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Circular Fashion: Understanding Consumer Behaviour, Knowledge and Awareness

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Abstract

The fashion industry, in broader terms, is defined as the global market involved in selling clothing, footwear, and accessories. In economic terms, the fashion industry is a global market system that allocates resources for the design, production, marketing, distribution, and consumption of apparel, footwear, and accessories in order to satisfy consumer demand.

The fashion industry is not only about apparel and accessories; it plays a significant role in shaping the global economy, culture, and society. As of 2025, the global fashion industry is a major worldwide economic sector, with the apparel market valued at about $1.84 trillion and accounting for approximately 1.6–1.65 % of global GDP, ranking it among the largest consumer industries in the world economy (UniformMarket, 2025). Some industry forecasts project the global fashion market could reach ~$2.26 trillion by 2030 if current growth trends continue (Muhammad Asim,2026). According to recent statistics, the fashion and textile sector employed roughly approximately 430 million people worldwide as of 2025, representing around 11.9% of the global workforce (out of ~3.62 billion) and covering activities from design to manufacturing and retail (UniformMarket, 2025). This figure is substantially higher than earlier estimates from 2017, reflecting broader inclusion of roles throughout the fashion value chain (UniformMarket, 2025). The fashion and textile sector is considered to remain among the largest employment sectors globally, particularly in developing economies where it is sometimes the second-largest employer after agriculture (Jannik Lindner,2025). b As one of the largest industries in the world, the fashion industry is also unfortunately one of the most polluting (UNEP, 2019).

Since the industrial revolution, we have been living in a linear economy. Our consumer and “single use” lifestyles have made the planet a “take, make, dispose” world (Ellen MacArthur Foundation, 2017). This linear economy model of mass production and mass consumption is testing the physical limits of the globe. It is, therefore, unsustainable and a shift toward a CE is becoming inevitable. Within this context, the CE is intended as an alternative to a traditional linear economy (make, use, dispose) in which resources are kept in use for as long as possible, while extracting the maximum value from their use and then recovering and regenerating products and materials at the end of each service life (Ellen MacArthur Foundation, 2017).

Circular fashion refers to an approach within the fashion industry that aims to create a closed-loop system, reducing waste and maximizing the lifespan of clothing and textiles. It aligns with the principles of the Circular Economy by rethinking how garments are designed, produced, used, and disposed of (Archana Puri,2024).

This paper, by compiling and analysing prior research on the ongoing implementation of the circular economy in the fashion industry and on consumer behaviour and responses to these initiatives, presents a review of the existing literature, evaluates the success of current implementations, and identifies areas

where further research and data are required for the growth of the circular fashion framework. The paper also applies relevant economic theories to analyse consumer responses to brand-led initiatives aimed at circularising production and design.

Keywords: Circular Economy, Circular Fashion, Consumer Behaviour, Consumer Awareness, Future Actions, Recycle-Reuse-Reduce-Remake

1. Introduction

Fashion is a form of expression and a sense of completion — and what better way to complete a look than with a Prada Re-Nylon bag. To receive this bag is not merely to gain a new accessory, but to become part of a remarkable journey: one where plastic and discarded waste from the ocean is transformed into a luxury piece meant to be cherished for years. Crafted from ECONYL, a regenerated nylon produced from recycled plastics, the bag can itself be recycled and remade once again. This cycle can continue endlessly, without even a fraction of that luxurious purchase ever reaching a landfill (Prada Group, 2025). As Giorgio Armani, founder and creative director of the Armani Group, has stated, "The world is changing and so is fashion." *(Armani, n.d.)* This idea captures the underlying philosophy of circular fashion.

Circular fashion represents a growing extension of the circular economy framework within the fashion sector. In this model, products and materials are kept in use for as long as possible through processes such as maintenance, reuse, refurbishment, remanufacturing, recycling, and composting. The concept of the circular economy was proposed and widely popularised by the Ellen MacArthur Foundation, which outlines three key principles driven by design: eliminating waste and pollution, keeping products and materials in use at their highest value, and regenerating natural systems (Ellen MacArthur Foundation, 2017).

Within the fashion industry, this approach promotes a closed-loop system in which clothing is designed, produced, used, and eventually recycled or repurposed to minimise waste and reduce environmental impact. It encourages a shift away from the traditional linear model of *take–make–use–dispose* toward a more regenerative system built on reducing, reusing, recycling, and restoring resources (Ellen MacArthur Foundation, 2017).

The concept can be best understood by the circular economy system diagram, known as the butterfly diagram. It illustrates the continuous flow of materials in a circular economy.

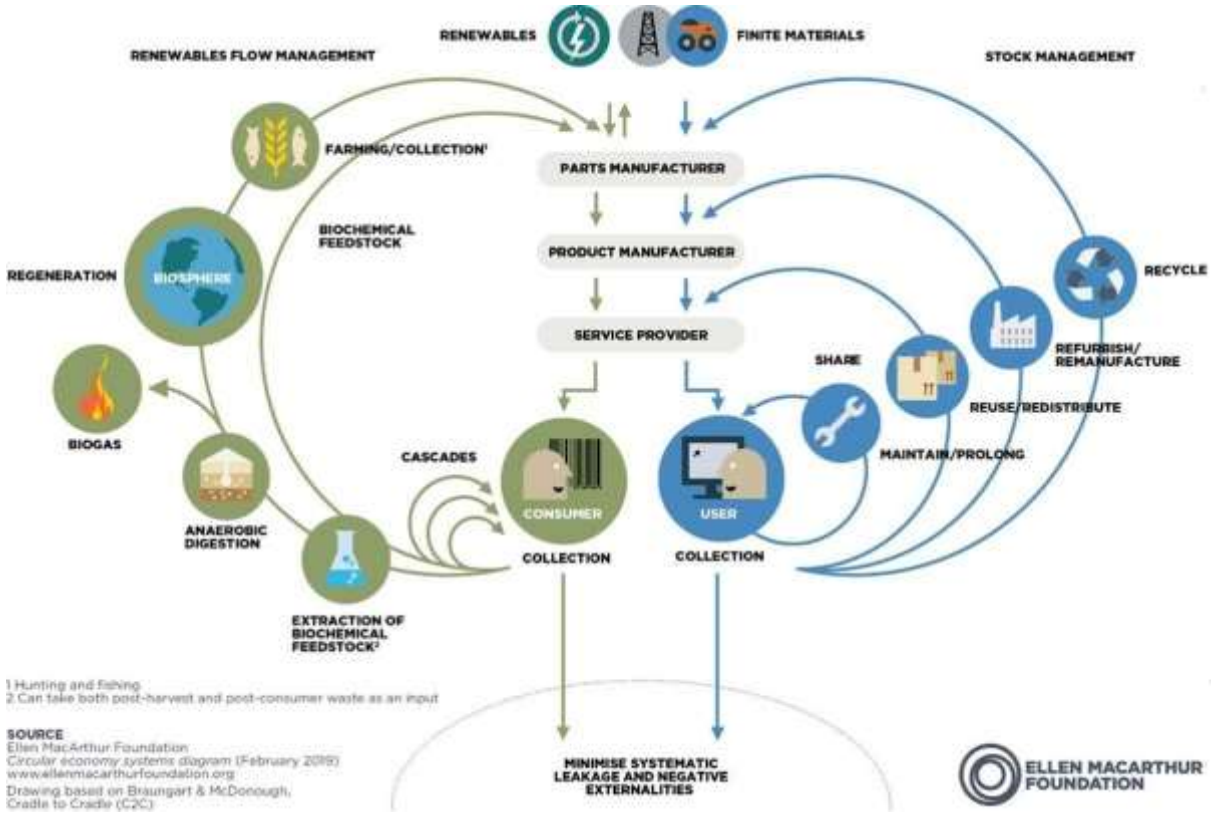

Figure 1- Circular Fashion Model (Ellen MacArthur Foundation, 2017)

The Ellen Macarthur foundation strongly proposes that circular economy to be the norm adopted by the fashion industry. The reasons lie in the shortcoming of the current linear model of the fashion economy (Ellen MacArthur Foundation, 2017).

The fashion and textile industry is a major global economic sector, valued at about USD 1.84 trillion in 2025, and it contributes roughly 1.6% of the world's GDP (UniformMarket, 2025). The global clothing market itself was estimated at approximately USD 1.78 trillion in 2026 and is projected to grow to around USD 2.61 trillion by 2035, with a compound annual growth rate of about 4.4% from 2026 to 2035 (Industry Research, 2026). The impact and importance of the fashion industry are both powerful and far-reaching. Around 430 million people are employed worldwide in the fashion and textile sectors, which accounts for nearly 11.9% of the global workforce (UniformMarket, 2025). In addition, fashion e-commerce alone is expected to exceed USD 1.2 trillion by 2025, showing how consumer trends continue to expand the industry's reach (ScottMax, 2026).

Regionally, Asia stands out as the largest hub for fashion and textile employment, representing roughly 60–75% of jobs in the sector, with tens of millions of workers in major production countries like China, India and Bangladesh (Gitnux, 2024). Europe employs around 1.3 million workers in textiles and clothing combined, while North America — especially the United States — supports about 1.8–1.9 million fashion-related jobs (FashionUnited, 2022).

The fashion industry currently operates largely within a linear economic model. A linear economy follows a one-way flow of resources — take, make, use, and dispose (Ellen MacArthur Foundation, 2017). In this system, raw materials are extracted from the earth, transformed into products, used for a limited period, and ultimately discarded as waste. There is little emphasis on reusing, repairing, recycling, or regenerating materials, which results in a continuous demand for new resource extraction.

This model is characterized by large-scale resource use, mass production and consumption, short product lifespans, and high levels of waste and pollution. Additionally, there is minimal responsibility taken for products once they reach the end of their life cycle. The linear system has become the dominant structure behind many modern industries, particularly fast fashion, where rapid production and disposal are embedded into the business model.

As a result, the fashion industry is widely recognized as one of the most polluting and unsustainable industries globally, with significant and damaging impacts on the environment. Each year, the industry generates over 92 million tonnes of textile waste, with approximately 85% of this waste ending up in landfills or being incinerated, contributing significantly to pollution and greenhouse gas emissions (UNEP, 2023). The sector is responsible for roughly 2-8% of global carbon emissions, a figure that surpasses many other major polluters (UNEP, 2023) . Textile production is also highly water-intensive, consuming an estimated 215 trillion litres of water annually and accounting for around 20% of industrial wastewater worldwide (Gitnux, 2024). Synthetic textiles further contribute to microplastic pollution, with about 10% of annual ocean plastic originating from fibres shed during washing — an estimated 500,000 tonnes of microplastics released each year (Gitnux, 2024).

Despite the fact that up to 95% of textile materials could be recycled, less than 1% of clothing is actually recycled into new garments, and roughly 35% of materials become waste even before products reach consumers. Fast fashion has accelerated this crisis, as consumers buy more clothes but wear them far fewer times — with garment use declining by about 36% — pushing the current system toward environmental collapse (Gitnux, 2024). According to the Boston Consulting Group (BCG) and Global Fashion Agenda (GFA), global apparel and footwear consumption, which stood at 62 million tonnes in 2015, is projected to increase by 3.4% per annum to reach 102 million tonnes by 2030 (Boston Consulting Group and Global Fashion Agenda, 2017). Nonetheless, the textile waste recycling rate remains only around 12%, and if it stays at this level, the fashion industry's share of global carbon emissions is expected to rise dramatically by 2050.

