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**IMPACT OF FAST FASHION ON SUSTAINABILITY
AND THE CIRCULAR ECONOMY**

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Abstract

This research paper investigates the role of fast fashion companies in the global sustainability crisis and examines how selected brands are adapting to the principles of the circular economy. The study evaluates environmental degradation practices commonly associated with the industry. It also examines specific companies and highlighting their efforts toward sustainable production and ethical operations. The study calls for fast fashion to change its ways and move towards sustainable practices with an emphasis on durability, recycling, and ethical sourcing.

Key words: fast fashion, circularity, environment, circular economy, sustainability



1. Introduction:

Cheap and trendy clothing has been mass-produced to fill global fashion consumption with the trouble-fast fashion industry. This mode of rapid production, however, has attracted numerous questions concerning environmental sustainability, labour exploitation, and resource depletion. Mass production, cheap materials, and fast product life cycles all generate huge amounts of waste and foster patterns of unsustainable consumption (*Ellen MacArthur Foundation, 2017*). It is imperative to address these issues, since the fashion industry happens to be among the top pollution industries worldwide, with a rising textile waste level, carbon footprint, and water usage (*Niinimäki et al., 2020*). Sustainable practices can design even more good from circular economy concepts of resource efficiency, waste reduction, and longevity of the product in comparison to cheap fast fashion alternatives. The historical linear economy was based on a "take-make-dispose" philosophy, which in turn generated a lot of waste; the circular economy now favours reuse, recycling, and sustainable production practices (*Geissdoerfer et al., 2017*). Clothing production was relatively slow before the Industrial Revolution, involving local techniques and labour and sustainable materials, but now mass production and disposable fashion have become threats to the environment. The contemporary fast fashion business rose to prominence towards the close of the 20th century, but chiefly related through Zara and H&M who quickly produced and provoked new collections to penetrate markets while also swiftly established international supply chains; thus created primarily fashionable waste due to their low quality-handling and constant changing trends (*Bick et al., 2018*).

This study seeks to examine the environmental effects of fast fashion and identify how the circular economy can be used to address these issues. Major goals include:

- To critically assess the environmental effects of fast fashion and determine critical sustainability issues facing the industry.
- To discover the possibility of circular economy models in reshaping the fashion industry towards increased sustainability.
- To compare Indian and global sustainability initiatives in the fashion industry and evaluate the regulatory, economic, and cultural impediments to circularity.

Nicknamed as fast fashion titans in the international arena, these industries include Shein, Zara, and H&M, all responsible for causing an enormous mass of waste in textiles with the most negligible number of rejected clothes being sent for recycling. India, home to a vibrant past, rich historical traditions of indigenous crafts, and sustainable methods, eventually has succumbed to fast fashion, urbanization, and evolving consumer mind sets (*Sharma and Joshi, 2022*). While West economies continue to invest in circular fashion, India faces challenges in the terms of poor waste management infrastructure provided and lower levels of consumer awareness towards sustainable fashion. Now, the circular economy presents a new approach to the so-called existing "take-make-waste" linear system using recycling, reusing, and effective resource efficiency. This paper focuses on analysing how companies can integrate the principles of a circular economy in fast fashion along with a cross-global assessment and Indian initiatives towards sustainable fashion.

2. Literature Review:

2.1 Environmental Impact of Fast Fashion:

The last two decades have seen the fast fashion value chain becoming much faster and shorter. High-speed production, media and celebrity trend-oriented design, and low-cost business models were all sources of profit thus businesses adopted them quickly. Unfortunately, serious consequences are going to be felt by the environment: fashion now makes the most carbon emissions, more than all global flights and maritime shipping, counting up to about 10 percent of global carbon emissions every year (*United Nations Environment Programme, 2019*). The coal-hungry processes of textile production and those plants where the production is very reliant on coal contribute much in forming emissions and increase the carbon footprint of the industry (*Niinimäki et al., 2020*). Water consumption is another major issue. It takes 2,700 liters to produce one cotton shirt – that's how much a person drinks over 2.5 years (*WWF, 2013*). Moreover, the textile dyeing and finishing processes generate almost 20% of the total industrial water pollution due to the discharge of untreated wastewater into lakes and rivers (*Sljivo & Brodar, 2023*). In countries like India and Bangladesh where environmental laws are poorly

enforced, the contaminated water would damage the ecosystems and environments surrounding the textile centres (Claudio, 2007).

