

Revitalizing India's Handloom Sector: A Strategic Review of Challenges and Solution-driven Approaches

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Abstract

India's handloom sector represents a unique blend of cultural heritage and economic potential, serving as a vital foundation of the nation's identity. However, in a rapidly mechanized and globalized world, the handloom industry faces substantial hurdles, including competition from power looms, declining artisan numbers, and limited technological integration. This paper digs into handlooms' cultural, historical, and economic importance while addressing the current issues threatening their survival. There have been multiple initiatives at both governmental and non-governmental levels to help revive this sector. Solution-oriented approaches are required to ensure the long-term viability of handlooms. The paper proposes technological advancements, skill development, design innovations, supply chain management, market access strategies, and public-private collaborations as critical measures for revitalizing the sector. Emphasis is also placed on empowering rural artisans, particularly women, and leveraging digital platforms for global reach. By focusing on strategic interventions and sustainable practices, this paper aims to provide a comprehensive roadmap for safeguarding India's handloom legacy, ensuring its evolution into a globally recognized and environmentally conscious industry.

Keywords: Artisanship; Cultural heritage; Digital platforms; Economic sustainability; Technological integration.

Introduction

The Indian textile industry is one of the oldest and most diverse sectors of the country's economy; it comprises four segments: textile mills, inde-

pendent power looms, handlooms, and knitwear (Pargai & Jahan, 2016). Of these, handlooms occupy a unique position, not only as a source of livelihood for millions of artisans but also as an emblem of India's cultural heritage and craftsmanship. However, despite their significance, the handloom sector has faced challenges in the face of increasing mechanization, primarily due to the rise of power looms, which has led to economic pressure on traditional weavers.

The handloom industry accounts for about 15% of the total cloth production in India, employing over 4.33 million people, mostly women and individuals from marginalized communities (Kumar & Gopal, 2020). The Handlooms (Reservation of Articles for Production) Act, 1985 defines handlooms as "any loom other than a power loom," emphasizing that handlooms are manually operated and do not rely on electricity or mechanical power for weaving.

1.1 Cultural Importance of Handlooms

Handlooms carry immense cultural significance in India, reflecting the diverse traditions, folklore, and artistic expressions of different regions. Each handloom product is not just a utilitarian item but also a representation of the cultural identity and history of the area it originates from. Traditional handloom textiles, such as the Banarasi silk from Uttar Pradesh, the Kanjeevaram from Tamil Nadu, and the *Paithani* sari from Maharashtra, are deeply embedded in the cultural and religious practices of these regions. (Mahajan, 2022). Handloom pieces are even cherished as ceremonial pieces or offerings to God.

The strength of the handloom industry lies not only in its access to affordable labor but also in the distinctive craftsmanship of its artisans, who utilize natural and locally sourced materials with minimal investment (Kandikonda & Sreenivas, 2017). The intricate designs, vibrant colors, and regional motifs highlight the weaver's artistry, rendering handloom textiles timeless and enduring across eras. Handloom products serve as repositories of indigenous knowledge, with weaving techniques and design motifs passed down through generations of artisans (Mishra & Mohapatra, 2020; Jayachitra & Leeson, 2016).

1.2 Challenges to the Handloom Industry in a Mechanized World

The handloom industry faces multiple challenges due to the proliferation of power looms, which now dominate textile production. Power looms

'cheap and faster fabric production has shifted consumers from time-consuming and costly handloom products (Govindjiwala, 2024). This mechanization has forced many handloom weavers to abandon their trade, switching professions to ensure economic survival.

Despite these challenges, handloom textiles in India remain resilient, contributing to foreign exchange earnings and global market demands.

1.3 Government Initiatives and Global Presence

To support and revitalize the sector, several policies and programs have been implemented by the Indian government aimed at improving the socio-economic conditions of handloom weavers. Initiatives like the Handloom Weaver's Comprehensive Welfare Scheme and the Raw Material Supply Scheme (National Handloom Development Programme) have helped in the sustenance of handlooms. Through participation in international trade fairs and exhibitions, Indian handloom textiles have gained global recognition.

1.4 Significance and Evolution of Handloom Textiles in India

The craft of weaving, deeply rooted in India's history, evolved from plant materials and animal skins to natural fibers such as wool and cotton, which transformed the textile industry (Mallick, 2018).

1.4.1 The Origins of Weaving in India

Weaving, a domestic activity began with simple, manually operated tools; the early types of looms were backstrap and warp-weighted vertical looms. With the advent of the handloom in the 13th century, weaving became a more streamlined and accessible craft (Balakrishnan, 2020). With the invention of the fly shuttle in the 18th century, the handloom weaving process was revolutionized, laying the foundation for commercialized weaving (Adanur, 2020).

The craft of weaving in India dates back to 1500 BC, as mentioned in Rigveda. During excavations at Mohenjodaro, an important Indus Valley site, spindle whorls, needles, and a madder-dyed cotton fragment wrapped around a silver pot were found (Textiles and Fabrics of India). Additionally, the famous Priest King sculpture, adorned in a shawl with trefoil motifs, indicates the prevalence of woven or embroidered textiles (Ancient Period).

