

Eco Fashion Endurance

Yasharth Singh

Ujjawal Chhajjer



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INTRODUCTION

This section covers an overview of the fast-fashion and the sustainable fashion business model, and discusses the need for sustainability.

- **WHAT IS SUSTAINABILITY IN FASHION?**
- **FAST FASHION: AN OVERVIEW**
- **SUSTAINABLE FASHION MODEL**
- **SUSTAINABILITY: A NECESSITY?**
- **CIRCULAR FASHION ECONOMY**

What is Sustainability in Fashion?

An Introduction

In the fashion industry, the word "sustainability" has become a buzzword over the past few years, as people are suddenly becoming aware of the harmful effects our clothes have on the environment.

An increase in globalization, competition, and consumer demands called for a need to manufacture clothes at a faster rate. Major Fast Fashion businesses thrive on these accelerated cycles of quick-production, small batches, wide variety, attractive prices, making the short fashion model very profitable.

However, with the decrease in prices, there is also a decrease in manufacturing quality. This doesn't pose a significant problem to businesses in terms of profit because of the social construct of the younger generation, who believe in clothes becoming obsolete after being worn a few times. This consumption pattern causes waste of resources and materials.

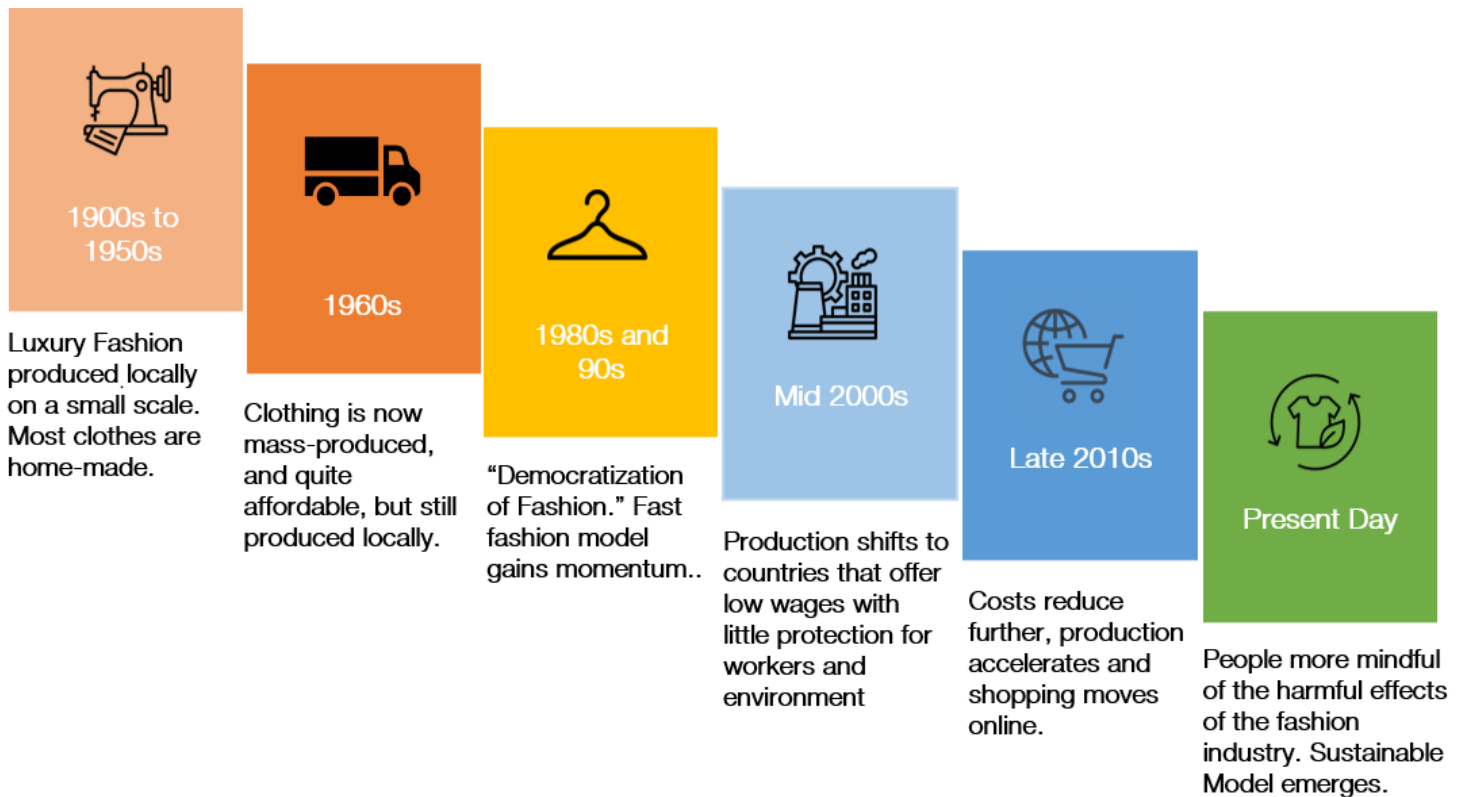
The sustainable model was created as a response to the problems posed by fast fashion's accelerated and exploitative model. 53 million metric tonnes of unwanted clothing are burnt or dumped each year. As a result, \$500billion is lost each year because of under-wearing and failure to recycle clothes.

There is also an environmental and ethical aspect, as fast fashion harms the ecosystem. Frequently, the rights of workers producing these garments are not taken care of.

"Regardless of what your background is, we can all agree on some fundamental things—no one should die to make a T-shirt, and we shouldn't be pouring toxins into our planet."

- Fashionista Whitney Bauck on Green Dreamer Podcast.

INTRODUCTION



Evolution of the Fashion Industry

Things that come under the umbrella of "sustainable fashion" are manufacturing and consuming safe garments for the environment and the people producing them. This is done by adhering to low carbon footprints, working with eco-friendly products, and ensuring safer work conditions for supply chain workers.

Fortunately, there is also an unexplored economic potential in the circular economy. There is a potential growth of 2.3 billion dollars in the future of the circular fashion economy, according to a report by Lablaco and Vogue. Most consumers see sustainability as a top corporate social responsibility.

So the three main areas of focus in our report are profitability, environment, and consumers. Starting from an introduction to the current market, the report will cover the market's post-covid scenario along with some challenges and trade-offs, our propositions on how fashion brands can become more sustainable, while still remaining profitable, and the future of the sustainable fashion industry.

Fast Fashion

An Overview

If you've purchased clothing in the last decade, chances are you've purchased at least one item from a fast-fashion retailer. Even with the rise of online shopping companies, stores like Zara and H&M, two of the world's top retailers, still have a grasp on most people's buying habits.

These large, brightly lighted boutiques sprang out of nowhere in malls in the late 2000s, retailing everything from jeans to work blouses to dresses, and frequently at a fraction of the price of Gap or Nordstrom.

These shopping behemoths aren't without their detractors, though. Their efficient supply chains rely on factory employees typically underpaid in other countries. The procedure is also harmful to the environment and uses many resources, and it's difficult to assess the industry's impact.

“Fast fashion isn’t free. Someone somewhere is paying.”

- Lucy Siegle, Journalist

How Fast Fashion became the New Normal?

If a lady wanted to buy a ready-made dress in the 1950s, she could order one from a Sears catalog for around \$9 (about \$72 in today's currencies).

