotton plants, and these often contaminate water bodies, soil, turf and other vegetation. When excess pesticides enter water bodies, the nutrients support growth of algae which eventually causes algal bloom. The algae get accumulated at the surface of the water and prevents light from penetrating into the water body. This hinders the process of photosynthesis for aquatic plants and these plant species eventually die, causing a disruption in the food chain. Other animals that were dependent on plants for food undergo food shortage. The microorganisms that aerobically decompose the dead plant and animal matter compete with the remaining living organisms for oxygen. This eventually leads to a dead zone being created in that water body.

Therefore, it is apparent that the production of the majority of the materials in the fast fashion industry pose a major threat to the environment. They all lead to extinction and sometimes endangerment of species.

**Social Impact**

Along with the environmental impacts, the fast fashion industry has various detrimental social impacts too. It opposes various Sustainable Development Goals including decent work, economic growth, gender equality, and reduced inequalities. Although the industry has created job opportunities in various developing countries,

(production of cotton alone accounts for 7% of the employment in developing countries) many cases have been reported that portray poor and dangerous work conditions.

In order to meet the pressure and deadlines of the rapidly progressing market, companies resort to using cheap affordable labour in order to keep costs low. To achieve this, they hire people from less economically developed countries as labour laws are lax or aren't enforced there. Labourers are then forced to work in unsafe and unhealthy conditions with wages so low that they find it difficult to make ends meet. These unsuitable work environments have caused numerous health issues among workers such as skin diseases, respiratory diseases and at times stress and mental disorders.

Brands such as H&M and Forever 21 have also been accused of adopting child labour in their production line. Children from developing countries are forced to work in unfavourable environments with extremely low wages. Although some of their products are allegedly 'sustainable', there is no proof of ethical, safe and legal working conditions for labourers. One such prominent example would be the Nike sweatshops. In 1991 an American labour activist named Jeffrey Ballinger published a report revealing the pitiful condition of Nike's factory in Indonesia. Underpaid child labourers were working in appalling conditions that resembled a sweatshop. Another US college student exposed the fact that workers were paid under USD1.25 per day and had to live in slum areas near open sewers and share bathrooms and bathwater with multiple families.

Following this, in 1996, Life Magazine published a report on child labour which showed a 12-year-old Pakistani boy sewing a Nike ball. All these instances prove the torture children would have endured just so Nike can carry out its production process at a low price. Now, the company states that their factories have strict codes of conduct as it pledged to eradicate the appalling work conditions. There are still a few controversies regarding how successful Nike really was in implementing ethical work practices, but the company is certified under the Fair Labour Association Workplace Code of Conduct.

**Circular Economic Solutions**

The circular economic model for the fashion industry aims to benefit businesses, the environment and society. It ensures that textiles and fabrics maintain their highest value during use and re-enter the economy after use. This way they never end up as waste and the environmental impact reduces substantially. A circular economic system revolves around the recycling, upcycling and reusing of clothes in order to improve sustainability. Although the production cost of high-quality clothes would be higher than that of the clothes produced in the current fashion industry, a reduction in the number of clothes produced would help maintain profitability. This new vision of the fashion industry heavily relies on new business models and renewable sources of energy and the following strategies will prove to be extremely beneficial:

1. Having more thrift shops to help with reusing, recycling and renting of clothes is sustainable and helps keep costs low for consumers. They have access to a variety of different clothing options and can purchase or rent them at their convenience. This increases the lifespan of fabrics and instead of being discarded, they once again become part of the supply chain.

2. Using renewable resources to reduce carbon footprint. Since the production rate in factories will reduce, companies can adopt renewable sources of energy that cannot be used in the current fast fashion industry. However, with the downsizing of the manufacturing step, energy supplied by solar, tidal, wind or even geothermal energy can prove to be adequate. As the carbon footprint of companies reduces, other environmental issues such as global warming and ozone depletion will also reduce.

3. Companies will be able to afford more sustainable materials for production of clothes through regenerative agriculture. These methods can be applied to grow bio-based raw materials such as cotton and sustainable wood-based fibre. This would mean a reduction in using cheap materials such as polyester, nylon and acrylic and a reduction in pesticide use which would have a positive impact on marine ecosystems. Reduced microfibres would mean animals wouldn't feed on them and put their lives at risk. This prevents disturbance in the food chain and maintains biodiversity on earth. The reduced use of pesticides completely eradicates the chances of eutrophication which in turn eliminates the formation of a dead zone and reduces visual and olfactory pollution.

4. Upcycling fabric is another solution to prevent bioaccumulation and biomagnification in landfills. Instead of dumping clothes, they can be collected by retail stores to be sent ahead for upcycling. In this process, the clothes are brought back down to fibres and then sown to form clothes or other artefacts. Large retail

companies can adopt this alternative to increase the range of their products and expand their business. For example, a pair of upcycled jeans can be used to make a fashionable, sustainable bag. This technique in turn increases profitability as companies don't invest as much in new fabric and get the opportunity to increase their product range.

Along with the environmental challenges, the social impacts can be tackled in the following ways:

1. Adopting the new business models of renting clothes in fast fashion companies can help reduce the number of clothes being produced which means fewer people will be forced into slavery. With time, as the concept of thrift stores also becomes more prominent the number of new clothes that need to be made will be significantly lower which allows employees to have higher wages and better work environments.

