INDIAN TEXTILE INDUSTRY: EMBRACING

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The textile industry in India is among the oldest in the world, with a history that spans

over 5,000 years. Cotton threads from India date back to around 4000 BC, and evidence

Abstract

of dyed fabrics can be traced to about 2500 BC. Over the centuries, the industry has evolved significantly, setting global standards in fabric production and influencing international fashion trends. Renowned for its high-quality textiles, the industry showcases the diverse cultural heritage of India's regions. Contributing around 2.3% to India's GDP, excluding related sectors, it accounts for 7% of the country's industrial production in value. In 2020-21, textiles, apparel, and handicrafts represented 11.4% of India's total exports, positioning India as the fourth-largest textile and apparel exporter worldwide. Industry includes both the handloom and machine-made textiles, produced

from cotton, silk, wool, and jute. It spans a variety of products and processes, such as fiber manufacturing, yarn spinning, fabric weaving, and dyeing and printing. With

agriculture providing vital raw materials like cotton, silk, and jute, the sector is also

second-largest employment generator in India, following agriculture, making it a key

player in the country's economy.

Keywords: textile industry, Innovation, Sustainability, economy, employment, export.

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Introduction

Indian textile industry holds a crucial place in the nation's economy and cultural heritage. It has evolved significantly, moving from traditional village handlooms to modern, advanced textile mills. As one of the earliest industries in India, it continues to play an essential role in the country's economic structure. Currently, the textile sector contributes 13% to total industrial production, 12% to overall exports, and 2.3% to the national Gross Domestic Product. It is also the second-largest employment generator in India, underscoring its importance in both economic and social contexts. India ranks as the sixth largest exporter of textiles and apparel globally, with textiles, apparel, and handicrafts making up 8.21% of the country's total exports in 2023-24.

India holds a 3.91% share in global textile and apparel trade, with the USA and the EU being the primary export markets, accounting for about 47 percent of total exports. The industry is a major source of employment, directly providing jobs to over 45 million people and indirectly supporting the livelihoods of over hundred million, including a large proportion of women and rural populations. The sector aligns with key central government initiatives such as Make in India, Skill India Misson, Youth Employment and Women Empowerment. To promote inclusive and participative growth, the government is focused on improving textile manufacturing by developing world-class infrastructure, encouraging innovation, upgrading technology, and leveraging traditional strengths in the sector.

However, environmental challenges like waste and pollution remain significant issues. In response, the industry is adopting sustainable practices, including circular fashion and renewable energy. With a vision to establish India as a global textile manufacturing hub, the goal is to create a \$250 billion textile industry and achieve \$100 billion in exports by 2030. This will involve focusing on high-tech, high-growth products, sustainability, large-scale infrastructure, and self-reliance in raw materials, while also ensuring substantial livelihood opportunities and supporting textile sectors.

Objectives and Research Methodology

This study adopts a quantitative approach using secondary data from books, newspapers, journals, economic magazines, research reports, and online sources.

Statistical tools like percentage and correlation analysis were used to explore relationships between variables, offering deeper insights into the data. The objectives are-

- To analyze the Textile industry and to focus on contribution to Indian Economy.
- To understand the recent emerging trends in Textile industry.
- To study the challenges faced by the Textile industry.
- To give suggestions to overcome the challenges of the textile industry.

Raw Material Assistance

Cotton: India is the world's largest cotton producer, accounting for 23% of global fiber production and 60% of its textile raw material consumption. The country cultivates cotton on 126.80 lakh hectares, with both rain-fed and irrigated areas. In 2023-24, India produced 436 kg/ha, benefiting around sixth million farmers. The central government sets a Minimum Support Price (MSP), with the Cotton Corporation of India (CCI) overseeing procurement, buying significant quantities each year to support farmers.

Silk: India is the 2nd-largest producer and the largest consumer of silk, producing all four commercial varieties: Mulberry, Tasar, Muga, and Eri. In 2023-24, India produced 38,913 MT of silk. The sericulture industry is employment-intensive and offers lucrative returns. India's silk production includes both bivoltine and vanya silks, with increased output of bivoltine raw silk in recent years.

Jute: Jute, primarily grown in eastern India, supports around 40 lakh farm families. India has 111 composite jute mills, with the government purchasing jute for packaging under the Jute Packaging Material Act, 1987. Initiatives like Jute-ICARE aim to improve fiber quality and increase farmers' income by 50%, while the National Jute Board promotes sector growth.