Further exacerbating the problem is an increased use of synthetic fibres. Polyester, the most common source of over 60% of the fibres for apparel worldwide, is produced from petroleum, which creates plastic waste (Napper & Thompson, 2016). Millions of microfibers escape with every wash cycle of synthetic garments into water bodies which eventually make their way into oceans and enter the marine food chain via marine life (Browne et al., 2011). Waste generation is another major problem. Globally, in the year 2015 alone, 92 million tonnes of textile waste were generated and plenty went to landfill (Ellen MacArthur Foundation, 2017). Today however, even as the percentage of recycled clothing rises, just 1 percent of used clothes have so far been recycled into new clothes, and the remainder is either down cycled or wasted (Textile Exchange, 2021). In the USA, for example, about 85 percent of textile waste is incinerated or disposed of within a landfill, where it emits toxic gases and contributes to climate change (EPA, 2019). In addition, the demands to constantly come up with new lines, in some cases as high as 52 "micro-seasons," have added strain on workers and the environment (Joy et al., 2012). Such fast-race cycles promote the throwaway culture, which works counter to ethical consumption.

2.2 Circular Economy as a Solution:

The circular economy (CE) paradigm stands in direct opposition to the linear "take-make-dispose" one as it shares a focus on resource efficiency, product longevity, and closed loops. The fundamental tenets of the CE within the realm of fashion are the designing out of waste, the maintenance of materials in use as long as possible, and the regeneration of natural systems (Ellen MacArthur Foundation, 2017). Second-hand American sites such as ThredUp, Poshmark, and Vestiaire Collective have become very popular for allowing the buying and selling of second-hand clothing, which in turn extends the lifespan of apparel (Brydges, 2021). Another American service, Rent the Runway, delivers high fashion at an affordable price while putting an emphasis on reuse, especially with regard to occasion-wear garments typically worn just once or twice (Lang et al., 2022). Upcycling as the appropriate practice has become a major strategy. The Re/Done and Beyond Retro brands transform vintage or disposable materials into new fashion, thus cutting

down on virgin material use. Start-ups from India: Waste and Pomogrenade, upcycle scraps that the factories discard into collections that are trendy while being sustainable style statements (Mukherjee 2020). On-site waste conversion into usable fibre is transforming from a manufacturing standpoint using technologies such as chemical recycling of polyester and mechanical recycling of cotton. Advanced industrial solutions capable of sorting blended fibres that have withstood recyclability challenges are under development by Worn Again Technologies and Infinited Fiber (Sljivo & Brodar, 2023). High costs combined with technical trades make it difficult for more extensive application. Some fashion companies currently test the waters regarding circular design strategies. Patagonia promotes repair and reuse through its Worn Wear program, while Move to Zero Nike employs recycled materials to make new products. H&M's Conscious Collection and the in-store Loop recycling machine mark a few of the baby steps taken toward CE, but critics argue these types of initiatives largely constitute "greenwashing" due to their limited scope and transparency (Niinimäki et al., 2020; Fashion Revolution, 2022).