To address these issues, circular fashion has gained prominent attention as it seeks to transform the textile and fashion industries into systems that are more economically viable, environmentally sustainable, and socially responsible. These considerations increasingly influence consumer purchasing decisions and are therefore essential for firms to address. As the desirability, necessity, and integration of circular practices continue to grow, circular fashion has secured a place in corporate strategy and economic policymaking discussions. Beyond environmental benefits, circular fashion also presents significant economic opportunities, with the potential to unlock a USD 560 billion economic opportunity for the fashion industry (Ellen MacArthur Foundation, 2017).

The transition toward circular fashion is driving significant changes across the economic structure of the industry, reshaping supply chains, encouraging the emergence of new business models such as resale, rental, and repair, and influencing consumer demand toward more sustainable and longer-lasting products. However, despite these ongoing developments, the economic dimensions of circular fashion — including its effects on pricing, supply chains, demand patterns, and market structures — remain relatively under-researched, highlighting a clear gap in the existing literature and emphasizing the need for further economic analysis of the circular transition within the fashion industry.

Fashion resale, an essential element of circular fashion, helps extend the life cycle of garments by bringing pre-owned clothing back into use, thereby reducing waste and improving overall product utilisation. ThredUp's 2022 Resale Report indicated that second-hand shopping displaced nearly one billion potential

new clothing purchases in 2021, highlighting the significant role resale can play in lowering demand for newly produced apparel (ThredUp, 2022). Although more recent Resale Reports (2024 and 2025) do not repeat this exact figure, they demonstrate continued rapid expansion of the resale sector, with the global second-hand apparel market projected to reach approximately $367 billion by 2029 (ThredUp, 2024 and 2025).

While circular fashion is increasingly recognised as important, research in this area remains relatively limited. Integrating circularity into the fashion industry is complex and requires a strong understanding of the many interconnected aspects that shape the sector. As a result, both implementation and academic exploration of circular fashion will take time; however, the growing adoption of circular practices represents a promising and necessary step forward.

The environmental impacts of the linear fashion economy have been widely studied and assessed, but the economic implications — particularly in areas such as pricing, demand elasticity, and supply chain structures — remain under-researched. Another key stakeholder group that requires greater attention is consumers, whose knowledge, behaviour, and participation significantly influence the direction and scale of industry change. A deeper understanding of these factors is therefore crucial for enabling a smooth and effective transition. Further research in these areas is essential to better understand and support the shift from a linear fashion system to a circular one, ultimately contributing to the development of a more sustainable and regenerative industry cycle.

This paper aims to review and analyse existing literature on circular fashion, with a particular focus on the role of consumers as presented in previous studies. It seeks to synthesise collective findings in order to understand how consumer knowledge, behaviour, and participation influence the development of circular fashion systems.

In addition, the paper applies relevant economic theory to interpret these findings, highlighting key patterns, areas of agreement, and points of contradiction within the literature. By bringing these perspectives together, the study aims to clarify what current research suggests about the future direction of circular fashion markets and their potential for long-term sustainability.

The scope of this paper is limited to a focused review and synthesis of secondary data, presenting interpretations and deductions drawn from existing literature. No primary data collection, experimentation, or empirical modelling was undertaken.

2. Review of Literature

Circular fashion has emerged as a key strategy within the broader circular economy framework aimed at reducing environmental externalities and resource depletion in the fashion industry. The literature examining circular fashion spans multiple perspectives, including technological, economic, institutional, and behavioural dimensions. This review synthesises existing research on the drivers and barriers shaping circular fashion adoption across industry actors, business models, and consumer behaviour.

2.1 Drivers and Barriers to Circular Fashion (Industry Level)

2.1.1 Technological Barriers (Recycling Limits, Fabric Blends, Infrastructure)

The literature shows that the fashion industry has adopted a range of circular initiatives aimed at addressing environmental and ethical challenges, commonly organised around reduction, reuse, and recycling strategies (Andreza de Aguiar Hugo et al., 2021). Recycling plays a central role in circular fashion and includes mechanical and chemical processes supported by emerging sorting and processing technologies.

Upcycling is further identified as an advanced form of recycling that transforms waste materials into products of equal or higher value. Despite their potential, these approaches remain constrained by technical limitations, inadequate infrastructure, and the poor quality of fast fashion garments.

Technological barriers—including weak recycling systems, insufficient waste management infrastructure, limited technical expertise, and inadequate digital capabilities—continue to hinder CE implementation, particularly in the Indian textile sector. Challenges related to Industry 4.0 integration, digitalisation, and reverse logistics restrict circular transition, while misclassification of textile waste, downcycling practices, and difficulties in maintaining fibre quality during recycling reduce overall resource efficiency (Suman Kumar Das, 2024).

Additional impediments arise from operational uncertainties, including variability in the volume, timeliness, and quality of returned products, as well as organisational inertia in integrating circular economy principles within conventional business models (Rudrajeet Pal et al., 2019). Circular product design—such as mono-materiality and design for disassembly—is therefore identified as a key integrator enabling cascading loops of reuse, repair, remanufacturing, renting, and recycling.

Digitalisation and Industry 4.0 technologies are increasingly recognised as potential enablers of circular transition. Advanced traceability systems supported by IoT, artificial intelligence, and data analytics allow firms to track materials from production to end-of-life, improving supply chain coordination and facilitating recovery processes. Emerging technologies such as robotics, additive manufacturing, and blockchain can further support automation, on-demand production, waste reduction, and secure data sharing across fragmented supply chains (Suman Kumar Das, 2024).

However, technological adoption remains constrained by interoperability challenges, high investment costs, and uncertainty regarding returns on investment. Effective implementation also depends on reliable data management and the maturity of digital infrastructure. Consequently, although digitalisation offers significant potential to support circular systems, technological complexity and financial constraints continue to limit widespread adoption (Suman Kumar Das, 2024).

2.1.2 Economic Barriers (Costs, Profitability vs Fast Fashion)

The circular fashion model is frequently contrasted with fast fashion systems characterised by rapid production cycles, low prices, and high consumption turnover.

Economically, slow fashion and reduced consumption models struggle to compete with fast fashion due to lower economies of scale and potential reductions in profitability. Financial constraints consistently emerge as a primary barrier, particularly for SMEs, due to high initial investment costs, uncertain returns, and limited access to funding and recycling infrastructure.

External impediments such as lack of customer demand, market unacceptance, and strategic misalignment further constrain circular transition (Rudrajeet Pal et al., 2019). Reverse supply chain ineffectiveness and high sorting and recycling costs also limit large-scale implementation.

However, the literature also identifies economic drivers that encourage CE adoption. CE models can be economically viable through service-based business models, such as rental systems that reduce production and inventory, and through value-based pricing strategies that allow firms to charge premium prices for higher-quality sustainable products. Green initiatives can generate cost savings and revenue gains through improved resource efficiency, reduced energy use, and waste minimisation. Durability consistently emerges as a strong economic and functional driver of circular fashion adoption across contexts (Malgorzata Koszewska et al., 2020).

2.1.3 Institutional Barriers (Policies, Certifications, Regulatory Frameworks)

Institutional barriers include weak or unclear government policies, high certification and compliance costs, and bureaucratic systems that discourage investment in sustainable practices. Weak policy enforcement, lack of national benchmarking systems, and insufficient governmental support create uncertainty and hinder long-term investment in circular practices.

The institutional literature focuses on public procurement policies, waste management policies, means–ends decoupling, inter- and intra-organisational collaboration, and institutional voids that hinder CE adoption (Krishnendu Saha et al., 2024). Means–ends decoupling creates a disconnect between firms' stated sustainability goals and their actual practices, raising concerns about symbolic claims of circularity. Among institutional voids, weak educational policy and the absence of supporting markets are prevalent. Inadequate waste management infrastructure, critical skill shortages, and limited understanding of CE practices constrain implementation. Embedding sustainability-oriented perspectives within education curricula is proposed to strengthen circular transition.

At the same time, legal frameworks can act as strong external drivers by compelling firms to comply with environmental and ethical standards. Extended Producer Responsibility (EPR) schemes, textile strategies, eco-design measures, and regulatory coordination—particularly in Canada and Poland—provide structured pathways toward circular transition, although implementation challenges persist due to economic structure, energy intensity, and sector-specific constraints (Malgorzata Koszewska et al., 2020).

2.1.4 Supply Chain Complexity

Circular supply chains differ from traditional linear supply chains by emphasising closed-loop material flows, reverse logistics, and value recovery mechanisms.

The transition to a green supply chain remains underexplored. Fashion supply chains are highly fragmented and globalised, involving multiple actors and layers, which complicates coordination, transparency, and supplier monitoring, thereby limiting circularity.

Supply chain fragmentation, limited coordination among stakeholders, and inadequate information sharing further constrain progress. Reverse logistics collaboration, differences in goals and practices across actors, and the evolving role of consumers in exchange processes complicate circular integration (Rudrajeet Pal et al., 2019).

Establishing, implementing, and mainstreaming circular fashion supply chains requires alignment across product design, business models, supply chain actors, and consumer engagement. However, structural, technological, and market-related impediments continue to limit systemic transformation.

2.2 Role of Retailers and Business Models

Over the past decade, growing attention has been directed toward the environmental and social impacts of the fashion industry, prompting researchers to explore more sustainable production and consumption models, particularly circular fashion. Despite the expansion of sustainability initiatives, consumer participation in circular practices remains limited. Consequently, scholars have examined the factors shaping consumer awareness, attitudes, and purchasing behaviour within circular fashion systems.

The Ellen MacArthur Foundation played a foundational role in developing and popularising the circular economy framework, outlining principles centred on eliminating waste and pollution, keeping products and materials in use at their highest value, and regenerating natural systems. Building on this framework, industry reports and academic studies propose practical models to support textile and fashion businesses in transitioning toward circularity.

Alessandra Vecchi (2020) argues that effective circular fashion requires coordinated transformation across the entire value chain. Progress depends not on isolated sustainability initiatives but on integrated changes spanning resource selection, design, production, retail, consumption, and end-of-life management. Material selection is highlighted as a critical stage influencing garment durability, quality, and environmental impact. Manufacturers are encouraged to assess the ecological footprint of fibres and prioritise environmentally responsible options, while also considering end-of-life outcomes—particularly reuse and recycling potential—during the design phase.

Design decisions are described as accounting for the majority of a product's environmental and economic impacts. From a circular perspective, designers are urged to adopt lifecycle thinking, considering sourcing, production, consumption, and disposal. Emphasis is placed on durability, as well as reuse, repair, redesign, and recycling when longevity is constrained. Waste reduction is framed as a central principle of circular design, achieved through efficient production methods, reuse of materials, and multifunctional design strategies. Strengthening emotional and functional relationships between consumers and products—through customisation, timeless design, and service-based models—is also suggested as a means to reduce overconsumption and extend product lifespans (Vecchi, 2020).

