A Study on the Evolution and Product Diversification of Solapur Chaddar

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A Study on the Evolution and Product Diversification of Solapur Chaddar

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By

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CERTIFICATE

This is to inform you that research work presented in this dissertation entitled ***"A Study on the Evolution and Product Diversification of Solapur Chaddar"*** in pursuit of partial fulfilment of the Master's Degree in Clothing and Textiles is the original bonafide work of the student Ms. Sharayu Late.

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This is to certify Ms. Sharayu Late study titled, "A study on the evolution of Solapur Chaddar and its product diversification" from Department of Clothing and Textiles has been approved by the Institutional Ethics Committee for Human Research (IECHR), Faculty of Family and Community Sciences, The Maharaja Sayajirao University of Baroda. The study has been allotted the ethical approval number IECHR/FCSc/M.Sc./10/2024/06.

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ABSTRACT

The Solapur Chaddar, a distinctive woven textile from Solapur, Maharashtra, had been an integral part of the region's textile heritage. Known for its durability, intricate designs, and traditional craftsmanship, the Chaddar had undergone significant transformations over the time. This dissertation explored the evolution of Solapur Chaddar, from its origins in handloom weaving to the mechanization of production, alongside an analysis of product diversification and market acceptability. The study was aimed to document the production process, assess the impact of technological advancements, and explore new product applications to ensure the craft's sustainability.

The research was conducted using a combination of field observations, interviews with manufacturers and weavers, and secondary data analysis. Data from manufacturers were collected from the MIDC (Maharashtra Industrial Development Corporation) area in Solapur, where several manufacturing units are located. For weavers, data were gathered from the Workers' Vasti, a residential area of traditional weavers in Solapur, providing valuable insights into their practices, challenges, and experiences.

The documentation of production process and techniques included the traditional handloom weaving process, the transition to power loom weaving, and the impact of mechanization on weavers and the industry. Changes in motifs, colours, and designs were studied to understand the adaptation of the Chaddar to contemporary demands. Additionally, a SWOT analysis was performed to evaluate the strengths, weaknesses, opportunities, and threats associated with the Solapur Chaddar industry.

To explore the potential of product diversification, mill surplus Solapur Chaddar fabric was utilized to develop contemporary lifestyle products. Through market research, five product categories—cushion covers, hanging storage organizers, pen cases, backpacks, and tote bags—were identified for diversification. Within each category, design sketches were developed, and the top three designs were selected through a consumer survey. Based on these selected designs, appropriate colour combinations, motifs, and patterns from the available mill surplus Solapur Chaddar fabric were chosen to ensure aesthetic and functional appeal.

Following this, pattern drafts were developed using Rich peace software, where the designs were digitally created and scaled down for documentation. To assess feasibility, sample products were first constructed to test various product construction parameters, including stitching techniques, structural integrity, and material suitability. Once the parameters were finalized, the final products were constructed with enhanced precision.

The completed products, which included bags, cushion covers, and lifestyle accessories, were subsequently evaluated through a structured survey conducted among potential consumers. The evaluation focused on key aspects such as overall product appeal, functionality, price preferences, and potential modifications, providing valuable insights into consumer acceptance and market feasibility.

The findings indicated that Solapur Chaddar holds significant potential for application beyond its conventional use. While consumers showed a strong interest in purchasing Chaddar-based products. Their preferences varied based on design elements, colour combinations, and functional utility. Market acceptability analysis highlighted key

factors influencing consumer purchasing decisions, including price range, preferred retail channels, and product enhancements. The responses also identified areas for improvement, particularly in finishing quality, design innovation, and strategic market positioning.

Overall, the dissertation emphasizes the need for innovation in Solapur Chaddar-based product development while preserving its traditional essence. The research suggested that expanding market reach through exhibitions, online platforms, and retail collaborations could enhance consumer accessibility. Additionally, efforts toward sustainable production practices and artisan collaboration could contribute to the long-term viability of Solapur Chaddar in the modern textile industry.

Keywords: Solapur Chaddar, Weaving Industry, Product Diversification, Power Loom Transition, Textile Evolution, Market Acceptability, Sustainability.

Chapter I
Introduction

India had a rich and diverse textile heritage, deeply connected to its cultural and economic identity. From ancient times, the country had been renowned for its handwoven fabrics, intricate embroidery, and vibrant dyeing techniques. The roots of Indian textiles could be traced back to the Indus Valley Civilization, where cotton fabrics were woven using hand-spun yarns. Over centuries, textiles such as muslin from Bengal, Pashmina from Kashmir, and silk from Varanasi gained international recognition. Various dynasties, including the Maurya's, Mughals, and the British colonial rulers, influenced India's textile traditions, each leaving a distinct impact on production methods and trade. The introduction of power looms and mechanized mills during the British era led to significant transformations, yet the handloom sector remained a crucial part of the industry. Even today, India continued to balance its traditional craftsmanship with modern technological advancements.

Maharashtra, one of India's leading textile-producing states, had a long history of weaving and craftsmanship. The state was known for its diverse textiles, including Paithani sarees, Himroo fabric, and Solapur Chaddars. The textile industry in Maharashtra flourished due to its access to raw materials, skilled artisans, and strategic trade networks. Over time, the introduction of cotton mills in cities like Mumbai and Solapur strengthened the state's position as a major textile hub. While power loom industries dominated the market, handloom weaving continued in certain regions, preserving traditional skills and artistry.

Solapur, a key textile centre in Maharashtra, had long been recognized for its cotton-based textiles, particularly the Solapur Chaddar. This durable and intricately woven fabric became a hallmark of the region's craftsmanship, blending traditional weaving techniques with evolving market demands. The growth of textile production in Solapur was deeply intertwined with the migration of skilled weaver communities, who brought with them extensive knowledge of handloom weaving. Over time, the city emerged as a hub for handloom and later power loom industries, adapting to technological advancements while preserving elements of its heritage.

By the late 19th and early 20th centuries, Solapur's textile sector gained momentum due to improved infrastructure and expanding trade networks. The introduction of railways

in 1860 played a pivotal role in facilitating the large-scale distribution of Solapur Chaddars, extending their reach beyond Maharashtra. As mechanization advanced, the industry witnessed a shift from traditional handloom weaving to power loom production, leading to increased efficiency and higher output. However, this transition also presented challenges for artisans, as handloom weaving gradually declined in favour of machine-based production. Despite these changes, Solapur Chaddars retained their cultural and commercial significance, receiving Geographical Indication (GI) status in 2002 to protect their authenticity and heritage.

Solapur Chaddars were traditionally woven with geometric and floral motifs on Jacquard looms. Initially, they featured bold colours and elaborate designs, but as market preferences evolved, manufacturers adapted to subdued colour schemes and modern motifs. Over time, mechanization replaced many handlooms, increasing production efficiency but also posing challenges for traditional artisans. Despite these changes, Solapur Chaddars continued to hold cultural significance and received Geographical Indication (GI) status in 2002, reinforcing their authenticity and heritage value.

While the Solapur Chaddar had been widely used for bedding and household textiles, efforts to diversify its application had been relatively limited. Earlier attempts focused primarily on apparel and fashion accessories, integrating the fabric into garments and other wearable items. However, these efforts did not fully explore the potential of Solapur Chaddar in other functional and lifestyle products. Recognizing this gap, the present study aimed to expand the product range by developing daily-use items that aligned with contemporary consumer preferences. By integrating Solapur Chaddar into home decor, storage solutions, travel accessories, and other lifestyle products, the study sought to revitalize its market potential while maintaining its traditional essence.

1.1 Purpose of the Study

The purpose of this study was to explore the evolution of Solapur Chaddar and its potential for product diversification. Through historical documentation, design experimentation, and market evaluation, the research aimed to bridge the gap between tradition and modern consumer needs. By reimagining Solapur Chaddar into a broader product range, this study sought to support the sustainability of the industry, provide new avenues for artisans, and expand market opportunities. Additionally, by utilizing mill

surplus fabric, the research promoted sustainable practices and aimed to minimize textile waste.

1.2 Objectives of the Study

1. To document the production processes used in made Solapur Chaddar over time period.
2. To analyse the evolution of Solapur Chaddar, highlighting key changes in production methods, designs, and market dynamics.
3. To create various products using Solapur Chaddar as raw material, demonstrating the adaptation of Chaddar for contemporary uses.
4. To evaluate the products for suitability and market acceptability.

1.3 Delimitation

This study was limited to Solapur Chaddar production within the Solapur region of Maharashtra. While references to other textile traditions were included for context, the research did not extend to a comparative analysis of other textile crafts. The product diversification aspect focused on feasible items made from Solapur Chaddar mill surplus and did not included an assessment of product durability. Instead, the study emphasized the design, aesthetic appeal, and functional usability of the diversified products.

CHAPTER – II

REVIEW OF LITERATURE

The review of literature for the present study was gathered from various secondary sources such as government documents, books from libraries, journals, thesis, dissertations and from various websites. The review of literature had been classified as: -

2.1 Theoretical Review

2.1.1 Indian Textile Industry

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2.1 Theoretical Review

2.1.1 Indian Textiles Industry

India’s textile industry had a long and rich history, dating back centuries. It was highly diverse, encompassing both traditional hand-woven fabrics and modern, high-tech mills. The industry thrived due to a strong base of raw materials, including natural fibres such as cotton, silk, wool, and jute, as well as synthetic fibres like polyester and nylon. The power loom, hosiery, and knitting sectors constituted the largest segments of the industry. A distinctive feature of this sector was its strong dependence on agriculture for raw materials and its deep-rooted connection to India's cultural heritage. To support its growth and generate employment, the government implemented various initiatives such as the Scheme for Integrated Textile Parks (SITP), the Technology Upgradation Fund Scheme (TUFS), and the Mega Integrated Textile Region and Apparel (MITRA) Park. According to Crisil Ratings, the organised retail apparel sector was projected to grow by 8–10 percent in 2024. This growth was driven by increased demand during the festive and wedding seasons, as well as a rising preference for affordable and trendy fashion. Overall, India’s textile industry played a crucial role in the economy and continued to expand its presence on the global *stage (Textile Industry in India, Leading Yarn Manufacturers in India - IBEF, n.d.)*.

2.1.1.1 Opportunities in India’s Textile Industry

India’s textile industry had significant potential due to its extensive range of natural and synthetic fibres and yarns. The sector was both technologically advanced and capital-intensive, placing it on par with industries such as heavy machinery and automobiles. With industrialization becoming a prevailing trend in consumer goods and labour-intensive industries, the textile sector presented substantial opportunities for growth (Deeba, 2022).

By 2025, India was projected to become the second most attractive market for textiles, contributing up to US$ 121 billion, with China expected to lead at US$ 378 billion. This optimistic forecast was reinforced by India’s rapidly growing economy, which recorded a GDP growth of 7.2 percent in 2017–2018. As purchasing power increased, so did the demand for textile products, enabling the industry to expand its manufacturing capabilities for both domestic and international markets. Furthermore, India’s textile sector was highly diverse, encompassing both traditional hand-woven fabrics and

technologically advanced, capital-intensive mills. This diversity created numerous opportunities, making the industry a vital contributor to the country's economic growth (Gupta, 2025).

2.1.1.2 Challenges Faced by India's Textile Industry

India's textile industry faced several challenges, including intense competition from countries like China and Southeast Asia, which offered lower prices and more advanced technology. Environmental concerns were also significant, as traditional dyeing methods contributed to water pollution, making the transition to sustainable practices both urgent and costly. Additionally, the industry struggled with a lack of modern technology, with many manufacturers relying on outdated machines that reduced efficiency and made it difficult to keep up with rapidly changing fashion trends. Labor-related issues further complicated the situation, as poor working conditions and low wages underscored the need for improved labour standards. Addressing these challenges remained essential for the industry's growth and long-term competitiveness (Verma, 2024).

2.1.1.3 Government Initiatives for India's Textile Industry

The Indian government implemented several initiatives to boost the textile industry, focusing on increasing exports, upgrading technology, and supporting small businesses. One of the major policy changes included allowing 100 percent Foreign Direct Investment (FDI) through the automatic route, which made it easier for foreign companies to invest in the sector (Textile Industry in India, Leading Yarn Manufacturers in India - IBEF, n.d.).

Several key initiatives were introduced to modernize the industry. The SAATHI Scheme was launched in collaboration with Energy Efficiency Services Ltd. (EESL) to help small businesses in the power loom sector adopt energy-efficient technologies, improving their competitiveness. Additionally, the *Hastkala Sahyog Shivirs* program was initiated by the Ministry of Textiles to support weavers and artisans. These camps were set up in 421 handloom and handicraft clusters across the country, benefiting over 1.2 lakh individuals by providing essential resources and assistance. Moreover, a comprehensive mega package was planned for the power loom sector, which included social welfare schemes, insurance coverage, cluster development programs, and financial assistance for upgrading old looms. Tax benefits and marketing support were also introduced to enhance the livelihoods of power loom workers. These efforts demonstrated the

government's commitment to strengthening the textile industry. If effectively implemented, these initiatives had the potential to drive significant industry growth and generate employment opportunities (Joshi et al., 2018).