1.4.2 India's Global Textile Dominance

Indian handmade textiles, especially muslin and chintz, were in high demand across Europe and America due to their superior quality and craftsmanship. By the 17th century, many nations wanted to establish trade relations with India. This trade thrived for nearly a century until the advent of industrialization in Europe, significantly altering global textile production dynamics.

The Industrial Revolution in Europe marked a significant decline in India's handloom industry. The introduction of mechanized production tools such as the spinning jenny drastically reduced the need for manual labor, leading to widespread unemployment among Indian hand spinners and weavers. The British colonial policies further exacerbated this decline, as India was reduced to a mere supplier of raw materials and a market for cheap, machine-made textiles produced in British factories in Lancashire.

By the late 19th century, English-made cotton textiles had replaced Indian handloom fabrics in global markets such as Africa, America, and Europe (Faruque& Islam, 2021).

1.4.3 Post-Colonial Struggles and Contemporary Challenges

Post-independence, the Indian government attempted to revive the handloom sector, recognizing its cultural and economic importance. Still, globalization and the rise of fast fashion have shifted consumer preferences toward cheaper, mass-produced garments. The increasing demand for standardized, homogeneous products in the global market has placed additional pressure on handloom weavers, who traditionally produce unique, one-of-a-kind pieces.

1.5 Role of the Handloom Industry in Rural Development and Employment-generation

Handloom products are an intrinsic part of India's rural landscape and are deeply rooted in the nation's cultural fabric. For centuries, weaving has been more than just a profession—it has been a way of life for many rural communities. The practice of weaving has been passed down through generations, with both men and women holding a deep reverence for this craft. This legacy has allowed the handloom sector to retain its authenticity and high-quality craftsmanship over centuries (Premsundar & Kannan, 2013). Handloom products are uniquely tailored to the specific cultural

and environmental contexts of the region as they utilize indigenous raw materials, which are locally grown (Agrawal & Chanana, 2021).

Handloom weaving has also played a crucial role in rural economic development and employment generation, particularly in regions where other industries are scarce. According to the Fourth All India Handloom Census, 31.45 lakh households are directly engaged in handloom weaving, providing a lifeline for rural economies across India. Beyond direct employment, over 8.48 lakh individuals are involved in allied activities such as pre- and post-loom processes, including spinning, dyeing, and finishing of textiles. This interconnected ecosystem provides substantial indirect employment opportunities and contributes to the socio-economic fabric of rural India.

In the handloom sector, there are about 72% of women weavers; their role in the cottage sector is immense. Women juggle domestic responsibilities with the rigorous demands of weaving; however, their contributions are often undervalued due to fragmented working hours and lack of formal recognition (Babel, 2013)

Weaving, a domestic pastime has rapidly evolved into a primary source of income for rural families. However, long working hours and ergonomically unsuitable workstations cause health issues among weavers, particularly women. No gender-specific considerations, such as anthropometric or physiological factors, have been incorporated into the design of handlooms, exacerbating the ergonomic challenges weavers face. Weavers often experience musculoskeletal problems due to prolonged hours spent in awkward positions, highlighting a critical need for design interventions that prioritize worker health and comfort. (Pandit et al., 2013)

Handloom weavers in India are generally categorized into three major groups based on their mode of production: cooperative, master-weaver, and independent weaver segments (Varghese & Salim, 2015). Among these, cooperative societies have been particularly instrumental in fostering social and economic empowerment (Boruah & Kaur, 2015).

Cooperative societies are crucial in handloom production; they maintain records regarding membership, ensure quality control, keep stock of finished products, and adhere to government regulations. They provide a safety net for artisans and contribute to the sector's development by ensuring that traditional skills are passed on to future generations.

1.6 Key Challenges faced by the Handloom Industry: An Overview

The Indian handloom industry faces numerous challenges, threatening its survival in a rapidly modern world. Despite its cultural significance and the unique craftsmanship, it represents, the industry struggles to maintain its relevance amidst industrialization and mechanization. Several states in India, including West Bengal, Tamil Nadu, Andhra Pradesh, Assam, and Uttar Pradesh, serve as major handloom centres where a significant portion of the population is engaged in weaving. Handloom products are primarily consumed within the country, with only 1.3% of working looms catering to export markets (Patil, 2012). The sector, which once flourished, is now dominated by independent weavers who bear the burden of procuring raw materials and marketing finished products.

One of the most common issues is the erratic supply of yarn, a key raw material. Most weavers are dependent on mill-made yarns, as hand-spun yarn is labor-intensive and expensive to produce. In rural and remote areas, where handlooms are predominantly situated, it is difficult to attract buyers, further adding to the challenges. India's rapid industrial growth, positioning it as a global manufacturing hub, has led to the expansion of power looms, which produce fabrics at a much faster rate— three times, that of handlooms. This has resulted in a decline in traditional weaving skills and a significant contraction of the handloom sector.