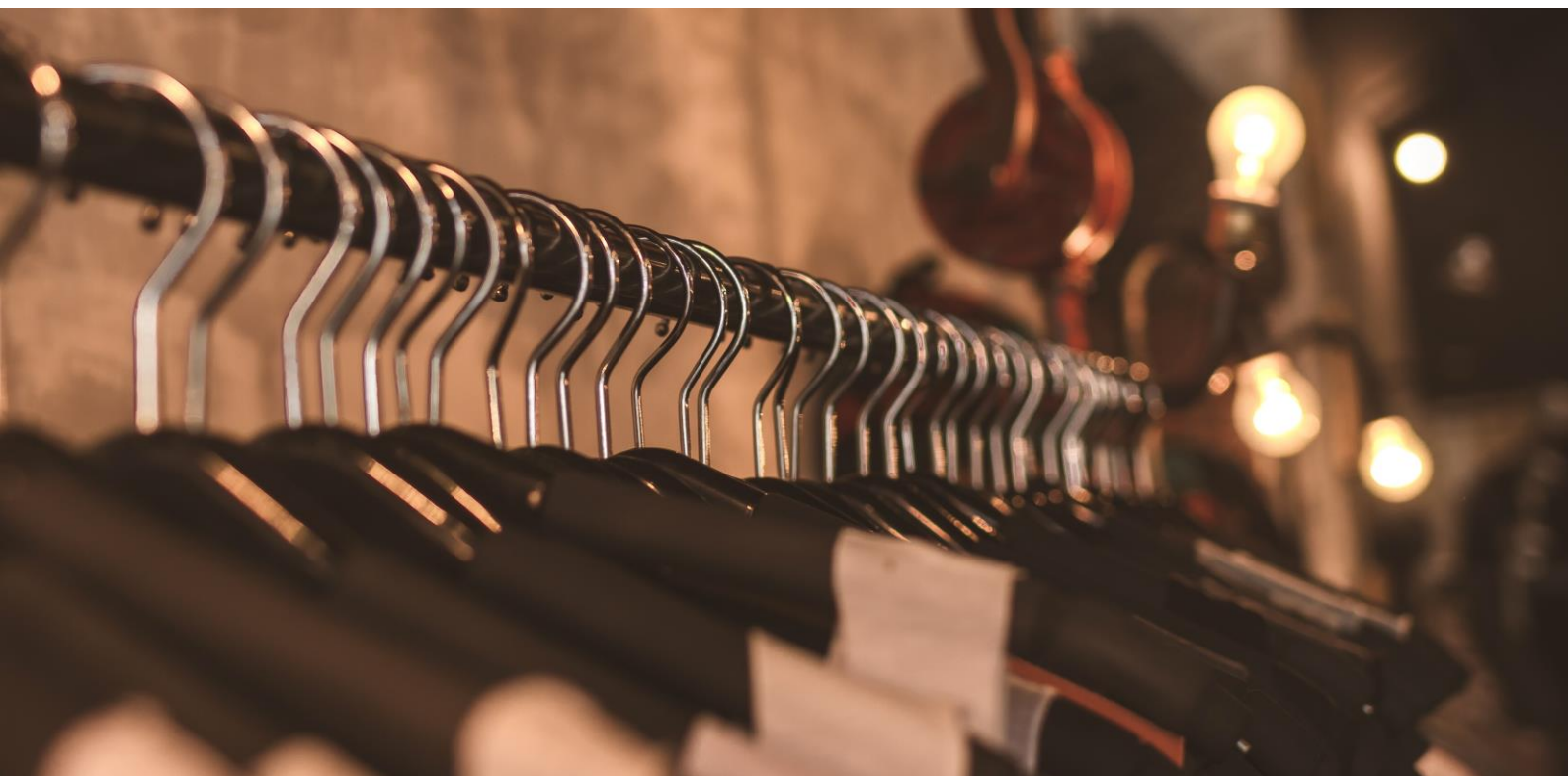
Today, a consumer might walk into Forever 21 and purchase a basic dress for under \$12. The cost of a piece of clothing now — including the cost of materials, labor, and supply chain logistics — is low, but it's unlikely to last.

“It’s not just about clothing. It’s about a disposable society”

- Michael Solomon, a consumer behavior expert

In addition, because of social media, the typical individual can now film their life in clothing in public. The rise of influencer marketing and culture has opened doors for fast fashion companies., mainly online shops, to thrive. Brands have formed a symbiotic connection with renowned celebrities and influencers, such as the Kardashians.

As a result, fast fashion looks to be a straightforward answer to satisfy our craving for novelty. When clothes are only \$20, it's much easy to avoid outfit repetition.



Sustainable Fashion Model

Less is More

Most manufacturers' most significant problem is collecting and recycling thousands of irreparable garments while also turning a profit.

Working on an old piece of garment might not necessarily be as easy as working with a fresh piece of fabric. But tackling the problem of overproduction and waste has become a priority for most apparel brands worldwide, not only because of the scale of the problem but also because tangible solutions are now possible.

A sustainable fashion business model works on three fundamental pillars:

THE TRIPLE BOTTOM LINE

- ♦ ***Environmental***
- ♦ ***Social***
- ♦ ***Economical***

The life cycle includes four stages: procurement, manufacture, use, disposal. Unlike a linear production model, which generates waste at every step of the model's life cycle, businesses are now adapting to a circular fashion model so that a textile that produces waste both post-production and consumption will be recycled such that materials remain in constant circulation.

The sustainable model includes using better materials like wool or bamboo instead of cotton or other synthetic fibers. The R&D sectors of most big businesses are currently focusing on material science for material innovations that can change the fashion industry. Several low-impact alternatives such as organic cotton and regenerative cotton have been considered.

INTRODUCTION

Another critical aspect of the sustainable model is the work conditions for manufacturers or garment workers. The model focuses on giving workers a fair wage, safe work environment, bonuses, paid leaves, overtime pay.

It is also inclusive of ethical consumer practices. As a consumer, the model encourages you to be mindful, along with looking for transparency in sustainable brands, buying less in amount but durable clothing, upcycling unwanted clothing, renting, and choosing natural fibers for your garments.

The final aspect of the sustainable model is the problem of overproduction. Most companies are tackling this problem by moving from the conventional linear model to a circular fashion model and engineering patterns to generate zero waste.

However, there is no better strategy to tackle waste than making and consuming less.

CIRCULAR FASHION



66%

of apparel shoppers claim that sustainability is more important to them today than it was before the Covid-19 crisis, as noted by The State of Fashion Report 2021 by McKinsey.

Circular Fashion Agenda

In 2017, most of the major fashion companies signed the 2020 Circular Fashion Agenda Commitment (discussed later).

The participants achieved more than 63% of their set targets by 2020.



of clothing is sent for recycle/upcycle post consumption.



is the projected growth of eco-friendly segment (annual rate).



The eco-friendly segment is projected to grow at an annual rate of 11.6%, making it the market's fastest-growing sector. The global ethical fashion market is expected to grow from \$5.84 billion in 2021 to \$8.3 billion in 2025 at a CAGR of 9%.

Sustainability

A Necessity ?

As a result of the pandemic, fast fashion came to a standstill. Now that the world has opened up to us and we are socialising and going places, we want to dress up again. However, after living a limited and simpler life during COVID, this is a good opportunity to consider the implications of our clothing choices. Fashion, particularly rapid fashion, has huge environmental and social consequences for our globe.

According to the American Chemical Society, fashion production has increased since the 2000s and will likely quadruple by 2050. Polyester manufacture, which is used in a lot of inexpensive fast fashion and athleisure clothing, has expanded nine-fold in the last 50 years. Clothing has become so inexpensive that it is readily thrown after only a few uses.

Environmental Effects

Every year, 70 million tonnes of trees are felled to meet the fashion industry's demand for wood pulp to create rayon, viscose, and other materials. By 2034, that number is predicted to have doubled, hastening destruction in some of the world's most vulnerable forests.

Every year, global fashion consumes 93 billion metric tonnes of clean water.

Cotton is a particularly thirsty plant. One kilogram of cotton needed to make a pair of jeans, for example, can require 7,500 to 10,000 liter's of water, or the amount of water a person would drink in ten years.

INTRODUCTION

The use of harmful chemicals in the dyeing of clothes is responsible for 17 to 20% of global industrial water pollution. Water used in textile dyeing has been discovered to contain 72 hazardous compounds.

Only about 1% of clothing is recycled to generate new garments. Furthermore, most textile-to-textile recycling systems today cannot separate colors, pollutants, or even a mix of fibers like polyester and cotton.

As a result, 53 million metric tonnes of unwanted clothing are burnt or dumped each year.

Social Disaster

Fast fashion relies on exploited labor in emerging nations with inadequate rules since it must be cheap. Workers are underpaid, overworked, and subjected to hazardous conditions or health risks. Many are minors.

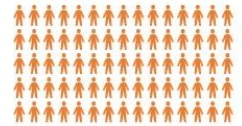
According to estimates, only two percent of the world's 75 million factory workers make a decent wage.

ENVIRONMENTAL IMPACTS OF THE CLOTHING INDUSTRY

Due to constantly changing trends, the production of new clothing has more than doubled in the past 15-20 years.

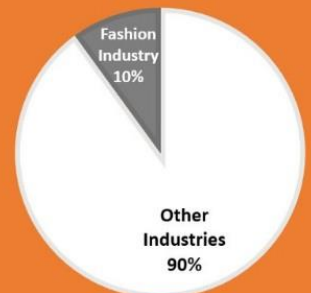
150M

LIVES ARE TOUCHED BY THE GLOBAL APPAREL INDUSTRY DAILY



Fashion chains have increased their offerings from 2 collections per year to 5 or more.

When it comes to global emissions, the clothing industry is second only to the oil industry.....



Nitrous Oxide, a byproduct of the production of nylon, contributes to 8% of global greenhouse gas emissions. The impact of one kilogram of nitrous oxide is equal to almost 600 times of the same amount of carbon dioxide.



