

Contemporary Innovations in Business Models for Khadi Enterprises

Doctoral Research Plan

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Background

As far back as history can tell, humans have relied on textiles and clothes to help define who they are as a society. The significant position that clothes occupy in our lives is best illustrated by the widespread expression "Roti, Kapda aur Makaan" (Food, Clothing, and Shelter), which ranks clothing only below food as a necessity. It's hardly surprising that clothing is at the bottom of Maslow's pyramid.



Fig. 1 Illustration of spinning and weaving in ancient Greece (Image source: www.dreamstime.com)

With a massive, unrivalled raw material base and manufacturing prowess across the value chain, India's textile industry is one of the world's largest. India ranks as the world's sixth-largest exporter of textiles and apparel. The textile and garment industry in India is vital to the country's economy. As of the 2020-21 fiscal year, the textile and apparel

(T&A) sector, which includes handicrafts, accounted for 11.4% of India's overall exports (Ministry of Textiles, 2022)

The history of textiles is intertwined with that of cotton. Cotton is so omnipresent that it is often overlooked, but its story provides an essential context for understanding the development of the modern global order. From its inception, the empire of cotton was a flashpoint in an ongoing worldwide conflict between enslaved people and plantation owners, merchants and governments, and workers and factory owners (Beckert, 2015). Fabrics were enjoyed by both the nobility and the commoners during the Middle Ages. Textiles were utilised for clothing and played significant roles in gift-giving, ritual, and the construction of individuality (Indian Culture Portal, n.d.)



Fig. 2 Cotton in ton farm (Image source: www.pixabay.com)

One of the most significant cash crops, cotton contributes around 25% of the world's total fibre production. Cotton provides for the second most fundamental life needs after food and clothes. It contributes significantly to India's net foreign exchange through raw cotton exports, intermediate products like yarn and textiles, and final completed goods

like clothing, made-ups, and knitwear. It is also known as "White Gold" due to its economic significance in India (Ministry of Textiles, 2022)

Hand-spinning and hand-weaving are crucial components of India's textile and garment sector. There are claims that the origins of hand-woven clothes may be traced back to the Indus Valley Civilization, when the dyed cotton cloth was discovered at the Mohenjo Daro excavation site, making the history of handlooms as old as India itself (Khatoon & Iffat, 2021; Satyasai & Thomas, 2021)

The industry of Indian handlooms and Khadi is steeped in history and tradition, with refined techniques having been passed down through the ages. Spinning and weaving, along with the superior quality of silk and cotton, are described in several ancient texts, including the Rigveda, the Ramayana, the Mahabharata, Thalia (by the Greek historian Herodotus), and Kautilya. This shows that the evidence of the export of handmade fabric dates back to the 15th century. Not long after, Vasco da Gama visited India and opened trade avenues for Europe (Ministry of Textiles, 2022; Satyasai & Thomas, 2021).



Fig. 3 Vector illustration of a man weaving on a handloom (Image source: www.shutterstock.com)

Spinning on the spinning wheel (Charkha) and weaving by hand on a loom can be seen as a metaphor for a way of life. The weaver's ideology is founded on a fundamental faith, as it befits the man who sits behind the loom to create traditional Indian textiles. The processes used to develop handloom fabric are simple, yet the finished product is anything but ordinary. By using their skills, the weavers can make works of art that are both beautiful and long-lasting (Gupta & Babel, 2004).

The spinning wheel converts cotton fibres into yarn, then woven to create fabric. Several variations of the spinning wheel have been designed over the years, some having roots in the Indian freedom struggle. The book-charkha was made to enable the imprisoned freedom fighters to spin while in prison. The farmer's charkha was created to help the farmers utilise their spare time in the field and generate extra income by spinning. The Ambar charkha was designed to increase productivity while reducing the efforts required. The spinning wheel (Charkha) emerged as a powerful symbol of the freedom movement and is usually also considered synonymous with Gandhi's social and economic justice philosophy.

The warp (length-wise thread) and weft (width-wise thread) entwined to create handloom cloth are known as tana-bana in everyday speech. The term "loom" refers to the equipment that drives this interlacement. The warp threads travel vertically in an up-down motion. The shuttle traverses the horizontal thread, and a moving comb-style frame pounds the woven fabric. A stick or wooden frame for weaving makes up a handloom. Different looms are traditionally used in India, and they can be distinguished by the fabric they create or the regions from whence it comes. The loin loom, pit loom, frame loom, etc., are a few of the most popular handlooms in India. Pit looms are used to create colourful fabrics like handkerchiefs, bedsheets, and towels. On the other hand, designed fabrics like thick woven bedsheets, striped and checked material, gauze cloth, etc., are made on frame looms (Ministry of Textiles, 2019; Mishra & Bhattacharjee, 2017).