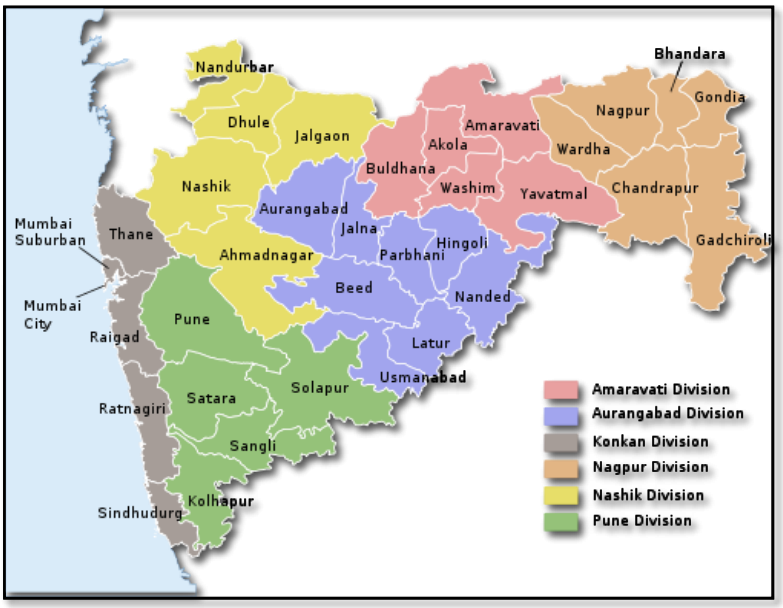
2.1.2 History of Woven Textiles of Maharashtra

India possessed a rich and diverse textile heritage, offering a wide variety of fabrics with unique designs and techniques that differed from those of other countries. Distinct weaving styles in each region were shaped by local climate, culture, and traditions. Indian textiles were not only visually appealing but were also well-suited to the country's climate, often featuring vibrant colours and intricate embroidery. The roots of Indian textiles could be traced back to the Indus Valley Civilization, where people used hand-spun cotton to weave garments. Excavations at Harappa and Mohenjo-Daro revealed artifacts such as bone needles and wooden spindles, suggesting that cotton spinning and weaving were common household practices. Ancient Indian texts, including the *Rigveda*, as well as epics like the *Ramayana* and *Mahabharata*, referenced weaving and the use of various fabrics. Indian textiles were highly valued in international trade, with Indian silk being popular in Rome during the early centuries of the Christian era, and cotton fabrics being exported to China via the Silk Route. By the 17th century, the British East India Company actively traded Indian cotton and silk fabrics, including the renowned Dacca muslin. The influence of traditional weaving techniques and patterns continued to be visible in the motifs and designs used by Indian weavers (Chain, 2021).

Textiles and clothing played a significant role in human history, reflecting the materials available to a civilization and the technologies mastered. Maharashtra, a state bordered by the Arabian Sea and several Indian states, had a rich textile history influenced by early industrialization. It was recognized for preserving its traditional woven textiles while also being an early adopter of power looms in the 20th century. As larger mills upgraded their machinery, smaller handloom weavers acquired discarded machines to increase production, leading to the spread of power looms in cities such as Mumbai, Bhiwandi, Malegaon, and Ichalkaranji. However, this shift significantly impacted traditional handloom weaving, contributing to its decline (An Introduction to the Handlooms of Maharashtra | Sahapedia, n.d.).

Maharashtra's textile traditions were diverse, featuring Paithani sarees, Himroo textiles, and regional weaves from Nagpur, Pune, Solapur, and Ahmednagar. Although power

looms dominated the market with cheaper synthetic blends, villages across the state continued to produce sarees using unique materials, techniques, and designs. Despite the cultural distinctions between Vidarbha, Marathwada, and coastal Maharashtra, a strong cultural affinity was evident in textile practices. Additionally, textiles like Khann fabric and Irkal sarees showcased cross-regional influences between Maharashtra and Karnataka. This combination of historical and modern practices illustrated Maharashtra's evolving textile heritage. Plate 2.1 showed the political map of Maharashtra and Table 2.1 showed the Traditional Textiles of Maharashtra and their Origin and Key Features (Karolia, 2020, pp. 189–191).



Source: https://en-academic.com/pictures/enwiki/77/Maharashtra_Divisions_Eng.svg

Plate 2.1: Political Map of Maharashtra

Table 2.1: Traditional Textiles of Maharashtra: Origin and Key Features

Textile	Origin/Region	Key Features
Paithani	Aurangabad, Paithan	Silk, Zari, intricate peacock and floral motifs
Himroo	Aurangabad	Blend of silk and cotton, Persian-inspired patterns
Mashru	Western Maharashtra	Silk and cotton blend with bright stripes and patterns

Khana	Southern Maharashtra	Geometric and floral patterns, used for blouses
Solapur Chaddars	Solapur	Thick, durable cotton with jacquard designs
Nauvari Sarees	State-wide	Cotton and silk, practical drape for daily wear

2.1.3 Solapur Textile Industry

Solapur chaddars, or cotton sheets made on handlooms, were renowned for their durability and distinctive designs. These textiles feature geometric and floral patterns, which were primarily woven using Jacquard machines with cotton yarns. The uniqueness of Solapur Chaddars was recognized with Geographical Indication (GI) status in 2002 (Solapur Chaddar GI).

2.1.3.1 History and Evolution of Solapur's Textile Industry

Solapur, a city in Maharashtra, had a rich textile history spanning over 100 years and was known worldwide for its high-quality cotton Chaddars (sheets) and other textiles. The foundation of this tradition was laid during the reign of Peshwa Madhavrao-I (1761–1772), who invited weavers from the Padmashali, Kothi's, and Sangars communities to settle in Solapur. He provided them with state support and land grants, which played a crucial role in establishing the city as a major textile hub. The settlement of Madhavrao Peth (now Mangalwar Peth) attracted many trading and artisan families, including weavers from the Nizam's territories. The development of roads and railway lines in the 19th century further boosted the textile trade, enabled expansion beyond the Deccan districts (Maharashtra State Gazetteer, 1977).

Key Textile Mills of Solapur

1. Sholapur Spinning and Weaving Co. Ltd. (Established in 1877)
    - Began operations with a capital of Rs. 8 lakhs and initially employed 350 workers.

- By 1961, the mill had expanded to over 2,234 looms and 95,232 spindles, employing more than 6,000 workers.
- Wages in the early 1900s remained low, with female workers earning between Rs. 5 to Rs. 9 per month, while male workers earned Rs. 6 to Rs. 12.

2. Narsingji Girji Manufacturing Co. Ltd. (Established in 1898)
    - Initially focused on cotton yarn production and was once the largest mill in Asia.
    - Faced closure in 1957 due to financial losses, leading to government intervention.
    - By 1961, the mill employed over 4,500 workers, operating 1,170 looms and 55,488 spindles.
3. Laxmi Cotton Manufacturing Co. Ltd. (Established in 1898)
    - Specialized in producing fine-textured cloth and, by 1961, had over 1,219 looms and 56,272 spindles.
    - Undertook modernization efforts with support from the Maharashtra State Industrial and Investment Corporation.
4. Vishnu Cotton Mill Ltd. (Established in 1908)
    - Operated 1,495 looms and 54,280 spindles by 1961, employing more than 2,000 workers.
5. Shri Jam Ranjitsingji Mill (Established in 1909)
    - Functioned as a composite unit with 512 looms and 22,132 spindles by 1961, focusing initially on cotton yarn production.
6. Lokmanya Mills Ltd., Barshi (Established in 1928)
    - Operated as a spinning unit with 12,872 spindles and had over 1,000 workers by 1961.
7. Jayashankar Mills Ltd., Barshi (Established in 1928)

- Specialized in spinning with 14,520 spindles and employed about 800 workers (Kakade, 1947 & Maharashtra State Gazetteer, 1977).

2.1.3.2 Impact of Modernization and Decline of Mills

The rise of power looms in the early 20th century transformed Solapur's textile landscape. Larger mills had begun modernizing, discarding older machinery, which was then acquired by handloom weavers who sought to increase production. This transition had initially taken place in Mumbai before spreading to smaller towns such as Bhiwandi, Malegaon, and Ichalkaranji, negatively affecting the handloom weaving sector (Monika Lonkar –Kumbhar, 2024).

The closure of major mills such as Gokaldas Mill in 1964 and Laxmi Vishnu Mill had marked a significant setback for the industry. Looms from these mills had been sold at throwaway prices, allowing local weavers to purchase and set them up in their homes. This adaptation by the weaver community had played a crucial role in reviving the Solapur Chaddar industry, ensuring its survival despite the decline of large-scale mills (Webdunia, 2023).

The introduction of modernization in the 1970s had further altered the handloom weaving industry. Power looms had begun producing traditional designs using cotton-polyester blends and synthetic fibres, which were cheaper and easier to maintain. This shift had resulted in a flood of lower-priced products in the market, making it even more challenging for traditional weavers to sustain their craft (Pimparikar, 2008).

2.1.3.3 Global Recognition and Resilience of Solapur's Textile Industry

Despite facing multiple challenges, Solapur's textiles, particularly Solapur Chaddars, had gained international recognition. The city had earned the title of "Mill Town" due to the high concentration of textile mills. With efficient production techniques and skilled labour, Solapur's textile products had been exported to markets in the U.K., France, the U.S.A., the Middle East, Australia, and South Africa, generating an annual export value of Rs. 500–600 crores. The history of Solapur's textile industry reflected a story of resilience and adaptation. From its origins under Peshwa patronage to its emergence as a prominent textile hub, the industry had navigated numerous challenges through community-driven efforts and traditional craftsmanship. The adaptability of the weaver communities—who had repurposed discarded looms and sustained production despite

economic fluctuations—highlighted the indomitable spirit of Solapur's artisans. Moving forward, preserving this rich legacy while integrating modern technology would be crucial for the sustainable growth of Solapur's textile sector (Deshpande, 2021).

a. Characteristics of Solapur Chaddar

Solapur sheets, also known as Solapur Chaddars, had been widely recognized for their durability, intricate designs, and the use of Jacquard weaving techniques. These cotton sheets, produced in Solapur, Maharashtra, had gained popularity both within India and internationally due to their bold patterns and solid colours (Solapur Chaddar GI).

b. Unique Production Techniques

- Hank Dyeing: One of the distinctive features of Solapur Chaddars had been the practice of hank dyeing, which was carried out by entrepreneurs themselves. This approach had allowed them to maintain control over colour quality and consistency.
- Dark Colour Preference: The use of dark colours had become a signature feature, aligning with consumer preferences for bold and vibrant designs.

The distinctive characteristics of Solapur sheets—including their Jacquard-woven patterns, diverse sizes, and varying weights—had underscored the region's rich weaving tradition. The ability of local manufacturers to seamlessly blend traditional techniques with modern trends had helped preserve the cultural identity of Solapur Chaddars while ensuring their appeal in global markets (Solapur Chaddar GI).

c. Competition of Solapur Chaddar

Solapur Chaddars, which had once been a household staple across Maharashtra and a popular export, had faced a significant decline due to competition from imitations. The production of authentic Solapur sheets had dropped to just 10 percent of the city's total textile output. This decline had been primarily driven by cheaper, low-quality imitations from Panipat (Haryana) and Erode (Tamil Nadu). These counterfeit products had often misused the Solapur logo and replicated traditional designs, misleading consumers into believing they were purchasing authentic Solapur Chaddars (नेटवर्क, 2019).

The lighter and more affordable nature of these fake sheets had made them more attractive to buyers, creating a major price disadvantage for original Solapur Chaddars. While

authentic Chaddars had been known for their durability, intricate designs, and Jacquard-woven patterns, counterfeit versions had offered cheaper alternatives, making it difficult for traditional weavers to compete. In addition to domestic competition, Solapur Chaddars had also faced design similarities with textiles from Uzbekistan, the Philippines, and other rug-making regions. This resemblance had diluted the uniqueness of Solapur's traditional patterns, making it harder for the product to maintain market distinction in both domestic and international markets (मुजावर, 2025).

Efforts to Combat Counterfeiting and Market Challenges

To counter this competition, the weaver community and manufacturers had recognized the need to focus on:

- Brand authenticity – Highlighting the genuine craftsmanship behind Solapur Chaddars.
- Quality control – ensured the original product maintained its superior standards.
- Marketing strategies – Promoting the heritage and legacy of Solapur's textile tradition.
- Legal protections – Strengthening Geographical Indication (GI) enforcement to prevent counterfeit products from misleading consumers.

More aggressive promotion of the GI tag and consumer awareness campaigns had been essential in preserving the identity of Solapur Chaddars amidst increasing competition (Mutha, 2025).

2.2 Related Research Review

2.2.1 Product Diversification

Khani, S. (1994) conducted "A study on Sujani weaving of Bharuch district and its product diversification". The research focused on six products: tea cozies, oven mittens, bags, cushion covers, sofa back sets, and jackets, using traditional and modified designs with two-colour yarns. Findings revealed that respondents preferred items made from modified Sujani fabric due to its bright colours and varied patterns. The sofa back sets

were the most popular, followed by jackets. The study concluded that these value-added products could attract a broader market.

Thoudam, J. (2008) conducted a study on "Documentation of the hand-woven textiles of Manipur and its diversification for home furnishing products depicting traditional motifs". The research aimed to preserve and promote these designs by creating marketable products. Using a descriptive method with surveys and interviews, the study found that while loom structures remained unchanged, there were minor modifications in weaving tools. Traditional motifs were largely replaced by contemporary designs, with floral motifs proving most popular. Window curtains with floral patterns were rated as highly appealing for their aesthetic value and marketability.

Vohra, K. (2010) conducted "A study on Tangalia of Saurasgtra and its product diversification", focusing on its history, motifs, colours, techniques, and product diversification. The research covered five villages in Surendranagar and Bhavnagar districts, collecting data through interviews, observations, and photography. Findings showed that most *Bharwad* women stopped wearing traditional *Tangalia* due to its high cost, and many weavers shifted to other livelihoods. To revive the craft, products like kurtas, tops, bags, stoles, and footwear were developed featuring traditional motifs. An exhibition revealed high consumer appreciation, encouraging weavers to continue the craft.