Adding to the woes, unethical practices by some merchants, who sell power-loom products disguised as handlooms, deceive customers and further erode the market for authentic hand-woven goods. Handloom co-operatives, once a boon for weavers by supplying raw materials, offering technical advice, and promoting handloom products, have seen their role diminish. Power looms, with their aggressive marketing strategies, faster production rates, and lower costs, have drawn consumers away from handloom products (Sarkar & Mukhopadhyay, 2019). The power loom sector now produces 60% of India's textiles, leaving handlooms with a meager 20% share (Power Loom Cluster in India).

The Indian handloom industry, despite its rich heritage and cultural significance, faces numerous challenges that hinder its growth and sustainability. These challenges stem from various economic, social, political, and environmental factors. Below is an examination of these key challenges, which are interconnected and collectively impact the industry's ability to sustain itself in the modern world.

1.6.1 Economic Challenges

The economic challenges faced by the handloom industry are multifaceted. A lack of capital, increasing raw material costs, and outdated technology has hindered weavers from competing with power looms. The latter's ability to produce fabric at a much lower cost due to economies of scale makes it difficult for handloom weavers to sustain their livelihoods. Despite government efforts to modernize the sector, inadequate infrastructure, outdated tools, and limited market access persist. Middlemen continue to play a crucial role in connecting weavers with consumers, but they often take away a significant portion of the profits, leaving artisans with meager earnings.

The increasing cost of raw materials, coupled with the inability of weavers to procure them at fair prices, has further crippled the sector. As a result, many weavers are forced to abandon their craft, leading to a decline in traditional skills and techniques. Additionally, the lack of access to e-commerce platforms and modern marketing tools limits the visibility of handloom products in both domestic and international markets (Sarkar, 2016).

1.6.2. Social Challenges

The handloom sector is deeply intertwined with social issues, particularly in rural areas where it provides both direct and indirect employment. The decline in younger generations taking up weaving as a profession, owing to the lack of monetary benefits, poses a significant threat to the sustainability of the handloom sector. This generational shift threatens the preservation of traditional techniques, motifs, and the cultural identity of Indian handlooms.

1.6.3. Political Challenges

From a political standpoint, the handloom industry suffers from inadequate policy support and a lack of comprehensive data to inform effective interventions. Weavers often face difficulties in securing loans and navigating government schemes, which further limits their ability to improve their economic standing. (Mishra et al., 2022).

Another significant issue is the misallocation of resources intended for the welfare of weavers. Due to inefficiencies in the system, many weavers do not receive the full benefits of government policies or welfare schemes. This mismanagement contributes to the continuing marginalization of

handloom artisans, who are left to fend for themselves in an increasingly competitive market.

1.6.4. Environmental Challenges

While handloom weaving is generally seen as a sustainable and eco-friendly practice, the industry is not without its environmental drawbacks. One of the main concerns is the use of synthetic dyes in yarns, which has become common due to the limited availability and high cost of natural dyes. Synthetic dyes contribute to water pollution, as effluents are often discharged into nearby water bodies without proper treatment. Moreover, the production and processing of cotton, one of the most widely used fibers in India, involve the use of large quantities of chemicals, which can have adverse environmental effects as shown by several life cycle assessment studies (Annaldewar et al., 2021).

Handloom production also requires significant amounts of water, and the processing of staple fibers generates dust and lint, which can lead to respiratory issues for workers (Sivaram et al., 2019). Despite these challenges, the handloom sector remains one of the most sustainable textile industries when compared to power looms, which consume vast amounts of energy and contribute significantly to pollution.

The challenges faced by the handloom industry are diverse and multifaceted, spanning across economic, social, political, and environmental domains. The interplay of these factors highlights the urgent need for a comprehensive, solution-oriented approach to safeguard the future of the handloom sector.

1.7 Significance of a Solution-Oriented Approach towards Addressing Challenges in the Handloom Industry

The handloom industry, with its rich cultural heritage and significant socio-economic implications, faces multifaceted challenges that hinder its growth and the development of weavers. A solution-oriented approach is imperative not only for the revitalization of the handloom sector but also for fostering sustainable practices that align with contemporary socio-economic needs.

1.7.1 Empowering Women and Marginalized Communities

A prominent benefit of a solution-oriented approach is its potential to

empower women and marginalized sections of society. According to a study by the International Labour Organization (ILO), women constitute a substantial proportion of the workforce in the handloom sector, yet they often face barriers to accessing training and resources. By focusing on skill development and providing targeted support, a solution-oriented framework can enable these individuals to gain greater economic independence and improve their quality of life.

1.7.2 Addressing Global Challenges

The handloom industry is uniquely positioned to contribute to solutions for pressing global challenges, such as unemployment and climate change. In the wake of rising unemployment rates, particularly in developing nations, the handloom sector can serve as a viable alternative by creating sustainable job opportunities.