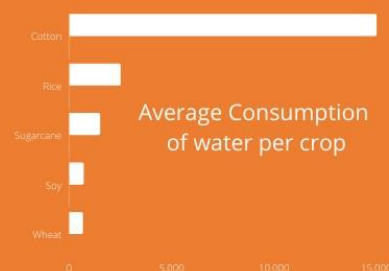
OF INDUSTRIAL WATER WASTE

When polyester clothing is washed, tiny fibers are detached, which end up as microplastics in the water



OF TEXTILES ARE SENT TO LANDFILLS

Toxic chemicals leach from clothing materials polluting the land & water while incinerators release toxins.



Cotton is the most used fiber in clothing industries due to its lightness and breathability

However, Cotton is extremely water-intensive and is considered the dirtiest crop due to its high consumption of insecticides. The land and water used to grow cotton cannot be reused due to contamination from fertilizers.

Circular Fashion Economy

Sustainable Development Goal 12

“Buy Less. Choose well. Make it last”

- Vivienne Westwood, renowned luxury fashion designer

Sustainable Development Goal 12, titled "**responsible consumption and production**," ensures sustainable consumption and production patterns. The fashion industry has recently implemented a circular model instead of the conventional linear model to ensure sustainable consumption by recycling, renting, or resale. In 2020, the Global Fashion Agenda signed a **Circular Fashion System Commitment**, which outlined four immediate action points:

- ♦ *Implementing design strategies for cyclability*
- ♦ *Increasing the volume of used garments and footwear collected*
- ♦ *Increasing the volume of used garments and footwear resold*
- ♦ *Increasing the share of garments and footwear made from recycled post-consumer textile fibers.*

How to get to a circular economy from a linear economy?



Source: Simplified form of a new Textiles Economy: Redesigning Fashion's Future, Ellen McArthur Foundation with analysis by McKinsey, Nov'17.

It is essential to understand where the fashion industry currently stands before knowing where it can go. The linear economy envisions a linear fashion industry. Materials are wasted, and people are exploited at every step of the way in a linear fashion model.

A straightforward example of this could be the manufacture of shoes. **Leather and rubber are both recyclable materials in themselves, but when they're glued together, it becomes impossible to have them recycled, eventually ending up in incinerators or landfills.**

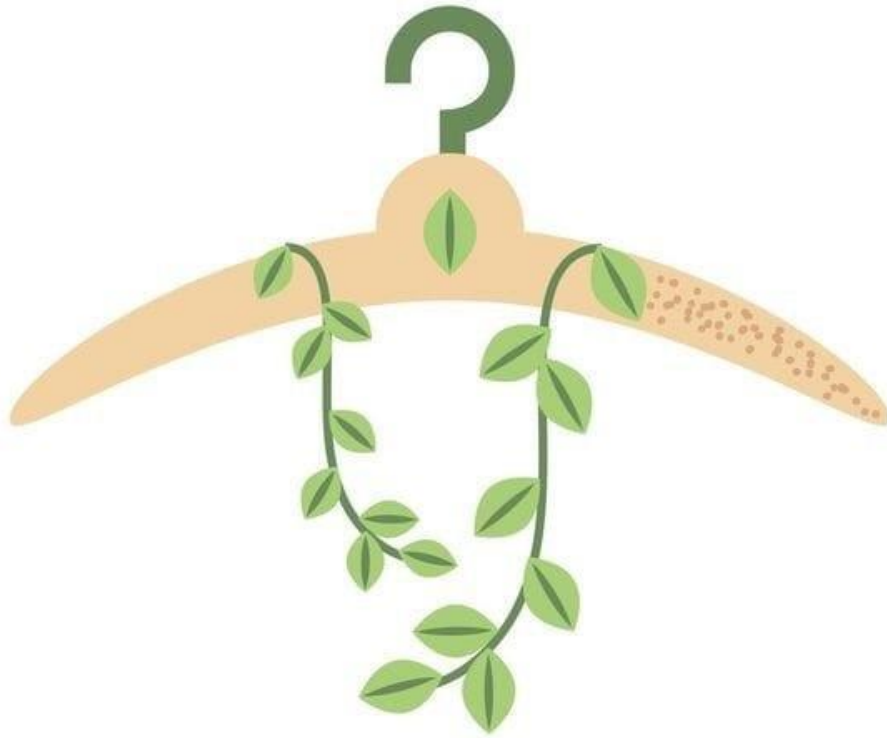
Only 15% of used textiles are sent for recycling post-consumption and only 1% reform into a value garment. This represents the loss of value to consumers in the form of \$460 billion. These statistics are enough to prove that the linear model is a model that needs to be discontinued.

So How do we get to circular fashion?

A huge obstacle in the circular model is that it looks perfect on paper but not in practice. But designing an economy so that resource efficiency, non-toxicity, ethical practices, and recyclability are ensured makes it possible to dismantle the exploitative linear model.

Prominent Fashion leaders are collaborating with textile-to-textile recycling companies and encouraging their customers to participate in bringing their worn-out clothes for recycling. **A good example would be, Renewcell, a recycling company based in Sweden, partnered with H&M and Levi's. They recently collaborated with Beyond Retro's parent company, Bank & Vogue, to recycle post-production and post-consumption waste.**

Therefore, achieving a circular model does not seem so far-fetched anymore. There are tangible and measurable solutions for the same. Increasing awareness among consumers with the help of marketing teams, designers ensuring minimal waste of resources, mindfulness among consumers, and heavily investing in R&D are some ways circular fashion models can be achieved.



THE MARKET

This section discusses emerging business models that challenge the exploitative fast fashion industry, and all other details of the sustainable fashion market.

- **WHO IS THE "SUSTAINABLE SHOPPER"?**
- **SUSTAINABLE BUSINESS MODELS**
- **THE SUSTAINABLE MARKET LEADERS**
- **USER & BUYER PERSONA**

Who is the Sustainable Shopper?

You? Us?

Brands can no longer disregard sustainability, especially when 88 percent of customers want brands to assist them in making a difference by being environmentally friendly.

When it comes to organizations that have been accredited to a sustainability standard, **although 37% of major corporations have done so, just 13% of small businesses can say the same.**

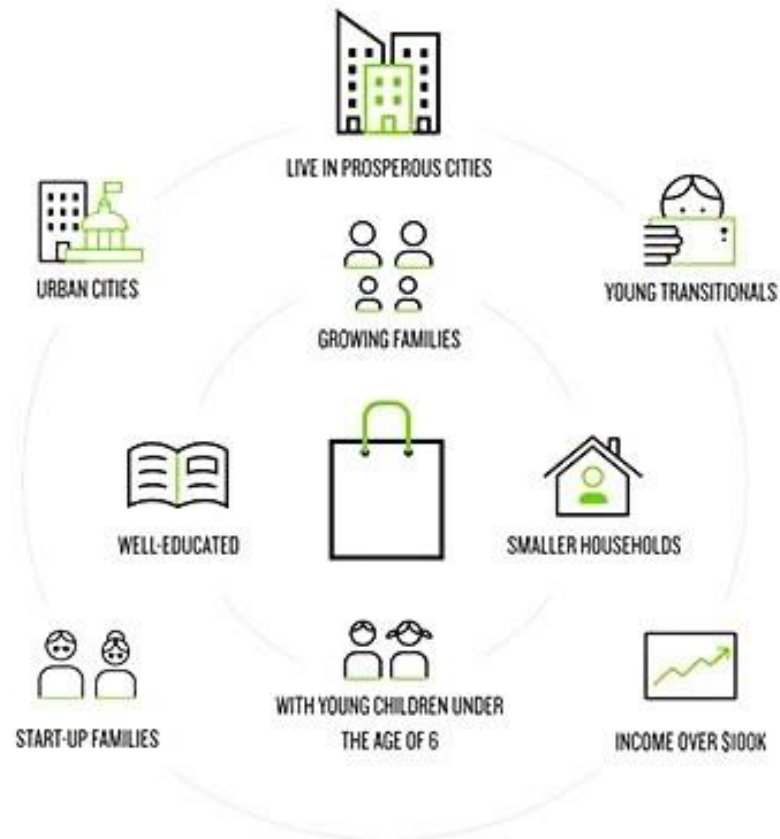
Large corporations appear to have a leg up on the competitors in this area, outperforming both small and medium-sized brands.

However, developing sustainable products and services isn't enough; you also need to advertise them to the appropriate audience. According to research, 66 percent of respondents feel that they would handle climate change more aggressively if brands offered alternative options.

According to all analysis, the buyer trend is shifting towards sustainable fashion. People began to choose more environmentally friendly options. Sustainability will become the essential criteria in customer behavior in the future, and dealing with sustainability will become a must.