Khator, R. (2010) conducted a study on "Documentation & product diversification of Phad painting of Rajasthan". The research aimed to expand the market for artisans by incorporating *Phad* motifs into interior products and souvenirs. Using interviews, observations, and photography, the study explored designs for bolster covers, curtains, lamp shades, wall hangings, bags, and more. The evaluation showed that products like lamp shades and curtains were especially appreciated. The diversification efforts were successful in preserving and modernizing *Phad* painting, providing new opportunities for artisans.

Solanki, P. (2011) conducted a study on “Documentation of Dhaba and Kharad weaving of Kachchh and their product diversification”. The research aimed to preserve these traditional crafts by expanding their applications to coffee table sets and other interior products. Using case studies and observations, the study assessed the aesthetic appeal, market acceptance, and cost of these products. Results showed that 84 percent of respondents viewed *Dhabla* and *Kharad* weaving as crucial for community identity, and the diversified products received a positive response, helping weavers gain market access and improve their socio-economic status.

Jaswal, A. (2012) conducted “A study of kinur shawls and its product Diversification”. The research aimed to explore the motifs, colours, and cultural significance of these shawls and develop a range of apparel products like skirts, *kurtis*, and *achkans*. Using field visits, interviews, and questionnaires, the study found that most respondents supported diversification as a way to increase awareness and revive traditional textiles. The new product line was well-received for its aesthetic appeal and market acceptability.

Desai, D. (2013) conducted a study on “Documentation of Paithani Saree and its product Diversification”. The research aimed to ensure the sustainable and commercial viability of this local craft by creating a range of products such as accessories, apparel, corporate items, home décor, and souvenirs. Most products received positive feedback for their cost-effectiveness, design elements, and market acceptance. The study highlighted opportunities in product design and innovation while identifying challenges in motif placement and colour combinations. Promoting the craft effectively reached a defined audience, helping in its preservation and growth.

Pawar, R. (2023) “Study of traditionally woven Solapur fabrics with respect to innovative product development to achieve global market”. Study on Solapur Chaddar Product diversification had played a crucial role in sustaining the Solapur Chaddar industry by expanding its applications beyond traditional bed coverings to apparels, fashion accessories-based products. The study highlighted various experimental approaches that tested the fabric’s adaptability for cushion covers, table runners, tote bags, and garments,

emphasizing necessary modifications in design and finishing to enhance suitability. Market acceptability studies revealed significant potential in niche markets, particularly those valuing handcrafted textiles. Branding and marketing strategies focusing on authenticity and heritage were deemed essential for attracting modern consumers, making product diversification a viable strategy for industry revival.

2.2.2 Craft Sustainability

Sardiwal, S. (2010) conducted "A study of traditional Namda-Craft of Rajasthan and development initiatives for its revival". The research, carried out in Tonk, aimed to document the production process, materials, tools, and techniques used in crafting Namdas. Key findings highlighted the use of wool pre-treated with soap, acid, and water and dyed with acid dyes. Tools like dhoom, *punja*, milling machines, and carding machines were essential for production. Emphasizing sustainable practices and improving production efficiency could help preserve this traditional craft.

Doshi, D. (2010) conducted "A study on the paisley Motif as Depicted on the Traditional Woven Textiles of Gujarat And Maharashtra", focusing on products like brocade *ghagharas*, blouses, *achakans*, brocade *sarees*, Asavali brocade saris, Paithani sarees, and Himroo shawls. The study documented motifs such as *Kamal, Hans, Asharfi, Asavali, Bangadi Mor, Rui Phool,* Mango, Circles, Stars, and Leaf clusters through photographs collected from museums and markets in Pune, Baroda, Yeola, Paithan, and Aurangabad. The use of twill weave and extra weft techniques alongside plain weaves for the body highlights a balance between traditional methods and potential modern adaptations, supporting craft sustainability.

Pawar, R. (2023) "Study of traditionally woven Solapur fabrics with respect to innovative product development to achieve global market". Craft sustainability in the Solapur Chaddar industry depends on preserving traditional weaving techniques while ensured economic and environmental viability. The study identified eco-friendly production processes, such as natural dyeing, as essential for reduced environmental impact and enhancing market value. Government initiatives like cluster development programs and GI branding were found to support sustainability by providing financial aid and

promoting authentic products. Additionally, skill development, fair wages, and improved working conditions were emphasized as critical factors in retaining artisans and preventing the decline of traditional knowledge. Integrating modern innovations with sustainability practices was seen as key to ensure the long-term survival of the industry.

Chapter III
METHODOLOGY

The present study was conducted on "A Study on the Evolution of Solapur Chaddar and Its Product Diversification". To achieve the formulated objectives a descriptive cum exploratory study was planned which was divided into four phases namely Documentation, Analysis, Product diversification and Evaluation.

3.1 Research Design

3.2 Documentation of production process

3.2.1 Preliminary survey of the craft

3.2.2 Sample selection

3.2.3 Preparation of the tools

3.2.4 Collection of data

3.3 Analysis of evolution

3.3.1 Analysis of collected data

3.3.2 Comparison of historical and present practices

3.3.3 Identification of key changes over time

3.3.4 SWOT Analysis of the Solapur Chaddar Industry

3.4 Product diversification

3.4.1 Designing and selection of product

3.4.2. Construction of selected products

3.5 Evaluation of products

3.5.1 Feedback & Evaluation of products

3.1 Research Design

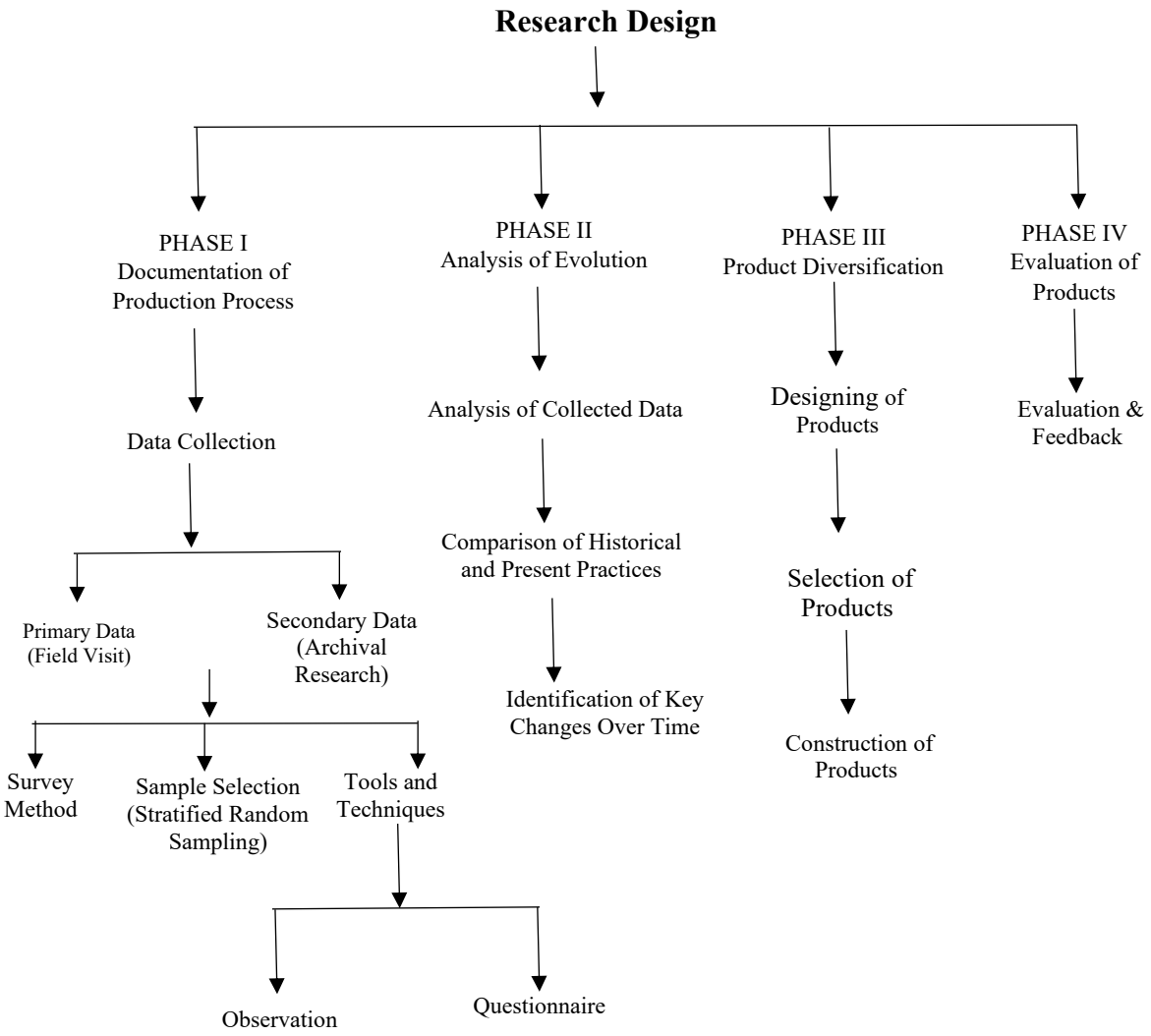


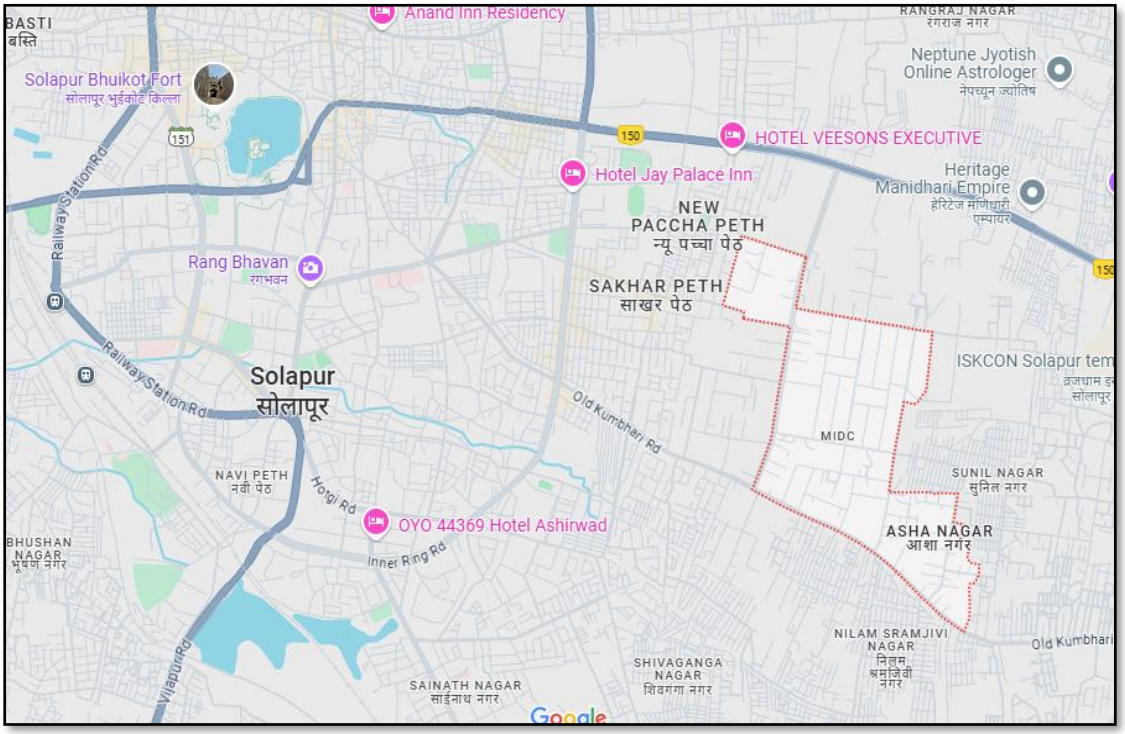
Figure 3.1: Research Design

3.2 Documentation of Production Process

3.2.1 Preliminary Survey of Craft

The preliminary survey of the Solapur Chaddar craft was conducted in Solapur city, Maharashtra, to gather information about the production hubs, weaving communities, and the socio-economic structure of the craft. Solapur, often referred to as the "Textile Town," was a major industrial and cultural hub in Maharashtra, known for its cotton-based products, particularly the iconic Solapur Chaddar. The survey was carried out in June 2023, focusing on two key areas:

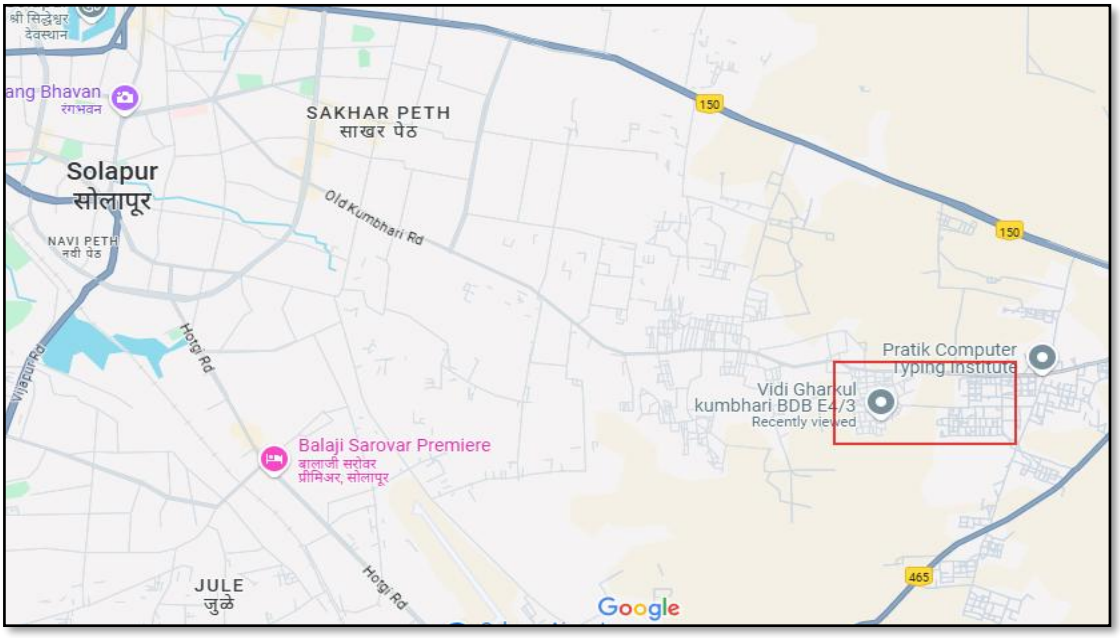
1. MIDC (Maharashtra Industrial Development Corporation) Industrial Area: This area houses small and medium-scale textile units, including power loom and rapier loom setups, which were central to the production of Solapur Chaddar.