2.3 Global vs. Indian Scenario:

2.3.1 Global Context:

Globally, regulations are integrating sustainability into fashion brands. The EU's 2022 Strategy for Sustainable and Circular Textiles constitutes an extensive program with binding environmental design requirements that aims at the banning of destruction of unsold garments and encourages Extended Producer Responsibility (EPR), thus giving brands some measure of control over post-consumer waste (European Commission, 2022). An example of this is the French 2020 law against waste, which now imposes donation and recycling rather than destruction of unsold clothing items. In America, while limited federal legislation exists, corporate accountability and state-based initiatives come into play. Through its waterless technology, Levi Strauss has reduced water consumption in the making of denim by more than 90% (Levi Strauss & Co., 2021). Others, such as Stella McCartney, have committed to sourcing materials through zero deforestation and animal-cruelty-free methods, with emphasis on environmental and ethical responsibility. Historically linked with exclusivity, handcraftsmanship, and limited production, luxury fashion brands such as

Louis Vuitton (LV) increasingly adopt mass production models, frequently outsourcing to cheaper economies such as China. This approach maximizes profit margins and addresses rising global demand, but ironically makes luxury an aggravator to the fast fashion conundrum. Louis Vuitton, which is owned by LVMH (Moët Hennessy Louis Vuitton), has traditionally had an air of elitism. But in the last ten years, growing consumer demand for luxury, particularly among millennials and Gen Z, has put pressure on brands to increase production and bring out more frequent collections. LV now drops multiple times a year, fuelled by seasonal collections and celebrity collaborations, which is the same pace of operation as fast fashion brands such as Zara and H&M (Joy *et al.*, 2012).

Much of LV's leather products and accessories are actually produced in China, Vietnam, and Bangladesh these days, famous for their lower costs due to cheaper manpower and relaxed environment regulations (Lundblad & Davies, 2016). Such a globalization of its supply chain is not only doing away with luxury brands' trademark artisanal façade but, more importantly, poses some legitimate concerns over work exploitation and degradation of the environment.

In addition, in contrast to high-street fast fashion, which is driven by price, fast luxury is sustained by brand desirability and consumer demand. However, the environmental price is still high. LV has been criticized for excess production, incinerating or destroying unsold stock to preserve brand scarcity, instead of donating or recycling it. Burberry (another LVMH rival) destroyed more than £28 million worth of products in one year, according to a 2018 BBC investigation, reflecting a wider industry issue (BBC, 2018). Although LV has introduced some efforts such as its "Life 360" sustainability plan—100% of raw materials responsibly sourced by 2030—the magnitude and speed of their actions fall behind the rate of consumption they encourage. Critics say these initiatives are nothing but greenwashing unless supported by open reporting and fundamental changes in business models (Turker & Altuntas, 2014). The merging of luxury and fast fashion has produced a sector commonly referred to as "fast luxury," which has high price points but quickens production and consumption timelines. It is by its nature an unsustainable model, one that compromises both the historic values of craftsmanship and the tenets of the circular economy. Although luxury players such as LV have the resources and heft to lead sustainable innovation, too many are still most

interested in profits over the planet. Large luxury brands are also migrating to the resale and rental market. Gucci partnered with The RealReal, and Burberry began refurbishing their surplus stock to promote waste prevention, turning their back on a previous practice of burning unsold items that became a scandal generating public outrage in 2018.