Fig .4 Ruth Clifford (a researcher on Indian handloom) attempting to weave on a pit-loom in Bhujodi the village, Kutch district in Gujarat (Image source: www.fashionstudiesjournal.org)

In terms of economic significance, handloom, including Khadi fabric, is one of India's oldest industries, with a sizable portion of the rural population actively engaged in the practice of weaving (Durlav et al., 2014; K. R. M. Rao, 1997; Sharmin & Hossain, 2020). 31.45 lakh weavers and allied workers are employed directly or indirectly by the sector, making it the second largest employer in the country after agriculture while accounting for 95% of all 'hand-woven' cloth produced globally. The Khadi sector employed more than five lakh artisans during FY 2021 (Dohale et al., 2022; Ministry of Textiles, 2022; Mohitkumar Trivedi et al., 2020; Office of the Development Commissioner for Handlooms, 2021; Satyasai & Thomas, 2021).

Khadi fabric is a unique form of cloth that is hand-woven and hand-spun from natural fibres, such as cotton, wool, or silk, or a blend of these materials, as stipulated by the Khadi and Village Industries Commission Act 1956. The cloth is sustainable and eco-friendly and can be worn in all seasons, providing warmth in the winter and coolness in the summer. Mahatma Gandhi was pivotal in promoting Khadi as an integral part of the Swadeshi Movement in 1918, which aimed to boycott imported goods and promote local industries and job creation. This approach was intended to combat poverty in India and

reduce the country's dependence on imported goods, many of which were produced overseas from raw materials originally sourced from India.

Acknowledging the significance of Khadi for the social and economic growth of the country, especially the rural areas, all the Governments in the past have endeavoured to bolster the sector's development. Since India's independence, many initiatives and schemes have been introduced to promote Khadi production. These programs have undergone periodic assessments and revisions to adapt to the changing needs of the weaving industry.

The Ministry of Micro, Small and Medium Enterprises has taken various initiatives to promote Khadi through the Khadi and Village Industries Commission(KVIC). The Khadi and Village Industries Commission (KVIC) is a statutory body established by an Act of Parliament in April 1957, tasked with developing and executing plans to grow Khadi and other village industries in rural regions. The KVIC aims to facilitate the sale and marketing of Khadi and related products from village industries and handicrafts. To achieve this, the KVIC establishes partnerships with established marketing agencies as and when required to promote the sales and marketing of Khadi products.



A significant intervention is the implementation of the 'Khadi Mark', launched by the President of India in September 2013. While guaranteeing the genuineness of Khadi products, the Khadi Mark also attempts to position Khadi as a brand that embodies social, cultural, and environmental values. Another recent initiative is opening sales

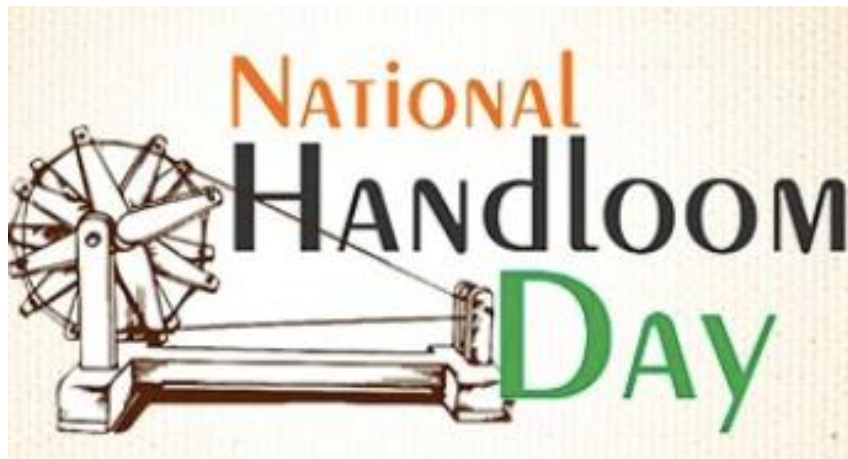
outlets at various Post Offices and domestic and international airports like Visakhapatnam, Lucknow, Ahmedabad and Varanasi.

The Khadi and Village Industries Commission (KVIC) has initiated the process of registering "Khadi" as a word mark and "Khadi India" as a trademark across 27 classes

of products in compliance with the IPR Act at the national level. The KVIC has also submitted an online application to register "Khadi" as a trademark with the International Bureau in 16 distinct European and European Union classes. To foster the growth of the Khadi industry, the Khadi and Village Industries Commission (KVIC) has created an electronic platform, the 'Khadi Institutions Registration and Certification Seva' (KIRCS), which enables institutions to register and obtain their certificates.

Because of its connections to important and delicate industries like agriculture, the Khadi and handloom sector significantly impact the rural economy. It provides an ongoing market for agricultural goods by employing agricultural items as its raw materials. Second, it is a sector that specifically addresses the empowerment of women. According to the recent census, the industry employs more than 23 lakh female weavers and related labourers (Ministry of Textiles, 2019).