Wool: The Integrated Wool Development Programme (IWDP) focuses on boosting India's wool sector. It aims to strengthen the wool supply chain, enhance wool quality, and promote coarse wool in technical textiles. Key initiatives include skill development, modernizing machinery, and promoting branding for Pashmina and carpet-grade wool, particularly in the Hilly region.

Man-Made Fibre: India's MMF value chain is vertically integrated, connecting raw materials to finished goods. While the global market is dominated by MMF, India has historically concentrated on cotton. The government is now focusing on expanding MMF production, establishing the Textile Advisory Group on MMF in January 2023

to address value chain challenges. In FY 2023-24, India's MMF textile and apparel exports reached USD 8.19 billion, with further growth potential. To ensure quality, a Quality Control Order for Viscose Staple Fibre imports was introduced in December 2022.

The Value Chain: The Indian textile industry boasts a robust value chain that encompasses natural and man-made fibers, apparel, and home furnishings, catering to both domestic and international markets. With abundant raw materials like cotton, silk, wool, and jute, alongside a highly skilled workforce, India is well-positioned for continued growth and expansion in the global textile sector.



India has significant potential to excel across the textile value chain, supported by 168 power-intensive textile firms and 31 operational textile parks. The industry spans a broad spectrum of segments, from Indian traditional handlooms, handicrafts, wool, and silk products to large-scale organized sectors that employ capital-intensive technologies for mass production. This diverse structure positions India to capitalize on its strengths and expand its footprint in the global textile market.

The PLI Scheme: Production-Linked Incentive Scheme for Textiles, with a ₹10,683 crore budget over five years, aims to boost MMF apparel, fabrics, and technical textiles. The scheme has two parts:

- Part-1: Requires ₹300 crore investment and ₹600 crore turnover per company.
- Part-2: Requires ₹100 crore investment and ₹200 crore turnover per company. Incentives are based on achieving threshold and incremental turnover.

Technology Support: The Amended Technology Fund Upgradation Scheme (ATUFS), launched in January 2016 with a ₹17,822 crore budget, promotes technology modernization through credit-linked subsidies. By March 2022, 14,389 UIDs were issued, encouraging investment and modernization in the textile sector, especially in MSMEs.

Support for Skilling: The Samarth scheme, under the Ministry of Skill Development & Entrepreneurship, includes advanced features like Aadhaar-based attendance tracking, mobile app-based monitoring, and a comprehensive Management Information

System (MIS). Key features include online proposal submission, trainee registration, and certification modules.

Infrastructure Development

Govt. of India is establishing seven PM-MITRA parks to create modern, large-scale textile infrastructure, with a budget of ₹4,445 crores for 2021-2027. These parks will include facilities for the entire textile value chain and will adopt a Public-Private Partnership model. The Textile Cluster Development Scheme (TCDS) aims to modernize outdated clusters, improving operational and financial viability through technology access and promoting sustainability. The handloom sector, employing over 35 lakh people, is crucial to India's economy, especially for women's empowerment. The sector is known for eco-friendly, innovative, and exportable products, supported by government schemes. The number of clusters that received financial assistance from 2018–19 to 2023–24 is broken out as follows:

Table:1

Cluster wise financial assistance during 2018-19 to 2023-24

Year	Number of	Amount released (Cr.)	
	sanctioned cluster		
2018-19	16	8.56	
2019-20	21	16.84	
2020-21	2	17.60	
2021-22	69	59.92	
2022-23	110	76.20	
2023-24	96	76.35	

Source: Annual Reports, Ministry of Textiles 2023-2024

Sivasagar (Assam), Varanasi (Uttar Pradesh), Virudhunagar and Trichy (Tamil Nadu), Murshidabad (West Bengal), Godda and surrounding districts (Jharkhand), Prakasam and Guntur (Andhra Pradesh), Bhagalpur (Bihar), and East Imphal (Manipur) are the eight states where nine Mega Handloom Clusters are currently under development. A

total of ₹14.28 crore has been set aside as of January 11, 2024, to carry out different projects inside these Mega Clusters.