2.3.2 Indian Context:

India represents a stark contradiction. On the one hand is the strong heritage of eco-friendly textiles like khadi, handloom, block-printing, and natural dyeing, which are low-impact by definition and beneficial to local artisan communities (Mukherjee 2020). Then, there is the other side, where the fast fashion sector has taken an upswing with the increasing middle class, urbanization, and the influence of e-commerce and online platforms (Saxena & Khandelwal 2019). This has led to new international players like Zara, H&M, and Shein coming with a bang in the Indian metros and setting the tone for the purchasing behaviour of the youth. Myntra, India's biggest fashion e-commerce portal, has been at the centre of shaping India's fast fashion space. Flipkart-owned, and by extension Walmart, Myntra has revolutionized the Indian consumer market by providing affordable and fashionable clothing. While this has brought economic gains, it has also brought massive environmental problems. Myntra's business model is characterized by fast turnaround times, regular product drops, and fast inventory cycles. The company procures most of its products from local suppliers, most of whom have informal labour practices and unsustainable production conditions (Khurana & Tewari, 2021). Textile units in India, especially in clusters such as Tiruppur and Ludhiana, are major contributors to water pollution and resource depletion, as per a 2022 report by the Centre for Science and Environment (CSE, 2022). In addition, part of Myntra's success lies in "discount culture." Regular sale campaigns such as the "End of Reason Sale" invite customers to purchase more than they require, and this translates to more clothes being wasted. As textile waste management in India remains in its infancy stage, most of these used clothes end up in landfill or are burnt, which has an impact on greenhouse gas emissions (Gugnani & Mishra, 2020). Myntra has made some efforts towards sustainability. In 2021, the firm announced its plans to move to 100% sustainable packaging by phasing out plastic and incorporating recyclable material. This effort, however, mainly targets

packaging and not the bigger problem of overproduction and overconsumption (*Myntra, 2021*).

They have also made another effort of cooperating with ecologically sustainable brands such as "House of Pataudi" and "Taavi," that produce more sustainable fibers and classic Indian handicrafts. Those brands are minimal to their number. Although the site has the capability to urge the consumers as well as suppliers toward more ecologically sustainable action, economic gains prompt the current system to adopt more volume and rapidity instead of sustainability. In a way, Myntra embodies the double-edged sword of fashion democratization in the emerging economies. The economic advantage and cultural change are immense, but so are the environmental and social costs. Unless there is a change at the systemic level—like introducing extended producer responsibility (EPR), encouraging slow fashion models, and rewarding circular economy practices—the fast fashion boom in India will remain environmentally and ethically unsustainable.

Raymond Ltd., a name that used to be synonymous with high-quality Indian tailoring and wool suiting, has for many years been a beacon of quality craftsmanship. The company rode high on its "The Complete Man" campaign for decades, touting customized-fit garments and quality fabric. In recent times, though, Raymond has lost much ground, failing to keep pace with the growing presence of ready-to-wear and fast fashion culture within India. Fast fashion has altered consumer tastes towards instant gratification, cheap, fashionable clothing off-the-rack. This trend is especially prevalent among young, urban consumers who value convenience and variety over durability and customization (*Khurana & Ricchetti, 2016*). Consequently, bespoke tailoring services, once a standard in Indian homes have fallen out of favour. Raymond's business model, based on bespoke and semi-bespoke men's wear, was unable to keep up. Although diversifying into readymade wear under brands such as Park Avenue and ColorPlus, the group has not managed to tap the fast-paced retailing trends controlled by brands such as H&M, Zara, and domestic players such as Pantaloons and Max Fashion. As per a 2022 Business Standard report, Raymond's fabric sales have fallen consecutively for the past decade, reflecting a national trend towards the decline in fabric-purchasing for stitching (*Business Standard, 2022*).

In addition, India's tailoring culture eroded has

contributed to wider sustainability effects. The tailoring, by its very nature, corresponds to circular economy principles: pieces are bespoke, there is low waste, and durability is more emphasized than disposability. The fast fashion promotes short product life and high volumes of production that generate too much textile waste (*Niinimäki et al., 2020*). The fall of outfits such as Raymond is not just an economic development but also a reflection of deeper cultural and environmental losses. The drift away from sustainable tailoring has pushed expert karigars (tailors) to the margins, undermined local economies, and filled the market with cheap, short-term fashion products. Although Raymond has attempted partial rebranding and online-enabled tailoring services, these efforts trail the ambitious expansion of fast fashion retail chains. In essence, Raymond's story underscores how fast fashion's rise in India is not just a shift in style, but a systemic challenge to the country's sustainable, artisanal heritage.

