

RESEARCH ARTICLE

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SUSTAINABLE MERCHANDISING PRACTICES IN THE TEXTILE SECTOR:
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ABSTRACT

As the textile business faces serious environmental and social issues, sustainable retailing techniques have become more and more important. With an emphasis on the opportunities and challenges that influence the industry's development, this study explores the intricate terrain of integrating sustainable practices in the textile industry and commerce. The study aims to provide useful information to companies looking to improve their sustainability credentials while preserving their competitive edge. The main issue discussed is the discrepancy between the increasing aspirations for sustainability and the implementation's practical difficulties, especially in intricate global supply chains. The study uses a qualitative research methodology based on thorough secondary data analysis, looking at academic literature to provide a comprehensive understanding of sustainable merchandising methods. The study highlights several important conclusions, including the following: the adoption of sustainable practices is severely hampered by financial barriers, especially for SMEs; the lack of standardized sustainability metrics makes implementation more difficult; digital technologies and the circular economy provide promising solutions for improving sustainability; and water consumption and chemical waste continue to be the main environmental challenges. The use of secondary data and the quick changes in sustainability practices are two major drawbacks that could compromise the findings' long-term relevance. By identifying gaps in current frameworks and combining current information on sustainable merchandising methods, the study advances theory. The study offers practitioners strategic recommendations for putting sustainable practices into practice, such as standardizing sustainability metrics, investing in waterless dyeing technologies, creating creative financial models, and utilizing digital technologies to increase supply chain transparency. While preserving revenue, these insights can help companies navigate the shift to more sustainable operations.

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KEYWORDS

Sustainable Merchandising; Sustainability Metrics; Sustainable Materials; Supply Chain Transparency; Textile Industry; Digital Technology

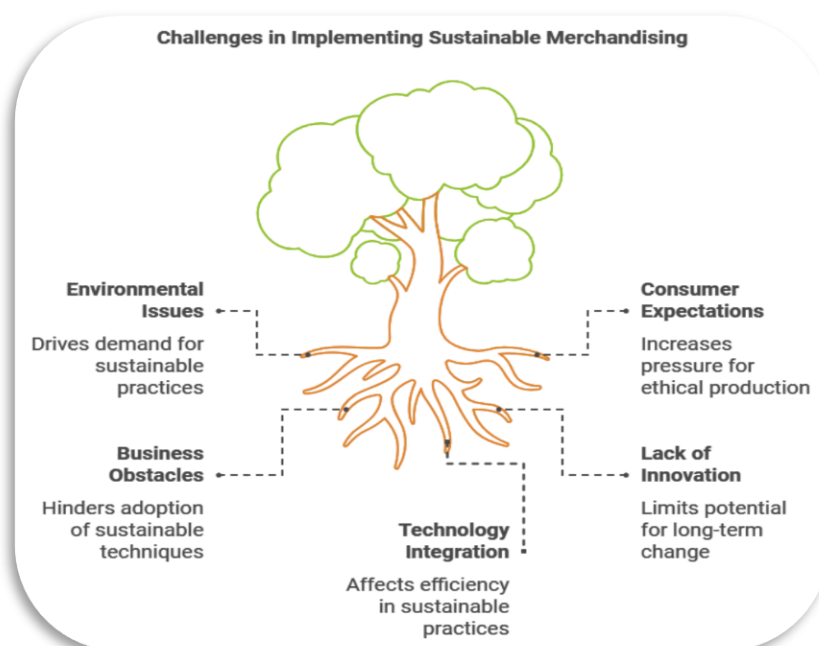
1 Introduction

Given the textile industry's severe environmental and social problems, sustainable merchandising techniques are becoming more and more important (FPT IS, 2024). Due to its enormous energy, water, and trash production, the textile industry is one of the most resource-intensive industries in the world and significantly degrades the environment (Mallick, 2023). As a result, businesses are now approaching product development and sourcing strategies differently (Lozano, 2023). This change has been sparked by the rising demand from consumers for products that are produced ethically and sustainably, which has forced companies to implement new procedures (ATRIA Innovation, 2023; Textilesinside, 2023). Notwithstanding these developments, the shift to sustainable merchandising is difficult and fraught with difficulties. Businesses are frequently discouraged from completely adopting green initiatives due to the high production costs of sustainable materials (FPT IS, 2024). Furthermore, because different nations have differing labor and environmental regulations, it is difficult to apply sustainable practices consistently across them due to the fragmented nature of global supply chains (Mallick, 2023; Lozano, 2023). Because of this, many businesses find it difficult to apply thorough sustainability metrics that can efficiently direct their activities (Textilesinside, 2023). Nonetheless, the industry is full with chances for long-

term change.