In addition to promoting Khadi, the Government of India also strives to strengthen the handloom sector. A thriving handloom sector also helps support Khadi since handloom weaving is integral to Khadi fabric production. For the promotion of handlooms, the National Handloom Development Corporation (NHDC) was established in February 1983 by the Government of India as a Public Sector Undertaking under the Companies Act, 1956, to provide a consistent supply of raw materials, such as yarn, dyes, and chemicals, to the handloom industry. To encourage the export of handlooms, the Handloom and Handicrafts Export Corporation of India Ltd (HHEC) was founded in 1958. The Office of Development Commissioner for Handlooms was established at the Center in response to proposals made by a high-powered study team in 1976 to assure the handloom industry's development along scientific lines (Ministry of Textiles, 2022; Office of the Development Commissioner for Handlooms, 2021)



To raise awareness of the handloom sector, its contribution to the nation's socioeconomic development, and the weavers' income Since 2015, 7th August has been designated National Handloom Day

(The Gazette of India, 2015). The Handloom mark was introduced in 2006 to give handloom items a distinctive character and assure consumers that they purchase the genuine hand-woven fabric. Twenty-two thousand six hundred thirty-nine registrations have been issued thus far.



The India Handloom Brand (IHB) was introduced in 2015 to promote high-quality handcrafted goods. One thousand seven hundred fourteen registrations have been issued under 184 product categories since the IHB's debut. Some well-known companies, like BIBA, Peter England, and ONAYA, have already debuted a unique line of handloom clothing with IHB (Ministry of Textiles, 2019; Office of the Development Commissioner for Handlooms, 2021)

While the khadi and handloom sector continues to nurture and preserve ancient spinning and weaving skills unique to each state, it is disheartening to note that handloom weaving, especially Khadi, is in deep crisis. The sector is caught between subjective perceptions and objective realities of low productivity, lesser wages, poor literacy levels, exploitation by intermediaries and very little penetration of formal banking, among many other issues. A series of targeted interventions in the significant restriction areas mentioned above could help the sector flourish in the future despite the numerous obstacles it is currently facing. Many of these initiatives could be driven by the market and introduced by private market participants. The government must be a facilitator and enabler (Ministry of Textiles, 2022; S. K. Mishra et al., 2016).

While it is, there is no doubt that along with being a significant contributor to livelihood opportunities for many people, hand spinning and weaving constitute one of the most vibrant aspects of Indian cultural heritage. It is known for flexibility, versatility and innovativeness. The artistry and intricacy of hand-spun and hand-woven fabric are unparalleled, and specific designs weaved on handlooms are well beyond the scope of modern machines.

Based on the study of published literature, secondary data from Government websites and reports as well as my interactions with some stakeholders during the pilot field visits, the significant problems of hand spinning and weaving can be summarised as follows:

- a) Unavailability of raw materials at the proper price
- b) Weak institutional support and inefficient operation of most cooperatives
- c) Inability to overcome market separations
- d) Age-old business models and supply chains
- e) Challenging work environment
- f) Lack of awareness about Government schemes
- g) Exploitation by the intermediaries
- h) Disconnect from the end-customer
- i) Lack of upgradation of looms and charkhas
- j) Insufficient training, upskilling and education opportunities

The study of literature and preliminary field visits so far have revealed that many research studies have attempted to address the issues of the handloom sector. Still, very few of them have explicitly focussed on Khadi. The outcome of most studies has also failed to create any significant impact as the research approach was not grounded in the reality of the khadi sector. Thus, this research proposal attempts to employ the human-centric approach of design thinking to uncover the real needs, both articulated and latent, of the khadi organisations and customers and propose a framework for contemporary innovations in business models to revitalise the khadi fabric sector.

Literature Review



Mamidipudi (2019) discusses in-depth sociotechnical ensembles, encompassing technology, practises, formal institutions, informal institutions, and social groups. The author claims that modernist and conservative philosophies fundamentally undermine the handloom business. In other words, the first results in mechanisation, while the second leads to museumisation. In both conceivable futures, handloom weaving becomes extinct. The study argues that while handloom must be preserved as a cultural artefact, it must also adapt and innovate to remain relevant in the modern world.

Amaravathi & Bhavana Raj (2019) analyse the key components of the handloom sector, including dependent families, weavers, looms, and man-days worked, as well as production trends, export trends, and import trends. The authors contend that India's diversity can be seen in the handloom industry, including in the goods, designs, weaving techniques, loom usage, job status, economic standing, etc., with each state preserving

its legacy and culture. Since most weavers come from the weaker and more vulnerable segments of society and often weave to make a living, the industry fosters economic growth at the bottom of the pyramid. The authors are concerned about declining handloom units, weavers, and allied work. They draw attention to the fact that weavers are changing careers due to low-income generation, a lack of operating capital, and inadequate marketing infrastructure.

In yet another article, Mamidipudi & Bijker (2018) make the case that rather than seeing handloom weaving as a dying industry that strains the welfare state or as a speciality good enjoyed by the elite, we need to offer an alternative perspective that takes the craft seriously within the knowledge, market, and policy domains: as an innovative sociotechnical ensemble that can support livelihoods. The authors contend that a more profound comprehension of handloom weaving innovation might drive inclusive development policies that provide more promising futures for craft practitioners who are both disadvantaged and inventive. Discussing the case of Jamdani weaving in Andhra Pradesh, the authors describe how these weavers used technology aids like mobile phones and computers to complement their hand-weaving tradition rather than letting the technology be seen as a competitor.