Sustainable fashion initiatives include the Sustainable Fashion Day at Lakmé Fashion Week, where collections are presented by designers using sustainable materials and zero-waste processes. NGOs like Goonj have initiated fabric upcycling schemes converting old clothes into sanitary pads or school uniforms for the disadvantaged (*Goonj, 2021*). The absence of strong policy frameworks—think of areas such as Extended Producer Responsibility (EPR)—constitutes one of the paramount challenges impeding the adoption of circularity in India's fashion industry. For now, EPR is beginning to take root in the electronics and plastics sectors in India. In contrast, the fashion and textiles sector still remains unregulated vis-a-vis EPR. This policy vacuum has created an environment in which manufacturers and brands feel very little accountability for the lifecycle impacts of the garments they produce. Thus, unless producers are legally required to take responsibility for the management of post-consumer waste or are incentivized to produce sustainable designs, most fashion brands will continue to tread the linear path of production free from any consequences to environmental degradation.

More importantly, while initiatives such as the Lakme Fashion Week have started showcasing designers who are oriented towards sustainability, this is still a symbolic paradigm shift without any real changes in policy or economy. Furthermore, low consumer demand for sustainable fashion acts as a major hindrance fuelled by price sensitivity. The Energy and Resources Institute (*TERI, 2020*) found in its market survey that a large part of the urban Indian

consumers-in particular the mid- and low-income segments-prioritize affordability and aesthetic appeal rather than sustainability credentials while making apparel purchases. While increasing awareness among India's youth and urban elites is encouraging in the sustainable fashion movement, such consciousness has not translated into substantial behavioural changes in purchasing habits. What further inhibits consumers from making ethical choices is a lack of sustainable options that are easily available and affordable.

Also, India's recycling and circular textile infrastructure is terribly underdeveloped, especially in rural and semi-urban regions where garment production and post-consumer waste management typically take place. Most textile recycling in India remains in the informal sector, with weak technological support and integration into organized supply chains. The absence of green logistics networks, certified waste collection mechanisms, and standardized material recovery facilities hinders the scalability of sustainable initiatives. Scaling textile recycling and circular supply chains remains an uphill task unless the infrastructure development of the government and industrial collaboration are in place. These factors put together bring forth an urgent need for a complete overhaul of policies, consumer ingredient education, and infrastructure development to enable a real transition to circularity for India's rapidly growing fashion economy. Still, the trend of sustainability has gone mainstream through local start-ups like B Label, Okhai, and No Nasties that integrate aesthetics with environment-friendly production. These companies advocate organic fibres, fair labour practices, and minimum carbon footprints and set examples for the greater industry.

3. Methodology:

The research employs a qualitative approach based on secondary data analysis to dive into sustainability practices in fast fashion and the application of circular economy principles. The study is basically comparative and examines sustainability and practices in a worldwide versus Indian context, allowing the identification of patterns, differences, and possible aspects of similarity in sustainability strategies used by companies. Material for the investigation has been collected from a number of credible secondary sources, including peer-reviewed journals, industry reports, sustainability reports from fashion brands, and policy briefs. The main sources consulted were Ellen MacArthur Foundation reports,

UNEP reports, and articles such as Sljivo and Brodar (2023), which deal with innovations in recycling, and Brydges (2021), which investigates circular business models for fashion. Corporate case studies from brands including Patagonia, Levi's, and H&M were analysed to understand sustainability practice at an operational level. While the study is an in-depth analysis, it, however, suffers from various limitations related to the secondary data and the lack of primary field research. This notwithstanding, the method contains an analysis contextualized and structured to understand the evolving paradigm of sustainability in fast fashion in a manner that has specific relevance to the circular economy systems. For the qualitative aspect of the research, the case study approach was employed as the central aspect of the methodology. This approach analyses sustainability practices and application of the circular economy in the real organizational contexts. The research therefore captures the diversity in complexity, context, and strategies employed by various fashion brands in response to sustainability issues, through in-depth case studies. The selected companies were picked due to their innovative and varied sustainability initiatives. These companies have shown the different novel ways to achieve circularity-closed-loop recycling, ethical sourcing, product life extension, and transparency. Therefore, these can be representative case studies to compare. Case study approach assists in the identification of the prominent practical models and the generic barriers and effective interventions in designing a basis for evaluating scalability as well as its adaptability with respect to global and Indian contexts.