The concepts of the circular economy are becoming more and more popular as workable ways to reduce waste and resource usage (FPT IS, 2024). Increasingly popular practices like closed-loop production systems and the use of recycled fibers greatly lessen the environmental impact of the sector while opening up new opportunities for market differentiation and economic success (Mallick, 2023; Lozano, 2023). Digital technology integration improves supply chain transparency, enabling businesses to monitor and control sustainable practices more successfully (ATRIA Innovation, 2023). Younger generations are demonstrating a significant affinity for sustainable brands, which is another change in consumer behavior. Consumer values are changing, which increases demand for ethically conscious products and motivates companies to take a more active role in sustainability issues (Lozano, 2023; FPT IS, 2024). Consumer loyalty and trust can be further increased by improving communication of sustainable initiatives through certification programs and open reporting (Mallick, 2023; Textilesinside, 2023). The textile sector urgently has to change its perspective as companies increasingly see sustainability as a competitive advantage. Even while a lot of businesses are moving in the right direction, there are still big implementation gaps. With practical suggestions for businesses looking to improve their sustainability credentials, this article attempts to

Figure 1: Challenges in Implementing Sustainable Merchandising



examine the potential and problems that the textile industry will face in the future for sustainable merchandising (Gonzalez et al., 2022; Smith & Jones, 2021).

1.1 Objective of the Study

The main goal of the study is to investigate the opportunities and difficulties of introducing sustainable merchandising practices in the textile industry, with an emphasis on identifying crucial tactics that can assist companies in making the shift to more environmentally friendly operations while boosting their competitive edge in the market.

1.2 Methodology

This study will use a qualitative research technique based solely on secondary data sources in order to fulfil its research goal of analyzing the opportunities and difficulties related to implementing sustainable merchandising practices in the textile industry. Because it enables a thorough examination of the viewpoints within the sector, the qualitative approach is especially well-suited for comprehending complicated challenges like sustainability. Secondary data collection techniques will be used to obtain rich contextual insights from existing literature and other pertinent sources in light of the research purpose.

2 Literature Review

The substantial social and environmental effects of the textile industry have drawn more attention in recent years. Businesses are investigating sustainable merchandising strategies to lessen their environmental impact and satisfy consumer demand for ethically made goods as the industry struggles with mounting sustainability issues (FPT IS, 2024). But putting these methods into action is a difficult undertaking that calls for a careful balancing act between social, economic, and environmental factors (Mallick, 2023). Using a variety of contemporary research and viewpoints from the academic and industrial literature, this overview of the literature critically analyzes the opportunities and problems related to sustainable marketing in the textile sector.

2.1 Challenges in Sustainable Merchandising Practices

The significant environmental impact of production

processes, especially those involving water consumption and chemical waste, is one of the most well-known issues facing the textile industry. Significant pollution is caused by textile production operations including dyeing and finishing, especially in water bodies close to industrial locations (Textilesinside, 2023). The environmental cost is made worse by the inefficiency of conventional textile manufacturing techniques and the worldwide scope of supply chains (Wang & Zhang, 2018). Furthermore, landfills and environmental deterioration are exacerbated by the sheer volume of textile waste, particularly fast fashion (Lozano, 2023). The financial burden of implementing sustainable practices is another major obstacle. Higher upfront expenses, such as expenditures for new technology and training, are frequently associated with the switch to environmentally friendly materials and production techniques (Pookulangara & Shephard, 2013). Given the demands of competition and the need for immediate financial gains, many textile companies, especially small and medium-sized businesses (SMEs), find it difficult to defend these expenses (Mallick, 2023; Gonzalez et al., 2022). Furthermore, the industry's transition to sustainability is made more difficult by the absence of established sustainability criteria. It is difficult to define and quantify sustainability in the textile industry; although there are several sustainability certifications, such as the Global Organic Textile Standard (GOTS), they are not always consistent and might not cover all facets of sustainability, including worker conditions and social equity (ATRIA Innovation, 2023; McKinsey & Company, 2016). Another significant obstacle is the intricacy of international supply systems. Subcontracting and offshore production are major components of the global textile industry, which makes it challenging for businesses to keep an eye on and regulate labor and environmental standards across all suppliers (FPT IS, 2024; Niinimäki & Hassi, 2011). Because of this complexity, sustainability is approached in a fragmented manner, and different stakeholders might not be sufficiently motivated to adopt green practices (Mallick S., 2023).