In conventional production systems, the design stage is followed by sample development and full-scale manufacturing. Sustainability literature highlights the importance of integrating zero-waste thinking at this stage, including digital sampling and zero-waste pattern cutting. Production processes should be evaluated in terms of energy and water use, regulatory compliance, and chemical reduction. Product quality and durability are positioned as foundational to sustainability, making quality control central during manufacturing. Localised production is frequently discussed as a strategy to improve oversight, enable smaller production runs, reduce global supply chain risks, and support product customisation—thereby potentially strengthening consumer attachment and reducing overproduction (Vecchi, 2020).

2.2.1 Design as a Strategic Lever in Circular Business Models

The literature conceptualises design as an iterative, human-centred process capable of shaping business strategy and innovation. Design thinking is characterised as adaptive and transformational, increasingly incorporating participatory and stakeholder-inclusive approaches. While traditional frameworks such as the Double Diamond model focus on development stages, more recent perspectives emphasise empathy and multi-stakeholder collaboration, integrating user needs from the outset (James et al., 2019).

Within the circular economy context, design is positioned as a critical intervention point in the product lifecycle. Environmental impacts and waste outcomes are frequently rooted in decisions regarding durability, modularity, reparability, and material compatibility. However, responsibility for circular transition is framed as collective, requiring collaboration across supply chain actors rather than relying solely on designers.

Several circular design strategies are identified. Design for longevity seeks to extend product life through emotionally durable design and behaviour-change interventions, although fostering emotional attachment remains complex. Design for behaviour change attempts to influence user practices but raises ethical questions regarding designer control. Design for service shifts responsibility toward firms through product-service systems such as rental and take-back schemes, though some scholars caution that these may prioritise brand enhancement over systemic transformation. Overall, design is presented as a pivotal but shared lever in advancing circularity (James et al., 2019).

2.2.2 Retailers and Circular Business Models

Retailers are increasingly recognised as central actors in advancing circular economy practices. Studies

emphasise take-back schemes, resale, upcycling, rental, and sharing models that shift consumption from ownership to access. Peer-to-peer resale and swapping platforms further extend product lifecycles. Value-added services—including repair, personalisation, and garment care—strengthen customer engagement while supporting circular strategies.

From the consumer perspective, research indicates growing sustainability awareness and demand for transparency in sourcing and production. Participation in second-hand markets, clothing swaps, donation systems, and garment repair reflects gradual behavioural shifts. At the end-of-life stage, collaboration between producers and consumers is considered essential to reducing textile waste, with reuse positioned as one of the most sustainable strategies for extending garment life (Vecchi, 2020).

Digital technologies play a supporting role in enabling circular retail models. Traceability systems, data analytics, and blockchain technologies enhance return flow management, inventory forecasting, authentication, and consumer trust—particularly within resale markets. Real-time consumer data allows retailers to adapt circular offerings competitively, although implementation depends on digital infrastructure and organisational capacity (Das, 2024; Saha et al., 2024).

2.2.3 Economic Viability, Regulation, and Organisational Transition

Legal frameworks are identified as both barriers and drivers of circular economy adoption. Regulatory complexity may hinder transitions; however, increasing environmental legislation, resource scarcity, and declining profitability of linear models incentivise adaptation. Certifications and legal standards function as signalling mechanisms, enabling firms to communicate sustainability commitments and reduce information asymmetry.

Contrary to earlier assumptions, several studies suggest that circular economy models can be economically viable. Profitability may emerge through service-based business models (e.g., rental systems reducing inventory requirements) and value-based pricing strategies that capture willingness to pay for sustainable quality. Cost savings may arise from energy efficiency, waste reduction, and resource optimisation. Consumer environmental awareness, NGO pressure, generational shifts away from fast fashion, and structural changes following COVID-19 further reinforce incentives for circular adoption (Hugo et al., 2021).

The literature distinguishes between “native” circular firms, which embed sustainability fundamentally into decision-making, and traditional firms adopting circular strategies primarily to capture economic value. Frameworks and performance indicators have been developed to assess environmental and social impacts across both models. Some scholars introduce the concept of “circular disruption” as a systemic, multi-phase transformation affecting industrial systems and social institutions, generating long-term environmental, social, and economic benefits. However, risks such as rebound effects—where efficiency gains lower costs and stimulate higher consumption—may undermine sustainability goals. Mitigation strategies include extended producer responsibility schemes, stakeholder awareness, and consumer engagement. Critics also caution against technological optimism and conceptual ambiguity within circular economy research (Saha et al., 2024).

2.2.4 Circular Supply Chains and Cascading Loops

Circular supply chains are increasingly conceptualised as cascading loops of repair, reuse, refurbishment, and recycling, circulating materials across interconnected systems. Effective implementation depends not merely on isolated circular business models but on integrating complementary models across the product lifecycle. Each loop requires a transformative value proposition, redefined customer engagement, and new external partnerships.

Product design functions as a critical integrator within these cascades. Designing for durability, disassembly, and recyclability—through mono-materials and modular construction—enables multiple lifecycle extensions, including reuse, rental, remanufacturing, and recycling. However, tensions arise when innovative materials are incompatible with existing recycling infrastructure. Digital tools such as tracking systems and product passports enhance material traceability and support circular flows.

Inter-organisational collaboration is essential for aligning business models across cascading loops. Coordination among designers, recyclers, retailers, and other stakeholders is required to shift from short-term, firm-centric value creation toward systemic, long-term value capture. Differences in stakeholder priorities and interpretations of circular value propositions frequently hinder implementation, highlighting that organisational alignment is as critical as technological innovation (Pal).

2.2.5 Industry Practices, Cultural Perceptions, and Implementation Barriers

Case studies of companies such as Adidas and Patagonia illustrate the integration of recycled and upcycled materials, including ocean plastic and post-consumer waste, into mainstream product lines. Sustainability is often incorporated into brand identity through strategic marketing.

However, a persistent "sustainability gap" between awareness and implementation remains. Designers and SMEs frequently lack knowledge of sustainability assessment tools, certifications, and life cycle assessment frameworks, limiting effective adoption. Barriers include limited expertise, resource constraints, and low awareness. Marketing strategies, cooperative advertising, and NGO partnerships may enhance consumer adoption, particularly amid rising landfill costs and regulatory pressures (Wagner et al., 2020).

Industry actors' attitudes significantly shape implementation. Sustainable design decisions are often driven more by external pressures—such as client demands, company policies, and project requirements—than by intrinsic environmental commitment. Uncertainty surrounding value creation, risk perception, and communication strategies affects adoption of recycled materials. Cultural perceptions related to hygiene, quality, and contamination influence both producer and consumer acceptance. Transparency and traceability, particularly within in-house recycling systems, enhance confidence; however, subjective material evaluation and sorting practices continue to shape perceptions of quality and reusability.

Overall, the literature positions retailers and business models as central to enabling circular fashion, emphasising integrated value chain transformation, collaborative stakeholder engagement, technological support, and alignment between economic incentives and environmental objectives.

2.3 Consumer Behaviour

While industry actors play a central role in enabling circular systems, consumer behaviour ultimately determines the effectiveness of circular fashion markets.

This thesis explores the theory of consumer behaviour in the context of second-hand markets on digital platforms such as eBay. Price elasticity of demand, a core concept in economics, measures how sensitive consumers are to price changes for a given product. By examining elasticity in the second-hand clothing market, this research provides insight into price-conscious consumers and those motivated by limited income, preference for unique or discontinued goods, or perceived exclusivity. Although this study does not explicitly differentiate between environmentally conscious consumption and other motivations, it demonstrates how pricing dynamics in resale markets can contribute to broader trends in sustainable consumer behaviour by increasing affordability and accessibility (Reyna Kleemeier, 2025).

Using OLS regression analysis across categories including item condition (new versus used), brand type, clothing style, and gender, the findings confirm the traditional downward-sloping demand curve. A 1% increase in price leads to a 2.11% decrease in quantity demanded, indicating strong price elasticity in the second-hand clothing market. High-end items exhibit relatively more inelastic demand compared to standard items, suggesting that prestige, rarity, and perceived quality reduce responsiveness to price changes. Gender differences are also evident, with men's clothing demonstrating greater price elasticity than women's clothing. Notably, used items display an upward-sloping demand relationship, where higher prices are associated with increased demand, indicating Veblen-like behaviour driven by perceived exclusivity and quality signalling. Overall, while most clothing follows conventional demand patterns, resale markets for used and fashion-oriented goods operate under distinct value-driven dynamics. Online resale platforms therefore have the potential to reduce consumption of new goods by enhancing access to second-hand alternatives, although further research is required to understand the nuanced mechanisms shaping this growing market (Reyna Kleemeier, 2025).

2.3.1 Attitudes, Awareness, and the Green Attitude–Behaviour Gap

Across the literature, sustainability awareness is generally high; however, this awareness does not consistently translate into behavioural change. Cross-country analyses reveal limited differences in the perceived importance of circular product attributes such as reparability, recyclability, reusability, and ecolabel certification. These attributes are rated as moderately important but consistently rank below traditional purchasing criteria including comfort, fit, style, price, and quality. Durability is the only circular attribute receiving relatively higher importance, though primarily for its economic benefits rather than environmental significance. While some consumers express stronger belief in environmental certification, trust in labelling remains inconsistent. Variations in attitudes toward environmental impacts, such as air pollution, further reflect broader national environmental concerns. Although certain groups demonstrate greater willingness to reduce clothing consumption and engage in environmentally responsible purchasing, findings reinforce the persistence of the green attitude–behaviour gap (Malgorzata Koszewska et al., 2020).

Generational research focusing on Generation Y and Generation Z similarly identifies environmental awareness, circular fashion awareness, willingness to change behaviour, and willingness to pay a premium as key determinants of circular consumption. Structural equation modelling (SEM) studies show positive relationships between environmental awareness and circular fashion awareness, and between willingness to change and willingness to pay a premium. However, environmental awareness does not directly predict behavioural change or premium payment, nor does circular fashion awareness significantly influence actual purchasing behaviour. Although respondents recognise the fashion industry's pollution levels and express strong willingness to support circularity, sustainable purchasing remains limited, with quality, durability, and price continuing to dominate decision-making. Methodological limitations—including convenience sampling and limited socio-economic comparison—indicate the need for broader cross-generational and cross-regional analyses (Aya Abdelmeguid et al., 2025).

Research on circular economy (CE) awareness similarly finds that recycling is the most recognised principle, while higher-order strategies such as reduce and reuse receive less emphasis. Environmental benefits are perceived as the primary advantage of CE, whereas economic and social benefits are less acknowledged. Barriers include weak societal commitment, insufficient governmental incentives, and limited recycling behaviour. Marketing, communication campaigns, competitive pricing, and accessible information function as key enablers, strengthening the relationship between CE awareness and positive

attitudes. Gender differences are also observed, with female consumers often demonstrating stronger pro-sustainability attitudes. Nonetheless, awareness alone does not guarantee behavioural adoption, reinforcing the role of contextual enablers (Anne Jimenez-Fernandez et al., 2023).

2.3.2 Perceived Value, Risk, and Purchase Intention

The literature consistently identifies perceived value as a stronger determinant of product attitude than perceived risk within circular fashion contexts. Emotional value—feelings of joy and pleasure—exerts the strongest positive influence on attitudes toward second-hand, upcycled, and recycled clothing. Social and epistemic value further contribute positively, while sanitary risk, defined as hygiene concerns, represents the strongest negative influence due to the intimate nature of clothing. Financial and functional risks are generally less influential.