Currently, the target audience for sustainable fashion is mainly between the ages of 18 and 45. Customers who live in Tier I and II cities are the most aware of and concerned about climate change. Consumers are also willing to pay more for environmentally friendly things.

The pandemic may have enhanced consumer awareness: 38% of those aware of fashion sustainability concerns only learned about them last year.



Source: American Research firm Nielsen

The youngest of our sustainable audiences, inspired Innovators are Gen Z and Millennials from urban and higher-education backgrounds. They prioritize innovation and forward-thinking policy as a collective.

Inspired Innovators, Gen Z, and Millennials from urban and higher-education backgrounds are the youngest of our long-term viewers. As a group, they value innovation and forward-thinking policies.

Early adopters are frequently motivated innovators ready to try out new ideas and goods. Furthermore, they are the most aggressive demographic in searching out sustainable businesses and are likely to boycott those that do not adhere to this model. They are somewhat outspoken and educated about environmental issues.

Sustainable fashion's customer base is continuously growing, and it will soon be the first choice for every consumer and the future of the fashion industry.

Sustainable Business Models

To promote sustainable consumption forms, several emerging business models challenge the prevalent ready-to-wear model: Resale, Upcycling, Rent-to-wear, Peer to Peer.

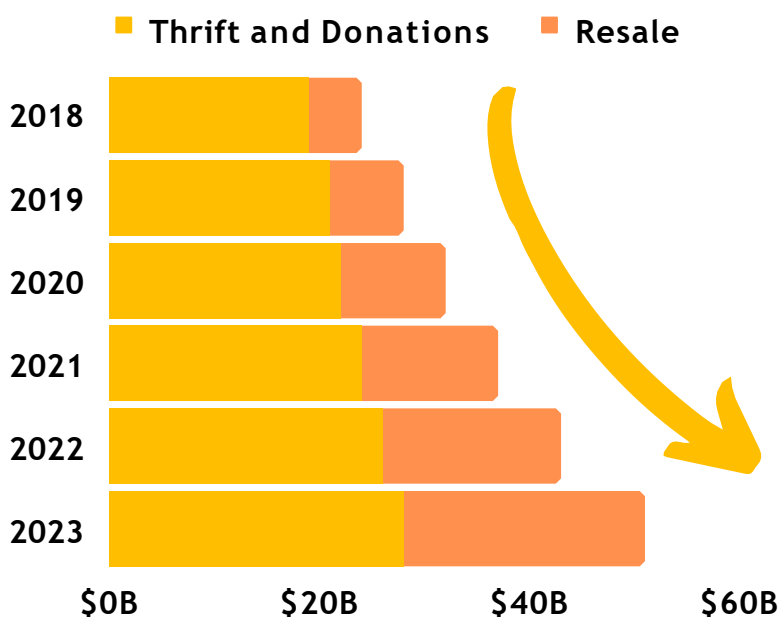
Resale Model

Resale has emerged as one of the most significant revolutions in fashion retail in recent years, appealing to a discerning customer who is increasingly worried about fast fashion. Offering circularity, reduced waste, and access to clothing at reduced prices, resale checks many boxes for today's consumer.

In its description of a hypothetical sustainable, Bain & Co. estimated that by 2030, Resale would account for 20 percent of revenue

It's no surprise that retail behemoths are fortifying their position in Resale on all ends of the market:

Gucci has recently ventured into the Resale domain with a premium consignment online store, and Levi's SecondHand is Levi's first foray into the resale market.



The Total Second-Hand market is expected to Double by 2023, since 2018, with Resale Sector driving the growth. The industry is expanding 11X faster than traditional retail and will be valued at \$84B in 2030.

Upcycling Model

According to Greenpeace, every year, a stunning 73 percent of recycled and donated clothing is sent to the dump or incineration. Clothing manufacturers are venturing into the Upcycling Fashion area due to the high expenses of processing used materials.

Upcycling is the repurposing of discarded items to produce more valuable products. Recycling is the process by which discarded goods are broken down into their raw elements to manufacture new commodities.

\$150M

**is the current
upcycling market
worth and is
progressively
expanding with
change in
consumer demand.**

Eileen Fisher's RENEW

**initiative accepts
used things and
either refurbishes
them or utilises the
resources to make
new products.**

In contrast to the traditional "take-make-waste" approach, upcycling focuses on establishing a circular economy in which fashion items are continuously reused.

Fashion retailers leveraged 'Take-back programs' to expand their customer base giving them an option to return used clothing in exchange for rewards.

Consumers enjoy trendier and more distinctive clothes than traditionally made apparel, providing consumers with new fashion to appreciate.

Rent to Wear Model



The 'Airbnb of Fashion' is quietly gaining ground in the fashion industry by selling subscriptions to rent rather than buy clothing.

During the epidemic, demand and revenues for fashion rental fell dramatically. By 2027, the fashion rental sector is expected to grow by 10% yearly to \$2 billion. According to Bain, by 2030, renting may contribute for up to 10% of luxury brand earnings.

YCloset, a Chinese fashion retailer, is considering a subscription rental model in which clients can choose from a wide choice of fashion items at no additional cost.

Peer to Peer Model

Of late, leading fashion rental platforms have functioned by stockpiling merchandise to rent out to subscribers. However, in recent years, a string of peer-to-peer startups have emerged across the globe.

P2P platforms bring together those who want to rent out their clothing to clients, leaving all the product listing, marketing, cleaning, and postage to users - and stepping in only to resolve serious issues. With no inventory costs, peer-to-peer rental startups can focus on streamlining costs and building immediate liquidity in supply.

Unlike traditional rental fashion firms, P2P platforms have prioritized the inclusion of mid-tier fashion brands and designers that include topical trends, "must-have" styles, and new designers.

According to "Rethinking Business Models for a Thriving Fashion Industry," a report issued by the Ellen MacArthur Foundation, **P2P rental services are 20% more sustainable than inventory-based rental models.**

Renters build connections and consistently rent from the same lenders over time, boosting app engagement. These platforms have a supplier retention rate of more than 90%, far greater than the capital-intensive Inventory models.

"It's very much a social network, which is something that no one's ever attempted before in the fashion rental space."

- Kabra-Davies

HURR collective, a leading P2P rental platform, owns no inventory and regulates the rental transaction between peers, taking a commission in the transaction. The P2P renting platform has firmly established itself as a viable alternative to rapid fashion consumption, providing consumers with sustainable options.

Sustainable Fashion Leaders

Levi's, Everlane, H&M, and Many More



A pair of denim jeans uses a lot of water, but Levi's new WaterLess collection uses up to 96 percent less. For this and all of its products, Levi's is committed to sustainability throughout the design and production process, including using 100 percent sustainably produced cotton and recycling old jeans into home insulation.

EVERLANE

Everlane blends sustainability and transparency by telling buyers the exact cost of each item and exposing the factories where the items are made. The firm cultivates strong ties with factory owners to ensure that staff and production follow Everlane's high ethical standards. Everlane also launched a clothing collection made from recycled plastic bottles and other repurposed materials.

pact

This Colorado-based family business sells certified organic and fair-trade clothing. From planting and harvesting non-GMO cotton to creating the final items, the entire supply chain is as sustainable and clean as possible, with techniques that use significantly less water than standard cotton. Many of Pact's products are manufactured from repurposed clothing and linens.

AMOUR VERT

To avoid squandering unsold items, this clothing company produces ensembles in tiny batches using ethically sourced fabrics. Amour Vert collaborates directly with mills to ensure that products are made using non-toxic colours and eco-friendly materials. For every item purchased, Amour Vert plants a tree. Furthermore, the firm is committed to zero waste and is always looking for new ways to recycle and reuse things.

Reformation

Reformation offers an explanation and score of its environmental footprint with each appealing piece to help customers understand its impact. The pieces are made with reused and sustainable materials in fair-pay environments. Reformation has been carbon neutral since 2015, and its manufacturing contributes to the preservation of deforested lands. Customers can also trade in their old garments for Reformation credit toward new things.






H&M is moving away from its fast-fashion beginnings with the Conscious line, composed of organic cotton and recycled polyester. By using eco-friendly materials and more sustainable production methods, the company hopes to reduce its environmental impact. H&M stores now offer customers the opportunity to recycle old clothing in exchange for a discount on a future purchase. H&M plans to use only sustainably sourced materials across the board by 2030.

User & Buyer Persona

What do some of our users look like?



Aparna Katiyar

 34 (GEN Y)
 Software Professional
 15-20 lakh per annum

LACK OF AWARENESS




- Knowledgeable about the fashion industry and its negative impacts.
- Less exposure to social media than Gen Z, but they're aware of sustainability practices followed by various brands.
- Willing to pay a premium for eco-friendly clothing.
- Lacks awareness about brands that are genuinely sustainable or transparent.