2.2 Opportunities for Sustainable Merchandising Practices

There are plenty of chances for businesses to implement sustainable merchandising strategies in spite of these obstacles. The increasing customer demand for sustainable products is one of the most promising possibilities. Sustainability is becoming more and more important to consumers, especially younger generations (Lozano, 2023; Gonzalez et al., 2022). The growth of conscious consumerism, in which people seek information on the social and environmental effects of the goods they purchase, lends support to this tendency (Tham & Wong, 2019). Businesses that use sustainable merchandising are therefore in a strong position to increase customer loyalty and set themselves apart from competitors. Additionally, as a way to improve sustainability and cut waste, textile retailing is increasingly using the concepts of the circular economy. Businesses can limit waste and lessen their dependency on virgin resources by emphasizing material reuse, recycling, and repurposing (FPT IS, 2024; Smith & Jones, 2021). By using waste as a raw material, the shift to a circular economy can lower the environmental effect of textile production while also resulting in long-term financial benefits (Textilesinside, 2023). By providing repair services and creating products that are simpler to recycle, businesses like Patagonia and H&M

have embraced circular models (Mallick S., 2023; Gonzalez et al., 2022). Another significant chance to improve sustainability in textile commerce is through the incorporation of digital technologies.

The effectiveness of sustainable practices and supply chain transparency could both be greatly enhanced by the development of digital technologies. According to ATRIA Innovation (2023) and FPT IS (2024), blockchain technology is a potent instrument for tracking the origin of raw materials and guaranteeing that goods fulfil sustainability requirements. Similar to this, big data and artificial intelligence (AI) are being utilized more and more to forecast demand, manage inventories, and cut down on overproduction, which minimizes waste and improves the effectiveness of merchandising tactics (Lozano G., 2023). Additionally, organizations can integrate their merchandising strategies with sustainability aims by purchasing raw materials sustainably. Since organic cotton, hemp, and other eco-friendly products have a far smaller environmental impact than conventional cotton, demand for them has increased recently (Mallick S., 2023; Pookulangara & Shephard, 2013). Businesses like Adidas and Levi's have led the way in utilizing sustainable materials in their goods (Smith & Jones, 2021), proving that adding eco-friendly materials to product lines can be profitable and good for the

Figure 2: Strategies for Sustainable Merchandising



environment. Businesses like Adidas and Levi's have led the way in utilizing sustainable materials in their goods (Smith & Jones, 2021), proving that adding eco-friendly materials to product lines can be profitable and good for the environment. A key component of sustainable merchandising is the utilization of recycled and biodegradable materials. To lessen their impact on the environment, brands are moving toward recycled fibres and organic cotton (Goetz, 2023).