Across circular categories, second-hand clothing benefits from epistemic and environmental value but may face concerns regarding trend compatibility. Upcycled clothing generates emotional and economic value through personalisation and learning experiences, although perceived environmental benefits do not always significantly strengthen attitudes. Recycled clothing is typically perceived as offering higher value and lower risk compared to other circular alternatives, resulting in stronger purchase intentions. However, perceived environmental value does not always align with objective sustainability performance, suggesting a divergence between subjective evaluation and measurable impact. Product attitude consistently predicts purchase intention and word-of-mouth behaviour, while individualism moderates certain risk–attitude relationships (Inhwa Kim et al., 2021).

2.3.3 Price Sensitivity, Aesthetics, and Market Barriers

Aesthetics consistently emerges as a dominant determinant of fashion purchases, often outweighing sustainability considerations. Sustainable garments are sometimes perceived as unattractive or counter-cultural, limiting broader adoption. Price also functions as a significant barrier, with sustainable fashion widely perceived as more expensive. High price elasticity among budget-constrained consumers reinforces preference for lower-cost fast fashion alternatives. Hygiene concerns, social stigma, and associations with lower social status further constrain acceptance of second-hand clothing in certain contexts.

Conversely, alignment with sustainable values, exclusivity, and perceived long-term value—including durability, quality, and cost savings—attract consumers to circular fashion. Willingness to pay a premium increases when sustainable products are perceived as differentiated and trustworthy. Awareness of social and environmental issues enhances brand trust and generates pride and responsibility, strengthening engagement (Andreza de Aguiar Hugo et al., 2021).

2.3.4 Collaborative Consumption and Consumer Roles

Consumers occupy multiple and fluid roles within circular supply chains, particularly in collaborative consumption models. In swapping systems and peer-to-peer networks, individuals function not only as buyers but also as sellers, suppliers, and partners, extending product lifespans through repeated exchange. Motivations evolve from nostalgia to financial and quality considerations, forming virtuous cycles of reuse that support slow fashion systems. Social relationships developed through collaborative practices further reinforce second-hand market participation (Rudrajeet Pal et al., 2019).

Sustainable use and post-purchase behaviour similarly reflect positive attitudes toward rental platforms, reuse, recycling, and upcycling. Responsibility, desirability, trend value, and environmental sustainability strengthen behavioural intentions. However, time constraints, required skills, convenience, and infrastructure availability significantly influence participation. Recycling behaviour is shaped by self-

efficacy, education, philanthropic awareness, and institutional support, yet empirical findings on the direct impact of environmental concern on textile recycling remain inconsistent, reinforcing the attitude–behaviour gap (Melissa Monika Wagner et al., 2020).

2.3.5 End-of-Life Behaviour and Emotional Attachment

When garments reach end-of-life, consumer responses are often disposal-oriented rather than focused on product-life extension. Common actions include donating to charity (31%), passing items to friends (26%), or returning garments to stores (9%), while a notable proportion discard items due to convenience. Upcycling presents an alternative by enhancing emotional attachment and perceived value through alteration and customisation, consistent with the "IKEA effect," whereby labour investment strengthens ownership and attachment. Physical engagement with garments increases emotional durability; however, fostering attachment earlier through considered design remains challenging due to the personal and individualised nature of meaning creation (Alana M. James et al., 2019).

2.3.6 Synthesis

Overall, the literature demonstrates that consumer behaviour in circular and second-hand fashion markets is shaped by price elasticity, perceived value and risk, aesthetic priorities, and contextual enablers. While awareness of sustainability and circular principles is relatively high, traditional purchasing criteria—price, quality, comfort, and style—remain dominant. Emotional value consistently enhances attitudes, whereas sanitary concerns and perceived inconvenience constrain adoption. Consumers increasingly participate in collaborative and resale systems, yet behavioural engagement remains conditional on affordability, trust, infrastructure, and communication. The persistent attitude–behaviour gap underscores the need for integrated strategies combining economic incentives, effective marketing, institutional support, and emotionally durable design to facilitate more sustainable consumption patterns across fashion markets.

2.4 Gaps in Literature Bottom of Form

Despite the growing body of research on circular fashion, several conceptual and empirical gaps remain. Existing research tends to focus predominantly on isolated circular strategies such as recycling, reusing, upcycling, and second-hand markets, rather than examining the circularisation of the entire fashion production and consumption system. While these initiatives contribute to resource efficiency, limited attention has been given to the structural transformation required to shift from a linear to a fully circular economic model.

Although the literature extensively identifies consumer drivers and barriers, it provides insufficient explanation of the persistent attitude–behaviour gap. Consumers and shareholders increasingly demonstrate environmental awareness and express positive perceptions of sustainability, with some indicating a willingness to pay a price premium for eco-friendly products. However, fast fashion continues to dominate the market due to price competitiveness, economies of scale, and convenience. This suggests the presence of behavioural biases, information asymmetries, and bounded rationality, where stated preferences for sustainability do not consistently translate into actual purchasing behaviour. Furthermore, consumer awareness of the long-term environmental and economic externalities of fast fashion remains unclear, reinforcing continued demand for low-cost, high-turnover garments.

Despite the integration of sustainability elements into business models and production cycles, participation in fully circular models remains limited. Given the scale of the global fashion industry, marginal adoption rates contribute little to mitigating environmental degradation or addressing negative externalities such as textile waste and resource depletion. Consumers continue to exhibit disposal-oriented behaviour,

contributing to landfill accumulation rather than engaging in product-life extension strategies. This indicates inefficiencies in incentive structures and insufficient internalisation of environmental costs.

Another significant gap lies in the geographical concentration of existing research. The majority of studies focus on developed economies such as the United States and Europe, with comparatively limited investigation into emerging markets such as India, Brazil, and Mexico. This restricts understanding of how differing institutional frameworks, income levels, cultural norms, and consumption patterns influence circular adoption. Given that middle-income populations in developing economies constitute a major consumer base for fast fashion, examining these contexts is essential for evaluating the global feasibility of circular transition.

Finally, although technological, economic, and institutional drivers and barriers are widely discussed, the interaction between supply chain restructuring and consumer adoption remains underexplored. The transition toward circular supply chains involves significant coordination costs, potential market adjustments, and redistribution effects across stakeholders. Without careful analysis, such transitions risk inefficiencies or market failure. Greater research is therefore needed to assess how circular supply chain models can be implemented without generating adverse economic or social consequences.

3 Methodology

3.1 Research Design

This study adopts a secondary research design using a literature review approach. It analyses, compiles, and synthesises existing academic studies to examine the why and how of circular fashion and to understand consumers' knowledge, attitudes, and behaviours toward circular fashion.

This research approach is appropriate due to the exploratory and emerging nature of circular fashion as an economic phenomenon. Circular fashion, particularly its implications for pricing and demand elasticities, remains relatively under-researched within mainstream economic literature. Therefore, a secondary, qualitative, and conceptual research design enables the integration of existing theoretical and empirical insights without the constraints associated with limited primary data availability.

3.2 Data Sources

Data for this study were collected from peer-reviewed academic journals, conference papers, and reputable publications in sustainability and economics. Key sources included journals focusing on circular economy, sustainable fashion, consumer behaviour, and applied economics.

Additional secondary data were drawn from industry and institutional reports, as well as corporate disclosures. Brand websites, including those of Prada Group and Levi Strauss & Co., were used as case-based sources to analyse real-world circular fashion initiatives such as repair services, resale programmes, and material recycling strategies.

Academic literature was identified using scholarly databases such as Google Scholar and ScienceDirect, as well as through reference tracking from relevant articles. Keywords used in the search process included "circular fashion," "circular economy," "consumer behaviour," "price sensitivity," "sustainable consumption," and "market growth." Studies were selected based on relevance, credibility, and alignment with the research objectives.

Over 30 academic sources were reviewed to identify studies containing relevant economic theories and empirical insights on circular fashion. These studies covered topics such as definitions and implementation of the circular economy in the fashion industry, cross-country comparisons of circular initiatives, brand-

led circular projects, consumer awareness and behaviour, and generational trends (particularly Generations Y and Z).

Following the review process, the most relevant and high-quality sources were selected for inclusion in the final analysis.

3.3 Data Analysis

The collected literature was analysed using thematic analysis, a qualitative method for identifying, analysing, and reporting recurring patterns (themes) within a dataset. This involved systematically coding the literature, grouping codes into broader themes, and aligning them with the aims of different sections of the paper.

Themes were organised according to key areas of discussion, including the conceptual foundations of circular fashion, consumer behaviour, pricing and value perceptions, and practical applications in the industry. Brand websites and corporate sustainability reports were analysed to extract information on how circular strategies are implemented in real production and business models.

The thematic analysis primarily focused on consumer behaviour in response to the growing adoption and popularisation of the circular economy model, particularly within the fashion industry.

3.4 Limitations of the Methodology

This study has several limitations. First, reliance on secondary data limits the ability to control for differences in sampling methods and research designs across studies. Second, much of the existing research focuses on developed economies, which restricts the generalisability of findings to developing markets. Finally, variations in definitions, measurement approaches, and methodologies across studies may affect the comparability of results.

Additionally, the use of brand case examples provides illustrative insights but may not fully represent the broader fashion industry.

3.5 Ethics and Validity

All data used in this study were obtained from publicly available sources and are appropriately cited. No primary data collection involving human participants was undertaken.

To ensure reliability, only peer-reviewed and reputable institutional sources were used. Opinion-based or weakly supported arguments were excluded. The quality, clarity, and credibility of sources were carefully assessed. Triangulation across academic literature, industry reports, and corporate case evidence was employed to strengthen the validity of the findings.

4 Results and discussion

4.1 Consumer Awareness and Knowledge

The reviewed literature consistently indicates that consumer awareness of sustainability issues within the fashion industry has increased in recent years. Environmental concerns related to textile waste, carbon emissions, water consumption, and unethical production practices are now widely recognised by consumers, particularly among younger generations such as Generation Y and Generation Z (Aya Abdelmeguid et al., 2025). This growing awareness has been driven by increased media coverage, brand-led sustainability campaigns, and greater visibility of environmental reporting within the fashion sector.

However, despite rising awareness, the literature reveals a significant gap between consumer awareness and actionable knowledge. Many consumers remain uncertain about what constitutes genuinely circular or sustainable fashion, often struggling to distinguish between truly circular practices and superficial sustainability claims. As a result, sustainability awareness does not consistently translate into informed

purchasing decisions (Fletcher & Grose, 2012). Survey evidence similarly finds gaps between awareness and action, where consumers report positive attitudes toward sustainable fashion but lack understanding of sustainability meaningfully in purchasing contexts (Doroteja Mandarić et al., 2021). This disconnect contributes to what is commonly described as the intention–action gap in sustainable consumption.

A key factor contributing to this gap is the prevalence of greenwashing within the fashion industry. Several studies highlight that firms frequently use vague terminology, eco-labels, and marketing narratives that overstate environmental benefits without providing transparent or verifiable information (Doroteja Mandarić et al., 2021). This lack of standardised definitions and disclosure creates confusion and reduces consumer trust, limiting the effectiveness of sustainability signals in the market.