Tech

Internet ● ● ● ● ●
 Social Media ● ● ● ● ●
 Online Shopping ● ● ● ● ●



Manoj Singh

 50 (GEN X)
 Business Analyst
 35-45 lakh per annum

SOCIAL STIGMA




- Aware of the negative impacts of the fashion industry.
- Unaware of the sustainability practices followed by various brands.
- Negative sentiment towards recycled clothing due to social stigma.
- Would rather buy a brand new piece than used/refurbished pieces of clothing.

Tech

Internet ● ● ● ● ●
 Social Media ● ● ● ● ●
 Online Shopping ● ● ● ● ●



Amresh Mahto

 20 (GEN Z)
 College Student
 None

PRICE SENSITIVITY




- Aware of the negative impacts of the fashion industry.
- Aware of the sustainability practices followed by various brands.
- Passionate about environmental sustainability
- Cites high prices as a barrier.

Tech

Internet 
Social Media 
Online Shopping 



Mayank Yadav

 26 (GEN Y)
 Freelancer
 10-15 lakh per annum

INCONVENIENCE

- Aware of the negative impacts of the fashion industry.
- Aware of the sustainability practices followed by various brands.
- Cites higher recycling effort as a reason to not buy eco-friendly items.
- Does not see the value in taking up the sustainability initiative

Tech

Internet 
Social Media 
Online Shopping 



NEW NORMAL

This section discusses the development in technology in the fashion industry post-covid, some survey results on consumer sentiments, and the challenges being faced by several stakeholders.

- **POST-COVID DIGITAL LEAP**
- **SURVEYS ON CONSUMER PERSPECTIVES**
- **CHALLENGES**

Post-Covid Digital Leap

Market Shift, Augmented Reality, and Much More

For all of us, the post-pandemic period served as a type of "green wake-up call." What we've seen has shown us that everything in nature is interrelated, and this is something we must remember going forward. Consumers today want assurance that the items they buy are manufactured responsibly at every stage of the manufacturing process, from the raw ingredients to the finished product," says Andrea Rosso, Diesel.

There is still a risk that sustainability may go off agendas in the fashion sector as firms focus on survival, striving to safeguard people, currency, and liquidity. These times, on the other hand, may give a chance for businesses that have not yet made sustainability a priority to do so.

Zalando, a European online fashion platform, has shown evidence of the COVID-19 pandemic's potential positive impact on the market for sustainable clothes. Zalando said that more customers are choosing sustainable fashion than in the past, with nearly 30% of its total customers opting for it.

Market shift

Consumers have turned to e-commerce as a result of the restrictions. Many merchants had to change their business models as well. Others were reaching out to individuals who already had e-commerce traction by offering community-building virtual experiences.

The workout-from-home material in Nike's fitness app boosted e-commerce sales. In the first quarter, the number of users increased by 80%, resulting in a 30% increase in digital sales. While buyers picked up online orders from fashion retailers, fashion companies with complementing digital and physical channels benefited.

Augmented Reality

Augmented reality (AR) is defined as an enlarged representation of the real physical environment created with the use of applied technology and digital visual elements, music, or other sensory stimulation.

Its capacity to visualise fashion and cosmetic products in real time is revolutionising every industry. AR can be used to provide users with a more engaging and interactive experience.

Zara

recently used augmented reality to promote its new collection, including a live runway where goods may be displayed.

Artificial intelligence

A large number of retailers are using this format. With social distancing becoming important, the growing appetite for AI makes a lot of sense

It is impossible to integrate human interaction into the digital experience. Artificial intelligence (AI) is likely to play an essential role in boosting conversion, giving customers the prospect to assess virtual try-on powered by AR.

PCs and applications will supersede In-store beauticians and shopping aides to assist consumers with as-sembling a look or complete buying.

It is not a choice between economic and environmental sustainability in the framework of COVID-19. Businesses must make the transition to more sustainable business models and supply chain management in order to thrive.

Surveys on Consumer Perspectives

People's Voice?

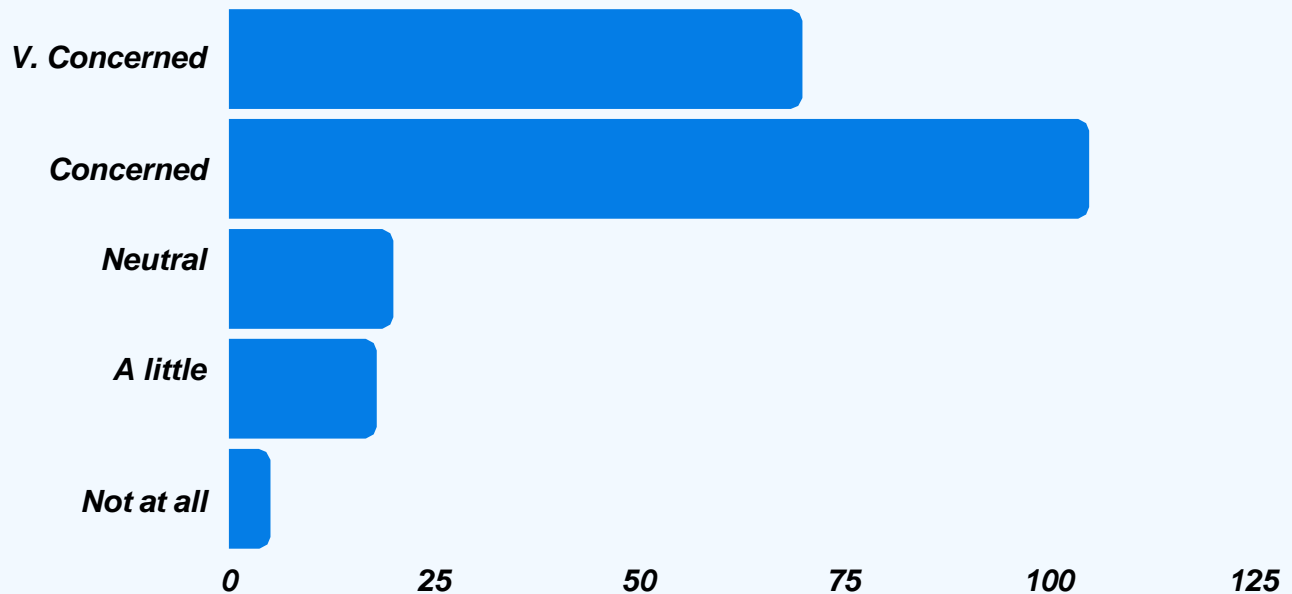


Fig: In general, how concerned are you about environment and issues surrounding workers' rights?

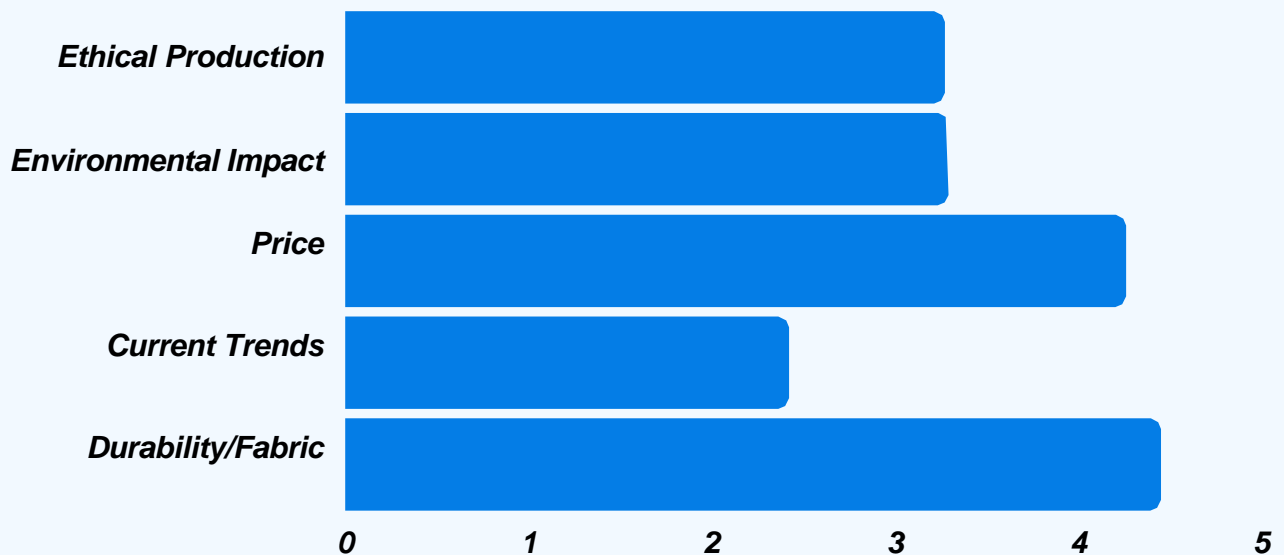


Fig: Priorities of Considerations when shopping for fashion products.