4. Analysis and findings:

The international fashion business is being progressively reformed with growing consciousness of its environmental impact. Sustainable fashion techniques and the incorporation of circular economy principles are changing the design, production, consumption, and disposal of clothes. Structural limitations continue to slow down complete circularity attainment in fast fashion, especially in developing nations such as India. While the public outcry has pushed the companies to opt for better and sustainable alternatives, the industry still keeps on being one of the largest waste producers. The focus shall shift on the consumers for not opting the use and throw model rather go for thrifting and environment conscious brands. The fast-paced fashion scenario opening up a debt-trap challenge against

sustainability-the onset and year 2120- is represented in both Myntra and Louis Vuitton. In such an instance, Myntra typifies challenges especially faced mostly in the emerging economies-the grandeur of demand, exceptionally low cost of labour, as well as the usual absence of infrastructure for strong waste management. Louis Vuitton, to the contrary, is a brand with luxuries, but it has adopted all fast fashion techniques of producing for the sake of growing to have wider market appeal. Both brands made token gestures toward sustainability; however, the existing models of business focus on speed, volume, and consumption-these are fundamentals that contradicted circular economy principles. True change would be achieved only if both brands gave up cosmetic initiatives for systemic changes like decreased production, extended life cycles for products, increased access to the supply chain, and consumer education. This is what it takes for fashion to change from a wasting linear industry to regenerative, circular and capstones that honour mankind and the earth.

Fast fashion in India has caused Raymond and traditional tailoring to go out of fashion, substituting sustainable made-to-measure clothing with mass-made, disposable clothing. This process robs artisanal skills, adds textile waste, and interrupts environmentally friendly practices that used to characterize Indian fashion, marking a cultural and environmental loss for the retail industry. Being an early adopter of the fast fashion business model, ZARA is criticized for promoting overconsumption. To meet sustainability goals, it introduced the Join Life program, through which 50% of the clothing was stamped as sustainable by 2020. Yet, the company continues to produce 24 collections annually, which makes it challenging to create substantial circularity. While Join Life highlights organic cotton and ethical sourcing, the research implies that it does not adequately offset the company's high levels of production (Shen, 2014). H&M has marketed its Conscious Collection, featuring recycled polyester and sustainably grown cotton. However, just 35% of H&M's product range complied with these sustainable criteria by 2019, and the business still publishes weekly micro-collections, questioning whether it is genuinely committed to sustainability. The study criticizes H&M's circularity claims as possibly performative, which echoes "greenwashing" criticism (Niinimäki & Hassi, 2011). The report focuses on Patagonia as a leader in the fashion industry for ethical and sustainable fashion. By its Worn Wear program, the company encourages

product repair, resale, and circular consumption. It manufactures with 87% recycled material and is set to achieve carbon neutrality by the year 2025, thereby becoming a yardstick for sustainable fashion (Fletcher, 2008). Levi Strauss & Co. has made significant strides with its Water<Less® production techniques, saving over 4.2 billion liters of water to date. The company has also developed denim using up to 40% recycled materials, marking progress toward a circular model. However, its extensive production volume still places it within the fast fashion-adjacent category (Ellen MacArthur Foundation, 2017). The smaller, influential brand of Eileen Fisher supports a circular design philosophy. It has taken back more than 1.5 million items and focuses on sustainable methods including working with organic fibres and low-impact dyes. The brand shows that even smaller fashion companies can spearhead systemic change (Fletcher, 2008).