From an economic perspective, this phenomenon reflects conditions of imperfect and asymmetric information. Producers possess substantially more information about production processes, material sourcing, and environmental impacts than consumers. When consumers cannot accurately assess product sustainability, they are unable to make utility-maximising choices aligned with their environmental preferences. This information asymmetry leads to market inefficiencies, as genuinely circular products may fail to receive sufficient demand while less sustainable alternatives continue to dominate due to lower prices or stronger branding.

Moreover, the literature suggests that information asymmetry in sustainability claims can create uncertainty for consumers. When reliable information about production practices is limited, consumers may struggle to distinguish between genuinely sustainable products and superficial sustainability claims. Without credible certification, transparency mechanisms, or regulatory oversight, consumers face higher perceived risk when purchasing circular fashion, reducing their willingness to pay price premiums (Doroteja Mandarić et al., 2021). Consequently, market signals may fail to fully reflect the environmental and social costs of production, reinforcing the persistence of linear fashion models.

Consumer awareness and knowledge are therefore fundamental to the introduction and growth of circular fashion markets. Consumers are generally aware of the environmental harms associated with the linear fashion economy; however, their understanding of the benefits, accessibility, and practical implementation of circular fashion remains limited.Circular fashion strategies are often structured around the 7R framework—reduce, reuse, repair, refurbish, remanufacture, recycle, and recover—which outlines key practices for extending product lifecycles and minimising resource waste within the fashion system.

Research by Anne Jiménez-Fernández and colleagues highlights that among the core circular economy principles—reduce, repair, reuse, refurbish, recycle, recover, rethink, restorative, and regenerative—consumers are most familiar with recycling, which received the highest awareness score in survey responses. This finding is significant because recycling represents one of the later stages of circularity, whereas higher-value strategies such as reduce and reuse, which are more effective in minimising resource consumption, are less recognised by consumers (Jiménez-Fernández et al., 2023).

The study also found that respondents strongly associate circular fashion with environmental benefits, indicating relatively high awareness of its potential to reduce pollution and waste. However, other economic benefits of circularity, such as increased innovation, competitiveness, and employment opportunities, are less recognised by consumers. When examining perceived barriers to circular fashion adoption, respondents identified factors such as lack of societal commitment, insufficient recycling behaviour, and limited governmental support as key challenges. Interestingly, consumers viewed these barriers as more related to individual behaviour and societal attitudes rather than the actions of companies.

In terms of enabling factors, respondents highlighted marketing and communication campaigns, social media, and improved information availability as important influences on their willingness to purchase circular fashion products. Consumers also suggested that more competitive prices, clearer information regarding the advantages and disadvantages of circular products, and improved accessibility could further encourage adoption. Although a large proportion of respondents indicated a willingness to pay a small premium for sustainable fashion products, the overall findings suggest that limited knowledge and understanding of circular economy principles continue to restrict the translation of awareness into consistent sustainable purchasing behaviour (Jiménez-Fernández et al., 2023).

Imperfect information can only be reduced by providing consumers with greater knowledge about concepts such as circular fashion, the lifespan of materials, and sustainable fabrics. Consumers need to understand that their purchasing decisions can influence market change. Studies show that consumer knowledge about eco-labels, production processes, and sustainable materials positively influences purchase intentions, but a lack of clear understanding acts as a barrier to adopting circular fashion practices (Mahendran Balasubramanian et al., 2024).

Empirical evidence further demonstrates that higher levels of education and awareness are associated with increased adoption of circular fashion behaviours, indicating that improved consumer information can directly influence sustainable choices (Iliana Papamichael et al., 2024). Similarly, research on eco-labelling suggests that clearer and more credible sustainability labels can improve consumer interpretation and encourage sustainable purchases, indicating that providing better informational cues is central to overcoming imperfect information in markets (Mineka Edirisooriya, 2025).

As communication and awareness have expanded rapidly with technological development, utilising platforms such as newspapers, social media, fashion magazines, and sustainability-focused companies can help promote circular fashion more effectively. Increasing public understanding of the drawbacks of the current linear system and the benefits of circular design can improve consumer knowledge and engagement. Consequently, addressing imperfect information through improved consumer education and transparent sustainability communication is necessary to correct market inefficiencies and align consumer demand with circular fashion objectives.

Overall, the findings indicate that while consumer awareness of sustainability in fashion is increasing, limited knowledge, greenwashing practices, and information asymmetry significantly constrain the development of efficient circular fashion markets. However, even when awareness and information improve, consumer behaviour does not always reflect these attitudes, highlighting the persistence of the intention–action gap in sustainable fashion consumption.

4.2 Consumer Attitudes vs Actual Behaviour (The Intention–Action Gap)

A recurring theme across the literature on circular fashion is the discrepancy between consumers' stated sustainability attitudes and their actual purchasing behaviour. Numerous studies indicate that consumers increasingly express concern for environmental issues and report positive attitudes toward circular and sustainable fashion initiatives. However, these attitudes do not consistently translate into corresponding consumption choices, with fast fashion remaining the dominant mode of purchase.

This divergence can be explained through the concept of the intention–behaviour gap, a phenomenon widely documented in behavioural economics. While consumers may intend to make environmentally responsible choices, actual decisions at the point of purchase are frequently driven by immediate economic considerations such as price, convenience, and product availability. As a result, circular fashion products—which are often priced at a premium due to higher production costs, limited economies of scale, and

sustainable material sourcing—are perceived as less attractive compared to low-cost fast fashion alternatives.

From a neoclassical economic perspective, this behaviour aligns with utility maximisation under budget constraints. Consumers aim to maximise perceived utility given limited income, and when faced with higher prices for circular fashion, many prioritise affordability over long-term environmental benefits. This suggests that sustainability attributes often function as secondary goods rather than primary determinants of utility for the majority of consumers, particularly in price-sensitive market segments.

Behavioural economics further explains this gap through the lens of bounded rationality. Consumers do not always process complete information regarding the environmental impact of their purchases, nor do they fully account for long-term social costs when making short-term consumption decisions. Time constraints, information overload, and cognitive limitations lead consumers to rely on heuristics such as brand familiarity, style preferences, and price cues rather than sustainability credentials.

Additionally, behavioural biases such as present bias reinforce fast fashion consumption, as immediate gratification from low-cost, trend-driven purchases outweighs the delayed and less tangible benefits of sustainable consumption. Even when consumers are aware of the negative externalities associated with fast fashion, these costs are not directly reflected in market prices, weakening the incentive to shift toward circular alternatives.

Empirical research supports the existence of this gap between attitudes and behaviour. Numerous studies have identified a persistent intention–behaviour gap in sustainable fashion consumption. Research on sustainable clothing consumption shows that although consumers often express intentions to purchase eco-friendly apparel, these intentions are frequently not reflected in their actual purchasing behaviour (Niinimäki, 2010; Preuit & Yan, 2017). Empirical studies indicate that several barriers contribute to this discrepancy, including perceived lack of style or variety in sustainable clothing, budget constraints, scepticism regarding sustainability claims, and limited consumer knowledge about sustainable fashion practices.

Similarly, research examining sustainable clothing purchasing behaviour finds that while positive attitudes toward sustainable fashion strongly influence purchase intentions, this relationship does not always translate into actual purchasing decisions. Factors such as perceived aesthetic risk, concerns about greenwashing, and uncertainty regarding sustainability claims can weaken the link between intention and behaviour, indicating that practical considerations such as product attractiveness and trust in sustainability information continue to influence consumer choices.

However, the higher prices associated with circular and sustainable fashion represent a significant economic inefficiency that discourages consumers from translating pro-environmental attitudes into actual purchasing behaviour. The increased costs of sustainable materials, ethical production, and limited economies of scale raise the marginal and average costs of production, resulting in higher market prices compared to fast fashion alternatives. For price-sensitive consumers operating under budget constraints, this creates a disincentive to purchase sustainable clothing, despite positive sustainability preferences. Consequently, circular fashion is under-consumed relative to its socially optimal level, reflecting allocative inefficiency driven by uninternalized environmental externalities.

This price sensitivity can be formally explained using the concept of price elasticity of demand. The price elasticity of demand is defined as:

$$E_d = \frac{\%\Delta Q_d}{\%\Delta P} = \frac{(Q_2 - Q_1)/Q_1}{(P_2 - P_1)/P_1}$$

Where E_d measures the responsiveness of quantity demanded to changes in price. In the context of circular fashion, even a relatively small increase in price $(P_2 - P_1)$ can lead to a proportionally larger decrease in quantity demanded $(Q_2 - Q_1)$. This implies that demand for sustainable fashion is relatively elastic ($| E_d | > 1$), particularly among price-sensitive consumers.

As a result, although consumers may express strong pro-environmental attitudes, higher prices significantly reduce actual purchasing behaviour. This provides a quantitative explanation for the intention–action gap, demonstrating how economic constraints override stated preferences in real market conditions.

Technological advancements and increased capital investment have the potential to reduce production costs and improve affordability within circular fashion markets. Innovations such as automated textile sorting, advanced recycling technologies, and digital resale platforms can lower transaction costs, improve productive efficiency, and generate economies of scale, thereby reducing average costs over time. As firms adopt these technologies and expand market participation, prices may fall, making sustainable fashion more accessible and narrowing the intention–action gap between consumer attitudes and behaviour.

4.3 Price Sensitivity and Demand Elasticity

Price sensitivity emerges as a central determinant of consumer behaviour within circular fashion markets. The literature consistently indicates that circular and sustainable fashion products are often priced higher than fast fashion alternatives due to increased production costs, limited economies of scale, and the use of recycled or ethically sourced materials. For price-sensitive consumers, this results in elastic demand, where relatively small increases in price can lead to proportionally larger decreases in quantity demanded. From an economic perspective, this response is reinforced by the availability of close substitutes. Fast fashion provides consumers with low-cost, trend-driven alternatives, intensifying the substitution effect when prices of circular products rise. For consumers operating under tight budget constraints, higher prices encourage substitution away from sustainable clothing toward cheaper fast fashion options, even when environmental preferences are present. This reinforces the intention–action gap observed in sustainable consumption and limits market penetration for circular fashion at mass-market levels.

Second-hand and resale markets further illustrate the importance of price sensitivity within fashion consumption. Empirical studies examining resale clothing markets show that affordability is a primary factor driving participation, with lower prices significantly increasing demand for second-hand garments (Madhavan, 2022). Similarly, research on online fashion resale platforms suggests that these markets expand partly because consumers seek affordable substitutes for newly produced apparel (Sujun Liu et al., 2023). In this context, resale markets provide a lower-cost alternative that allows consumers to continue participating in fashion consumption while reducing expenditure.

The income effect also plays an important role in shaping demand within circular fashion markets. Higher prices for sustainably produced clothing reduce consumers' real purchasing power, particularly among lower-income or price-sensitive households. As a result, consumers may reduce their consumption of premium circular products and instead purchase cheaper alternatives. The growth of second-hand clothing markets illustrates this dynamic, as lower prices increase accessibility and enable consumers to acquire clothing without increasing total expenditure (Vanshika Bansal et al., 2023).