Source: https://maps.app.goo.gl/AJvLURXpENJrddKr6

Plate 3.1: Map of Solapur MIDC Industrial Area of Solapur

2. Weavers Vasti (Residential Clusters): These clusters were home to the weaver community, where traditional handloom practices were still preserved alongside modern techniques.



Source: https://maps.app.goo.gl/5TKBUdEiqiSLvRj76

Plate 3.2: Map of Workers' Vasti in Solapur

3.2.2 Sample Selection

The sample selection for this study was done using a stratified random sampling method to ensure a comprehensive representation of both manufacturers (20) and weavers (148) involved in the production of Solapur Chaddar. This approach was designed to capture the industry's diversity, considering traditional practices, socio-economic conditions, and varying production scales.

3.2.3 Preparation of Tools

Data collection tools, including observation checklists and questionnaires, were prepared to document production techniques. The questionnaires were validated by three experts in the related field, and their suggested revisions were incorporated. Additionally, consent forms and permission letters were developed to ensure ethical research practices.

3.2.4 Collection of Data

Data was collected through questionnaires, observation, photography, and videography. To identify potential errors or gaps, an initial pilot study was conducted with five sample responses from both manufacturers and weavers. Based on the findings, minor refinements were made to the questionnaire before full-scale data collection. Material

samples were gathered, and oral histories from older artisans and manufacturers were recorded to capture traditional techniques and the craft's evolution.

3.3 Analysis of evolution

3.3.1 Analysis of collected data

The collected data on the demographic details of weavers, technical aspects of the weaving process, and the motifs and colours used were thoroughly examined. The analysed data was systematically tabulated and presented using tables, graphs, and photographic evidence to ensure a clear and comprehensive representation of findings. The collected data were analysed to trace the historical and contemporary development of the Solapur Chaddar.

3.3.2 Comparison of historical and present practices

The study involved a comparison between historical and contemporary Solapur Chaddar production practices which was conducted through qualitative analysis in a descriptive manner. Historical documents, photographs, and oral histories were reviewed to create timelines and charts illustrating the craft's evolution, providing a comprehensive understanding of the changes in techniques, designs, and production methods over time.

3.3.3 Identification of key changes over time

Key changes in production methods were identified through qualitative analysis, focusing on factors such as technological advancements, market demands, and shifts in raw materials. The impact of these changes on both the craft and the artisan community was documented in a descriptive manner, highlighting the transformation of traditional practices over time.

3.3.4 SWOT Analysis of Solapur Chaddar Industry

The SWOT analysis of the Solapur Chaddar industry was conducted to assess its strengths, weaknesses, opportunities, and threats with respect to the industry, manufacturers, and weavers. This analysis was based on data collected through interactions with weavers and manufacturers, review of previous studies, and direct observations. It provided insights into the current state of the industry, key challenges faced, and potential areas for growth and sustainability.

3.4 Product diversification

To diversify the product, first the products were categorized based on market research and five categories were finalized: home decor, storage and organization, desk and office essentials, travel accessories, and personal accessories. After finalizing the categories, the products were designed keeping in mind the availability of designs, motifs and colours on the mill surplus pieces. These products were then constructed, ensuring their feasibility, aesthetic appeal and sustainability while maintaining the traditional essence of Solapur Chaddar.

The adaptation of Solapur Chaddar into diverse products involved a structured approach to design and development. The following steps were undertaken:

1. **Material Analysis:** The material analysis of Solapur Chaddar, included its weave structure and adaptability to different product forms.
2. **Design Development:** Contemporary product designs were created retaining traditional motifs and patterns. Sketches and prototypes were developed based on consumer feedback and market analysis.
3. **Construction Techniques:** Experimentation was conducted with stitching, finishing techniques, and reinforcement methods to ensure product functionality.
4. **Sustainability Considerations:** Mill surplus fabric was utilized for product development to promote sustainability and reduce textile waste.

3.4.1 Designing and selection of products

Based on market research and suitability of Solapur Chaddar for the products, five broad product categories were identified for diversification:

1. Home Decor (Cushion Covers, Table Runners, Wall Hangings)
2. Storage & Organization (Laundry Hampers, Jewellery Organizers, Hanging Storage Organizers)
3. Desk & Office Essentials (Laptop Sleeves, Pen Stands, File Organizers)
4. Travel Accessories (Backpacks, Shoe Bags, Travel Toiletry Bags)
5. Personal Accessories (Tote Bags, Bottle Covers, Lunch Bags)

The final selected products were:

- Cushion Cover (Home Decor)
- Hanging Storage Organizer (Storage & Organization)
- Pen Case (Desk & Office Essential)
- Backpack (Travel Accessory)
- Tote Bag (Personal Accessory)

For each selected category, 10 design variations were created per product, totalling 50 product sketches. The design phase incorporated:

- Traditional motifs and designs.
- Functional adaptations for contemporary use.
- Aesthetic appeal for modern consumers.

A total of 10 design sketches were developed for each product category, with each design assigned a specific code for identification and further evaluation. (Illustration 3.1 to 3.5)

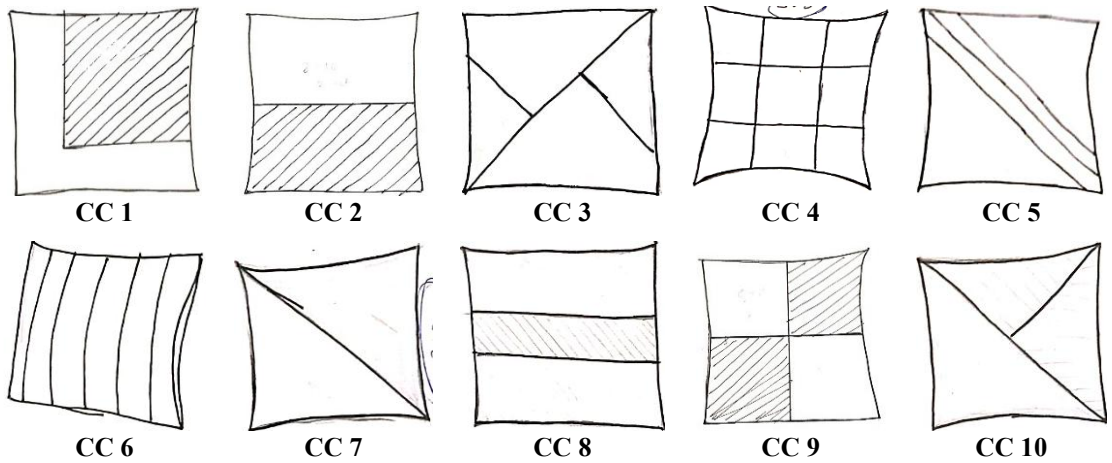


Illustration 3.1(CC 1-10) : Sketches of Cushion Cover

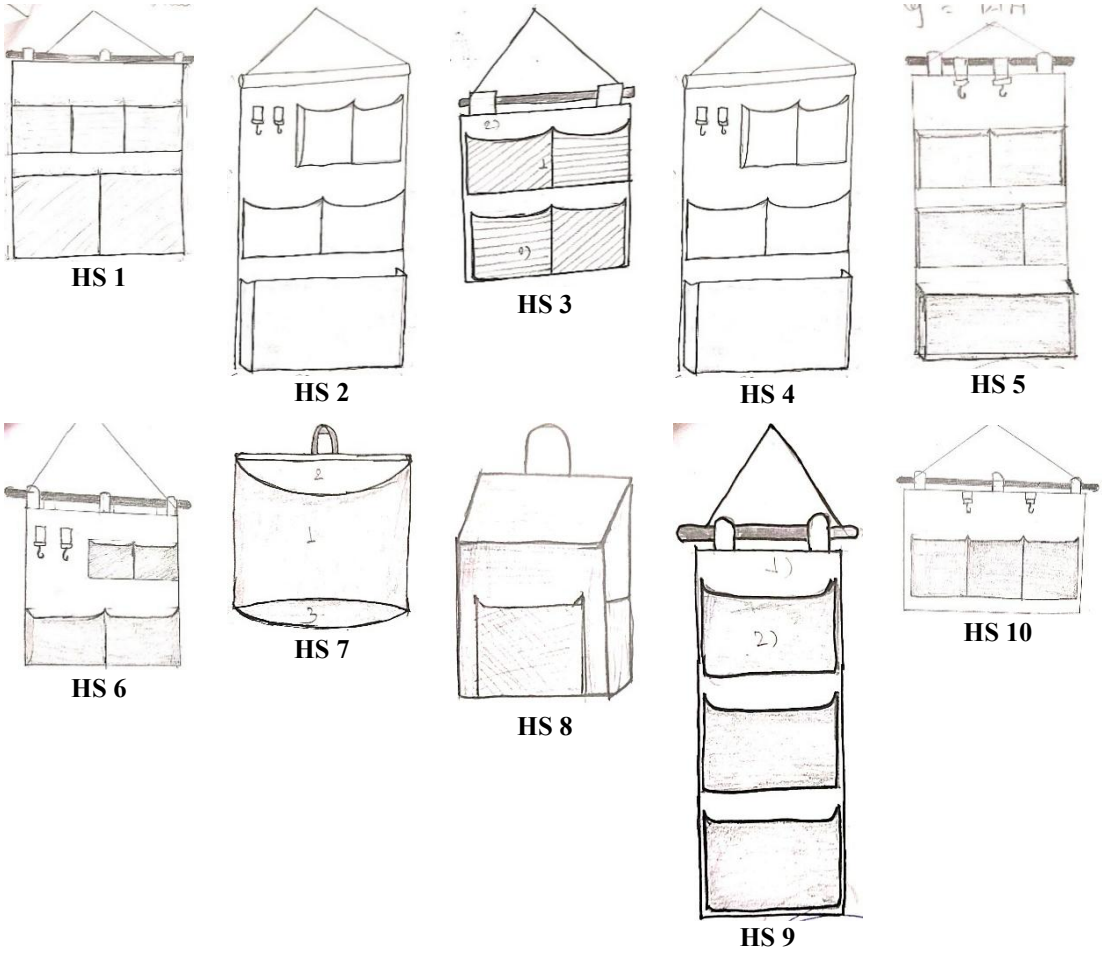


Illustration 3.2(HS 1-10): Sketches of Hanging Storage Organizer

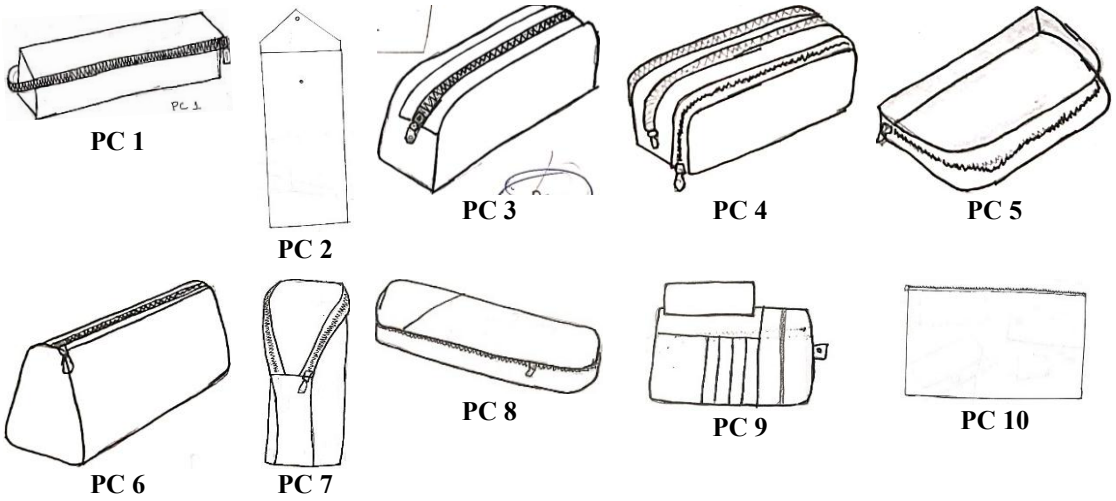


Illustration 3.3(PC 1-10): Sketches of Pen Case

Illustration 3.4(BP 1-10): Sketches of Backpack

Illustration 3.5(TB 1-10): Sketches of Tote Bag

A structured survey with 50 respondents (N=50) was conducted to determine preferences for the designs, where the respondents were from The Maharaja Sayajirao University girls' hostels. From the survey results, the top three preferred designs for each product category were selected, leading to the final 15 product designs for construction.