The study on the issues of handloom weavers in Rajasthan by Gupta & Babel (2004) observed that most of the weavers had trouble obtaining financing as some were unaware of how to apply for loans while some could not offer collateral. In their sample of weaver families, 41.4% of all units encountered issues with the availability of high-quality raw materials in adequate amounts, which are necessary for the efficient operation of the unit. According to many weavers in the survey, their most significant problems included- not receiving supplies on time, being unable to purchase raw materials on credit, adulteration, using inferior raw materials, not having the required amount of material available, and price increases. The incapacity of weavers to produce goods that reflect the shifting consumer tastes is another problem mentioned by the authors. Most weavers aren't familiar with contemporary design patterns, so the designs have already lost their relevance by the time they utilise them.

A field survey study of 300 women weavers in Manipur by Devi (2012) examines their socioeconomic circumstances, the benefits and drawbacks of their living and working

conditions, health, and financial status. The authors also analyse their hopes and dreams, their relationships with family and the community, and the technology they use in production. The author examines the lives of women weavers to review their motivations for choosing weaving as a profession, health, social standing, and involvement in community initiatives. The study shows that these weavers feel a sense of security and self-sufficiency in the technology utilised in their handloom and that any new situation would arouse insecurities. These women tend to uphold the status quo since they are unprepared to compete with the rest of society. Pain in the back, shoulders, chest and joints, eyestrain, and constipation were the most prevalent illnesses experienced by weavers. Half of the respondents reported having at least one of these conditions. Due to a lack of funds, resources, and knowledge, half of them had never received medical attention. Most women weavers reportedly claimed their social status improved after starting to weave.

Singh et al.(2015) look at the case of market development in the handloom cluster in Chanderi using a qualitative research method that involves secondary data analysis and in-person discussions with various stakeholders. The writers see the four separations between consumers and producers—spatial, economic, temporal, and informational—through Bartels's idea of market separations. The fifth kind of market separation—social separation—which prevents market growth in the cluster—is also introduced by the authors. According to the authors, researchers need to look at how these five separations affect how markets and marketing work in the handloom sector.

Mukesh (2019) observed that traditional weaving processes caused many health concerns for workers, leading to a loss of interest and migration to other fields. To develop design interventions that can improve the lives of weavers in the Maheshwar handloom cluster, the author investigated health issues brought on by traditional weaving methods. The requirements and problems of the workers/weavers were ascertained using methods like observation, anthropometric posture and task analysis, and workspace study in conjunction with time study plus motion study. According to the authors, the primary cause of the weavers' body aches was that they sat in the same position all day. The researchers suggested a flywheel-based attachment reduces the energy the weavers use to operate the loom. According to the study, the Maheshwar

weavers saw the competition and the supply of counterfeit goods by power looms as a danger.

Dutta (2020) conducted a field research project in the subdistricts of Machkhowa and Sisiborgaon, situated in Dhemaji, Assam, to acquire primary data for their investigation. The study aimed to identify the elements that motivated weaver households to become involved in manufacturing handloom products. In addition, data were gathered from 148 families by the authors to highlight the critical challenges that weavers in the region confront. According to the study's findings, the support of one's family, self-interest, and unemployment are the three most essential elements motivating handloom owners. The problems that have been noted include a lack of availability of raw materials, lack of credit, lack of awareness of the programme, lack of supporting infrastructure, lack of education and training, and lack of education and training.

According to Banerjee & Buhroy (2020), handloom weaving not only aids the nation's economy by creating jobs but also serves as a means of preserving India's rich cultural history and earning cultural significance. The authors use the fact that weavers and their weavings tell distinctive tales about their rich cultural background to bolster their claims. Their investigation of the handloom cluster in Majuli found that the absence of innovation, poor information access, inadequate infrastructure, and the disorganised nature of the weaving industry were significant factors in the unattractiveness of the profession leading to the consequent abandonment of weavers from their traditional work.

The study by Das (2021) that examines the socioeconomic situation and means of subsistence of handloom weavers in Odisha's Sambalpur focuses on how some master weavers and intermediaries exploit the weavers. The author is concerned that after spending a week weaving a saree, the weavers are only compensated between Rs. 500 and Rs. 700. Even though Sambalpuri handloom enjoys the privilege of having Geographical Indication registration, competing power-looms and mills imitate the design and sell counterfeit Sambalpuri sarees for less than twenty-five per cent the price of the authentic hand-woven saree on the local market. The article discusses the state of cotton production in Odisha and the impact of the closure of some spinning mills on the handloom industry. It argues that the state government should encourage the

reopening of the closed cotton spinning mills to strengthen the backward linkage of the handloom industry in the region and the creation of numerous jobs. The study shows that with increased education, households want to work as independent weavers, thereby stressing the necessity of policy actions to provide handloom artisans with the appropriate training and education.