4.1 Emerging Trends in Sustainable Fashion:

One of the noticeable changes in consumer pattern is the emergence of second-hand and rental fashion markets. ThredUp, Poshmark, and Depop are some of the platforms which have rapidly mushroomed to help consumers have an economically viable and environmentally friendly alternative to buying new. As per ThredUp's Report on Resale in 2021, the second-hand apparel market in the U.S. was worth \$36 billion in 2021 and is projected to double by 2025 (ThredUp, 2021). Use of commodities like Le Tote and Rent the Runway reinforce this idea of circular fashion use by inciting consumers toward reuse and life extension in garments (Lang et al., 2022). Material innovation continues to grow as companies seek alternatives to environmentally damaging fabrics. Companies are investing in bio-based materials like mycelium leather (fungus), Piñatex (pineapple leaf fibre), and in-vitro lab-grown textiles to substitute animal leather and synthetic polymers (Textile Exchange, 2021). Adidas and Stella McCartney have tapped into this through products such as shoes and accessories that are made from mycelium-based alternatives as a step towards biodegradable design. Progressive technology has been incorporated into making circular practice feasible. Artificial intelligence and block chain are being tapped to increase the transparency of the supply chain, counteract overproduction, and track the environment impact of fashion clothing from raw material to the point of purchase (Brydges, 2021).

With companies like Provenance and Circular Fashion, the majority of them will use block chain with an eye on ethical verification of production and on bigger platforms - they make their inventories quicker through the use of AI thereby reducing loss.

4.2 Barriers to Circularity in Fashion:

Some barriers remain extremely important for applicability of mass circularity in the fashion industry. Consumer behaviour has become one of such barriers. Trend of sustainability is gushing into public awareness but cost remains entrenched as the primary buying decision driver. From the study by *Sljivo and Brodar (2023)*, about 63% of Slovenian consumers were shown awareness of environmental pricing of fast fashion but actually selected cost and convenience over sustainable alternatives. In India, it becomes worse since the middle-class price consciousness makes environmental solutions elitist or expensive (*Saxena & Khandelwal, 201*). Another barrier is the cost of sustainable production itself. An expensive upfront capital investment will be organic and ecologically friendly dyes and recycling technology the high cost of shifting for any business from polyester and cellulose-based material currently chemical recycling-is much too high even for most small- and medium-sized enterprises to ever access (*Niinimäki et al., 2020*). The businesses with thin profit margins from the fast fashion industry are unwilling or cannot change into more expensive means of production without regulatory incentives or pressure from consumers. Geographically, the regulations also vary remarkably among countries. With its Strategy for Sustainable and Circular Textiles (2022), the EU leads the pack, where eco-design, extended producer responsibility (EPR), and right-to-repair policies for consumers are mandatory (*European Commission, 2022*). India is still wanting in the enforcement of environmental and labour standards for the industry in textiles. The guidelines on eco-labelling are available with the Bureau of Indian Standards but the same has not been made compulsory and is at a limited level (*Mukherjee, 2020*). Some state-level programs such as the Khadi and Village Industries Commission, besides other things, have promoted sustainable local clothing, but change is still needed at the industrial level.

5. Conclusion and Recommendations:

Studies conducted have made it abundantly evident

that fast fashion, in democratising access to fashion-forward apparel, has secured itself as a leading player in accelerating global environmental degradation. Unsustainable resource extraction, production of greenhouse emissions, textile waste buildup, and dependency on exploitative labor practices have rendered today's fashion model incompatible with environmental and social welfare. Although this consciousness has increased immensely, effective industry-wide change has been slow and piecemeal, particularly in terms of policy implementation, infrastructure and consumer attitudes as India falls behind international trends on sustainability. Circularity, as part of a real economy, promises to answer the fast fashion problem. Incorporating design for durability, recycling textile-to-textile, establishing rental and resale platforms, and developing materials innovation represent the new paradigm of consumption and value of garments. This change of thought requires more than just vague definitions of isolated corporate sustainability programs or symbolic policy statements. It takes concerted, multi-stakeholder action in systemic and bold, visionary interventions realigning incentives throughout the entire fashion value chain.