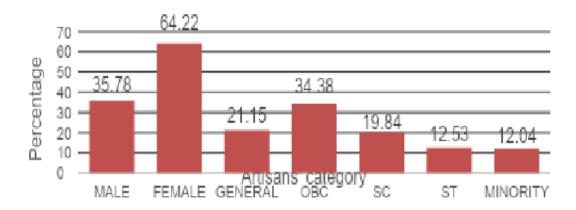
Handloom Schemes:

- Raw Material Supply Scheme (RMSS): Implemented from 2021-22 to 2025-26, this scheme ensures the availability of all types of yarn for handloom weavers across the country. It is managed by the National Handloom Development Corporation and state governments, with freight reimbursements and depot operating charges offered to agencies.
- Handlooms Act, 1985: This Act protects handloom weavers from competition
 with powerlooms and mills by reserving certain articles for handloom
 production. Enforcement offices in Delhi, Ahmedabad and Chennai ensure its
 implementation.
- 3. National Handloom Development Programme (NHDP): The updated guidelines for NHDP, effective from 2022-23 to 2025-26, focus on the integrated growth of handlooms and the welfare of weavers. Scheme provides support for design inputs, technology upgrades, marketing through exhibitions, infrastructure development like Urban Haats, and the creation of an e-marketing web portal for handloom products

Handicrafts Sector:

India's economy greatly benefits from the handicrafts sector, which employs a large number of artisans in rural and semi-urban areas. It is essential for maintaining the country's cultural legacy and generating foreign exchange profits. In addition to providing possibilities for newcomers to the industry, handicrafts support the livelihoods of millions of craftspeople. However, obstacles including inadequate market access, low cash, lack of exposure to technology, and lack of knowledge impede growth.

The Ministry of Textiles has issued artisan ID cards and mobilised 32.03 lakh craftsmen under the "Pahchan" scheme. Below picture show the demographic profile of the artisans who have been granted an artisan ID card:



Handicrafts Sector Schemes:

The Office of Development Commissioner of the Handicrafts manages significant programs aimed at fostering the growth of this sector, such as the National Handicrafts Development Programme and the Comprehensive Handicrafts Cluster Development Scheme. These initiatives focus on the overall development of handicraft clusters and artisans.

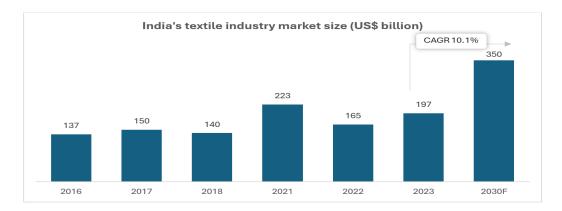
- 1. The National Handicrafts Development Programme (NHDP) encompasses:
 - Skill Development
 - Ambedkar Hastshilp Vikas Yojana
 - Marketing Support & Services
 - Welfare Benefits for Artisans
 - Research and Development
 - Infrastructure and Technology Support
- 2. The Comprehensive Handicrafts Cluster Development Scheme takes an integrated approach to the development of sector.

Direct Benefit Transfer (DBT) Scheme:

The DBT scheme aims to bring transparency and eliminate fund mismanagement by directly transferring benefits to beneficiaries' bank or postal accounts linked with Aadhaar. The scheme is monitored through the DBT Bharat Portal, ensuring efficient and timely delivery of benefits, while reducing pilferage and duplication.

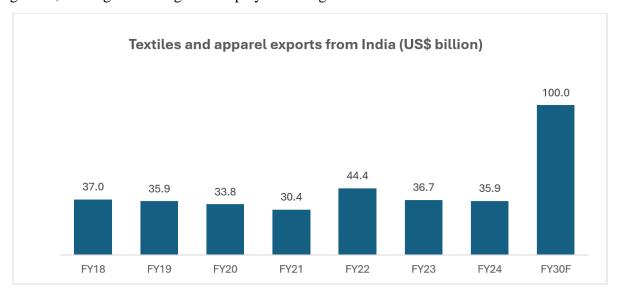
current state of the Indian textile industry: Indian textile industry has undergone significant transformation over the last decade, establishing itself as a world leader in

textile production and export from the country. Historically known for its rich heritage in handloom and cotton, the industry has evolved through modernization, technology adoption, and policy support. Key milestones include the rise of man-made fibers, the growth of the apparel and garment sector, and the development of textile parks and clusters. With advancements in machinery, automation, and skill development, India has solidified its position as one of the largest producers, exporters, and consumers of textiles, contributing significantly to global supply chains and the domestic economy.



Source: Financial Express T

According to Texprocil, Textile market in the country is expected to grow at a robust Compound Annual Growth Rate of 10.1 percent, from USD 197 billion in 2023 to USD 350 billion by 2030. Technological developments, the growing demand for textile products worldwide, and pro-business government policies have all contributed to this growth, making India a significant player in the global textile market.