Sivasakthi & Rabiyaathul (2018) present a descriptive study to comprehend the choices of consumers as well as the difficulties of weavers in Kanchipuram, an essential centre in Tamil Nadu well-known for its sarees. A lack of quality standardisation, ineffective logistics management, limited infrastructure, inadequate marketing support, and a weak distribution network are among the problems cited by the authors. The authors discovered that handloom clothing is soft, good for the skin, eco-friendly, and adaptable to the customer's preferences, qualities that other mill-made or power-loom fabrics do not possess. However, these distinctive characteristics of handloom products are typically unknown to most customers. Thus, the authors propose that attracting younger customers and educating them about the benefits of handloom products should be one of the primary focuses.

Kumar et al. (2019) carried out research in Ernakulam to study and analyse the elements that influenced the decision to purchase khadi shirts. The researchers included those who did not buy Khadi as part of their sample to understand why people do not buy Khadi. The authors conclude that there may be greater demand for khadi shirts if the industry provides more variety in the designs and colours available.

Unlike most researchers, D'Costa (2022) contends that the state's supply-side assistance alone cannot assure the viability of the handloom industry. The author advocates for a demand-driven cultural nationalism to expand the handloom items market and empower the sector. He bases the arguments on the moral economy's tenets. Instead of lowering the price of handloom products, the article advocates enhancing the supply side already provided by the government with well-planned interventions to increase overall demand for handloom products through cultural awareness and the valorisation of artisanal work.

The research by Dohale et al. (2022) highlights eleven significant supply-chain risks in the handloom saree industry, with particular reference to the impact of Covid-19, arguing that reducing supply-chain risks is crucial for the handloom industry. Using a multiple case study technique, the researchers offer a risk mitigation strategy matrix of nine strategies to manage supply-chain hazards encountered by the handloom saree business in Ahmednagar, Kota Doria, Kanchipuram, and Varanasi. This is the only study to explore any part of the Indian handloom sector in relation to the Covid-19 impact.

In the article on their action research project, Samadhiya & Agrawal (2022) claim that design interventions by past researchers have often compromised the originality of the handloom by adding more power to operate it or by transforming the traditional handloom into either a semi-automatic or a computerised loom. The authors have used Design Thinking to develop a new handloom, with an empathetic understanding of the needs and requirements of the weavers in Uttarakhand while maintaining the essence of the handloom. The authors' novel loom exhibits improved consistency in thread count and has an ergonomically sound design for the comfort of the weavers.

The Varanasi handloom cluster's study by Rao (2022), to look at how global value chains affect the sector's sustainability, asserts that since handloom production relies on human energy, handloom sustainability is dependent on human well-being. The article also emphasises how women comprise most of those employed in India's handloom industry. Findings show the absence of capacity upgrading as most handloom home workers are at risk for survival and are stuck in a cycle of poor well-being because of their low levels of human capital, productivity, and income. The authors also contend that the industry and weavers' issues are interrelated. Thus, the workforce's ability to survive and thrive is a critical factor in the sustainability of handloom production.

According to research done in the Sualkuchi silk handloom cluster in Assam by (Das & Mishra (2021), the handloom owners survive by taking advantage of every family member, especially women and children. They increase the use of their unpaid labour to lower production expenses. The study discovered a link between working hours and value creation, suggesting that owners who extend working hours to promote greater labour exploitation achieve better value creation. The majority of government initiatives

for the handloom industry, according to the authors, are essentially bureaucratic prescriptions involving significant amounts of public money and are not grounded in the handloom sector's actual conditions. The study also shows that organised businesses are always more interested in selling handmade fabric than in producing it since there are restrictions on how much of it can be made on a large scale, even though there is a significant demand for it.

To investigate the benefits that handloom weavers receive from government welfare programmes, Khatoon & Iffat (2021) performed a study based on telephonic interviews with 400 weavers and allied workers in the state of Uttar Pradesh. The study shows that because the community of weavers is unaware of welfare initiatives, they are forced to enlist the aid of mediators who secretly benefit from schemes rather than the intended recipients. Another issue highlighted is the underuse of banking services, particularly in rural regions, which excludes weavers from many direct benefits transfer schemes. The authors also underline the fragility of every stage of the cotton-to-market supply chain for Uttar Pradesh's handloom industry.

Tarai & Shailaja (2020) researched to learn how Odia consumers feel about handloom goods. The authors collected data from handloom weavers and purchasers to gather insights into the elements that affect customers' purchase behaviour on e-commerce platforms. Their analysis reveals that many consumers saved their handloom purchases for special occasions. The authors report that the purchase of handloom products is impacted by quality, price, uniqueness, durability, style, comfort, design and advertising. When asked about the most significant challenge they faced when selling their products, the weavers cited a lack of proper marketing channels.

The study by Trivedi et al. (2020) on factors influencing the purchase of handloom products suggests a framework to highlight the influence of region of origin and story marketing on Indian buyers' propensity to buy. The study demonstrates that storey marketing has a favourable impact on customers' purchase intent. Based on the analysis of the data gathered from 400 customers in the city of Ahmedabad, the authors propose that handloom companies use storytelling in their advertising campaigns to enhance consumers' perceptions of the worth of their goods.