Moreover, the adoption of eco-friendly practices in the handloom sector aligns with global sustainability goals. The United Nations' Sustainable Development Goals emphasize the need for sustainable industrialization, and the handloom industry can contribute by utilizing natural fibers and chemical-free dyeing processes. This approach not only preserves traditional craftsmanship but also appeals to a growing market of environmentally conscious consumers.

1.7.3 Balancing Handloom and Power loom-production

As power looms increasingly dominate the textile industry, maintaining a harmonious balance between handloom and power loom production becomes essential. Both sectors can coexist and benefit from one another if approached strategically. A solution-oriented perspective fosters collaboration rather than competition, enabling handloom weavers to leverage modern technology while retaining their traditional methods. This balance is crucial for preserving the cultural heritage associated with handloom weaving while also meeting market demands for efficiency and scalability. Studies show that hybrid models, which incorporate both handloom and mechanized techniques, can yield positive outcomes for artisans, manufacturers, and consumers alike.

1.7.4. Promoting Sustainable Development

In today's context, where sustainable development is a pressing global concern, the handloom industry must adopt practices that harmonize

economic growth with environmental stewardship. A solution-oriented approach focuses on sustainability as a core principle. By promoting practices such as eco-friendly sourcing of materials and waste reduction strategies, the handloom sector can align itself with contemporary expectations of corporate responsibility. The use of sustainable materials not only enhances product appeal but also attracts consumers who prioritize ethical consumption.

1.7.5. Enhancing Livelihoods through Skill-development and Access to Resources

A solution-oriented approach empowers weavers through comprehensive training and access to better resources and technologies. By offering targeted programs in skill development and providing resources such as high-quality raw materials and innovative tools, weavers can enhance their productivity and craftsmanship. Moreover, initiatives that support marketing and sales through e-commerce platforms enable artisans to bypass traditional distribution channels, thus eliminating the reliance on middlemen. This not only increases their profit margins but also fosters a sense of ownership and agency over their work.

1.7.6 Fostering Networking and Collaboration among Stakeholders

A solution-oriented approach also emphasizes the importance of networking among various stakeholders in the handloom industry, including weavers, cooperatives, manufacturers, retailers, exporters, government agencies, and non-profit organizations. Collaboration among these entities can lead to the establishment of best practices, resource sharing, and the development of innovative solutions tailored to the specific needs of the handloom sector. By creating platforms for dialogue and exchange, stakeholders can collectively address common challenges, ensuring that the handloom industry not only survives but thrives in an increasingly competitive landscape.

Basically, adopting a solution-oriented approach is crucial for addressing the myriad challenges faced by the handloom industry.

1.8 Solution-oriented Approaches for the Sustenance of Handlooms

The handloom industry, an integral part of India's cultural heritage and economic fabric, faces numerous challenges, including competition from

mechanized textiles, market fluctuations, and socio-economic factors affecting artisans. To ensure its sustenance and revitalization, various solution-oriented approaches have been implemented, encompassing government initiatives, NGO involvement, cooperative societies, and the contributions of designers. Each of these components plays a vital role in addressing the complexities of the handloom sector, fostering both economic development and cultural preservation.

1.8.1 Government-initiatives for the Handloom Sector

The handloom industry in India, regarded as a crucial segment of the rural cottage-based economy, has consistently received attention and support from the government. The Ministry of Textiles, as the apex organization responsible for policy formulation and regulation within the textile sector, plays a pivotal role in this regard. Its mission encompasses the development of both synthetic and natural fibers, which are integral to textile, apparel, and handloom production. The government's overarching goal is to make India self-reliant (Aatmanirbhar Bharat) by reducing dependency on imports and machine-made goods, thereby fostering domestic craftsmanship and innovation (Chatterjee, 2015).

To facilitate these objectives, the Government of India has established a network of advisory bodies tasked with monitoring production levels, managing exports and imports, and ensuring that various schemes are effectively implemented. Key organizations include the All India Handloom Board, All India Handicrafts Board, Cotton Advisory Board, Central Wool Development Board, Jute Advisory Board, and the Central Silk Board (Jain & Gera, 2017).

The Development Commissioner for Handlooms is specifically responsible for the revival and promotion of handloom products, while the Development Commissioner for Handicrafts focuses on preserving India's rich handicraft heritage. This includes empowering artisans through initiatives such as the issuance of artisan identity cards, which help in recognizing and formalizing their contributions to the economy (Deb & Molankal, 2021). Additionally, the Handloom Export Promotion Council (HEPC) plays a vital role in promoting handloom products, particularly in the fabric and home furnishings sectors, aimed at enhancing export potential.

A series of targeted schemes have been launched to invigorate the handloom sector. Among these are the Silk Sector Schemes, Jute Sector Schemes,

Skill Development Schemes, Textile Cluster Development Schemes, and Integrated Processing Development Schemes. The “Make in India” initiative stands out as a significant program aimed at establishing India as a global manufacturing hub. This initiative encourages the creation of high-quality; sustainable products while attracting global investments (Gulhane & Turukmane, 2017).