2.3 Integration of Sustainability in Textile Merchandising

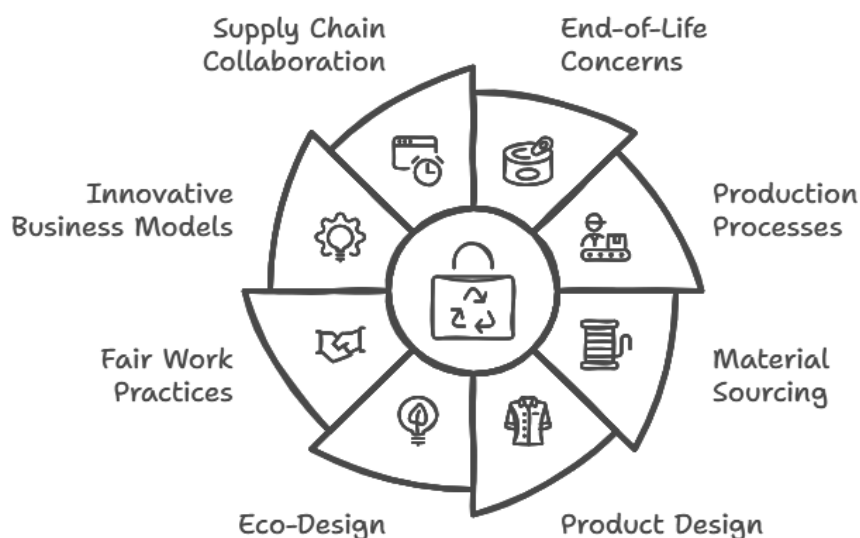
A comprehensive strategy that takes into account end-of-life concerns, production procedures, material sourcing, and product design is needed to include sustainability into merchandising practices. One important tactic for attaining sustainability is the idea of eco-design, which is creating products with their full lifecycle in mind (Textilesinside, 2023). Fair work practices are also emphasized by sustainable merchandising. Businesses are urged to guarantee fair compensation and secure working conditions for employees across their supply chain (Ludwig, 2023). By reducing material waste and using recyclable components, eco-design concepts assist businesses in lessening the total environmental effect of their goods.

A shift in conventional business strategies is also necessary to include sustainability in retailing. By encouraging sharing or leasing rather than ownership, sustainability-driven business models—like subscription models or product-as-a-service—have been demonstrated to reduce waste. By keeping things in circulation for longer, businesses that implement these models can increase the lifespan of their products while reducing waste (FPT IS, 2024). Furthermore, encouraging the broad adoption of sustainable practices requires cooperative collaborations throughout the supply chain. Brands, suppliers, NGOs, and regulatory agencies working together can facilitate industry information sharing and provide the incentives needed to adopt sustainable practices (ATRIA Innovation, 2023; Mallick S., 2023).

In the textile industry, sustainable marketing offers both formidable obstacles and exciting prospects. Technology breakthroughs and rising consumer demand for sustainable products present significant potential for companies to lessen their environmental impact while boosting brand value, even while industrial methods' negative effects on the environment continue to be major barriers (Mallick S., 2023). According to this research, including sustainability into retailing practices necessitates a thorough strategy that incorporates cooperation (Lozano G., 2023), innovation (Gonzalez et

Figure 3: Sustainable Textile Merchandising Overview

Sustainable Textile Merchandising Overview



al., 2022), and a dedication to long-term sustainability objectives.

3 Discussion

The critical literature assessment identifies several important ideas and principles that influence how the textile industry now understands sustainable merchandising techniques. These observations not only highlight the difficulties that businesses encounter but also provide worthwhile prospects that organizations should take advantage of in order to promote sustainability. We go over some of the most important discoveries and how they affect the textile sector below.

3.1 Environmental Challenges: Water Usage and Chemical Waste

There are many environmental issues facing the textile industry, especially with regard to chemical waste and water use. It is one of the biggest water users in the world, and operations like dyeing and finishing greatly increase water contamination. One kilogram of textile materials, for example, can require an average of 164 liters of water to produce; dyeing alone is responsible for a significant amount of this water consumption (PLOS Sustainability Transformation, 2023). Additionally, the hazardous chemicals employed in dyeing operations are the main cause of the industry's 20% share of worldwide water contamination (DNB Asset Management, 2022). Despite the emergence of waterless dyeing techniques, their uptake is hindered by high implementation costs and technical difficulties, especially for small and medium-sized businesses (SMEs), which frequently lack the funds to invest in such innovations (Textile Focus, 2019).