Chakraborty (2019) examined the information gathered from 378 weaver homes in West Bengal to comprehend unpaid family labour's role in the handloom industry. Their investigation shows that the support of the family, particularly the female members, allows the entire handloom sector to remain sustainable. The authors noted that women actively engaged in pre- and post-loom activities, with most of their involvement being unpaid labour. According to the research, 26% of unpaid female labour accounts for more than 50% of the overall revenue made by the handloom sector under consideration.



Fig.6 Author's pilot field immersion at Magan Khadi Sangrahalya, Wardha)

Based on primary data collected from 327 handloom households during field visits in the Domkal block of Murshidabad district, Pal et al. (2016) conclude that using one's children as unpaid labour was commonplace in the handloom sector. This was found to be particularly relevant in the case of low-income families. According to the study, children in these households engage in handloom-related activities for an average of 4.52 hours daily. The authors also make the startling discovery that some of these parents desire more children to increase their availability of free labour.

A thorough Life Cycle Assessment with one kilogramme of hand-woven khadi cloth as the unit of production is provided by Bhalla et al. (2018), taking into account cotton cultivation, fibre production, fabric processing, transportation, and disposal as system boundaries. The LCA shows Khadi (with a total energy demand of 97.6 MJ/kg) is more environmentally friendly than mill-woven fabric (170.5 MJ/kg). Additionally, the authors contend that Khadi enterprises offer better chances for overall human development. Several vectors, including unsanitary living, poor health procedures, pollution, and obvious income and gender disparities, simultaneously afflict the highly technological textile mills. The article suggests that the production of Khadi textiles is a deeply interwoven process affecting the social, cultural, environmental, and economic aspects of a rural setting.

To increase the marketing of handloom items in India, Vinayan (2012) emphasises the importance of geographic indicators. The author contends that GI registration and enforcement can be a way to maintain the ailing handloom industry and aid weavers in competing against imitation goods produced by mills and power looms. The paper also addresses the difficulties that can develop when GIs are registered and used for an unorganised industry like handlooms, which has a poorly controlled supply chain and inadequate quality assurance tools.

The study on women weavers in Mizoram, based on fieldwork by Ramaswamy & Kumar (2013), reveals that yarn shortage impacts the weavers' profitability and quality of their output because they are compelled to purchase from private suppliers who frequently offer subpar yarn. The weavers also noted the absence of loom upgrades and a shortage of resources for weaving as significant problems. According to reports, the weavers feel that these difficulties prevent them from producing as much as they want. On the marketing front, these weavers typically rely on shops where the proprietors retain a more significant portion of the revenues.

The study by Scuotto et al. (2023) emphasises the significance of business model innovation for promoting the growth and sustainability of social impact ventures. Their research uses in-depth multiple comparative case studies and narrative analysis to address the research question of how SEOs modify their business model to develop social innovation and propose a new conceptual framework for business model

innovation. The framework shows that social and cultural goals and paths to market and economic outcomes are equally important in creating social innovation.

Akinboade et al. (2023) highlight the significance of social enterprises adapting to their environment as the key to sustainable business models. Their research approach follows the purposeful selection of social entrepreneurs from Gauteng and Western Cape provinces in South Africa, using face-to-face interviews with senior managers or executives associated with SE or identifying their company as such. The study reports the importance of customer-centricity design-thinking, incorporating societal values that address market failures, and creating valuable services for multiple stakeholders. The authors conclude that the business model design should adapt to the dynamics of the value network. Product value should extend beyond product quality to include value for money and affordability.

Zhou et al. (2022) argue that in today's highly competitive market, technological innovation alone is not enough for companies to succeed and thus, business model innovation has gained increasing attention, becoming a key means for new ventures to break through path constraints, achieve disruptive innovation, and catch up with established players. Their research on entrepreneurs from eastern China's seven most active provinces highlights that no single factor is sufficient or necessary for successful entrepreneurship and business model innovation. Instead, the authors emphasise that the innovation of new venture business models results from interactions and value-added linkages between various internal and external resources.

Cavazos-Arroyo & Puente-Díaz (2021) studied 400 customers of social enterprises in Mexico, and the results showed that socially responsible consumption had a positive effect on the perceived business model innovation, which, in turn, had a direct positive impact on customer satisfaction and an indirect positive effect on loyalty. In social enterprises, business model innovation is crucial for establishing innovative management practices and building a sustainable hybrid business that leads to efficient performance and growth. Innovation in business models can enhance a social venture's competitive positioning, improve its overall performance, and attract customers.

Kullak et al. (2021) underline the importance of shared value creation amongst network actors in social purpose organisations with dual economic and social goals. Their study investigates the case of a German music festival through interview data, video-graphic content analysis, and secondary data to explore how shared value creation has been enhanced by transforming from an organisation-centric model to a platform for engagement with various other actor groups. The authors show that despite modest funding and minimal staffing, an organisation bring together a broad network of others for resource integration and shared value creation for social good, thus contributing to the social enterprise literature.