Several other schemes have been specifically formulated to address the unique challenges faced by the handloom sector. The National Handloom Development Programme aims to provide financial assistance and resources to weavers, while the Yarn Supply Scheme ensures a steady supply of raw materials. Additionally, the Health Insurance and Credit Scheme offers vital support to weavers, addressing their welfare needs (Compendium of Handloom Schemes).

One of the most notable skill training initiatives is the SAMARTH scheme, which focuses on upgrading skills in handlooms and handicrafts. This program not only enhances the capabilities of artisans but also helps them adapt to market demands and trends (Samarth Scheme).

The promotion of organic fabrics, such as Khadi, which gained prominence during India’s freedom struggle under the leadership of Mahatma Gandhi, remains a focus of governmental efforts. The Khadi and Village Industries Commission (KVIC) was established to promote Khadi and other cottage industries, functioning under the Ministry of Micro, Small, and Medium Enterprises (MSME). This organization plays a crucial role in preserving the legacy of Khadi while promoting sustainable practices within the handloom sector (Rise of Handloom to a Global Industry).

In a significant move to enhance the marketability of handloom products, the Honorable Prime Minister launched the India Handloom Brand on August 7, 2015. This initiative aims to endorse the quality of handloom products based on raw materials used, processing techniques, manufacturing standards, embellishments, intricacies, and design. The primary objective is to ensure the production of high-quality handlooms that have zero defects and minimal environmental impact (Singh & Srivastava, 2018).

To combat the proliferation of counterfeit products in the name of handloom textiles, the Government of India enacted the Geographical Indications of Goods (Registration and Protection) Act, 1999. This legislation protects the identity of handloom products by providing details about

their origin and characteristics. By labeling these products as original, the GI Act safeguards artisans' interests and enhances traditional textiles' market value (Pattnaik, 2023).

As of now, various handloom-made products have received Geographical Indication (GI) tags in India, including the Banaras Brocades of Uttar Pradesh, Patola of Gujarat, Kullu shawls of Himachal Pradesh, Moirang-Phee of Manipur, and Teliarumal of Telangana. These regionally specialized handloom textiles are distinguished by their unique raw materials, motifs, and production techniques, further solidifying their place in the global market (Details of GI registered Handloom Products under GI Act, 1999).

India's favorable climate and abundant resources for producing raw materials for textile production provide a conducive environment for the growth of the handloom sector. The government's policies are strategically aligned to enhance the textile industry, integrating various aspects of the textile value chain and ensuring a sustainable future for handlooms (Solanki, 2017).

The government's multifaceted approach to supporting the handloom sector is crucial for its revival and growth.

1.8.2. The Role of Non-Governmental Organizations in Revitalizing the Handloom Industry

Numerous non-governmental organizations (NGOs) in India are actively working to revitalize the handloom industry through various initiatives, often supported by government funding. Organizations such as Dastkar, Khamir and Rangсутra, have emerged as pivotal players in promoting traditional crafts and empowering artisans, thereby contributing significantly to the socio-economic development of their respective communities.

- ***Dastkar: Empowering Artisans through Market-access and Design-innovation***

Dastkar, based in New Delhi, is dedicated to empowering Indian artisans by enhancing their access to markets and providing vital design inputs. Established in 1989, the organization focuses on preserving traditional crafts while adapting them to contemporary markets. Dastkar facilitates workshops and exhibitions across India, providing artisans with platforms to showcase their work and connect with potential buyers (Sareen,

2017). By fostering direct interactions between artisans and consumers, Dastkar helps to eliminate middlemen, ensuring that artisans receive fair compensation for their labor.

- ***Khamir: Revitalizing Cultural Heritage in Kachchh***

Founded in the wake of a devastating earthquake in Gujarat, Khamir aims to preserve the rich cultural heritage and crafts of the Kachchh region. The organization is committed to supporting artisans through skill development programs and initiatives that create sustainable livelihoods (Khamir.org). Khamir focuses on various crafts, including weaving, embroidery, and pottery, and provides artisans with the necessary resources and training to enhance their skills. By fostering an environment of creativity and innovation, Khamir helps artisans to adapt their crafts for contemporary markets while maintaining traditional techniques, while also focusing on community involvement.

- ***Rangсутra: Economic Empowerment through Self-reliance***

Rangсутra is dedicated to enhancing the livelihoods of artisans through a comprehensive approach that includes training, design inputs, and entrepreneurship opportunities. By fostering self-reliance among artisans, it contributes to the economic empowerment of local communities (Rangсутra.com). Rangсутra's initiatives include collaborative design projects that engage artisans in the creative process, ensuring that their unique skills and cultural heritage are celebrated in the final products. Additionally, Rangсутra has established partnerships with various brands and retailers to ensure a broader market reach for artisan products.

1.8.3 Co-operative Societies: Empowering Small Weavers in the Handloom Industry

Cooperative societies play a crucial role in empowering small weavers who often grapple with various challenges due to their scattered and unorganized nature. By uniting in cooperative societies, weavers can secure better orders and fair wages, thus significantly enhancing their economic viability. These societies are autonomously managed groups that collectively address the economic, social, and cultural needs of their members (Datta & Agrawal, 2018).