Source: AEPC

With 4.6% of global trade, India is currently the second-largest producer of textiles and clothing worldwide. It is the third-largest exporter of textiles, after Germany and China. India's textile exports were valued at US\$35.9 billion in FY24 and are expected to reach US\$100 billion by FY30. About 4.5 crore people are employed in India's vast and expanding textile industry, which includes 35 lakh handloom workers. This industry, which benefits from a sizable, highly qualified workforce and substantial growth potential, is essential to both the domestic economy and international trade.

Free Trade Agreements under WTO

India signed FTA with Australia in 2022 and is currently negotiating FTAs with the EU, UK, Canada, Israel, and other nations. These agreements are anticipated to offer price advantages to Indian textiles, enabling Indian firms to compete effectively with companies from Vietnam and Bangladesh, whose products enjoy duty-free access to major markets.

The expansion of India's textile industry following the year 2005.

Following the elimination of the quota system, India's textile exports saw an increase in value. However, its global share in textile exports only rose slightly, from 4% in 2005 to 5.7% in 2022.

Table - 2

India's Textile Expo	rts After the Annual Q	uota Was Eliminated in 2005
Year	Worth (\$Billion)	percentage of global exports
2000	5.08	3.5
2005	7.86	4.2
2010	13	5.12
2022	18.9	5.6

Source: World Trade Statistical Review, World Trade Organization.

After the elimination of the quota system, India's textile exports experienced a significant increase from 2.69% in 2004-2005 to 23.14% in 2005-2006. Nevertheless, exports fell in the following years, especially after the 2008 subprime crisis, which hampered the US economy and led to a 15% increase in the rupee's value against the US dollar, affecting exports to the US, which is India's main textile importer. In 2011-12, exports increased by 26.23% because of a depreciated rupee and a resurgence in demand from key markets. However, ongoing growth was impeded by difficulties including a complicated supply chain, elevated logistics expenses, stringent labor regulations, high cotton prices, and sluggish domestic demand.

Table - 3

Name of the Country	Export 2022-23 in	Percentage Share
	USD Million	
United States of America	10,460	29
European Union	7,678	21
Bangladesh	2,530	7
United Arab Emirates	2,090	6
UK	2,105	6
Turkey	719	2
Sri Lanka	728	2
Australia	659	2
Canada	573	2
Saudi Arabia	576	2
Sub-Total	8,570	23
Total exports of textiles and apparel, including handicrafts	36,684.00	100

Source: DGCI&S(Provisional)

India's top market for textile and clothing exports is the US, with significant demand also coming from the European Union, Bangladesh, the UK, and the United Arab Emirates. The US continues to be the top market for Indian textile exports, and these areas are crucial to the growth of India's textile exports.

Need for sustainable transition

The rapid growth of the textile industry and increased use of synthetic fibers have raised environmental concerns. While production has doubled, garment lifespans have decreased by 36% in the past 15 years, and only 1% of fibers are recycled into new clothing. The industry's reliance on chemicals, dyes, and fuels leads to issues like wastewater discharge, pollution, and workplace safety risks. In response, India is focusing on sustainable manufacturing through ecofriendly practices, such as recycling, water conservation, and bio-friendly textiles. Initiatives like the 'Mega Investment Textile Parks aim to make sustainable manufacturing more accessible.

- Recycling and Upcycling: Companies like Pomogrenade, Second Life, and Patch over Patch are converting textile waste into new garments, contributing to the circular economy.
- Using Solar Energy: Textile factories, including Welspun, are adopting rooftop solar panels to reduce fossil fuel usage and enhance energy efficiency.
- Eco-Conscious Water Management and Dyeing: Companies like BRFL
 Textiles are reusing wastewater and implementing innovative dyeing processes,
 such as sulphur dyeing, to reduce water consumption and promote
 sustainability.

Innovations in the Textile Industry:

- Pleating Technology and Nanotechnology: Pleating creates texture changes, while nanotechnology promotes water-resistant, energy-efficient production methods.
- **3D Printing**: Enhances yarn processing and textile design flexibility, allowing customized and unique products.
- Biodegradable Textiles: The use of biodegradable fabrics is reducing waste, showcasing the industry's commitment to sustainability and minimizing environmental impact.

• **Artificial Intelligence**: AI is revolutionizing design, enabling the creation of innovative patterns based on data-driven insights.