3.2 The Financial Cost of Sustainability: Barriers to Adoption

Another obstacle to the textile industry's adoption of sustainable practices is the expense of sustainability. Smaller businesses may be discouraged from making the shift to more sustainable operations due to the unreasonably high initial cost of sustainable materials and technologies. For instance, many SMEs view the risks associated with increased expenses as a disincentive, even though companies like H&M and

Patagonia show that putting circular economy concepts into practice may improve profitability and brand loyalty (Europarl, 2024). Long-term advantages like improved customer relations and resource efficiency are becoming more apparent, underscoring the need for collaborations or financial incentives that could reduce obstacles for SMEs (DNB Asset Management, 2022).

Figure 4: Bridging the Sustainability Gap



3.3 Lack of Standardized Sustainability Metrics

The absence of uniform sustainability measures is a major problem in the textile sector. Businesses find it more difficult to integrate their operations with global sustainability goals when there is no clear structure in place. Although there are certifications like GOTS and Fair Trade, they mostly concentrate on particular elements like organic ingredients or ethical labor methods, neglecting to fully address other important issues (Textile Focus, 2019). Customers become confused as a result of this fragmentation, and companies are unable to create comprehensive sustainability plans. Comprehensive and widely recognized sustainability metrics are desperately needed to improve industry accountability and transparency (Europarl, 2024).

3.4 Consumer Demand and Conscious Consumerism

A major change in the dynamics of the market is represented by the rise of conscious consumption. Customers, especially younger ones, are calling for more ethically made goods. Businesses can take advantage of this trend by differentiating themselves by using sustainable materials and ethical labor methods to match customer ideals (DNB Asset Management, 2022). Companies must, however, overcome the

difficulty of clearly conveying their sustainability initiatives without engaging in greenwashing, which is the practice of falsely portraying their operations as more environmentally friendly than they actually are. Businesses must make sure that their sustainability statements are supported by verifiable activities and third-party audits in order to prevent customer backlash (Europarl, 2024).

3.5 Circular Economy and Waste Reduction

An important opportunity for the textile industry is the incorporation of circular economy concepts into textile marketing. Businesses can reduce waste, save manufacturing costs, and lessen their dependency on virgin resources by prioritizing reuse, recycling, and repurposing. This concept has been embraced by industry leaders like Patagonia and H&M, who prioritize product repair services and design clothing with recyclability in mind (Gözet and Wilts, 2022). In addition to reducing environmental damage, the shift to a circular economy encourages creative commercial strategies. For example, renting services like Rent the Runway are a prime example of the trend away from ownership and toward leasing or sharing things. These models encourage sustainable consumer practices, prolong product lifecycles, and cut waste (Platform for Accelerating the Circular Economy, 2023). However, a substantial shift in consumer behavior is required for the successful adoption of circular models, and this shift may take some time to establish (EURATEX, 2022).

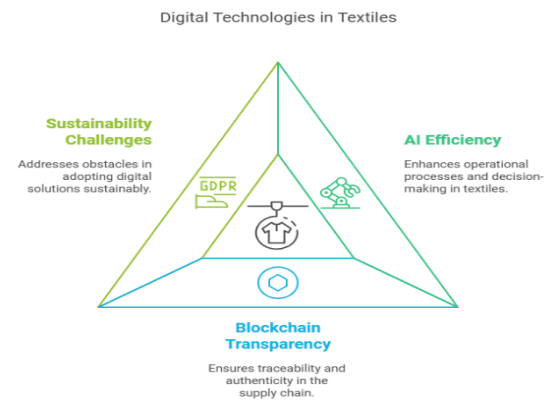
3.6 Digital Technologies and Supply Chain Transparency

Artificial intelligence (AI) and blockchain are two examples of digital technologies that are becoming essential for improving sustainability in the textile industry. Blockchain technology makes it possible to track and confirm the origin of raw materials, guaranteeing that businesses fulfil their sustainability pledges (NIST, 2024). Meanwhile, by precisely forecasting customer demand, AI and big data can eliminate waste, limit overproduction, and improve inventory management (Gözet and Wilts, 2022). These technologies have the potential to significantly increase operational effectiveness and supply chain transparency, allowing businesses to implement more environmentally friendly merchandising strategies. Adoption of these technologies is still difficult, though, because they need large expenditures in digital

infrastructure and raise data security issues (Platform for Accelerating the Circular Economy, 2023).