The primary purpose of cooperative societies is to provide a structured framework that protects weavers from exploitation by middlemen and

traders. By pooling their resources and efforts, weavers gain access to essential services such as raw materials, technical support, and training, which are often difficult to obtain individually (Aggarwal, 2020). This collaborative approach enables artisans to enhance the quality of their products, thereby increasing their competitiveness in the market.

For instance, URMUL in Rajasthan is a prominent cooperative society that has successfully improved the livelihoods of local weavers. Established with the goal of revitalizing traditional crafts, URMUL focuses on skill development and quality enhancement, empowering weavers to produce superior handloom products. The cooperative facilitates not only the supply of raw materials but also access to training programs that equip artisans with modern weaving techniques (URMUL.org).

Similarly, Tantuja in West Bengal exemplifies how cooperative societies can uplift local communities. Founded to support the state's rich tradition of handloom weaving, Tantuja emphasizes collective bargaining, ensuring that artisans receive fair compensation for their work. The cooperative also engages in marketing and promotional activities, thereby expanding the reach of handloom products both nationally and internationally (Tantuja.com).

Cooperative societies serve as a vital link between artisans and the market, enhancing their bargaining power and enabling them to negotiate better prices for their products and ensuring fair wages. They also facilitate the marketing of handloom products through exhibitions, craft fairs, and online platforms, broadening market access and increasing visibility, especially in an era of increased demand for authentic, handmade products.

Beyond economic benefits, they organize workshops, training sessions, and skill development programs with opportunities to innovate and diversify their product offerings.

Cooperative societies also play a significant role in fostering a sense of community among artisans and empower artisans to participate in decision-making processes. So, cooperative societies are instrumental in empowering small weavers within the handloom industry.

1.8.4 The Role of Designers in Preserving Indian Handlooms and Handicrafts

The involvement of fashion designers and entrepreneurs is crucial in pre-

erving the rich heritage of Indian handlooms and handicrafts. By incorporating traditional textiles and crafts into contemporary fashion, designers create a vibrant global market for handloom products.

- **Fusion of Tradition and Modern Aesthetics**

Indian designers draw inspiration from the country's diverse textile arts, merging traditional motifs and techniques with contemporary aesthetics, resulting in unique, high-quality pieces that resonate with both local and international consumers. Renowned designers such as Sabyasachi Mukherjee, Abu Jani, and Sandeep Khosla have elevated Indian textiles on international platforms. Their innovative designs often feature intricate embellishments and traditional craftsmanship, appealing to a contemporary audience while honoring the rich heritage of Indian textiles (Singh, 2019).

- **Collaboration with Artisans**

Collaboration between designers and artisans is a vital aspect of sustaining the handloom industry. Designers often engage directly with local artisans, providing them with opportunities for skill development and fostering innovation within traditional practices, thereby preserving languishing crafts. For instance, designers may incorporate contemporary color palettes or modern silhouettes while preserving the techniques of traditional weaving methods.

- **Economic Impact and Market-expansion**

The involvement of designers significantly impacts the economic viability of the handloom sector. By creating high-demand products and leveraging them on various platforms like fashion weeks, trade shows, and online marketplaces, they enhance the visibility and accessibility of handloom products. It not only opens up new avenues for sales and income generation but also positions them favorably in a competitive market.

The sustenance of the handloom industry in India requires a multifaceted approach that encompasses government initiatives, NGO efforts, cooperative societies, and the active involvement of designers. Each of these elements plays a vital role in addressing the challenges faced by the sector, fostering economic empowerment, and preserving the cultural heritage associated with handloom textiles.

1.9. Strategic Enhancements for the Indian Handloom Sector

The Indian handloom sector, rich in cultural heritage and craftsmanship, faces various challenges amid modernization and globalization. To ensure sustainability and growth, a multifaceted approach focusing on technological advancements, design innovation, and market accessibility is essential. This section explores strategic enhancements aimed at revitalizing the handloom industry and empowering artisans for a resilient future.

- **Technology and Innovation:** In recent years, due to the introduction of modern tools such as electronic jacquard looms and innovations in textile production processes, the efficiency of artisans has increased, thereby minimizing errors and reducing physical strain, which has also attracted younger generations to the craft by making the work less labor-intensive. The integration of technology not only streamlines production but also enhances the quality of handloom products, making them more competitive in both domestic and international markets. (Mamidipudi & Bijker, 2018)
- **Design-innovation and Product-diversification:** To ensure the relevance of handloom products in contemporary markets, the Indian government has been actively promoting design innovation and product diversification. Initiatives like the “Make in India” campaign have successfully attracted foreign clients and increased export earnings, enhancing the credibility of Indian weavers as they introduce innovative, high-quality products to the global market (Khatoon, 2016). To further support this endeavor, the National Institute of Fashion Technology has established Design Resource Centres at Weavers Service Centres, facilitating collaboration between weavers and designers. These centres enable artisans to access design repositories and receive training that aligns with modern consumer demands (Centre to set up 10 more Handloom Design Resource Centres). The “Aatmanirbhar Bharat” campaign, launched during the pandemic, encourages young weavers to become self-reliant, utilizing local handloom products while preserving traditional techniques (Bonthra & Gupta, 2024; Thakura & Sharma, 2022).
- **E-commerce and Online Platforms for Marketing:** The proliferation of e-commerce platforms has been instrumental in connecting handloom weavers and artisans with both Indian and inter-