Nair (2022) interviewed office bearers of a social enterprise, management staff of a commercial agricultural farming and marketing company, and officials from the local municipality. They also referred to secondary sources, such as government reports, to comprehensively understand the enterprise's context. The data collected through these methods were used to identify and analyse various network participants, their functions, roles, and value chain activities. The findings were then used to illustrate the proposed social business model canvas and were applied to a real-life social business in a case study. The authors were able to fine-tune the existing business model of the enterprise and identify gaps that needed to be addressed to embrace the enterprise's dual objectives better.

Research Paradigm

Inspired by the earlier work in a similar context (Rao, 2012), and given my way of looking at the world impacted by my experience of working in the startup ecosystem coupled with my training in neuro-linguistics, the proposed research will be guided by the pragmatist world-view. A pragmatic study puts practical solutions above philosophical discussions. It does not pretend there is only one ultimate truth and steers clear of abstract, rigid concepts. Pragmatic research defines concepts in relation to human experience (Duram, 2010; Rao, 2012).

The majority of pragmatic researchers are driven by the desire to solve issues that actually affect people and to put the findings into practice., instead of abstractions, pragmatism emphasises tangible solutions. Such research tries to understand human experiences by looking into human behaviour. Due to their lack of direct connection to a particular research issue, abstract questions are rarely raised. Therefore, pragmatic studies explore human experience to discover the "truth" of what functions well in a specific circumstance (Duram, 2010; Kolly, 2018).

The use of mixed-methods approaches is common in pragmatic research. Any methodology that offers a pertinent approach to a particular research subject, whether qualitative or quantitative, may be used (Chaumba, 2013; Johnson & Onwuegbuzie, 2004). This makes it possible for a researcher to construct a comprehensive analysis and fully consider many pertinent aspects of the study (Duram, 2010). Pragmatic researchers begin with what they think is known, and they pick and choose how and what to research and what to do while looking for the desired consequences (Rao, 2012)

While the research will be heavily qualitative in nature, Design Thinking is proposed as the overarching methodology as it aligns very well with this fundamental world-view of pragmatism. Suitable research techniques will be employed for each objective, as discussed later.

Research Gaps

Based on the review of literature, preliminary field visits and secondary data, the following gaps have been identified:

1. While much work has been carried out to understand the challenges of the handloom sector, the extant literature does not focus much on Khadi.
2. Very little attention has been paid to the success and limiting factors of khadi organisations. Further, there has been no attempt to analyse the hierarchical relationship between these factors.
3. Though there have been some studies on understanding customer expectations from handloom products, the focus on Khadi and the investigation into how customers prioritise these expectations is mainly missing.
4. There is an evident lack of research focusing on strategic innovations in business models to make khadi fabric appealing and relevant for contemporary customers.

Research Questions

Based on the research gaps identified, the proposed research seeks to address the following research questions:

1. What are the success factors & limiting factors of Khadi organisations and their business models?
2. How do Khadi organisations address the prioritised expectations of customers from Khadi fabric?
3. How might we leverage business model innovation to make Khadi fabric relevant & attractive for contemporary customers while maintaining its ethos?

Research Objectives

- To identify the success factors and limiting factors of Khadi organisations and their business models.
- To develop an interpretive structural model highlighting the hierarchal relationship between the factors contributing to business models' success for khadi enterprises.
- To investigate the unique characteristics and requirements of Khadi fabric ventures that make them different from other artisanal and textile ventures.
- To explore the factors influencing customers' perception, purchase intent, experience, acceptance, and appreciation of Khadi fabric.
- To identify the best practices and successful business models from similar sectors that Khadi organisations can adopt.
- To explore how design thinking methodologies can be applied to develop innovative business models considering the unique needs of Khadi fabric enterprises.
- To test and evaluate the effectiveness of the innovative business models developed during the research.

Research Methodology

As mentioned earlier, the research will be primarily qualitative, with some quantitative data captured through surveys.

1. Survey Questionnaire

- a. **Survey with Khadi ecosystem stakeholders:** To collect preliminary quantitative data on the Khadi ecosystem, including characteristics of Khadi-based ventures, their business models, life-cycle, branding activities, financing, marketing strategies, supply chain, distribution channel, technology adoption, etc. The data collected through this questionnaire will help to gain a high-level overview of the Khadi ecosystem from cotton to fabric to the customer. In addition, these surveys will help identify the significant key informants (KIs) and stakeholders who will be subsequently contacted for more detailed interviews, as outlined in

the later part. The questionnaire will be administered in person (online/offline) or via email. In case the respondent prefers email, a detailed note explaining the purpose behind each item in the questionnaire will be shared with them in addition to a discussion over a telephone call. The respondents will be selected through the snowball sampling method.

- b. **Survey with Khadi fabric customers:** To collect preliminary quantitative data on customer preferences and expectations related to Khadi fabric and their frustrations and challenges during their purchase journey. The information gathered will also help shortlist the customers for detailed empathy interviews, as discussed in the next step. The surveys will also help identify some new Khadi fabric enterprises that the customers might engage with. 150-200 customers will be approached for the survey using the snowball sampling method. The surveys will be administered via email, social media, or direct personal communication with the respondents. As mentioned later, the questionnaire will also be administered to the customers observed at Khadi stores and exhibitions.