3.4.2. Construction of selected products

For the construction process, after selecting the final product designs, the drafts for selected products using Rich peace software were developed and used for construction purposes. Depending on the selected product design availability of mill surplus pieces, design assembly of product was done. To incorporate these drafts into the dissertation,

they were scaled down to a 1:4-inch ratio for documentation purposes. Following this, the final stitching of the products was carried out, ensuring proper execution of the selected designs.

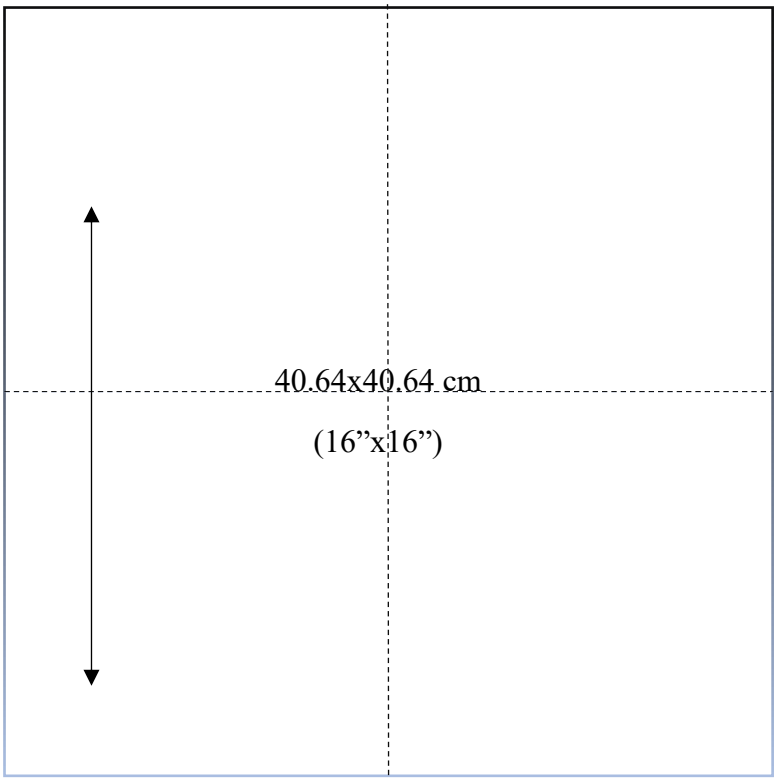


Illustration 3.6: Basic pattern draft of Cushion Cover

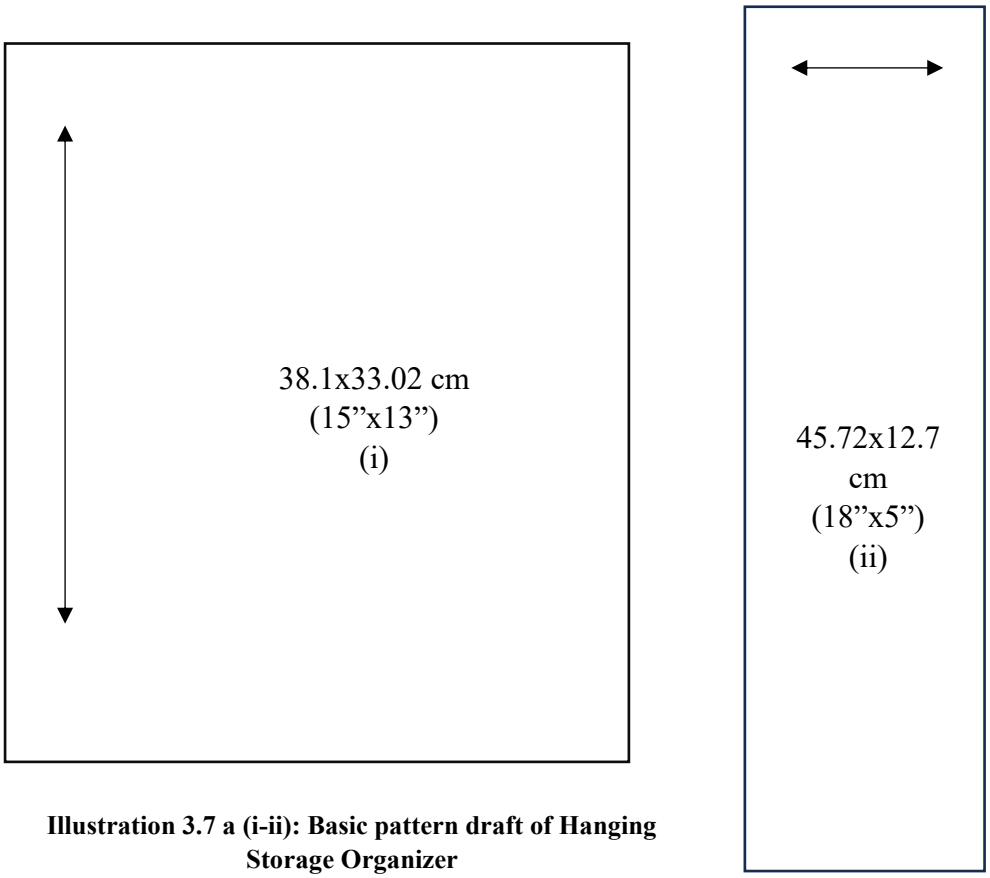


Illustration 3.7 a (i-ii): Basic pattern draft of Hanging Storage Organizer

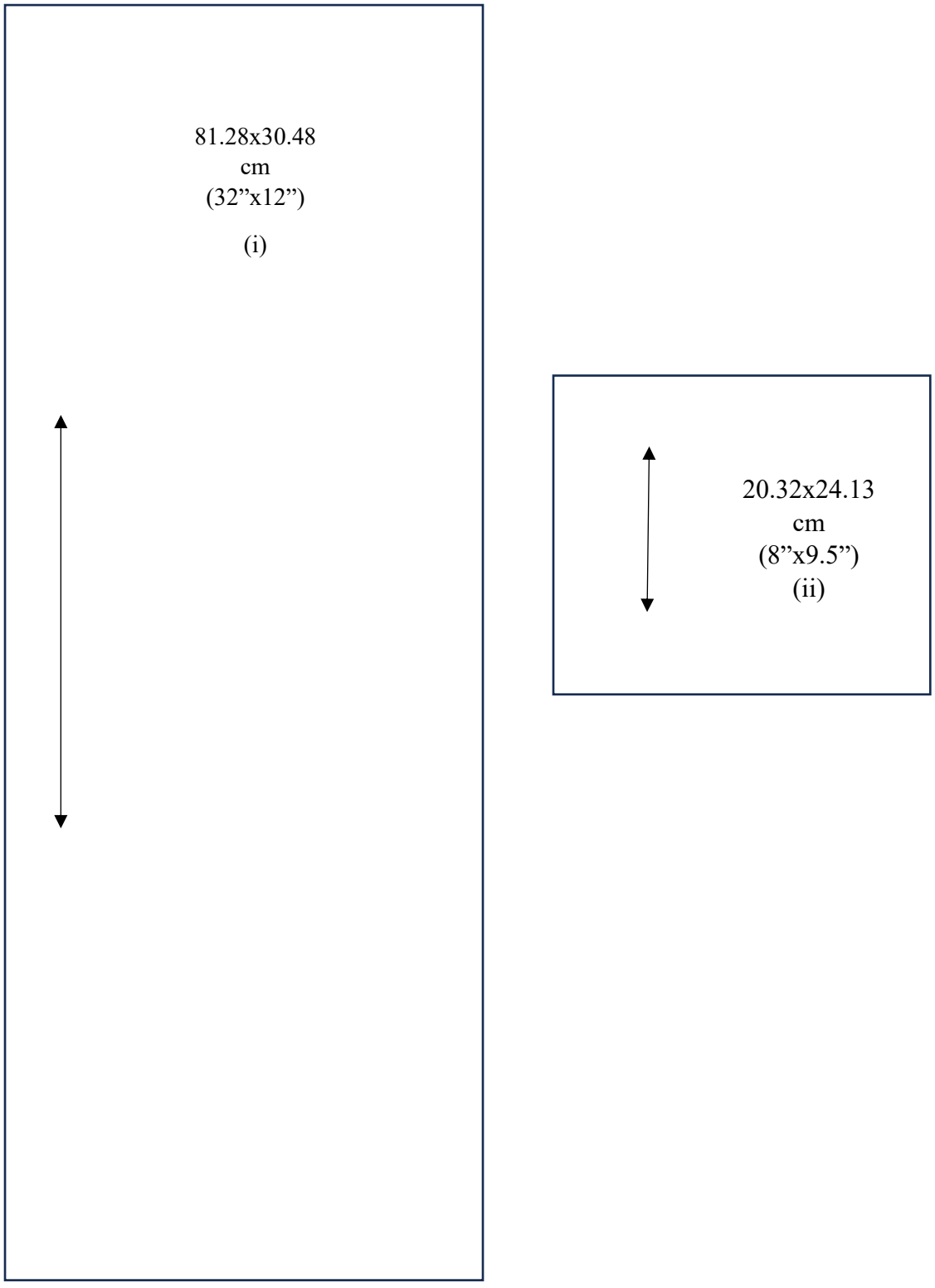


Illustration 3.7 b (i-ii): Basic pattern draft of Hanging Storage Organizer

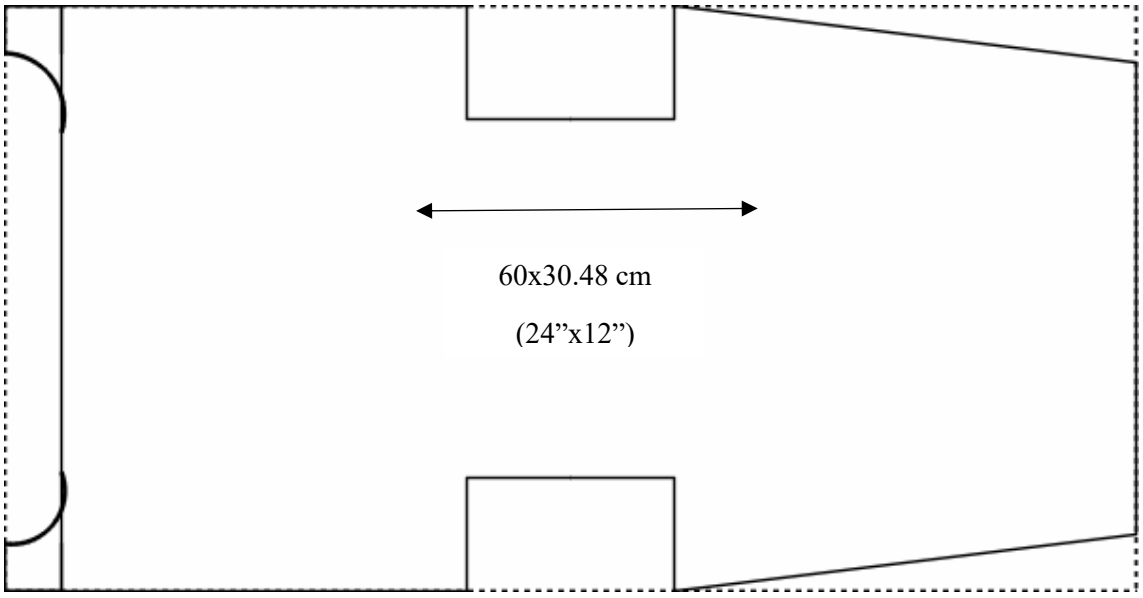


Illustration 3.7 c (i-ii): Basic pattern draft of Hanging Storage Organizer

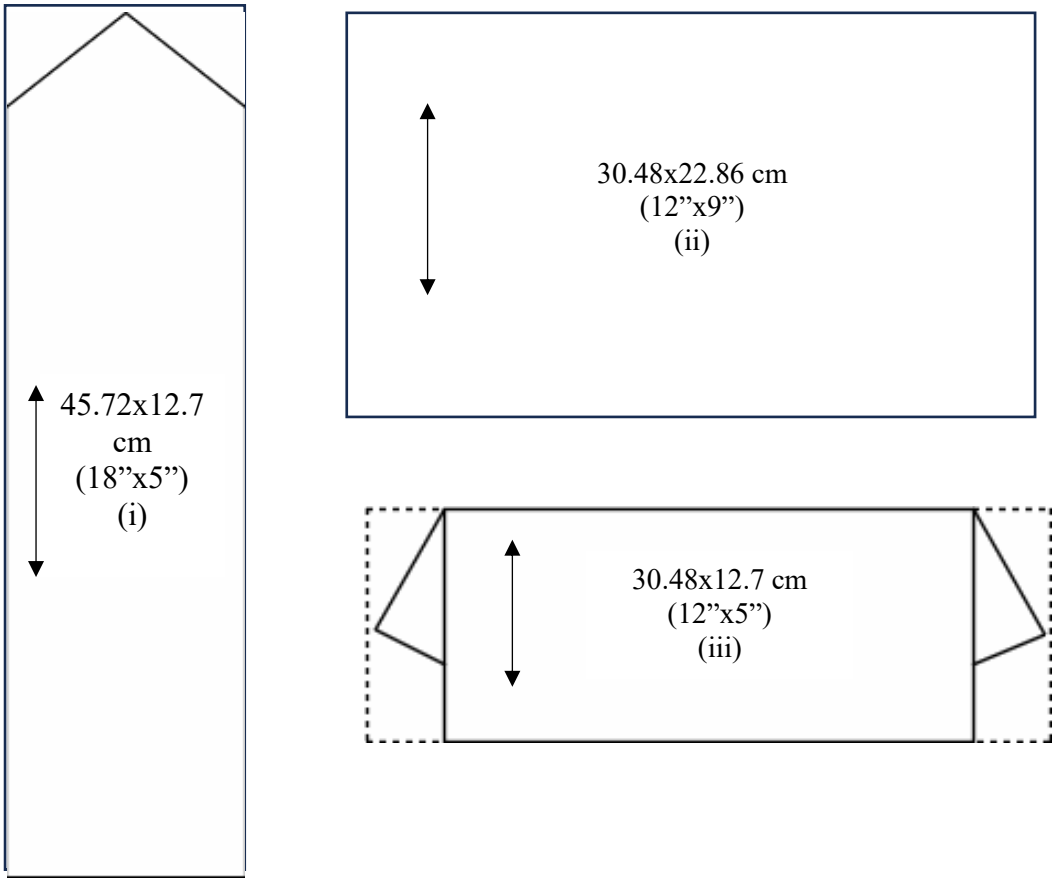


Illustration 3.8 (i-iii): Basic pattern draft of Pen Case

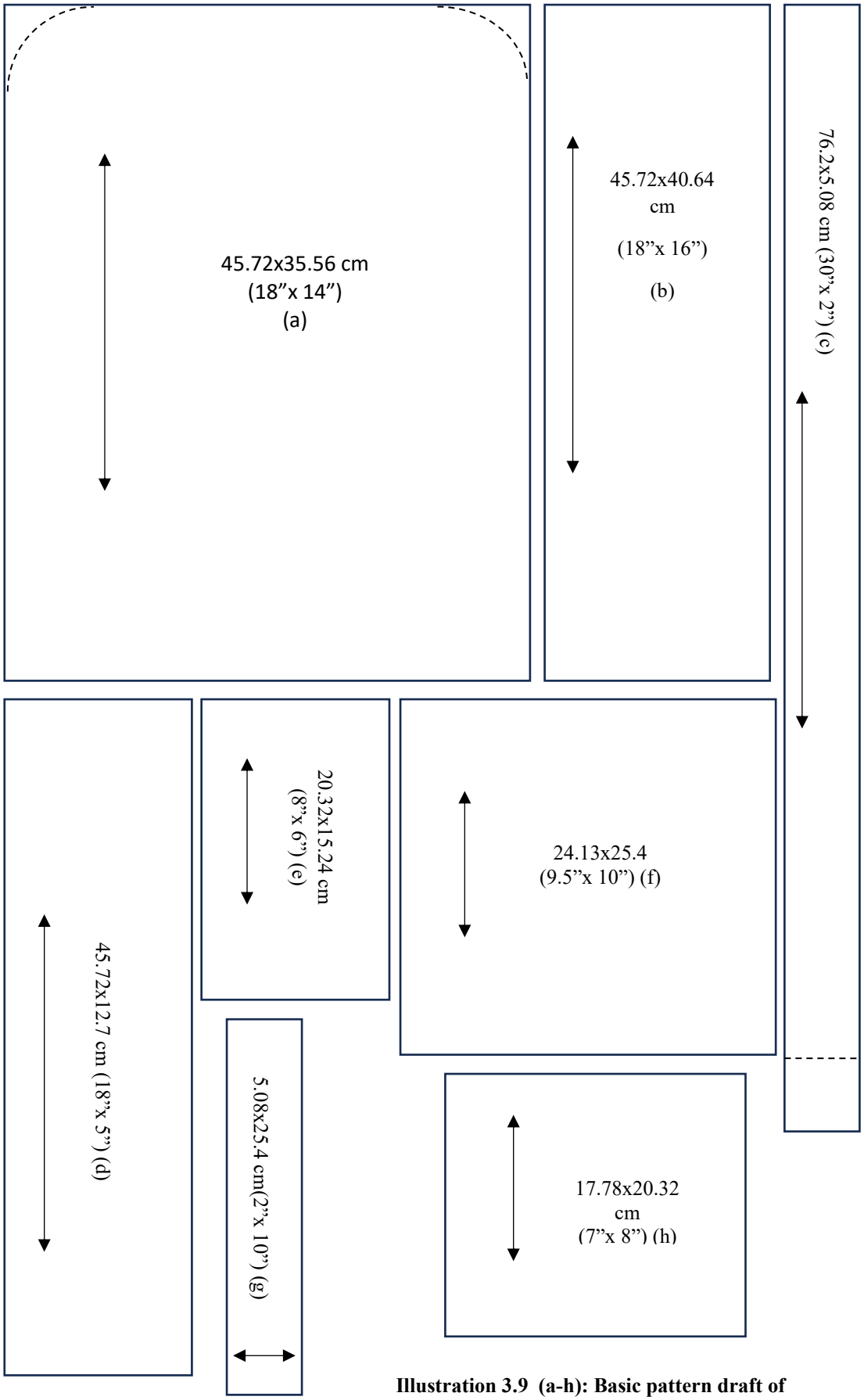


Illustration 3.9 (a-h): Basic pattern draft of Backpack

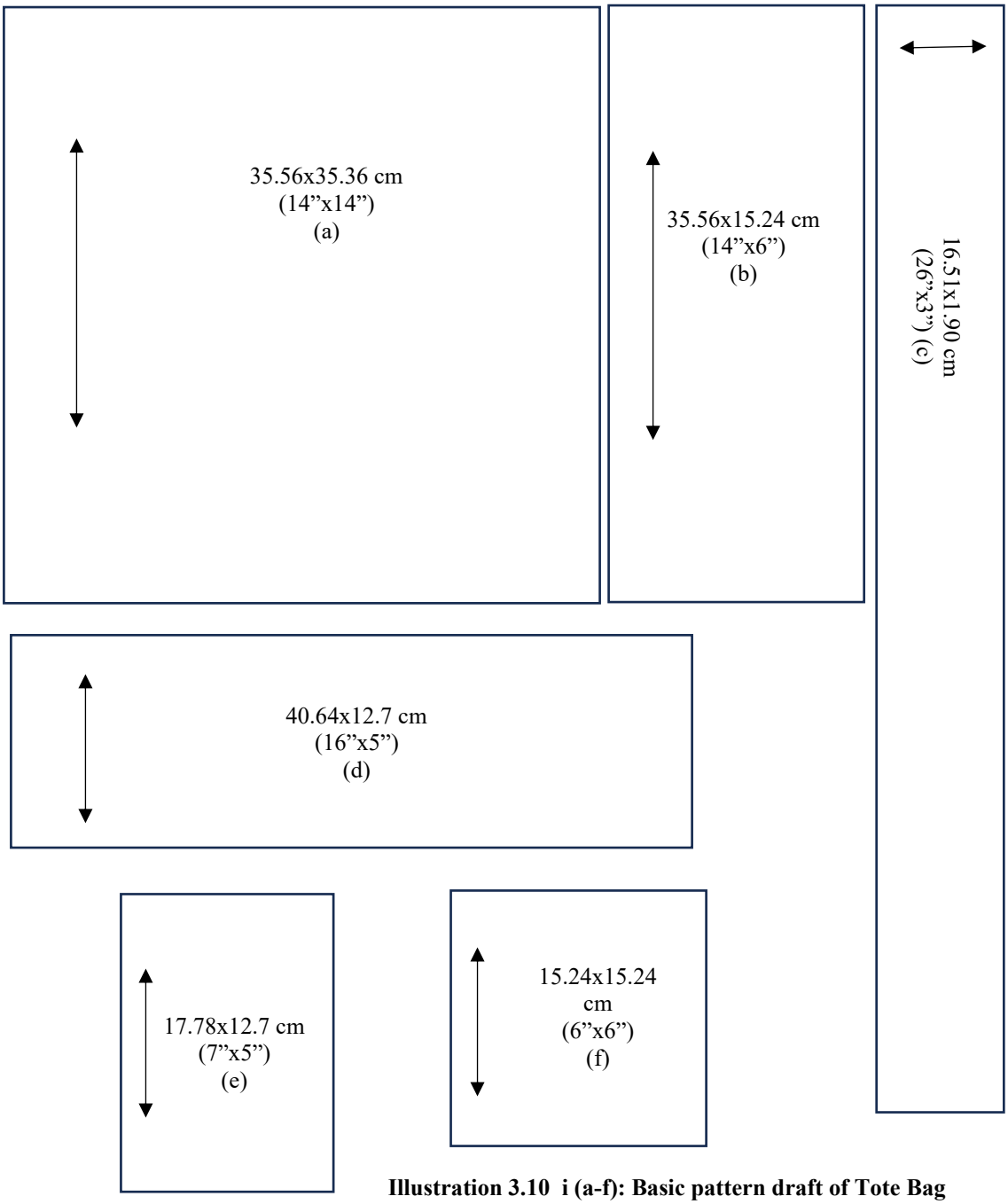


Illustration 3.10 i (a-f): Basic pattern draft of Tote Bag

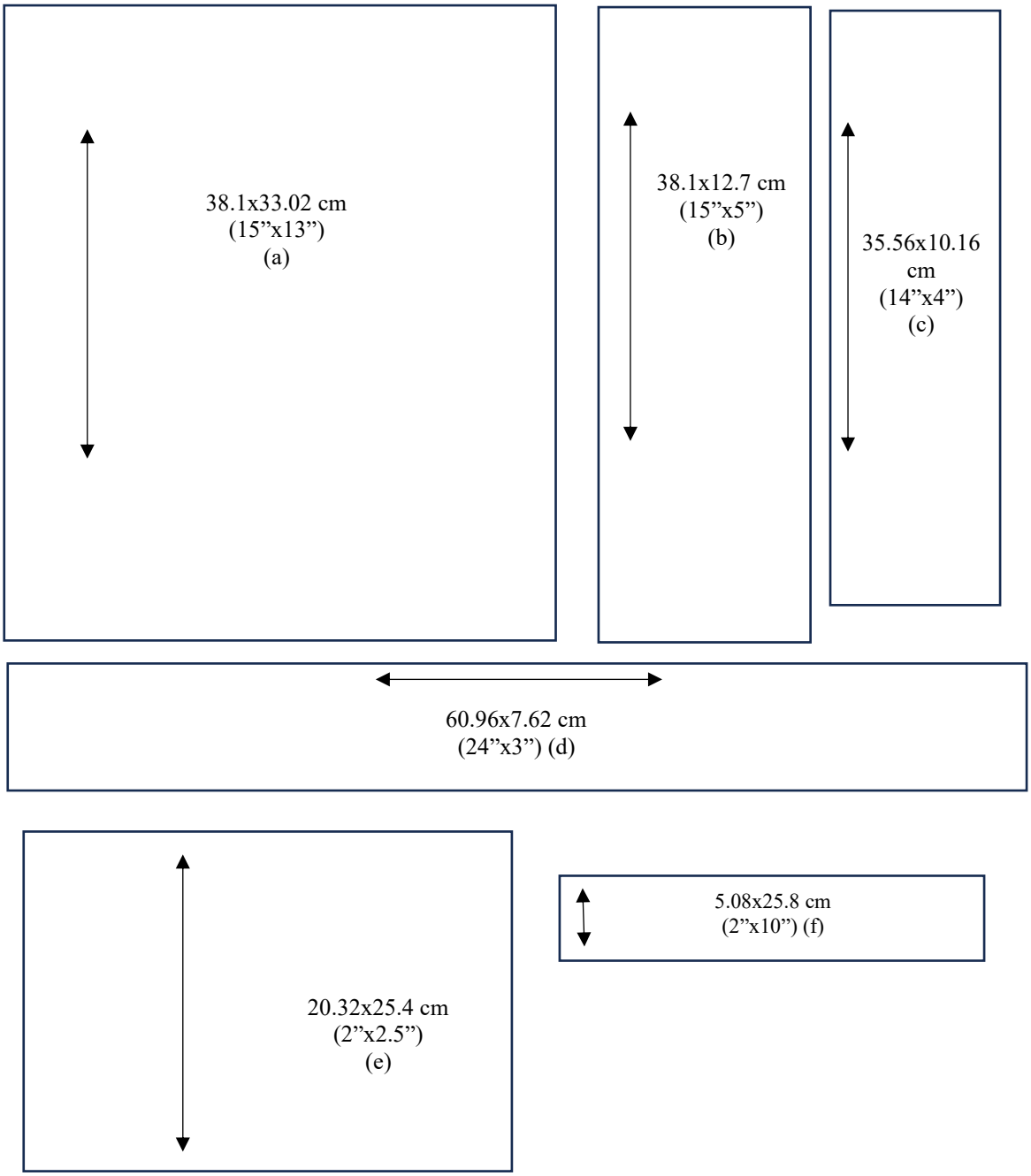


Illustration 3.10 ii (a-f): Basic pattern draft of Tote Bag

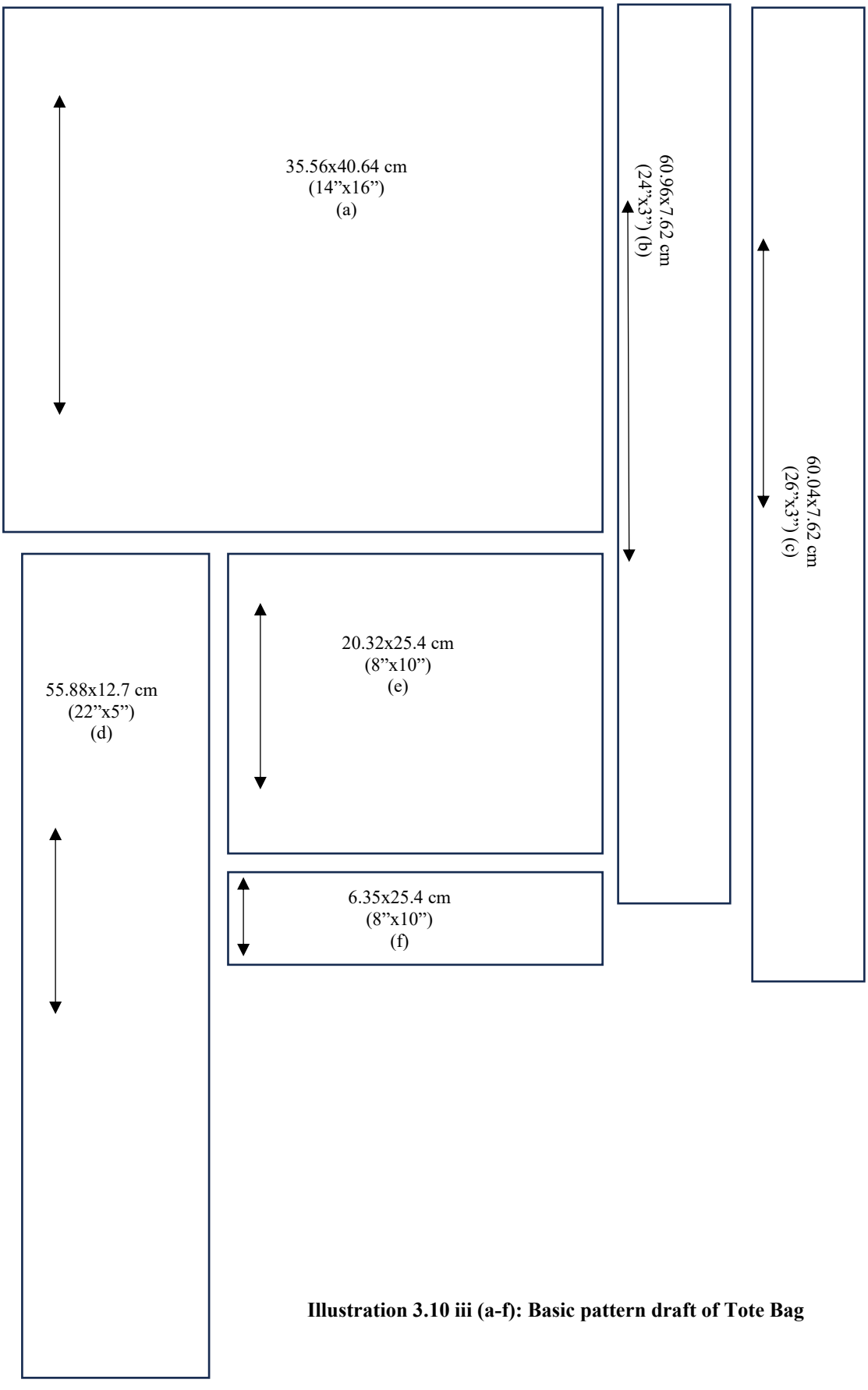


Illustration 3.10 iii (a-f): Basic pattern draft of Tote Bag

3.5 Evaluation of products

3.5.1 Evaluation & feedback

The developed products were evaluated through a consumer feedback and market assessment at Khandelwal Home Saaz, Subhanpura, Vadodara, Gujarat and The Maharaja Sayajirao University girls' hostels. The evaluation process involved:

- Randomly selected consumers providing feedback on product appeal.
- Data collection on aesthetic appeal, cost, consumer acceptability and market competitiveness.

The feedback was analysed to determine the commercial potential of diversified Solapur Chaddar products and assess their viability in contemporary markets.

Chapter IV

RESULT AND DISCUSSION

The present study was aimed at "A Study on the Evolution and Product Diversification of Solapur Chaddar" with the purpose of documenting traditional weaving processes and exploring new product applications. The results had been analysed based on the study objectives and were discussed under the following sub-heads:

4.1 Documentation of Production Process

4.1.1 Traditional Weaving Process

4.1.2 Transition from Handloom to Power loom

4.1.3 Documentation of Design, Motif, and Color

4.2 Evolution of Solapur Chaddar

4.2.1 Foundation and Transformation of the Solapur Chaddar Industry

4.2.2 Industrial Growth and Market Expansion: Identification of Key Changes Over Time

4.2.3 SWOT Analysis of the Solapur Chaddar Industry

4.3 Product Diversification

4.3.1 Selection of Product Categories and Variations

4.3.2 Experimentation and Development

4.3.3 Construction of Products

4.4 Evaluation of Products and Market Acceptability

4.4.1 Product Evaluation

4.4.2 Market Acceptability Analysis

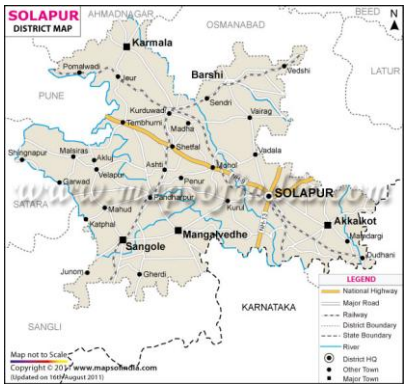
4.1 Documentation of Production Process

The documentation of the production process was carried out based on the preliminary survey of the craft, sample selection, preparation of tools, and data collection. These steps facilitated a comprehensive understanding of the traditional and modern weaving practices of Solapur Chaddar. The findings from this process had been systematically incorporated into the following sections:

4.1.1 Traditional Weaving Process

4.1.1.1 Historical Background

Solapur had been a prominent textile hub in Maharashtra for centuries, with weaving traditions deeply embedded in its cultural and economic fabric. The origins of Solapur Chaddar weaving could be traced back to skilled weavers from the Padmashali and Kosti communities, who migrated to the region and played a crucial role in establishing this craft. Historically, the demand for Chaddars was driven by both local and regional markets, owing to their durability, intricate designs, and cultural significance.



Source: https://www.mapsofindia.com/maps/maharashtra/districts/solapur.htm

Plate 4.1: Map of Solapur district

In its earliest form, Solapur Chaddar weaving was exclusively a handloom-based craft, with artisans relying on traditional wooden looms and locally sourced cotton. The craft flourished during the 18th and 19th centuries when royal patrons and affluent families sought these intricately woven textiles for household and ceremonial use. The weaving industry saw further growth in the early 20th century, as Solapur's strategic location facilitated trade and distribution across India.

The hallmark of traditional Solapur Chaddars lies in their distinctive geometric and floral motifs, woven using jacquard techniques even in handloom settings. These textiles were

not just practical household items but also held symbolic value, often used as prestigious gifts and part of wedding trousseau.

However, the craft also faced significant challenges over time. The mid-20th century brought shifts in consumer preferences, coupled with increased competition from industrially produced textiles. Despite these changes, traditional weavers continued to preserve their techniques, passing down their expertise through generations. Even as mechanization gradually altered the industry, the legacy of handwoven Solapur Chaddars remained an integral part of Maharashtra's rich textile heritage.

4.1.1.2 Raw materials, Machineries, and Infrastructure

1. Materials

a. Cotton

The primary raw material for Solapur Chaddars was cotton yarn, sourced mainly from spinning mills in Tamil Nadu, particularly Ichalkaranji and Coimbatore. Some manufacturers dyed their own yarns, while others procure pre-dyed varieties. Yarn was typically packed in 2.27 kg bundles, priced around Rs. 1800 per bundle. The yarn count varied based on Chaddar type, ensured the durability, softness, and distinct weaving quality of Solapur Chaddars.[Plate 4.2(a-b)]

a. Cotton Bales

b. Cotton cones

Plate 4.2 (a-b): Raw yarns from spinning mills

b. Dyes and Bleaching Agents

Initially, Solapur Chaddars were dyed using natural dyes, Vat dyes (Indigo for deep blue), and Naphthol dyes (Maroon) due to their strong colour fastness and durability. Over time, manufacturers transitioned to chemical dyes, offering up to 300 shades, improved cost efficiency, and enhanced durability. The primary dyes used included:

- Direct Dyes – Producing bright, vivid colours.
- Vat Dyes – Still preferred for their superior colour fastness.

Plate 4.3: Hydrogen Peroxide and Sodium Nitrite

Before dyeing, hydrogen peroxide bleach was applied to remove impurities and ensure even colour absorption. Sodium nitrite was used in the dyeing process to stabilize azo dyes and enhance their bonding with the fabric, ensuring colour consistency(Plate 4.3). The dyes and bleaching agents were sourced from Bagalkot, Solapur, and Rabakdevi, which serve as key supply hubs for the textile industry.

c. Graph Paper