national clients. Digital marketplaces enhance the visibility and reach of artisans, facilitating direct sales without intermediary exploitation. One notable initiative is "India Handmade," developed by the Ministry of Textiles, which allows artisans to register free of charge and sell their products directly, ensuring transparency in transactions (<https://www.indiahandmade.com>).

- **Sustainable Practices and Ethical Consumption:** The Indian handloom sector is eco-friendly, with minimal electricity usage and reliance on easily accessible labor. Handloom fabrics are biodegradable and have a lower environmental impact than synthetic fibers (Tryphena & Aram, 2017). Furthermore, the tradition of natural dyeing, rooted in ancient practices, aligns with the growing consumer demand for sustainable products (Govindwar et al., 2011).
- **Fair Trade and Ethical-sourcing:** Fair Trade certification promotes human rights and ethical production practices (Moitra et al., 2021). It ensures that artisans receive fair wages, emphasizing gender equality in compensation. (Taylor, 2005). Fair Trade is particularly significant for marginalized craftspeople, aiming to uplift disadvantaged communities and empower women while mitigating environmental impacts through sustainable practices (Bassett, 2010). The ethical sourcing of raw materials is becoming increasingly important, as consumers demand transparency regarding production processes and the rights of artisans. Emphasizing decent working conditions and abolishing child labor is essential for maintaining ethical standards in the handloom sector (Jain, 2022).
- **Waste-reduction and Recycling-initiatives:** Handloom production is generally a low-waste process due to its small scale and precision. Waste is categorized into pre-consumer waste—fiber linters, textile scraps, and post-consumer textile waste from households. Recycling initiatives in the handloom sector focus on repurposing waste materials into innovative products, thus generating employment for skilled, semi-skilled, and unskilled workers. This ethical approach to consumerism reflects environmental and social responsibility (Singh & Rani, 2021). Innovative practices, such as utilizing fabric scraps as weft in handlooms to create durries known as "Chindi durries," exemplify sustainable design. Additionally, traditional embroidery techniques like Kan-

the leverage discarded textiles, further demonstrating the sector's commitment to sustainability. (Jain & Gupta, 2016).

- **Consumer-awareness and Support:** Consumer awareness is crucial as the market is inundated with power loom products masquerading as handlooms. The Government of India has initiated various labeling systems to help consumers identify authentic handloom products. Ecolabels such as the India Handloom mark, Woolmark, Silkmark, and Khadi mark assure consumers of the quality and authenticity of their purchases (Goswami, 2008; Choudhury, 2015). Support mechanisms are being implemented to elevate the Indian handloom industry and assist artisans.
- **Carbon Footprint:** Handloom textiles exhibit a lower carbon footprint as compared to power loom textiles, primarily due to their reliance on natural fibers and reduced energy consumption (Bhandari & Arya, 2019). This environmental advantage is critical as global consumers increasingly seek out sustainable options in their purchasing decisions.

1.10 Success Stories of Regions with Positive Handloom Interventions:

Various studies highlight the effectiveness of government interventions and support in promoting handloom entrepreneurship. Singh (2018) explored opportunities for handloom entrepreneurship in Varanasi, revealing that government schemes have facilitated the transition from traditional family legacies of weaving to individual entrepreneurship. These initiatives provide weavers with access to credit and subsidized yarn, alongside design assistance from appointed designers.

Kaushik and Jain (2015) assessed the impact of government schemes on handloom weavers in Maheshwar, finding that access to training and financial support has significantly improved weaver satisfaction. Similarly, Hada and Chaturvedi (2018) conducted research in Kaithoon, Rajasthan, demonstrating that weavers are increasingly aware of government schemes, enabling them to sell products online and benefit from designer collaborations.

In Chhattisgarh, Peters and Bajpai (2018) reported that government initiatives have established regular employment opportunities for weavers through cloth distribution plans. Marketing strategies, including exhibitions at various levels, have also proven effective in connecting weavers

with consumers, allowing them to achieve significant profits from their craftsmanship.