3.7 Sustainable Sourcing of Raw Materials

Figure 5: Bridging the Sustainability Gap



Another recurrent subject in the literature is the need for sustainable sourcing of raw materials like hemp and organic cotton. Textile firms have an opportunity to integrate their operations with sustainability goals due to the growing availability and consumer choice for these materials (EURATEX, 2022). Customers are calling for more information about where their clothes come from. Customers are more likely to trust brands that reveal their supply chain information and sourcing methods (Awasthi et al., 2022). However, because of their restricted supply and variable prices, procuring these components at scale continues to provide difficulties. Careful supply chain management is necessary when switching to sustainable resources in order to avoid unforeseen social or environmental repercussions (Gözet and Wilts, 2022). In order to retain profitability, businesses must strike a balance between the cost of sustainable resources and consumers' willingness to pay more for them. Therefore, procuring sustainable raw materials requires both ethical considerations and economic foresight.

3.8 Collaboration Across the Supply Chain

For sustainability initiatives to be successful, cooperation throughout the supply chain is essential. To guarantee uniform standards and procedures across the supply chain, businesses must work closely with suppliers, non-governmental organizations, and regulatory agencies (NIST, 2024). Collaborative methods facilitate the exchange of resources and best practices while creating an atmosphere that supports long-term innovation. Strengthening these collaborations can result in a more integrated approach

to sustainable retailing and shared accountability for sustainability goals, especially considering the fragmented structure of global textile supply chains (Platform for Accelerating the Circular Economy, 2023).

The literature offers a thorough analysis of the opportunities and problems associated with sustainable merchandising techniques in the textile industry. The growing demand for sustainable products, the incorporation of circular economy principles, the use of digital technologies, and the growing consumer focus on ethics present businesses with significant opportunities, even though environmental concerns, financial costs, and supply chain complexity continue to be major obstacles. Overcoming the current obstacles via cooperation, technological innovation, and consumer education is the key to opening up these potentials. The textile industry can only make the shift to a more ethical and sustainable future by taking a holistic strategy. The literature offers a thorough analysis of the opportunities and problems associated with sustainable merchandising techniques in the textile industry. The growing demand for sustainable products, the incorporation of circular economy principles, the use of digital technologies, and the growing consumer focus on ethics present businesses with significant opportunities, even though environmental concerns, financial costs, and supply chain complexity continue to be major obstacles.

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4 Findings

4.1 *Environmental Challenges: Water Usage and Chemical Waste*

The excessive use of water and the dangerous chemicals used in dyeing operations are two major environmental problems facing the textile industry. One of the biggest water consumers in the world, the industry greatly contributes to water pollution through operations like dyeing. Waterless dyeing technology has advanced, but widespread adoption is hampered by its high cost and technical difficulties, especially for small and medium-sized businesses (SMEs).

4.2 *Financial Barriers to Sustainability*

For many firms, especially SMEs, the expense of implementing sustainable practices is a significant obstacle. Businesses may find it challenging to make the switch without outside assistance because initial investments in sustainable materials and technologies might be unaffordable. Nonetheless, businesses such as H&M and Patagonia have demonstrated that incorporating the concepts of the circular economy may improve profitability and brand loyalty, suggesting that the initial expenses can be compensated for in the long run.

4.3 *Lack of Standardized Sustainability Metrics*

The lack of standardized sustainability indicators has been cited as a major issue facing the textile sector. Although there are certifications like GOTS and Fair Trade, they only cover particular facets of sustainability, like fair labor practices or organic ingredients. The absence of thorough, widely recognized standards confuses customers and prevents companies from putting complete sustainability policies into practice. Standardized sustainability measures are essential for enhancing openness and enabling more efficient environmental impact analyses.

4.4 *Consumer Demand for Sustainable Products*

Conscious consumption is on the rise, particularly among younger generations who are calling for more ecological and ethically made goods. Businesses have a chance to stand out from the competition by matching the values of their customers as a result of this change in consumer behavior. Businesses must, however, make sure that their sustainability claims are supported by

independent audits and verified data in order to avoid "greenwashing." Gaining the trust of customers and cultivating enduring loyalty need open communication and supply chain transparency.