Empirical evidence from resale markets further highlights the importance of price-driven consumption patterns. The global second-hand clothing market has expanded rapidly, reaching approximately $177 billion in 2022 as consumers increasingly seek lower-cost alternatives to newly produced apparel. However, research suggests that participation in second-hand markets does not always replace new clothing purchases. Instead, second-hand consumption may coexist with continued fast fashion consumption, indicating that lower prices can stimulate additional consumption rather than fully substituting traditional fashion purchases (Meital Peleg Mizrachi et al., 2025).

However, the literature also identifies notable exceptions to standard demand behaviour within certain market segments. In luxury resale and premium circular fashion markets, demand may exhibit Veblen-like characteristics, where higher prices function as signals of quality, exclusivity, and social status rather than deterrents to consumption. Studies examining consumer values in luxury second-hand markets suggest that brand prestige, authenticity, and perceived status strongly influence purchasing decisions. As a result, higher prices in luxury resale markets may reinforce perceived product value rather than discourage demand (H. M. Rakib ul Hasan et al., 2022).

This divergence highlights the heterogeneity of demand within circular fashion markets. While mass-market circular products remain highly price sensitive and constrained by affordability, premium and luxury circular goods operate under different value-driven dynamics. These findings suggest that circular fashion cannot be approached as a uniform market; instead, pricing strategies must be segmented according to consumer income levels, preferences, and motivations. Without addressing price sensitivity through cost reduction, technological innovation, or targeted subsidies, widespread adoption of circular fashion is likely to remain limited to niche or high-income consumer groups.

4.4 Perceived Risk in Circular Fashion

Perceived risk represents a major non-price barrier to consumer participation in circular fashion, particularly in second-hand and resale markets. The literature consistently identifies concerns related to product quality, hygiene, garment durability, and social perception as key factors discouraging the adoption of circular alternatives. Uncertainty surrounding garment cleanliness, wear-and-tear, and sizing increases the perceived probability of dissatisfaction, which reduces consumers' willingness to purchase second-hand clothing.

Concerns about hygiene, garment condition, and the quality of previously worn clothing have been identified as significant barriers to participation in collaborative fashion models such as clothing swapping and rental systems (Armstrong et al., 2015). Similarly, research on collaborative fashion consumption highlights that consumers frequently perceive risks related to contamination, product performance, and the possibility of receiving items that do not meet expectations (Becker-Leifhold and Iran, 2018). These concerns create hesitation toward engaging in circular consumption models despite their environmental and economic benefits.

Perceived risk within circular fashion markets also extends beyond product quality to include service reliability and financial uncertainty. Consumers may worry about hidden fees, penalties for garment damage, or unclear return policies when engaging with rental or resale platforms (Becker-Leifhold and Iran, 2018). At the same time, social and psychological risks may influence purchasing decisions, as some consumers associate second-hand clothing with stigma or lower social status.

Trust therefore plays a central role in mediating perceived risk within circular fashion markets. Where trust in sellers, platforms, or certification mechanisms is weak, consumers are more likely to discount the value of second-hand products and perceive higher risk. A systematic review of circular fashion

consumption literature confirms that concerns related to product quality, hygiene, and lack of trust in resale or rental platforms significantly reduce consumers' willingness to engage in circular consumption models (Camacho-Otero et al., 2019).

From an economic perspective, these concerns can increase the transaction costs associated with circular fashion purchases. Consumers may need to invest additional time and effort to verify product condition, assess seller credibility, and evaluate hygiene standards. As a result, fast fashion—despite its environmental costs—may appear more convenient and predictable, encouraging consumers to revert to linear consumption models. Persistent perceptions of functional, financial, and social risk therefore continue to constrain demand for circular fashion and limit its adoption beyond niche consumer segments.

4.5 Business Models and Market Transformation Now shift to firms

While consumer behaviour plays a significant role in the adoption of circular fashion, firms are also increasingly reshaping the structure of the fashion market through innovative business models. Circular business models aim to extend product lifecycles, retain value within garments, and reduce resource waste by shifting away from traditional linear production and consumption systems. These models include resale platforms, rental services, take-back programmes, and repair initiatives, which enable companies to generate value through reuse and service-based consumption rather than one-time product ownership. Business transformation within firms is particularly important because they act as the primary suppliers to consumers; unless circularised fashion products and services become widely available in the market, consumer demand and large-scale adoption are unlikely to occur. Circular business models therefore provide an opportunity for the fashion industry to decouple revenue streams from resource use. By promoting clothing reuse and extending product life cycles, firms are able to generate economic value while reducing dependence on continuous production of new garments, offering a pathway toward more sustainable growth within fashion retail (Hellström and Olsson, 2024).

4.5.1— Product-Service Systems

Rental models illustrate a shift toward product-service systems, where consumers pay for temporary access to clothing rather than permanent ownership. These models extend product use across multiple consumers, increasing resource efficiency while creating recurring revenue streams for firms. Circular fashion business models focus on increasing the number of users per garment by facilitating the movement of clothing from one consumer to another. By enabling reuse systems, these models extend the lifecycle of clothing items and reduce the need for new textile production (Hellström and Olsson, 2024).

A prominent example is Rent the Runway, a digital fashion rental platform that provides subscribers with access to a shared inventory of designer garments through monthly subscription plans. Customers are able to rent multiple items, wear them temporarily, return them, and receive new items in rotation, creating a service-based consumption model rather than traditional ownership. The company reports that its subscription service represents the core of its business model, with the majority of revenue generated from recurring subscription fees that allow customers to access thousands of styles from multiple brand partners. Rent the Runway served approximately three million lifetime customers and had over 126,000 active subscribers in fiscal year 2022, demonstrating the scale at which access-based fashion consumption can operate within the market.

Through this model, garments are worn by multiple consumers across their lifecycle, allowing firms to maximise the value extracted from each product while reducing the need for constant new production. This approach reflects a broader shift in the fashion industry from one-time product sales toward service-

based revenue streams that extend product life cycles and enable more efficient utilisation of clothing assets.

4.5.2— Take-Back and Brand-Led Circular Models

Fashion brands are increasingly introducing take-back, resale, and recycling initiatives designed to recover garments and reintegrate them into production systems. These brand-led circular models aim to extend product lifecycles while reducing textile waste within the fashion industry. A strong example of branded resale within circular fashion is the Levi's® SecondHand programme, which enables consumers to trade in pre-owned Levi's garments for resale through the company's recommerce platform. The programme aims to extend the lifecycle of denim garments by circulating them between multiple users rather than discarding them after a single ownership cycle. According to Levi Strauss & Co.'s latest sustainability reporting, the company has been expanding its circularity strategy to include resale, repair, and product longevity initiatives designed to keep garments in use for longer. Levi's® SecondHand forms part of this strategy by allowing consumers to return used garments that are then assessed and resold through the brand's resale marketplace, helping extend the lifespan of clothing items and reduce textile waste.

Through this model, Levi's collects used garments from consumers, assesses their condition, and resells items that meet quality standards through its second-hand marketplace. Garments that are unsuitable for resale are redirected toward recycling initiatives or other circular material streams. The company has also complemented resale initiatives with services such as Levi's® Tailor Shops, which provide repair and customisation services aimed at extending garment longevity and encouraging consumers to continue using existing products rather than purchasing new ones. These initiatives form part of Levi Strauss & Co.'s broader circular economy strategy, which aims to make its product portfolio increasingly "circular ready" by aligning product design, materials, and services with circular economy principles.

Similar circular strategies are also visible in the business models of global sportswear companies such as Adidas, which has recognised the need to fundamentally transform its business model by rethinking materials, extending product lifecycles, and reducing environmental impact in line with circular economy principles. As a result, the company has introduced multiple initiatives aimed at extending product lifecycles and reducing waste within the apparel system. One example is the "Choose to Give Back" programme, developed in partnership with resale platform ThredUp, which allows consumers to send used apparel and footwear back to Adidas to be reused or resold. Through this initiative, customers can generate a shipping label via the Adidas Creators Club app and return used sportswear items so that they can be redistributed or repurposed through resale channels. In addition to resale initiatives, Adidas has developed circular product design programmes such as "Made to Be Remade", which focus on creating footwear and apparel designed for recyclability at the end of their lifecycle.

According to the company's latest sustainability reporting, Adidas has continued to expand its circularity strategy in order to embed circular economy principles within its business model and support the development of systems required to scale circular solutions across the fashion industry. A key component of this strategy involves reducing reliance on virgin materials, with the company reporting that approximately 99% of the polyester used in its products has already been transitioned to recycled polyester. Adidas has also set a target for 10% of its polyester to come from recycled textile waste by 2030, supporting the development of textile-to-textile recycling systems. Through initiatives such as resale programmes, circular product design, material innovation, and take-back systems, Adidas is working to integrate circular economy principles into its operations and extend the lifecycle of sportswear products within the global fashion market. Together, these brand-led initiatives demonstrate how major fashion

companies are increasingly integrating circular business models that retain value within garments and support the broader transition toward a more circular fashion economy.

4.5.3— Resale Platforms and Platform Economics

Logistics services play a critical role in enabling circular fashion systems. Efficient logistics infrastructure facilitates the collection, sorting, and redistribution of clothing between users, making large-scale clothing reuse possible within retail systems (Hellström and Olsson, 2024).

Digital resale platforms have also played a significant role in expanding circular fashion markets by enabling large-scale second-hand exchanges. Platforms such as ThredUp operate as intermediaries that connect buyers and sellers, reducing search costs and facilitating market transactions. These platforms benefit from network effects, where an increasing number of users improves product variety and overall market liquidity.

Digital resale platforms have become a key driver of circular fashion markets by enabling large-scale exchanges of second-hand clothing between consumers. Platforms such as ThredUp facilitate the resale of pre-owned apparel through online marketplaces that connect buyers, sellers, and retail partners, reducing search costs and improving access to second-hand garments. Digital resale platforms also provide the technological and logistical infrastructure necessary to scale second-hand markets. Through proprietary software systems, data-driven pricing tools, and specialised logistics networks, platforms are able to process, categorise, and list large volumes of second-hand garments while efficiently connecting buyers and sellers within a single marketplace. According to ThredUp's latest resale report, the second-hand apparel market is expected to grow significantly in the coming years, with the global market projected to reach $367 billion by 2029, while the U.S. second-hand market alone is expected to reach $74 billion. The report also highlights that the U.S. second-hand apparel market grew 14% in 2024, outperforming the broader retail clothing market and demonstrating the rapid expansion of resale within the fashion industry. Online resale in particular has seen accelerated growth, expanding 23% in 2024 and expected to nearly double to $40 billion by 2029, reflecting the increasing role of digital platforms in enabling circular consumption.

Consumer participation in resale markets has also increased as shoppers seek affordability and access to higher-end brands. Studies within the resale report indicate that many consumers purchase second-hand apparel to obtain greater value for money, while a growing number of retailers are integrating resale into their own strategies. Branded resale has expanded rapidly, with over 160 brands launching resale programmes and many retail executives expecting resale to contribute a meaningful share of future revenue. Platforms such as ThredUp also support branded resale initiatives through "resale-as-a-service" systems that enable fashion brands to launch their own resale programmes while outsourcing logistics, processing, and marketplace operations. Through these platforms, garments are circulated between multiple users rather than discarded after a single ownership cycle, allowing clothing to remain in use for longer and supporting the extension of product lifecycles within the fashion system. In this way, resale platforms contribute to the retention of value within garments while supporting the broader transformation of fashion markets toward more circular systems.