1.11 **Suggestions: Recommendations for Strengthening the Handloom Sector**

Despite its immense cultural and economic significance, the handloom sector is crippled with challenges, although it has witnessed substantial growth due to concentrated efforts from the government and various stakeholders. Despite government interventions, issues like inadequate awareness of schemes, lack of infrastructure, and fluctuating demand persist. To secure the future of this sector and uplift the weavers who rely on it, several strategic recommendations can be implemented. Few of which are mentioned below:

- **Enhanced Marketing and Infrastructure-development:** Improving marketing strategies and developing robust infrastructure are critical to increasing the visibility and reach of handloom products. While initiatives such as the government-backed e-commerce platform “India Handmade” are commendable, these efforts need to be scaled up. Targeted marketing campaigns should focus on both domestic and international audiences, showcasing the unique craftsmanship and heritage value of handloom textiles. Additionally, investment in physical infrastructure equipped with modern tools can help increase production efficiency and reduce the physical strain on weavers.
- **Value-addition and Protection of Handloom Products:** Value addition is essential for enhancing the competitiveness of handloom products in both local and global markets. This can be achieved through innovation in design, incorporating contemporary styles while preserving traditional techniques. Furthermore, increasing the frequency of Geographical Indication (GI) tagging for distinctive handloom varieties, such as Banarasi silk and Pochampally ikat, would help protect these cultural assets from imitation and ensure fair prices for weavers. Ensuring a steady and affordable supply of high-quality raw materials will also enhance productivity and product quality.
- **Educational-initiatives and Youth-engagement:** To ensure the handloom industry thrives in the future, it is imperative to involve younger generations. Making handloom uniforms mandatory in government schools, colleges, and other institutions will

create a consistent demand for handloom products while educating youth about their cultural significance. Moreover, introducing textile arts and handloom studies into school and university curricula will help foster an appreciation for traditional crafts. Appointing young brand ambassadors and influencers to promote handlooms on social media can also significantly boost demand among modern consumers.

- **Comprehensive Outreach and Awareness Programmes:** Many weavers, particularly those in rural and semi-urban areas, remain unaware of the numerous government schemes available to support them. The government should intensify its outreach efforts through localized workshops, media campaigns, and digital platforms to educate artisans about available financial aid, subsidies, and training programs. These initiatives must also focus on equipping weavers with the digital literacy required to leverage online marketing platforms effectively, thus enabling them to sell their products directly to consumers and eliminate exploitative intermediaries.
- **Streamlined Supply Chain Management:** One of the key challenges faced by the handloom industry is its fragmented supply chain. Fiber production, yarn processing, weaving, and finishing often take place in different regions, leading to inefficiencies and higher costs. The government should focus on streamlining the supply chain by developing integrated handloom clusters where all stages of production can be managed in a centralized manner. This will not only reduce production times and costs but also create more cohesive networks for weavers and suppliers.
- **Expanding Export Opportunities and Global Partnerships:** Increasing the export of high-quality handloom products is vital for the economic sustainability of the sector. Establishing partnerships between local artisans and international fashion brands can open doors for handlooms to enter high-end global markets. Additionally, simplifying export procedures for small-scale weavers and offering subsidies for international trade shows will further enhance the sector's global footprint.
- **Strengthening the Artisan Welfare Ecosystem:** Weavers are often excluded from enjoying the full profits of their labor due to their reliance on middlemen or master weavers. Policies should be adjusted to ensure that small-scale weavers, particularly those

in rural regions, receive direct financial benefits from their work. Expanding welfare measures such as health insurance, pension schemes, and financial literacy programs will contribute to improving the overall well-being and economic security of weavers.

- **Awareness Campaigns for Cultural Heritage and Consumer-engagement:** Raising consumer awareness about the cultural value and craftsmanship behind handloom products is critical. Public awareness campaigns led by the government and NGOs should educate consumers about the authenticity of handloom textiles, promoting labels like the India Handloom Mark and GI tags to distinguish handloom products from power loom imitations. Consumers who understand the heritage and labor behind handlooms are more likely to support and invest in these products.
- **Design-innovation and Product-diversification:** The handloom sector's survival depends on its ability to adapt and evolve with changing consumer preferences. This involves integrating contemporary design elements such as new color palettes, patterns, and textures without compromising the authenticity of traditional craftsmanship. Introducing product diversification is equally important to reach wider markets. Government and design institutions, like the National Institute of Fashion Technology (NIFT), have established Design Resource Centres to assist weavers in creating new, innovative products that cater to modern consumer demands.
- **Government-support and International Collaboration:** Government support remains pivotal in fostering the growth and global reach of the Indian handloom industry. One of the key areas where government intervention is crucial is in expanding the reach of handloom products into international markets through collaborations with global fashion houses.

1.12 **Future Outlook: Prospective Pathways for Handloom Sustainability**

Looking ahead, the future of India's handloom sector hinges on its ability to remain both relevant and sustainable in a fast-changing global market. As consumers become more conscious of the environmental and ethical aspects of fashion, the industry must adopt a "slow fashion" approach, emphasizing quality, authenticity, and durability over mass production. The handloom sector must protect its intellectual property through geo-

graphical indications (GIs) and trademarks.

Also, the rise of e-commerce and digital marketplaces presents an opportunity for weavers to access new markets and engage with a global audience. However, this requires significant investment in digital literacy, market strategies, and logistic support to ensure weavers can thrive in this digital economy.

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