4.5 *Circular Economy and Waste Reduction*

There is a lot of promise for waste reduction and sustainability advancement in the textile industry through the application of circular economy concepts. Businesses that prioritize recycling, repair, and repurposing—such as Patagonia and H&M—are setting the standard for circular models. Despite the potential of circular economy techniques, their successful adoption necessitates a change in consumer behavior, which could take some time to develop. As part of the circular economy concept, rental models and product-as-a-service tactics are also becoming more popular.

4.6 *Digital Technologies for Supply Chain Transparency*

Artificial intelligence (AI) and blockchain are two examples of digital technologies that are becoming crucial instruments for improving sustainability in the textile sector. Blockchain technology ensures accountability and transparency by tracking and confirming the origin of raw resources. By precisely forecasting customer demand, AI can eliminate waste, cut down on overproduction, and enhance inventory management. Smaller businesses may find it difficult to implement these technologies because they necessitate large investments in digital infrastructure.

4.7 *Sustainable Raw Material Sourcing*

Sustainable raw materials like hemp, organic cotton, and recycled fibers are becoming more and more in demand. However, because of their restricted availability and variable prices, procuring these components at scale continues to be difficult. Businesses must strike a balance between consumers' desire to pay more for environmentally friendly items and the higher costs of sustainable materials. To overcome these obstacles, effective supply chain management and long-term contracts with suppliers of sustainable materials are crucial.

4.8 *Collaboration Across the Supply Chain*

Working together throughout the supply chain is essential to attaining significant sustainability. To create common sustainability standards and promote innovation, businesses must collaborate with suppliers,

non-governmental organizations, and regulatory agencies. A more integrated strategy for minimizing environmental effect and consistent sustainability practices will be ensured by fortifying relationships across the supply chain.

5 *Recommendations*

5.1 *Invest in Waterless Dyeing Technologies*

Despite their high initial costs, textile industries are advised to invest in waterless dyeing technologies because to the substantial environmental effect of traditional dyeing processes (Deloitte, 2024). Governments, trade associations, and non-governmental organizations should think about offering financial incentives, like grants or subsidies, to promote wider adoption by lessening the financial burden on businesses, especially small and medium-sized enterprises (SMEs) (European Commission, 2024). To make these technologies more cost-competitive with traditional dyeing techniques, future research and development should concentrate on enhancing their scalability and efficiency (PwC, 2024).

5.2 *Develop Financial Models to Support Sustainable Transition*

It is crucial to create creative finance models that encourage sustainability adoption without burdening enterprises to remove the financial obstacles keeping them from switching to sustainable practices (VP Bank, 2024). Green finance choices, low-interest loans, or cooperative funding models between SMEs and larger enterprises are a few examples of this. Additionally, businesses should be urged to assess the long-term financial advantages of switching to sustainable practices, such as improved customer loyalty and resource efficiency, which can partially offset the upfront expenses (Deloitte, 2024).

5.3 *Standardize Sustainability Metrics and Certifications*

It is essential to develop uniform, complete sustainability measures that consider not just material sourcing but also energy use, waste management, and social equity to increase the openness and efficacy of sustainability initiatives in the textile sector (European Commission, 2024). Governments, industry associations, and independent certifying bodies should cooperate to create global standards that give businesses

clear direction and are simple for customers to comprehend. Lifecycle assessments that take into account the full environmental impact of items from manufacturing to disposal should also be included in these measures (PwC, 2024).

5.4 Leverage Consumer Demand for Sustainable Products

Transparency in supplier chains and product offers should be given more importance by businesses in light of the emergence of conscious consumption. Brands should make sure that their sustainability claims are supported by independent audits, verifiable statistics, and transparent information on the social and environmental effects of their products to win over ethically conscious customers (VP Bank, 2024). Businesses can also spend money on teaching customers about the advantages of sustainable products, since this can boost market share among younger, environmentally concerned consumers and foster long-term brand loyalty (Deloitte, 2024).