Source: Online Public Surveys

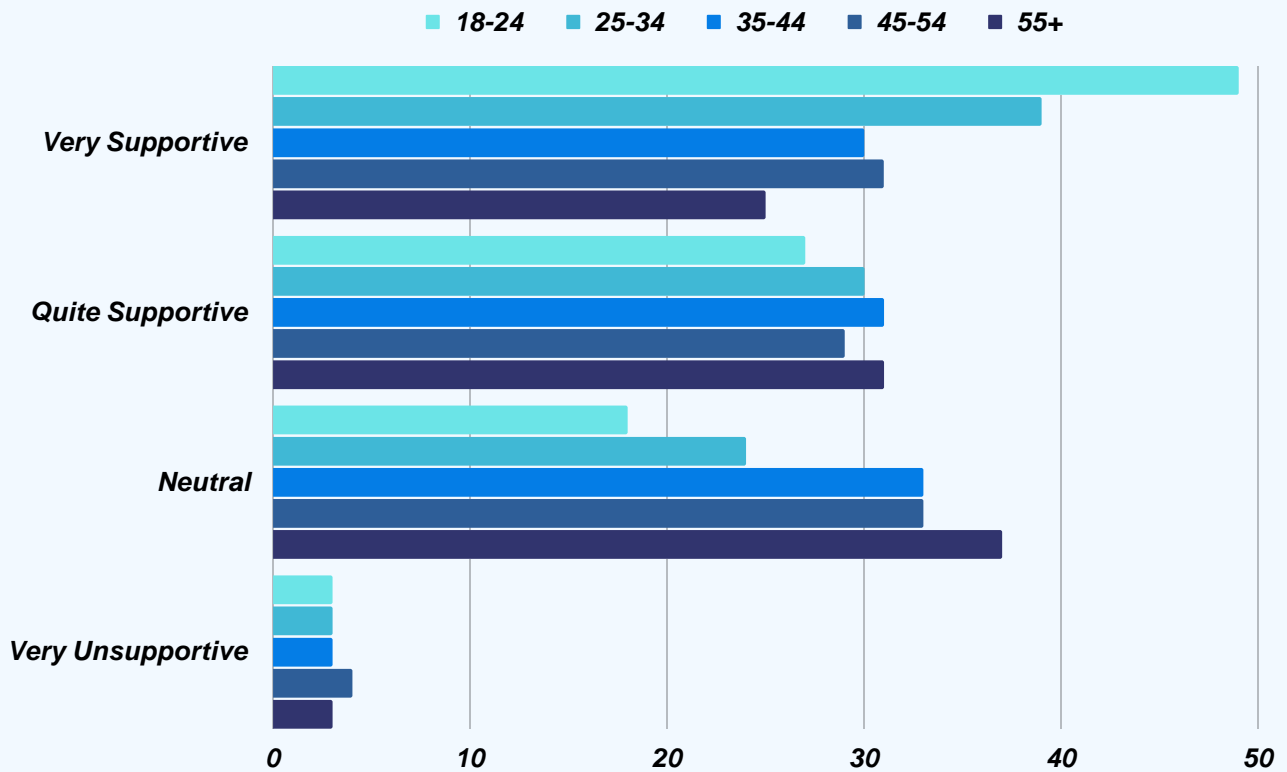


Fig: How supportive are you of sustainable fashion?

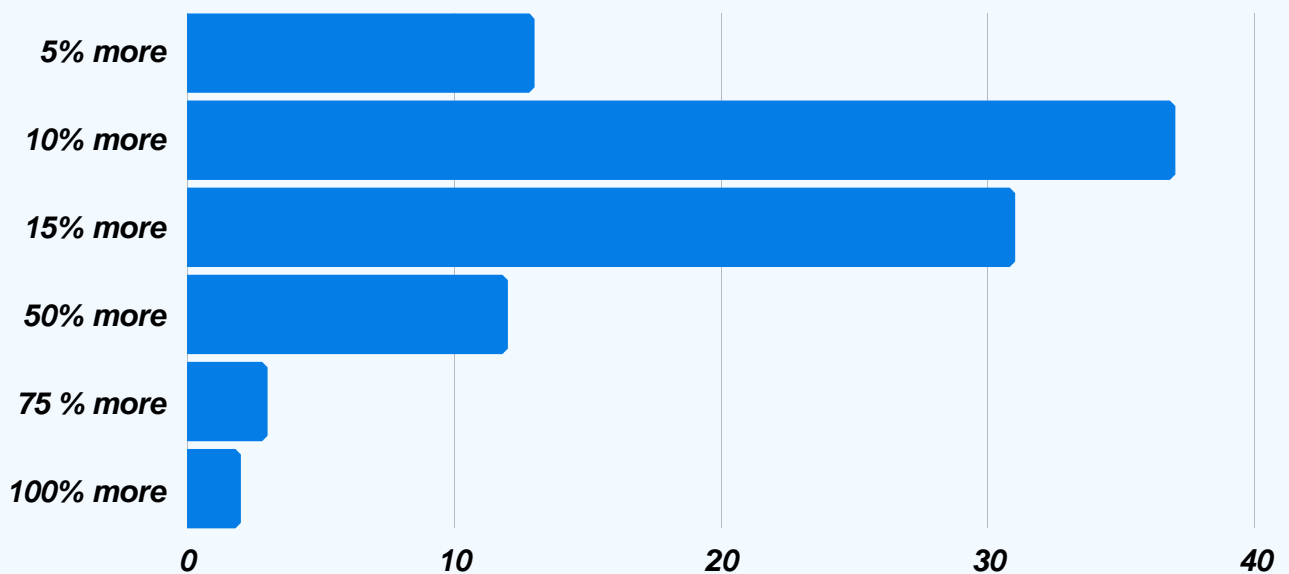


Fig: How much more are you willing to pay for sustainable fashion than normal fashion?

Challenges

Solvable?

01

Overcoming social stigmas

There is an overall negative sentiment towards clothes that are recycled/upcycled, especially amongst the older generation. Moreover, people tend to suspect such garments' quality, longevity, and hygiene. Consumers prefer holding on to their clothes for more extended periods or recycling them for a refund instead of consuming refurbished clothes.

02

Valuable garment out of used fabric

Most designers believe that they find it much easier to work on a fresh piece of fabric than a used garment that is stained, stretched, or marked. Because most garments are made from a mixture of materials, recycling becomes more challenging for designers. This also commands high prices for recycled clothes, a challenge for the consumers.

03

A complex web of logistics

Circular models require an understanding of economics, making the consumer wonder if it is worth the time and energy. Some other challenges include the need for technology to create sustainable practices that are more transparent and the complexity of logistics such as laundry and sustainable delivery.



ANALYSIS

This section discusses propositions on how fashion brands can create a more sustainable business model, while still remaining profitable by analysing each component of the life-cycle of a garment.

- **DRAWING INDUSTRY PARALLELS**
- **MANUFACTURING PROPOSITIONS**
- **SALES-DISTRIBUTION PROPOSITIONS**
- **THE METAVERSE MINDSET**

Drawing Industry Parallels

Cosmetic & Footwear Industry

What do we mean by Sustainable Cosmetics?

In modern marketing, the term "green" has evolved to mean "organic" or "healthy." However, the field of green cosmetics still needs clarification. "Green" and "sustainable" cosmetics are products made with natural components derived from renewable raw materials in the cosmetics business.

Hurdles

While conscious shopping is becoming more accessible, it is sometimes prohibitively pricey for many people.

Furthermore, there is a conundrum around the perception of sustainable products since they are frequently labeled as uninteresting and useless. Many believe that 'good-for-you' and 'good-for-the-planet' products are mutually exclusive.

Way Forward

To bring sustainability into the mainstream, items must be designed with both cost and utility in mind. Customers care about sustainability, but they are unwilling to give up anything to make that option.

Transparency, product education, and minimizing the negative consequences of 'Green Washing' will be critical in assisting more customers in transitioning to eco-conscious alternatives.

Industry Example

MamaEarth, a leading sustainable Cosmetics brand, combines the best of science with Ayurveda to create dermatologically certified natural products, via its need-gap analysis, it recognizes the altering consumer appetite and offeres a solution to meet the expanding expectations of conscientious buyers.