Graph paper had traditionally been essential in the jacquard weaving process of Solapur Chaddars, serving as a design template for transferring patterns onto looms using punching cards. Sourced locally, it was similar in quality to architectural graph paper. Skilled professionals draw motifs manually, ensuring precise alignment before converting them into punched cards for jacquard looms.

With the advent of digital technology, many manufacturers had transitioned to computerized design software, eliminating the need for hand-drawn graph paper. However, some traditional weaving units still used this method to maintain the authenticity of handcrafted Chaddars.(Plate 4.4)

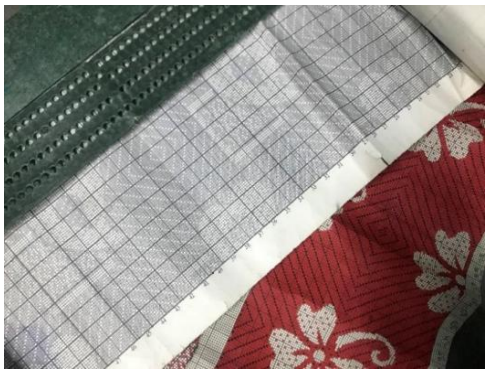
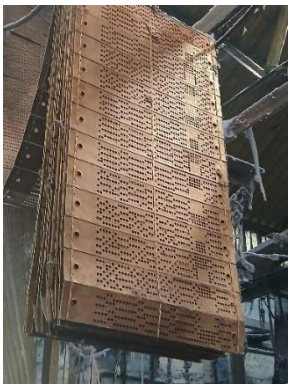


Plate 4.4: Graph paper with corresponding punch card

d. Punching Cards

Punching cards, crafted by skilled artisans, were essential for operating jacquard looms in Solapur Chaddar weaving. Originally made from cardboard, they were prone to wear and tear. To improve durability and consistency, manufacturers used plastic punching cards(Plate 4.5). Each design requires 250-300 punched cards, which were strung together and fed into the jacquard mechanism, guiding the loom to create intricate patterns. While modern computerized jacquard systems were gradually replacing manual punching, many traditional weaving units still use this method to preserve the authenticity of handwoven designs.



a. Cardboard Punch Card

b. Plastic Punch Card

Plate 4.5(a-b): Types of Punch Card

2. Machineries

The production of Solapur Chaddars combined traditional and modern machinery to enhance efficiency, precision, and quality while preserving the craft's authenticity. The key machines involved in the manufacturing process Included:

a. Doubling Machine: Twisted and strengthened yarn before transferring it onto cones, ensured durability for weaving.

b. Hank Winding Machine: Converted yarn from cones into hanks for even dye penetration and colour consistency.

c. Yarn Dyeing Bath Machine: Used for both bleaching and dyeing, with separate units for each process.

d. Wash Bath Machine: Removed excess dye and chemicals, ensured colour fastness and prevented bleeding.

e. Extra Water Removing Machine: Partially dried dyed yarn, reduced drying time and preventing moisture damage.

f. Rewinding Machine: Transferred dried yarn hanks onto flanged bobbins (warp) and cones (weft) for proper alignment before weaving.

g. Card Punching Machine: Could be manual (Piano card cutting machine) or computerized (Quick Cards software), punching up to 250 cards per hour.

h. Pirn Winding Machine: Transferred yarn from cones to pirns, ensured smooth weft insertion during weaving.

i. Warping Machine & Creel: Arranged and winds yarn onto the warp beam, ensuring alignment and tension for weaving.

j. Jacquard Loom: The primary weaving machine, used punched cards or computerized inputs to create intricate designs.[Plate 4.6(a-j)]

a. Doubling Machine

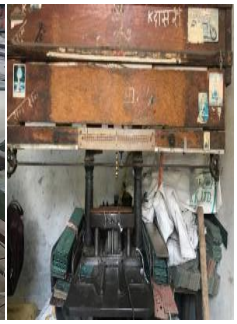
b. Hank Winding Machine

c. Yarn Dyeing Bath Machine

d. Wah Bath Machine

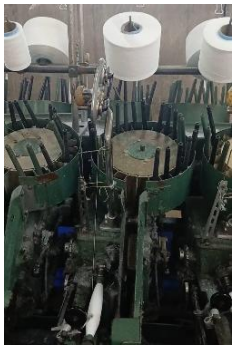
e. Extra Water Removing Machine

f. Rewinding Machine



g. Manual & Software based computerized punching machine

h. Warp Machine and Creel



i. Pirn winding Machine

j. Jacquard Power Loom

Plate 4.6(a-j): Machineries

3. Overhead costs

a. **Electricity:** Essential for operating power looms, auto looms, punching machines, lighting, warping machines, and winding machines. The electricity supply was provided by MAHAVITARAN (Maharashtra State Electricity Distribution Co. Ltd.).

b. **Water**: Required for washing, dyeing, and bleaching of yarn. Water was sourced from Solapur Municipal Corporation or through personal borewells, depending on availability.