2. Regular audits from governmental bodies to ensure appropriate working conditions are essential. Following the Nike sweatshops conflict, websites have reported that there is no proof of improvement in the company. Therefore, regular checks can help prevent repetition of such a situation.

3. Making Trade Unions compulsory in businesses could prove to be beneficial in overcoming the absence of stringent labour laws in less economically developed countries. If employees experience unjust treatment at their workplace, they can all retaliate as a team instead of submitting to the attitude of their employers.

**Barriers and Solutions for Eco-Friendly Fashion**

Globally, various measures have been taken in order to inform the human population about the various environmental challenges being faced on Earth. The United Nations has set sustainability goals that encourage countries to take measures that help reduce their carbon footprint. There are numerous initiatives across the world that have somewhat improved the situation. Focusing on the UAE, their governmental initiative named 'UAE Green Agenda 2015-2030' aims to promote sustainable development, increase awareness about environmental challenges and provide incentive schemes to businesses practising eco-friendly manufacturing. Despite these efforts from the government, the fashion industry is lacking in the number of sustainable fashion stores. People support fast fashion businesses primarily which makes opening sustainable fashion stores risky. There are a variety of reasons behind this, as follows:

**1. Affordability**

According to a study carried out by Perry and Chung in 2016, the main reason behind low purchases of sustainable clothing were the high costs and poor quality of clothing. Clothes produced in the fast fashion industry aren't as expensive as eco-fashion products and are usually of better quality. Since eco-fashion is still a niche sector, it is difficult for sustainable fashion companies to compete on the basis of pricing as they do not receive the benefits of economies of scale. Companies such as Zara, H&M and Cotton On offer clothes at very competitive prices, acting as a barrier for sustainable fashion purchases. Yan et al. (2017) reported that consumers are willing to pay high prices if they see products of suitable quality. Therefore, if businesses can manage to purchase high quality materials and manufacture clothes that significantly outdo the quality of clothes of fast fashion companies, they could potentially see an increase in sales. With time, the sustainable fashion market will be able to enjoy the economies of scale too.

**2. Availability**

In addition to high prices, low availability of eco-friendly clothing is another reason behind low purchases. Since sustainable fashion is still a growing sector, these clothes aren't as readily available as fast fashion ones. There are options of purchasing second hand clothes and renting them from thrift stores, but these are considered low class and are often looked down upon. In order to solve these issues, brands can try using e-commerce in order to sell eco-fashion products. Selling them online would mean a reduction in costs of setting up and maintaining stores and would also solve the problem of low availability if promotion is done efficiently. In a way, this solution also reduces environmental impact as fewer resources would be used in order to set up the business. Purchasing second hand clothes or renting them can also be possible if the mental stigma of it being 'low class' is removed. Market leaders such as H&M and Zara could change their business models and promote these methods which would make it seem progressive and environmentally responsible, thereby encouraging people to do the same.

**3. No Incentive**

Eco-friendly clothes are considered to be less stylish and uncomfortable. It seems as if being environmentally conscious is a trade-off for style. Even though people would like to make greener purchases, the plain and rather boring designs demotivate them. Therefore, being more innovative and increasing variety in designs can help attract more customers.

4. **Lack of Awareness**

Brands often do not advertise their eco-friendly measures which means customers aren't always aware. Eco-labelling, also known as 'green labelling', helps inform buyers about the various environmentally safe measures taken to produce the clothes. In addition, in store displays and green marketing programmes regarding the benefits of supporting environmental causes help positively influence customer's choices.

**5. Inadequate Infrastructure**

The UAE doesn't have sufficient infrastructure for recycling and management of waste produced. So, many people impulsively resort to discarding recyclable fabric into general waste bins and this leads to wastage of valuable textiles.

**6. Less Information on Market**

Considering the lack of literature available on the sustainable fashion industry of the UAE it is apparent that hardly any studies have been conducted. By carrying out more market research and understanding customer's needs, businesses will be able to make better decisions. They can start making small changes in their business model in order to environmentally support the fashion industry. Introducing recycling containers for clothes in famous retail stores can encourage customers to upcycle their clothes instead of disposing them off. They can drop off unwanted pieces of clothing in the containers and the company can use that as fabric to manufacture clothes further. With efficient marketing and promotion, they can collect a wide array of materials that can help expand their own product range too.

## CONCLUSION

Solving the environmental challenges being faced by UAE's fashion industry wouldn't be difficult as long as companies work together to meet sustainability goals. Small changes in order to progress from the linear economic model to the circular economic model can immensely benefit the environment and society. Considering the importance of fashion in the country's economy, eco-friendly measures will in turn prove to only be beneficial.

Starting off with small measures in order to change peoples' mindsets can go a long way when it becomes a trend. Contacting celebrities and influencers to promote such business models can also help change consumer buying patterns. Not only will this reduce the carbon emissions at a national level, but it will also reduce the severity of climate change globally. A reduction in greenhouse gas emissions will reduce various problems such as global warming, acid rain, land pollution and water pollution. Flora and fauna will continue to thrive as fewer thereby preventing endangerment or extinction of species.

Moreover, workers and children from developing countries will be freed of forced labour and would have the opportunity to make a better future for themselves.

A circular economic approach will truly benefit everybody, with time.

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