What do we mean by Sustainable Footwear?

Sustainability in the Footwear industry, as defined by FDRA, refers to the design, development, manufacturing, and distribution of shoes that minimize negative environmental impacts and conserve energy & resources. Furthermore, it is safe for employees, communities, customers, and economically sound.

Hurdles

Primary roadblocks identified in this market are the lengthy production methods and expensive materials required to manufacture sustainable footwear compared to their conventional counterparts.

However, Grand View Research notes that technical developments in sustainable fabric recycling are anticipated to decrease the price of procuring raw materials.

Way Forward

Traditionally, shoe manufacture depended heavily on chrome-tanned leather, but that has changed in recent years with the introduction of vegetable-tanned leather made from vegetable-based tanning agents.

Vegan leather is a good substitute for chrome-tanned leather, primarily composed of polyurethane – plastic-based material; however, plants such as cactuses and pineapples are being employed to develop eco-friendly vegan leather.

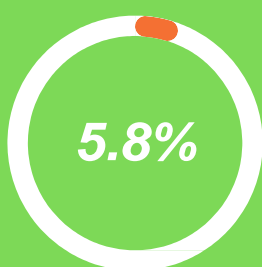
Industry Example

Adidas is creating, and testing footwear made entirely of recyclable materials. Furthermore, the firm has officially vowed to use only eco-friendly materials in their goods by 2024.

Reebok has announced a running sneaker that incorporates plant-sourced instead of petroleum-based materials.

KEY LEARNINGS

Understanding the dynamics of footwear and cosmetics industries, we observed that the key barriers to expansion in both industries have been the prohibitively pricey materials, minimal transparency in the supply chain, and a lack of product knowledge.



The Expected CAGR for Sustainable Footwear industry, with the industry being sized at **\$7.5 Billion in 2019.**



The Annual Growth Rate for Sustainable Cosmetics Industry, the industry is expected to reach **\$25.11 billion by 2025.**

Taking a cue from the aforementioned industries, the clothing industry suffers a similar set of issues.

Learning from these setbacks, we understood that transitioning to a less expensive raw material alternative, educating customers, and incorporating transparent sustainable practices will assist enterprises moving into the sustainable sector in making a splash.

Other strategies include using 'Re-E-commerce to extend the lifespan of fashion items.

Manufacturing Propositions

Raw Materials, Sustainable Packaging, 3D Printing

Using sustainable materials for clothing

Apart from consuming less and recycling, brands can utilize some natural or artificial eco-friendly substitutes to the current raw materials that could help them save the planet from the adverse effects of the fast fashion industry.

Self Healing Textiles

The molecules in self-healing textiles associate to form a super molecule rubber which contains cross-links and chains. Thus they can be stretched and return to their original structure, and healing is done. A good example is regular clothing fibers coated in Squid Ring's Teeth proteins. The unusual molecular structure of these proteins accounts for their use.

Pinatex

A vegan-friendly fruit leather made out of cellulose of the pineapple leaves. No harmful chemicals are used, and it requires less water too. The leftover leaf waste is then recycled and used for fertilizer or biomass.

Econyl

This innovative project creates nylon from waste materials like industrial plastic old fabrics. Econyl also closes the loop on nylon manufacturing, which regenerates plastic already in circulation, which means no new resources and no waste. But econyl sheds microplastics, which could be a dealbreaker, but it is still a step forward.

Tencel

This fabric uses wood pulp to create bio-fibers. These are entirely compostable and biodegradable, enabling them to return to nature when they're finished with. The material is high-quality, breathable, and adsorbent.

Sustainability in Packaging



Eco packaging, is not all about the environment. It should also take into account economic and social considerations. Plant-based packaging, for example, may appear to be a promising choice. However, removing threatened rainforests to grow crops is a common occurrence.

The economic aspect of green packaging must be considered. It must be cost-effective as compared to standard oil-based/single-use packaging choices.

Sustainable Design in Packaging

In simple words, this means designing your packaging in a way such that it can be repurposed. A good example would be the shopping bag from H&M that transforms into a hanger.

Not just ignoring plastic bags, can work, but recycled paper bags could also be used, as H&M is using 80% recycled paper bags.

IKEA has started to invest in biodegradable types of packaging made from mycelium fungus. Polylactic acid (PLA) is an alternative for plastic packaging and is made from fermented plant starch.

Value engineering is the process of completely rethinking packaging with the goal of saving money - and believe it or not, the majority of money may be saved by using less packaging.

3D Printing

3D printing uses computer-aided design to manufacture an item layer by layer in a very exact manner. Plastics and metal powders were initially utilized as feedstock, but resins, carbon fibers, and even graphite and graphene are now commonly used.

Why 3D Printing?

The process has several advantages over traditional manufacturing methods: quick prototyping increased productivity and created one-of-a-kind goods. It can also cut production costs and carbon dioxide emissions and reduce energy usage during a product's lifetime. Before producing the initial model, many product design trials and errors can be made digitally with 3D printing.

For example, a Michigan Technological University study found 41-64% less energy was used to 3D print an item than manufacture it overseas and ship to the US due to fewer materials required and a reduced need for shipping.

It is also feasible to reduce carbon dioxide emissions. For starters, because printing is frequently a more efficient process, the finished items use less energy to make, especially when integrating elements.

The future of 3D Printing in Manufacturing

Manufacturing in the future will most likely be a mix of traditional and 3D printing processes. The latter is more resource-efficient and allows for more efficient and unique designs, reducing production costs. Traditional manufacturing practices are also greener, cleaner, and more sustainable; yet, there is still space for improvement.

The Metaverse Mindset

Testing Opportunities in the Metaverse

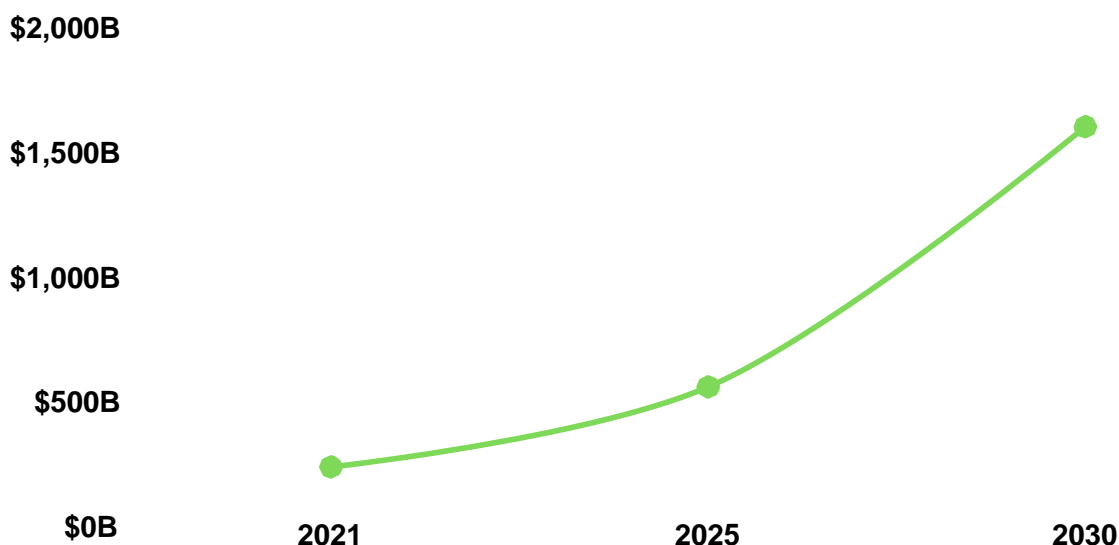
Digital environments evolve from linear, transaction-focused areas to multi-dimensional and immersive virtual worlds as they mature. Virtual assets in the form of Digital fashion and NFTs provide customers new opportunities to purchase, exchange things, and live their multiversal identities.

Final Remark

To believe that the fashion industry can innovate its way out of a long-standing environmental challenge is utopian but ultimately short-sighted. Although digital fashion is "sustainable," virtual clothing does not serve as a functional alternative.

Digital clothing and accessories are simply a supplement to our overflowing corporeal closets as long as our actual bodies take precedence over a virtual equivalent. No matter what virtual worlds we plug into, the physical world continues to force its obligations on us. We still have to get dressed!

The Metaverse market may reach \$1542.9 billion in 2030 vs. \$148.5 billion in 2021 representing a compound annual growth rate of 41.7%.



Wait, but what is Metaverse?

In layman's terms, the Metaverse is an immersive virtual environment wherein you have a digital character known as an 'avatar' that can seek out experiences comparable to those found in the real world.