2. Field Immersion

Immersion visits and stays at primary sites will be conducted to gain in-depth insights and collect primary data about the functioning of Khadi fabric organisations and their business models, supply chains, distribution network, marketing strategies, contemporary innovations, technology adoption, etc.

Gram Seva Mandla, Gopuri and Magan Khadi Sangrahalaya, Wardha have been identified as primary sites/organisations for immersion visits. I have already spent a week on the field with these two organisations as a part of my pilot and established good relationships with the key personnel.

In addition, visits will be conducted at MGM Khadi Research Centre. More visits will be planned throughout the research to gather more data and develop case studies. Dastakar Andhra will also be a site for the immersion visits. In addition, one field visit has been conducted at MGM Khadi Research Centre, Aurangabad.

3. Key Informant Interviews

In the later stage, I'll collect qualitative and quantitative data through Key Informant Interviews (KIIs). The participants will be asked to describe and discuss people, inputs, outputs, flows, and quantities in the system. The goal will be to identify and understand the factors affecting the success and failure of Khadi business models and their inter-relationship.

Target interviewees include key personnel from Khadi enterprises (GSM, DesiTude, GodWit Khadi, Khadiji, Khadi London, etc.), change-makers from social impact organisations such as Dastakar Andhra, customer-facing stakeholders (retailers such as Khadi Bhandars in various locations, Magan Khaddar Store, etc.), and officials from Government organisations such as KVIC. These interviewees will be selected systematically using the quota sampling method to have a broad representation from all parts of the Khadi fabric ecosystem.

1-3 key informants from Khadi organisations, cooperatives/NGOs, and Govt officials and 3-5 key informants from Khadi fabric startups and retailers will be interviewed in depth. The qualitative data gathered from multiple stakeholders during these interviews will form the basis for developing an Interpretive Structural Model that depicts the hierarchical relationship between various factors contributing to the success of Khadi fabric organisations and their business models.

4. Customer Observation & Interviews

- a. In context, observation of customers will be conducted using Design Thinking techniques such as "Fly on the Wall". This will help gain an unbiased understanding of the customers' expectations from Khadi fabric and their frustrations and challenges while purchasing it. The observations will also help in analysing the purchase behaviours of the customers and their perception of Khadi fabric. The observation will be conducted at Khadi retail outlets (such as Magan Khadi and Khadi speciality stores) and Khadi-related exhibitions.

- b. To gain deeper qualitative insights into the quantitative data captured through survey forms, empathy interviews will be conducted with 40-50 customers to understand the factors influencing their purchase intent, experience, appreciation, and acceptance of Khadi fabric. Further, the interviews will also intend to unwrap how the customers prioritise these factors. These customers will be primarily selected based on the data captured from the quantitative surveys. Some customers would also be identified through the convenience sampling method.
- c. To expand the understanding of why people don't buy Khadi fabric, interviews will also be conducted with 20-25 extreme users and non-users, identified using the convenience sampling method.

A set of customer personas will be created based on the empathy maps generated from the interview and observation data (Ferreira et al., n.d.; Rosenbaum et al., 2017). These customer personas and journey maps will be used to brainstorm interventions for enhancing the experience part of the Khadi business models (Faily & Flechais, 2011; Ferreira et al., n.d.). The data gathered will also help develop a hierarchical model using AHP to explain the customers' priorities.

5. Case studies

The case study method will provide an in-depth understanding of the context-specific factors that contribute to the success of Khadi enterprises' business models. For the proposed research, case studies will be conducted on two established social enterprises, Gram Seva Mandal Gopuri and Magan Khadi Sangrahalaya, Wardha. One or two new-age startups dealing in Khadi fabrics will also be selected for the case study. The selection of case studies is based on the criteria of their contribution to the Khadi ecosystem and their ability to showcase innovative business models.

The data will be collected through interviews with key informants, such as the organisations' founders, managers, and employees and observations of their operations. Observations of their operations will also be made, and document analysis

will be carried out on their annual reports, financial statements, and marketing strategies.

The findings of the case studies will be an integral part of the final thesis outcome, which will be a framework for innovative business models for Khadi enterprises. The case studies will provide a comprehensive understanding of the strategies and practices adopted by successful Khadi enterprises. They will further enable the development of a framework that can guide other Khadi enterprises in adopting innovative business models.

Expected Contributions

- a) Interpretive Structural Model depicting the hierarchical relationship between the key factors for the success of the sustainability of Khadi enterprises.
- b) AHP model for the customers' preferences and factors affecting their perception, experience, and acceptance of Khadi fabric.
- c) In-depth case studies highlighting the impact and best practices of innovative & sustainable Khadi organisations that will inform business model decisions for contemporary Khadi enterprises.
- d) Framework for innovative business models to make Khadi fabric more relevant & attractive for contemporary customers while maintaining its ethos.

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