5.1 With this, therefore, the following innovative strategies and reforms are recommended in this study:

5.1.1 Embedding Sustainability in Fashion Curricula and Skill Development:

Beyond top-down, it needs a bottom-up approach to rewire the industrial cultural foundation of fashion. Such a system would need governments and academic institutions to introduce mandatory sustainability modules in their design, textile, and merchandising programs. Vocational training initiatives have to equip rural and semi-urban artisans with circular production techniques, digital selling tools, and eco-certification know-how. In addition, India's rich heritage in the handloom and slow fashion tradition would find a place in the global supply chains by upskilling and giving modern market access to grassroots artisans.

5.1.2 Establishing a "Textile Passport" System:

Inspired by the EU's Digital Product Passport initiative, fashion brands worldwide - and in India -

should have to embed a "textile passport" with every item sold. It would contain the information on provenance, materials, recyclability, repair instructions, and carbon footprint, all accessible through a QR code. In this way, traceability, empowerment of consumer choice, and facilitation of downstream recycling will be enhanced. This applies especially to informal economies where garment disposal at end-of-life is highly problematic.

5.1.3 Green Garment Zones Backed by Government:

Dedicated "Green Garment Zones" should constitute India and emerging economies—an industrial cluster deploying renewable energy and with clear environmental and labour standards. A zone like this would not just offer tax incentives, subsidized sustainable materials, and recycling facilities but also would-wisest for the business.

5.1.4 Consumer Nudging via Fiscal Instruments:

Consumer behaviour is one of the most potent impediments to the adoption of sustainable fashion. Appropriate markets can be created based on fiscal policies for consumers, e.g., a so-called "green garment rebate," which gives consumers tax credits or discounts on sustainable clothing or the return of unsustainable articles. Alternatively, some kind of levy could be imposed on fast fashion to dissuade overconsumption and fund recycling, that being really low-cost clothing e.g., below ₹500 in India.

5.1.5 Block Chain-Based Traceability for Informal Waste Collectors

In developing countries, a massive volume of garment waste is being managed by an informal sector hardly visible or supported. Using block chain technology, governments and NGOs can establish transparent and decentralized systems to trace textile waste handled by informal recyclers. Formal identities and micro-payments to the waste pickers would honour their contribution and allow them to form part of global sustainability data reporting mechanism thereby carting out environmental as well as social justice.

5.1.6 Circularity-Based Brand Audit by

Mandate:

Sustainability disclosures are vague or greenwashed far too often. Regulatory agencies must compel brands to undergo annual "circularity audits" that measure durability, recyclability, and take-back rates of their products. These audits will be publicly reported and verified by a third-party auditor. The performance could also be linked to a tax incentive and market access, such as eligibility to participate in government tenders or display on runway at fashion weeks.

5.1.7 Prepare for Creating Circular Fashion Index:

A Circular Fashion Index is an aggregate composite index indicating how brands fare in terms of circularity, labour practices, emissions intensity, and transparency developed for the guidance of consumers, policymakers, and investors. Much like BEE star ratings for appliances and LEED certification for buildings, this index should increase competition among brands and be a quick reference for individuals making sustainable purchase decisions.

In short, sustainability in fashion should be more than a token effort; it should evolve into an all-encompassing and enforceable framework of accountability, equity, and ecological stewardship. While the big brands and regulators have made a fair start, the road to full circularity will require sustained innovation, an inter-sectoral collaboration, and representation in policy design—particularly within emerging markets where the cross-section between tradition and technology holds ample promise. The picture of a truly sustainable fashion ecosystem is now entering the purview—but only if fashion is viewed as not a disposable commodity but a circular regenerative force that gives back to both people and the planet.

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