Collectively, these business models illustrate a broader transformation within the fashion industry. Rather than relying solely on the sale of newly produced garments, firms are increasingly adopting circular strategies that extend product lifecycles and create service-based revenue streams. Through resale markets, rental systems, and take-back initiatives, companies are gradually shifting toward more circular forms of value creation within the fashion economy. These brand-led models demonstrate how large-scale business

transformation can support the development of circular systems that benefit multiple stakeholders, including firms, consumers, and the wider environment.

The transition toward circular fashion requires fundamental changes in retail business models rather than incremental improvements to existing systems. Circular platforms that connect retailers, second-hand actors, and consumers enable clothing to remain in use for longer, thereby extending product lifecycles and supporting the transformation of fashion retail toward a circular economy (Hellström and Olsson, 2024). Examples from major brands illustrate how business model innovation can facilitate wider industry change by creating systems that allow garments to circulate between multiple users while retaining value within products.

4.6 Barriers to a Circular Fashion Market

While circular fashion presents significant potential for improving the environmental sustainability of the fashion industry, its development and large-scale implementation remain limited. Despite growing awareness among consumers, policymakers, and firms, the transition from a traditional linear fashion system to a circular model has been slow and uneven. Existing literature consistently identifies a range of interconnected barriers that hinder the widespread adoption of circular fashion practices.

These barriers operate across multiple levels of the fashion system, including consumer behaviour, firm-level economic constraints, supply chain and technological limitations, and institutional or policy challenges. Each of these factors influences how effectively circular business models can be developed, implemented, and scaled within the industry. From an economic perspective, many of these challenges reflect classic forms of market failure, including information asymmetry, coordination problems, and misaligned incentives, which allow linear fast-fashion models to remain more competitive in the current market structure.

Understanding these barriers is therefore essential for identifying the structural changes required to support the transition toward a more circular and sustainable fashion economy.

4.6.1 Consumer-Level Barriers

A major barrier to the adoption of circular fashion lies in consumer behaviour. Consumers are not always perfectly rational decision-makers and frequently deviate from purely utility-maximising behaviour due to behavioural biases, habits, and social influences. Although awareness of environmental issues is gradually increasing, actual purchasing decisions continue to be driven primarily by price, convenience, and style rather than sustainability considerations.

Existing literature indicates that consumers remain strongly attracted to fast fashion consumption and often fail to fully internalise the environmental consequences associated with high levels of consumerism (Hugo et al., 2021). This pattern can partly be explained by persuasive marketing strategies and rapidly changing fashion cycles, which encourage frequent purchasing and shorten product lifecycles. Social norms and the desire to remain fashionable further reinforce this behaviour, increasing the perceived utility derived from new and trend-aligned clothing.

A significant intention–behaviour gap also persists within sustainable fashion consumption. While many consumers express pro-environmental attitudes, these intentions frequently fail to translate into actual purchasing behaviour. This gap reflects bounded rationality and information limitations, as consumers may lack clear knowledge about the environmental impact of their choices or the availability of circular alternatives. As a result, short-term private benefits—such as lower prices, convenience, and immediate

gratification—often outweigh longer-term collective environmental benefits, slowing the transition toward circular fashion systems.

This phenomenon is often referred to as the "30:3 syndrome," where a large proportion of consumers report willingness to purchase responsibly, yet only a small fraction translate these intentions into sustainable purchasing behaviour (Bray et al., 2011). This gap highlights that positive sustainability attitudes alone are insufficient to drive meaningful changes in consumption patterns.

In addition, consumers frequently feel disconnected from the environmental and social consequences of their fashion choices. When sustainability issues are perceived as distant or abstract, individuals are less likely to modify their behaviour (Carrigan & Attalla, 2001). This behaviour is closely linked to Perceived Consumer Effectiveness (PCE)—the extent to which consumers believe their individual actions can influence environmental outcomes. When PCE is low, individuals are less motivated to engage in responsible consumption practices (Ellen, 1994).

Consumer-level barriers are also evident in the limited adoption of alternative consumption models such as second-hand clothing markets and rental platforms. Despite their potential to reduce overconsumption and textile waste, these models remain underutilised. Research suggests that consumer reluctance is often driven by perceived functional and social risks, including concerns about garment quality, hygiene, and social acceptability (Hugo et al., 2021). These perceptions reduce the perceived value of second-hand goods, even when their objective utility may be comparable to new products.

Furthermore, limited strategic marketing and weak brand positioning of resale and rental platforms restrict their visibility and attractiveness in mainstream markets. From an economic perspective, this reflects an information and signalling problem, where the potential benefits of second-hand consumption—such as lower prices, access to unique products, and extended product lifecycles—are not effectively communicated to consumers. As a result, demand for these alternatives remains below its potential level.

However, consumer attitudes appear to be gradually shifting. The growing cultural acceptance of thrifting, combined with increasing price sensitivity and rising sustainability awareness, suggests an emerging change in consumer preferences that may improve the future viability of second-hand and rental fashion markets.

Together, these behavioural, psychological, and informational barriers limit consumer participation in circular systems and slow the transition away from linear fashion consumption patterns.

4.6.2 Price and Economic Barriers

Price and cost structures represent a significant barrier to the wider adoption of circular fashion systems. Circular fashion products often involve higher production costs due to the use of sustainable materials, ethical labour practices, improved durability standards, and smaller production scales. As a result, these products are typically priced higher than fast fashion alternatives, limiting their competitiveness in price-sensitive markets.

From an economic perspective, this issue can be explained through concepts such as price elasticity of demand and the income effect. Fashion products are often considered discretionary goods, meaning that consumers tend to reduce their demand when prices increase. As circular fashion products generally carry higher retail prices, price-sensitive consumers may substitute them with cheaper fast fashion alternatives even when they recognise the environmental advantages of more sustainable options.

On the production side, implementing circularity also creates cost-related challenges for firms. Circular business models often require system-wide redesign, the use of higher-quality or recyclable materials, and innovation at the product design stage. These changes increase production costs and may reduce short-

term profitability for firms when compared with the highly cost-optimised supply chains used in fast fashion production (McDonough & Braungart, 2010; Maldini & Balkenende, 2017).

Technical limitations further increase the economic barriers associated with circular fashion. For example, recycling processes can be expensive and technologically complex, particularly when garments contain mixed textile fibres that are difficult to separate. Developing scalable textile recycling infrastructure therefore requires significant financial investment and technological innovation.

Organisational challenges within the global fashion supply chain also contribute to these economic barriers. The industry operates through highly globalised production networks involving numerous suppliers, manufacturers, and distributors. Coordinating circular systems—such as material recovery, recycling, and closed-loop production—across these fragmented supply chains can increase operational complexity and costs.

Knowledge limitations within the market may also influence pricing dynamics. Limited consumer awareness of the environmental costs associated with traditional fashion production can weaken demand for circular alternatives, making it more difficult for sustainable brands to justify higher price points (Hugo et al., 2021). As a result, market demand continues to favour low-cost, high-turnover production models, reinforcing the dominance of linear fashion systems.

Overall, these combined cost pressures on both producers and consumers create a structural economic barrier to the transition toward circular fashion systems.

4.6.3 Supply Chain and Technological Barriers

At the production level, the transition toward circular fashion is significantly constrained by technological and supply chain limitations. Recycling technologies for blended textiles remain underdeveloped and costly, while globalised fashion supply chains often lack the transparency and coordination necessary to support material recovery and closed-loop production systems. As a result, many circular initiatives face substantial operational and technological challenges.

From an economic perspective, these challenges can be explained through concepts such as coordination failure, high fixed costs, and path dependency. Circular systems require coordination between multiple actors across the value chain—including designers, manufacturers, retailers, recycling facilities, and logistics providers. When these actors lack the incentives or infrastructure to collaborate effectively, coordination failures can occur, slowing the transition toward circular production systems. Research on circular economy transitions highlights that structural barriers often arise because existing economic systems and supply chains are built around linear production models rather than circular resource flows (Kirchherr et al., 2017).

Supply chain structures further contribute to these challenges. The fashion industry operates through highly globalised and fragmented production networks involving numerous suppliers and intermediaries. Many firms attempt to introduce circular strategies within existing linear production systems rather than redesigning the entire value chain. This approach often leads to fragmented or partial solutions that fail to achieve the systemic transformation required for a circular economy (McDonough & Braungart, 2010; Maldini & Balkenende, 2017). In contrast, circular systems require coordinated changes across all stages of the product lifecycle, including design, production, distribution, consumption, and end-of-life recovery.

A further technological barrier relates to product design. A large proportion of garments are not currently designed with circularity in mind, limiting opportunities for repair, reuse, and recycling. Research suggests that up to 80% of a product's environmental impact is determined at the design stage, highlighting the importance of integrating circular principles such as durability, modularity, and material recovery into

early product development (Webster, 2017). However, the industry still faces a shortage of specialised knowledge and professional expertise in environmentally conscious design practices (Hugo et al., 2021). Technological limitations in textile recycling also reinforce these barriers. Many garments contain blended fibres that are difficult to separate using current recycling technologies, making fibre-to-fibre recycling both technically complex and economically expensive. In addition, circular systems require reverse logistics networks for collecting, sorting, and processing used garments. Existing fashion supply chains, however, are largely optimised for rapid and low-cost forward production rather than material recovery, which creates structural rigidity and limits the scalability of circular initiatives.

Overall, technological gaps in recycling and circular product design, combined with fragmented global supply chains and coordination challenges across multiple actors, act as major structural barriers preventing the fashion industry from fully transitioning toward a circular production model.

4.6.4 Institutional and Policy Barriers

Institutional and policy frameworks play a critical role in shaping the transition toward circular fashion systems. Weak regulatory frameworks and inconsistent sustainability standards continue to slow progress across the industry. In many markets, environmental externalities generated by the fashion industry remain largely unpriced, allowing linear production models to remain artificially cheap relative to circular alternatives. From an economic perspective, this reflects a case of negative externalities and market failure, where the environmental costs of production are not fully reflected in market prices (Pigou, 1920). As a result, firms and consumers face limited financial incentives to adopt circular practices without external intervention.

Government policies therefore represent a major institutional influence on the development of circular fashion systems. Through legislation, taxation, subsidies, and regulatory standards, governments have the ability to shape the incentives that guide firm behaviour and business model innovation. When governments introduce supportive measures—such as subsidies for sustainable materials, financial incentives for circular production systems, carbon taxes on resource-intensive manufacturing, or extended producer responsibility schemes for textile waste—firms may find it easier and more economically viable to transition toward circular business models. In contrast, the absence of such policies allows linear production systems to remain the most cost-efficient option, reducing the motivation for firms to invest in circular innovation. Policy guidance and regulatory incentives are therefore essential in encouraging businesses to adopt more sustainable and circular production practices (Ellen MacArthur Foundation, 2017).