Government Initiatives for Sustainable Textile Industry:

Sustainable Resolution: This initiative outlines a 5-point plan for the textile industry to:

- Ensure traceability of sustainable raw materials across the value chain.
- Develop sustainable sourcing with eco-friendly raw materials.
- Shift a significant portion of the supply chain to sustainable practices by 2025, in line with UN Sustainable Development Goals.
- Assess the environmental impact of current garment production.
- Inform consumers and participants about sustainability efforts.

Pradhan Mantri Mega Integrated Textile Region and Apparel (PM MITRA): With an investment of US\$ 541.82 million (Rs. 4,445 crore) till 2027-28, this initiative aims to support India's textile sector in achieving UN SDG 9 by setting up seven textile parks.

Production-Linked Incentive (PLI) Scheme: Focused on boosting domestic manufacturing, this scheme provides incentives based on cumulative sales of locally produced goods. The government allocated Rs. 10,683 crore (US\$ 1.44 billion) for the textile sector under this initiative in September 2021.

Amended Technology Up-gradation Fund Scheme: This scheme provides credit-linked capital investment subsidies to support ease of business, create employment, and promote exports. A total of US\$ 75.74 million (Rs. 621.41 crore) has been distributed across 3,159 cases.

Opportunities

Opportunities for India arise from the limitations faced by China and Pakistan in the textile sector. China's share in global textile trade has declined due to ongoing accusations of human rights violations, particularly related to forced labor, which led to actions like the US's Uyghur Forced Labour Prevention Act and stricter European Commission policies.

Pakistan, once a leader in textiles, is currently facing a crisis due to economic instability, floods in 2022, and high inflation. These factors, including rising interest rates and restrictions on imports, have made it difficult for Pakistani textile companies to operate efficiently, creating potential market share to the India's textile exports.

Navigating Challenges in Indian Textile Industry

The Indian textile sector has a number of difficulties, due to its complex and decentralized structure, which involves multiple players across the value chain. Key challenges include:

- Supply Chain Complexity: The decentralized nature of the supply chain creates coordination issues, hindering the smooth implementation of sustainable practices.
- Lack of Manufacturer Capabilities: Many manufacturers lack the technological expertise or financial resources to adopt sustainable practices on a large scale.
- Cultural and Language Barriers: Diverse cultural and language differences among workers can create communication barriers, making it difficult to implement and standardize sustainable initiatives across regions.

Despite these challenges, competition in this sector can drive innovation and encourage the adoption of cost-effective, green technologies. Collaboration among manufacturers to share resources and best practices can help overcome some of these hurdles, achieving economies of scale necessary for sustainable investments.

Findings and Suggestions

Export Trends: The textile and apparel export sector has shown mixed trends:

- Positive Growth: Export values have increased for categories such as carpets, silk products, jute products, cotton textiles, and man-made textiles.
- Negative Growth: The export values of wool textiles, handloom goods, and ready-made clothing have decreased.

CAGR Insights: Compound Annual Growth Rates (CAGR) help gauge the average annual growth for each textile category, highlighting the key performers in the export sector.

Global Trends: The textile industry's performance impacts world merchandise trade patterns. While there were fluctuations in the global textile market, there was overall positive growth, particularly in 2021. However, the share of textile and clothing in world trade has shown volatility.

Imports and Consumption: The rising trend in imports suggests increased demand for textiles and apparel, despite a sharp dip in 2020-21, likely due to economic disruptions like the COVID-19 pandemic. The decline in exports from 2018-2020 could be due to global factors like trade tensions or shifts in demand.

Recommendations

- **Diversification**: Expanding the export base in categories that are showing positive growth can offset declines in others.
- Adopt Sustainability: Manufacturers should embrace sustainable practices to align with global demand for eco-friendly products and strengthen their export potential.
- Collaborate and Innovate: Pooling resources and sharing knowledge will allow manufacturers to overcome challenges, improve productivity, and reduce costs while adopting green technologies.

Conclusion

Due to changing market demands, regulatory frameworks, and environmental concerns, India's textile industry is moving towards sustainability and technological advancement. In an effort to reduce their environmental impact and boost their competitiveness, manufacturers are progressively implementing eco-friendly production techniques and sustainable materials. Prominent businesses like Raymond Limited, Welspun India, Arvind Limited, and Aditya Birla Fashion are prime examples of the benefits of incorporating sustainable practices into their daily operations. However, realizing complete sustainability will require coordinated efforts among manufacturers, policymakers, and consumers. With its ongoing growth and innovation, India's textile sector holds significant potential to establish itself as a global leader in sustainable production.

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