5.5 Adopt Circular Economy Models and Product Lifecycle Extensions

Businesses can incorporate more circular economy concepts into their company plans, such as product-as-a-service models, recycling, and repair services (Veolia North America, 2020). Reducing waste and dependency on virgin resources can be achieved by emphasizing the extension of product lifecycles through services like repair, refurbishment, and reuse (Manninen, 2023). Businesses can also look into cutting-edge models that can support more sustainable consumption habits, like product leasing or sharing platforms (Twice Commerce, 2023). Businesses such as Patagonia and H&M have established a standard for circular economy operations, and other companies ought to emulate them by implementing comparable tactics (PRé Sustainability, 2021).

5.6 Expand Use of Digital Technologies for Supply Chain Transparency

Artificial intelligence (AI) plus blockchain technology can significantly improve supply chain transparency by enabling businesses to track the origin of raw materials and cut down on overproduction (Twice Commerce, 2023). It is advised that businesses look into collaborating with tech companies to create scalable and

reasonably priced blockchain solutions. Investing in AI-powered inventory management systems can improve demand forecasting, cut down on waste from overproduction, and enable more effective use of available resources (Manninen, 2023).

5.7 Promote Sustainable Raw Material Sourcing at Scale

Textile firms should put more of an emphasis on sustainable procurement of raw materials such as organic cotton, hemp, and recycled fibres to meet the growing demand for eco-friendly products (Veolia North America, 2020). Establishing long-term sourcing agreements with suppliers can help stabilize material prices and guarantee the large-scale availability of sustainable commodities. Furthermore, corporations ought to think about collaborating with nearby or regional farmers to create sustainable farming methods that lessen the environmental impact of procuring raw materials while offering farmers financial incentives (PRé Sustainability, 2021).

5.8 Foster Collaboration Across the Entire Supply Chain

All parties involved in the supply chain, from producers of raw materials to consumers, must work together to make the textile industry's transition to sustainability (Twice Commerce, 2023). To create common sustainability standards, promote knowledge sharing, and find creative ways to lessen their influence on the environment, businesses should aggressively look for collaborations with NGOs, government agencies, and trade associations. To promote greater industry-wide responsibility and uniformity in sustainable practices, collaborative efforts should also concentrate on developing a consistent framework for sustainability reporting (Manninen, 2023).

5.9 Encourage Government Policies to Support Sustainability

Through the implementation of supportive policies like tax incentives for sustainable practices, subsidies for eco-friendly technologies, and mandatory sustainability reporting for large companies, governments can actively drive the shift toward sustainable textile manufacturing (Veolia North America, 2020). Furthermore, by offering focused financial assistance or promoting knowledge-sharing programs on sustainable practices, governments

can contribute to the creation of a fairer playing field for SMEs. These initiatives will assist in removing obstacles like high initial expenses and smaller enterprises' ignorance.

The textile industry can overcome its present problems and set itself up for a more sustainable future by adopting a multifaceted strategy that includes investments in technology, cooperation throughout the supply chain, standardized sustainability metrics, and improved alignment with changing consumer demands. By putting these suggestions into practice, businesses will be able to lessen their negative effects on the environment and society while simultaneously developing more profitable and competitive business models that appeal to consumers who are becoming more environmentally conscious.

6 Conclusion

To secure a sustainable future, the textile industry must confront the issues of complex supply chains, financial restraints, and environmental effects at this critical juncture. Nonetheless, there are plenty of chances for companies to adopt sustainable merchandising strategies that give them a competitive edge in addition to lessening their environmental impact. Important suggestions for a more sustainable and successful future for the sector include investing in waterless dyeing technology, implementing circular economy models, and integrating digital tools for supply chain transparency. Importantly, speeding the industry's transition to sustainability requires removing financial obstacles through creative funding approaches, creating uniform sustainability measures, and encouraging cooperation throughout the whole supply chain. To foster enduring customer loyalty and stand out in the market, companies must also adapt their strategy to meet the rising consumer demands for ethical sourcing, eco-friendly products, and transparency. The textile industry can shift to a more ethical, sustainable, and profitable model with the help of proactive government policy support, investments in new technologies, and a comprehensive approach to sustainability. This will set the industry up for long-term success in a world that places a growing emphasis on sustainability.

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