Institutional and structural limitations within the industry further constrain large-scale transformation. Although many firms are attempting to adopt circular strategies, these efforts are often fragmented and confined to isolated parts of the business rather than reflecting the systemic changes required for a circular economy (McDonough & Braungart, 2010; Maldini & Balkenende, 2017). Established firms in particular tend to prioritise incremental improvements rather than disruptive innovation, which slows the pace of structural change within the fashion industry.

A further institutional challenge lies in the lack of integrated frameworks that prioritise circular design at the earliest stages of the product lifecycle. Research suggests that up to 80% of a product's environmental impact is determined during the design phase, yet industry practices and policy frameworks frequently focus on end-of-life waste management rather than preventative design strategies (Webster, 2017). This reflects a broader policy gap, where regulatory and industry systems do not sufficiently encourage long-term design innovation or resource-efficient production methods.

Institutional barriers also extend to the social dimension of circularity. Consumers often show resistance toward product-life extension practices such as repair, reuse, and second-hand consumption due to cultural norms and perceived stigma (Stahel, 2010). In addition, the widely documented intention–behaviour gap, sometimes referred to as the "30:3 syndrome," highlights that although many consumers express pro-environmental attitudes, only a small proportion translate these intentions into actual sustainable purchasing behaviour (Bray et al., 2011). This indicates that existing market structures and policy environments may not provide sufficient incentives, education, or engagement mechanisms to encourage responsible consumer participation.

Overall, these findings suggest that without stronger regulatory frameworks, industry-wide standards, and coordinated policy support, circular fashion initiatives are likely to remain limited to small-scale or isolated efforts. Effective government intervention—through regulatory reform, economic incentives, and consumer awareness initiatives—therefore plays a crucial role in enabling the systemic transformation required for a functioning circular fashion economy.

4.7 Progress Towards Circular Fashion: Market, Industry, and Policy Perspectives

Overall, while significant barriers continue to limit the adoption of circular fashion, current market trends indicate that gradual progress is being made across both consumer and industry levels. Recent market reports highlight the rapid expansion of second-hand and sustainable fashion markets, with the global resale sector projected to reach approximately $350 billion by 2028, growing at a rate significantly faster than the broader apparel market, driven by increasing consumer demand for affordability and sustainability (EcoWatch, 2024). Similarly, industry forecasts suggest that the sustainable fashion market is expected to grow at a compound annual growth rate (CAGR) of over 9%, while the circular fashion market is also projected to expand steadily in the coming years, supported by rising environmental awareness, technological advancements, and the scaling of circular business models (Custom Market Insights, 2024a; 2024b).

The increasing participation of major fashion brands in resale, rental, and take-back initiatives further demonstrates that firms are beginning to integrate circular strategies into their core business models. In addition, global frameworks such as the Ellen MacArthur Foundation's vision for a circular textiles economy emphasise systemic change through design innovation, value retention, and industry collaboration, indicating a broader shift at the policy and institutional level. Additionally, growing government intervention highlights the importance of systemic change, as regulatory frameworks and policy instruments are increasingly being implemented to address the environmental externalities of fashion production while encouraging more sustainable consumption patterns (MDPI, 2022; Government of the Netherlands, 2020).

Many well-known fashion brands, as previously discussed, are also responding to the need for this transition by beginning to adopt circular practices or introduce sustainable counterparts, while increasingly listening to evolving consumer demands.

However, despite this progress, the transition remains uneven and fragmented, with circular models still operating alongside dominant linear systems. This suggests that while momentum toward circularity is building, stronger coordination between consumers, firms, and governments is required to achieve large-scale transformation (Global Fashion Agenda, 2023; Ellen MacArthur Foundation, 2017).

4.8 Future Economic Implications

4.8.1 Measuring Consumer Awareness and Adoption in Circular Fashion

As the circular fashion movement gains momentum, consumer awareness may act as a very focal driver and key activator in facilitating the transition from a linear to a circular fashion system. It therefore becomes increasingly important to measure both consumer awareness and economic engagement with sustainable practices. Two conceptual models can help quantify these aspects, providing guidance for brands, policymakers, and researchers.

1. Consumer Awareness Index (AI)

The Awareness Index estimates the proportion of consumers who are knowledgeable about circular fashion:

$$AI = \left(\frac{\text{Consumers Aware of Circular Fashion}}{\text{Total Surveyed Consumers}} \right) \times 100$$

$$AI = \left(\frac{n_{aware}}{N_{total}} \right) \times 100$$

This metric highlights the current level of awareness and can be tracked over time to assess the effectiveness of educational campaigns, social media outreach, and corporate sustainability initiatives. Even without primary data, secondary sources such as industry reports or previous surveys can provide a benchmark.

2. Circular Fashion Adoption Score (CFA Score)

The CFA Score combines both consumer behaviour and economic participation:

$$CFA_{score} = \left(\frac{\text{Active Circular Consumers}}{\text{Total Surveyed Consumers}} \right) \times \text{Avg Monthly Spend on Circular Products}$$

$$CFA = \left(\frac{n_{active}}{N_{total}} \right) \times \bar{S}_{circular}$$

This measure provides insight into not only how many consumers engage with circular fashion, but also the economic impact of these practices. Tracking CFA Scores can help businesses and policymakers understand market potential, identify barriers to adoption, and design targeted interventions to increase participation.

Potential Extensions:

Linking the AI and CFA Score to demographic factors such as age, income, and region could reveal important patterns in awareness and adoption. Additionally, the inclusion of variables such as social media influence and advertising exposure could further refine these models, as these factors play a significant role in shaping consumer perceptions and behaviour within the fashion industry. For instance, higher exposure to sustainability-focused campaigns may positively influence both awareness and adoption rates. Future research could validate these conceptual models through structured surveys or consumer panels, generating actionable data for the circular fashion industry. Such empirical validation would strengthen the reliability of these indicators and support their use in both academic research and industry decision-making.

These models also provide a foundation for integrating behavioural economics into circular fashion research, particularly in analysing the gap between consumer awareness and actual sustainable purchasing behaviour.

4.8.2 Future Research

In the long run, widespread adoption of circular fashion has the potential to fundamentally reshape the economic structure of the fashion industry. By reducing reliance on raw materials such as cotton, polyester, and other resource-intensive inputs, circular systems may decrease overall resource dependency and improve material productivity. Extending product lifecycles through reuse, repair, and recycling reduces the need for continuous extraction and production, thereby mitigating supply-side vulnerabilities associated with volatile raw material prices and global resource scarcity.

From a macroeconomic perspective, circular fashion could contribute to improved allocative and productive efficiency over time. While initial production costs may remain higher due to technological constraints and limited economies of scale, investment in recycling infrastructure, automation, and innovation may generate economies of scale and learning effects, which can lower average costs in the long run. As firms optimise material recovery and reduce waste, deadweight loss associated with environmental externalities may decline, particularly if regulatory mechanisms successfully internalise these external costs into market prices. Over time, this could lead to more affordable and efficient pricing within the market, allowing consumers greater consumer sovereignty, where individuals are able to make purchasing decisions that better reflect their environmental preferences. Additionally, increased participation in circular fashion may enhance consumer satisfaction, as individuals may perceive that their consumption choices contribute less to environmental harm while still fulfilling their clothing needs.

The transition toward circularity is also likely to reshape global supply chains. Linear fashion operates through geographically dispersed, labour-intensive production networks focused on high-volume output. In contrast, circular models require reverse logistics systems, localised repair services, material recovery facilities, and digital resale platforms. This shift may shorten supply chains, increase regional production capacity, and expand sectors associated with refurbishment, authentication, and recycling technologies. As a result, value creation may move away from volume-based production toward service-oriented and platform-based revenue models, including rental, resale, and subscription systems.

Labour market implications are similarly significant. While automation and digitalisation may reduce demand for low-skilled manufacturing labour in some regions, circular systems may generate employment growth in repair services, recycling operations, quality control, logistics management, and sustainable product design. This structural shift reflects a broader economic transition from extractive production toward knowledge-intensive and service-based activities. Training and educating workers can have significant macroeconomic benefits, contributing positively to a country's GDP growth and labour productivity. As workers develop specialised skills related to repair, recycling, and sustainable production, overall workplace efficiency may improve. In addition, investment in human capital can enable firms to operate more effectively at scale, generating economies of scale as skilled workers perform tasks more efficiently and production processes become more streamlined. This improvement in productivity may also reduce operational costs for firms in the long run, further supporting the economic viability of circular fashion systems.

Public policy will play a decisive role in determining the speed and scale of this transition. Instruments such as carbon pricing, environmental taxation, subsidies for recycled materials, and extended producer responsibility (EPR) schemes can correct market failures by internalising environmental externalities. By

increasing the relative cost of resource-intensive production and lowering the effective cost of sustainable alternatives, these policies can realign private incentives with social welfare maximisation. Without regulatory intervention, however, circular fashion may remain constrained by persistent price differentials and coordination failures across supply chains.

Overall, the long-term economic implications of circular fashion extend beyond environmental sustainability. If successfully implemented at scale, circular systems could enhance resource efficiency, stabilise supply chains, stimulate innovation, and transform value creation within the global fashion economy. For consumers, this transition may also help reduce one of the major contributors to pollution and environmental degradation associated with fast fashion consumption. Therefore, it is vital to encourage a shift toward a circular fashion mindset and promote its wider integration within the industry for the wellbeing of the planet. Such a transition can also strengthen the foundation for future markets, while enabling consumers to contribute more responsibly to society through their purchasing decisions. However, achieving these outcomes requires coordinated action among firms, consumers, and policymakers to overcome structural barriers and ensure that circular markets achieve both economic viability and environmental effectiveness.

5. Conclusion

This paper examined the environmental and economic implications of the current fashion industry and explored circular fashion as a viable pathway toward sustainability. Through an analysis of existing research, industry practices, and emerging circular models, it became evident that the traditional linear "take–make–dispose" system is no longer viable in the face of escalating environmental pressures. Circular fashion offers a framework that prioritizes resource efficiency, waste reduction, and longer product lifecycles.

However, the transition toward a circular fashion system cannot occur in isolation. Strong support from governments through policy frameworks and regulation—particularly concerning fast fashion—is increasingly essential. Regulation is more important than ever to guide the industry away from overproduction and excessive consumption while encouraging responsible production methods. At the same time, accessibility and affordability must remain central considerations to ensure that sustainable fashion options are available to a broad range of consumers.

The transformation required extends beyond incremental improvements; entire business models must evolve to support circularity. This shift is no longer optional but inevitable as environmental, economic, and societal pressures continue to intensify. Greater public awareness is also crucial. The principles of circularity, including the 7R strategies (Rethink, Reduce, Reuse, Repair, Refurbish, Recycle, and Recover), should be widely understood within society. Media, education, and information channels must play a larger role in communicating the benefits and practices of circular fashion.

Consumers themselves are powerful drivers of change. Informed purchasing decisions, responsible consumption habits, and increased demand for sustainable products can significantly influence industry practices. By empowering consumers with knowledge and transparency, they can actively support and accelerate the transition toward a circular fashion economy.

Ultimately, achieving a truly circular fashion system will require coordinated action among governments, businesses, and consumers. With systemic transformation, informed participation, and stronger regulation, circular fashion has the potential to reshape the industry into a more sustainable and resilient model for the future.

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