Digital fashion has emerged as a lucrative revenue stream. **The Metaverse could help luxury brands increase their total addressable market by over 10% by 2030**, resulting in an additional \$50 billion in sales. Profit margins are even more intriguing, with 75% of revenue potentially meeting EBIT.

Furthermore, **digital fashion is intrinsically sustainable, requiring 97 percent less carbon and 872 less gallons of water to manufacture than a physical garment**. At the end of the season, no overstock must be discounted, donated, or burned.

The fashion industry is beginning to plunge into the so-called Metaverse, with Ralph Lauren, Gucci, and Balenciaga organizing ventures like 3D virtual runways.

DIGITAL FASHION METAVERSE

METAVERSE MINDSET



Metaverse is an immersive virtual environment wherein you have a digital character known as an 'avatar' that can seek out experiences comparable to those found in the real world.

SUSTAINABILITY ANGLE

Digital fashion is inherently sustainable. Furthermore, there is no overstock at the end of the season.

97%

less Carbon than
physical garment

872

fewer gallons of water
than a physical garment



THE FASHION INDUSTRY IS MAKING A FORAY IN THE METAVERSE

Ralph Lauren, Gucci, and Balenciaga charging real money for digital-only apparel and organising virtual ventures like 3D virtual runways

DISTRIBUTION

Digital fashion has emerged as a lucrative revenue stream. The Metaverse could help luxury brands increase sales by \$50 billion.



Increase in **Total Addressable Market** (Luxury Brands) by 2030



EBIT (Earnings Before Taxes and Interests) Profit margin

**DIGITAL FASHION IS "SUSTAINABLE"
BUT IT DOES NOT SERVE AS A
FUNCTIONAL ALTERNATIVE.**



CONCLUSION

This section analyses the various stakeholders in our model, the future of fashion sustainability, and how it is a win-win opportunity for both the planet, and the businesses.

- **STAKEHOLDER ANALYSIS**
- **FUTURE SCENARIO**
- **SUSTAINABLE FASHION AND BUSINESSES**

Analyzing the Stakeholders

Consumer, Retailer, Manufacturer, Government

A buyer can impact the sustainable fashion industry by properly researching sustainability practices in brands before shopping to reduce carbon footprints during clothes shipping. Switching to natural fabrics and using alternatives like organic cotton, which are more sustainable. Shopping locally can help reduce carbon footprints due to shipping clothes across countries.

As laundry wastes are responsible for 35% of all the microplastics in the ocean, consumers must practice washing less and air-drying clothes whenever possible.



Consumer



Retailer

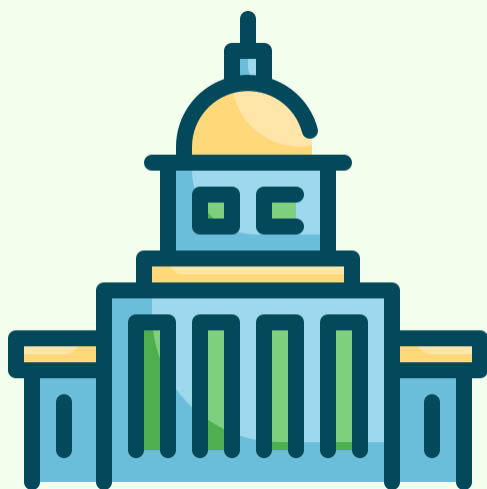
The role of a retailer is not only to sell sustainable clothing but also to spread awareness about the model among its consumers through its marketing. Take-back programs, store credits, discounts, and collaborations are ways retailers can encourage sustainability among their consumers. They can incorporate recycle/upcycle models to support circular economy. The R&D sector of many businesses is now investing in material innovations to come up with the most eco-friendly raw materials.

Designers have a social responsibility towards the garment workers and must demand transparency in the way products are channeled through their production pipeline. Manufacturers must fulfill their ecological commitment by the mindful use of land, water, and raw materials. Designers must use their creative freedom without causing too much waste of fabric, which is economically inefficient for the company.

By leveraging a sense of exclusivity, designers can alter the perception of their consumers by conveying sustainable values through their collections.



Manufacturer



Government

Global governance must develop regulatory measures that encourage corporate social responsibility by incentivizing corporations to adopt sustainability. Policies must hold industries responsible and promote sustainability among customers by educating them and providing subsidies. According to Textiles 2030, signatories pledged to reduce their environmental footprints by 2030 to reach specific goals in the UK. The ecological cost of producing textile products was proposed to be included in the item's market price cost.

Sustainable Fashion and Businesses

A Win-Win Opportunity?

There are multiple reasons to support sustainability in fashion, like the ones discussed above which stem purely from a moral and collective responsibility towards our planet. But businesses need to worry about more than just the planet, i.e., their profits. Fortunately, there is also an unexplored economic potential in the circular economy.

There is a potential growth of 2.3 billion dollars in the future of the circular fashion economy, according to a report by Lablaco and Vogue. Most consumers see sustainability as a top corporate social responsibility. A study finds that environmentally-aware customers are willing to pay a 10-20 percent premium for sustainable fashion. And the highest willingness to pay comes from an audience aged between 16 and 25.

The circular mindset also allows you to build excellent customer relations. Repair and recycle initiatives are tactics for building customer loyalty and ensuring post-sale relationships. It not only gives your customers a reason to stay in touch, but it also increases the probability of future purchases or recommendations. Patagonia is an excellent example to represent this circular mindset-customer relationship.

What is the role of Social Media?

The findings suggest that, in addition to enhancing supply chain transparency and brand or theme recognition, social media educates and engages the youthful and ethically interested target population. Furthermore, because users are empowered to share their experiences, social media provides a platform for organisations to manage their relationships and social interaction, resulting in a higher degree of trust.

What Does the Future Hold?

A Ray of Hope?

Due to the rising global warming and changing climate, all the governments and organizations agreed that sustainability is essential to reach carbon neutral and save the planet from climatic catastrophe. People worldwide are also very concerned about this threatening impact and have made their minds sustainable. Also, consumers have begun questioning whether or not companies source their raw materials and labor ethically.

The fashion industry is a significant contributor to the global economy, with around \$1 trillion annual revenue. However, it is the most resource-consuming industry as well. Meeting today's requirements while not keeping the needs of future generations at stake is what sustainable Fashion is all about. Fast Fashion is moving to Sustainable Fashion. Sustainable Fashion is a necessity.

Currently, sustainable Fashion is a new concept for consumers. Consumers hesitate to buy sustainable clothing, not because they don't know its benefits, but because the brands are not transparent about their sustainability practices. Moreover, due to less production and demand, the prices are comparatively higher than fast fashion products.

The sustainable movement has already begun. Brands like Adidas, Veja, G-star raw have already developed recycled products from plastic is thrown into the oceans. And some of the biggest brands like H&M, Zara, Levi's are early adopters.

Not only brands, governments, and organizations worldwide recognize the need for sustainability. **Reducing overproduction in half from where it is now would make a major difference in the industry's carbon footprint.** In the future, transparency in brands will establish trust among consumers.

CONCLUSION

According to a report by McKinsey, under the present trajectory, the fashion sector would fail the 1.5°C pathway by 50% if current trends continue and will only reduce emissions from incremental growth. To automate harmful activities and attain sustainability, brands need to innovate.

According to a report by McKinsey, 55 percent of all levers in the sustainable model will not prove to be negative but will help save money. **Though they require initial up-front investments, they are positive in terms of payback.**

When it comes to the market size of sustainable fashion, the market will undoubtedly expand significantly. According to the data, **the global ethnic fashion market reached a value of \$6.35 billion in 2019 and is expected to grow to \$15.17 billion by 2030 at a CAGR of 9.1%.**

In upcoming years the challenges for brands would be to market sustainable fashion to create customer trust. Brands should innovate ways to cut down the production cost. Sustainable fashion will be the new normal in the years to come.



THE FUTURE OF SUSTAINABLE FASHION

The fashion industry is one of the major polluting industries in the world and accounts for almost 8-10% of global carbon emissions, and about 20% of wastewater.

The sustainability movement has already begun. This year, following the vows of brands like Gucci, Versace, and Burberry, London fashion week prohibited the designs made from animal skin.

The future of sustainability involves:

.....> Resource Efficiency> Low Carbon Emissions
.....> Profitability> Social Welfare

In the Paris Agreement, the United Nations said that every country should achieve carbon neutrality by 2050.

88%	respondents agree that pollution reduction is priority
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66%	customers indicate that sustainability is more vital to them post covid
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"There is a silver lining for the environment among the shock and uncertainty that the fashion sector is experiencing during the COVID-19 crisis: two-thirds of questioned customers indicate that it has become even more vital to prevent impacts on climate change."

-McKinsey