4.1.1.3 Design Development

The design process played a crucial role in Solapur Chaddar manufacturing, ensuring a balance between traditional aesthetics and modern trends. It involved pattern conceptualization, motif selection, and jacquard card creation, defining the visual identity of each Chaddar.

1. Design Conceptualization:

- Based on consumer preferences, market trends, and traditional aesthetics.
- Common motifs included geometric patterns, floral designs, and temple-inspired borders, with some manufacturers incorporating logos and abstract patterns.

2. Graph Paper Designing:

- Artisans sketched designs on graph paper, where each square represented a warp-weft intersection for precise pattern alignment.
- The complexity of the design determined the number of warp and weft threads required.(Plate4.7)

Plate 4.7: Design sketches on graph paper

3. Punching Card Preparation for Jacquard Looms:

250-300 punching cards were prepared based on graph paper sketches. These cards-controlled warp movements in jacquard looms, ensured accurate pattern reproduction on the fabric.

4. Digital Designing & Computerized Jacquard Systems:

Many manufacturers used computerized design software, eliminating manual sketching. Electronic jacquard looms enabled faster production while maintaining accuracy. Despite modernization, some artisans continued traditional methods to preserve authenticity. Once designs were finalized, the process moved to yarn processing and weaving, where patterns take form on fabric.

4.1.1.4 Manufacturing Stages of Solapur Chaddar

Solapur stood out for its vertically integrated production system, where all key manufacturing stages—Doubling, Dyeing, Winding, Warping, Weaving, Finishing, Packing, and Marketing—were conducted within the same premises. Unlike other textile hubs that outsourced processes, Solapur's power loom industry followed a self-sufficient model, ensuring better quality control and production efficiency. A key aspect of the industry was the close-knit relationship between factory owners and workers, as many owners came from weaving families, fostering trust and collaboration. Despite

technological advancements, the industry relied heavily on conventional machinery and manual processes:

- Dyeing, finishing, and packing were done manually, ensuring traditional quality control.
- Winding, warping, and weaving were carried out on older, adapted machines.
- Unlike other textile hubs where one worker operated multiple looms, in Solapur, each worker managed only two looms, allowing for greater precision.
- The workforce in pre-weaving and post-weaving processes was three to four times larger than loom operators, making Solapur's textile industry highly labour-intensive.

This traditional, labour-centric approach helped preserve the craftsmanship and authenticity of Solapur Chaddars, even as mechanization expanded in the broader textile sector.

1. Yarn Preparation

The manufacturing of Solapur Chaddars began with yarn preparation, which determined the fabric's strength, texture, and durability. Warp yarns underwent processing, while weft yarns were generally used in their grey (untreated) form, except for export orders requiring bleaching or special treatments.

a. Yarn Sourcing and Selection

Cotton yarn was sourced from spinning mills in Tamil Nadu (Ichalkaranji and Coimbatore) and the local market. Selection depended on the required fabric quality and weave structure.

b. Doubling of Yarn

Warp yarns underwent a doubling process, where two strands were twisted together to enhance strength and durability. Common doubled yarn counts for warp included 14 doubles, 16 double, and 20 double, while weft yarns (4s, 6s, 10s) were usually single, with doubling done only when additional strength was needed. Doubling Machines ensured uniform twisting before further processing.(Plate 4.8)

Plate 4.8: Process of Yarn doubling

c. Hank Formation for Dyeing

Doubled warp yarns were transferred onto cones, which were then processed in a hank winding machine to convert them into yarn hanks. Dyeing was most effective in this form, ensured even colour absorption.[Plate 4.9(a-b)]

a. Hank Winding process

a. Ready Hank

Plate 4.9(a-b): Hank formation of doubled yarn

2. Yarn Dyeing Process

After yarn preparation, dyeing and bleaching were essential steps in achieving the desired colour and fabric quality for Solapur Chaddars. This multi-stage process ensured colour fastness, uniform dye absorption, and durability.

a. Pre-Treatment: Wetting and Bleaching

Before dyeing, the yarn underwent pre-treatment to remove impurities and enhance dye absorption:

- Wetting Process: Grey yarn hanks were soaked overnight with a wetting agent for better chemical penetration.
- Bleaching: Wet Gray yarn hanks were treated with hydrogen peroxide or sodium bisulfite, made the yarn white for brighter colours.[Plate 4.10(a-b)]

- Antichlor Treatment: Sodium bisulfite was used to neutralize residual bleach, preventing damage.

a.Wetting

b. Bleaching

Plate 4.10(a-b): Pretreatment Process of yarn

b. Dyeing Process

Bleached yarn was dyed using different dye types, depending on colour requirements:

- Vat Dyes: Used for deep shades (green, violet, blue) with excellent colour fastness.
- Naphthol Dyes: Produced vibrant colours (red, blue, bottle green, orange, yellow).
- Sulphur Dyes: Primarily used for black shades, ensured long-lasting colour.
- Direct Dyes: Used as cost-effective option for shades unavailable in other dye types.

a. Dye Liquor

b. Dyeing of yarn in dye bath

Plate 4.11(a-b): Dyeing process of yarn

The yarn hanks were immersed in dyeing bath machines, where controlled temperatures ensure deep colour penetration and uniformity.[Plate 4.11(a-b)]

c. Post-Dyeing Treatment: Washing and Drying

- Washing: Dyed yarn was washed in wash bath machines to remove excess dye and stabilize colour.
- Water Removal: An extra water removing machine extracted moisture for faster drying.

- Sun Drying: Yarn hanks were air-dried under sunlight for 2–3 days, ensured softness and even moisture evaporation.[Plate 4.12(a-c)]

a. Washing **b. Water removal** **c. Sun drying**

Plate 4.12(a-c): Post-dyeing treatment of yarn

Once dried, the yarn was ready for the next processing stages—winding and warping, leading to weaving.

3. Winding

a. Rewinding Process

After dyeing and drying, yarn hanks were prepared for weaving using rewinding machines, which transferred the yarn onto: Flanged bobbins for warp yarns and Cones for weft yarns were used this process ensured properly aligned and tangle-free yarn before further processing.[Plate 4.13{a-b)]

a. Winding on flanged bobbins **b. Winding on cones**

Plate 4.13(a-b): Rewinding process of warp and weft

b. Pirn Winding

For weaving, weft yarn was transferred from cones to pirns using a pirn winding machine, ensuring even winding for smooth shuttle insertion. Once winding was complete, the yarn

moved to the warping stage, where warp threads were aligned in parallel, forming the fabric's base.(Plate 4.14)

Plate 4.14: Pirn Winding

4. Warping Process

Warping was essential for aligning, tensioning, and arranging warp yarns according to Solapur Chaddar design specifications. This process was exclusive to warp yarns, as weft yarns were inserted separately during weaving. Flanged bobbins with different-coloured yarns were placed on a creel machine as per design requirements. Creel machines in Solapur hold up to 400 bobbins, enabling large-scale warping. Yarns were transferred to a drum at 75 yards per minute[Plate 4.15(a-b)], ensuring uniform tension. From the drum, yarn was wound onto warp beams, which were later mounted on the loom. Ground and extra beams were typically 1200 meters long, allowing continuous weaving with minimal interruptions.

a. Warp arrangement on drum

b. warp beam

Plate 4.15(a-b): Warping

a. Production Capacity and Limitations

Warping machines in Solapur lack a brake motion, meaning the process runed at a fixed speed once started. The average production output ranged from 2000 to 3000 yards per

shift, depending on design complexity and fabric length. Once warping was completed, the prepared warp beam was mounted onto the jacquard loom, marking the beginning of the weaving process.

2. Weaving Process

The weaving of Solapur Chaddars was carried out on power looms fitted with jacquard mechanisms, enabling the creation of intricate patterns through the structured interlacing of warp and weft yarns.

a. Loom Setup

The process began with the loom setup, where two beams were attached to the power loom-one for the warp yarns and another for the extra warp, which carried design-specific elements. A pirn-loaded shuttle moved back and forth, inserting the weft yarn, while the jacquard machine, mounted on the loom, controlled warp movements using pre-punched design cards.

b. Jacquard Mechanism and Pattern Formation

The jacquard mechanism played a crucial role in pattern formation. Designs were first drawn on graph paper and later transferred onto punching cards, which were perforated according to the design. These cards were then laced together and passed over needles, each of which controlled a warp string by lifting or lowering it as per the pattern. The holes in the cards determined the movement of warp yarns, ensuring that the desired design appeared on the fabric.

c. Weaving Process

In the actual weaving process, warp yarns were divided into two sets-one set was lifted according to the jacquard design, while the other set remained lowered, creating a shed (opening) through which the shuttle carrying the weft yarn passed. This interlacing of warp and weft formed the fabric. A reed compacted the fabric after each shuttle pass, ensuring uniform density and design clarity. The process continued in repetition, with the weaver overseeing smooth operation and replaced pirns as needed to maintain efficiency and precision in the woven Chaddars.[Plate 4.16(a-c)]

a. Loom setup

b. Jacquard mechanism

c. Weaving

Plate 4.16(a-c): Weaving Process

Once weaving was complete, the Chaddars moved to the finishing stage, where they were checked for quality, washed, and packed for sale.

3. Finishing Process

Once the Solapur Chaddar was woven, it underwent a finishing process to ensure it was market-ready. This included cutting, quality inspection, and packaging to maintain product standards. Since Chaddars were woven in a continuous length, they were first cut into individual pieces, separating each Chaddar from the woven fabric. Any extra warp threads at the edges were either trimmed or, in some cases, twisted into tassels to enhance their aesthetic appeal.[Plate 4.17(a-b)]

a. Cutting and Quality Inspection

b. Packaging

Plate 4.17(a-b): Finishing Process

Following this, each Chaddar underwent a quality inspection, where it was checked for weaving defects, colour consistency, and design alignment. Any loose threads or irregularities were corrected before the final packaging stage. To ensure branding, a manufacturer's label was attached to the Chaddar, displaying the brand logo and mark. The Chaddars were then neatly folded in a specific style and packed into plastic jackets,

protecting them from dust and damage. Typically, five Chaddars were bundled together, sealed, and placed into cartons for transportation to markets and retailers.

4.1.2 Transition from Handloom to Power loom

The shift from handloom to power loom weaving marked a major transformation in Solapur Chaddar production. While handloom weaving was labour-intensive and time-consuming, power looms introduced higher efficiency, cost reduction, and design consistency. However, this transition also led to the decline of artisanal weaving and reduced employment opportunities for traditional weavers. The information presented in this section was documented through an analysis of historical documents and observations of current practices in the field, providing a comprehensive understanding of the transition and its impact on the industry. (Plate 4.18)

Plate 4.18: Pit loom used during 1950s for weaving

The survey revealed that the majority of weavers in Solapur were engaged in power loom weaving, while only a small fraction continued using handlooms (Figure 4.1). This indicated a significant decline in traditional handloom weaving due to the increasing preference for mechanized production. The shift to power looms had provided higher efficiency but also reduced the involvement of artisans in intricate craftsmanship.

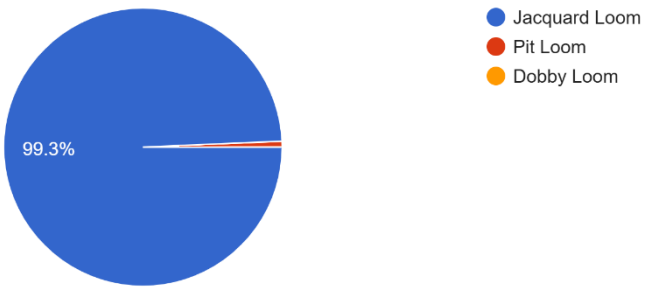


Figure 4.1: Types looms used by weavers

4.1.2.1 Introduction to Mechanization

Traditionally, Solapur Chaddars were woven entirely by hand, with artisans manually operating looms to create intricate patterns. However, with rising market demand and industrialization, power looms were introduced in the mid-20th century to enhance production speed and cost efficiency. Initially, traditional weavers resisted the change, as handloom weaving was a generational craft. However, economic pressures and competition from machine-made textiles gradually forced many weavers to transition to power looms.

Mechanization enabled mass production, reduced weaving time while maintaining design consistency. While manufacturers benefited from higher output and profitability, handloom weaving saw a decline, forcing artisans to adapt to machine operations or leave the industry. Jacquard power looms dominated Solapur Chaddar production, offering large-scale weaving capabilities. The following sections explored the technological advancements, socio-economic impacts, benefits, and challenges of this transition.

4.1.2.2 Technological Advancements in Chaddar Weaving

The introduction of power looms in Solapur brought significant technological advancements, revolutionizing the weaving process. Over time, these innovations enhanced efficiency, precision, and production capacity, making mechanized weaving the dominant method in the region.

a. Introduction of Jacquard Power Looms

Traditional handlooms were gradually replaced by Jacquard power looms, which automated the lifting of warp threads, allowing the creation of intricate patterns with greater ease. Unlike handlooms, where weavers manually controlled each movement, Jacquard looms used punched cards to guide the weaving process, ensuring consistent geometric and floral designs characteristic of Solapur Chaddars. This shift increased weaving speed while maintaining traditional aesthetics.

b. Replacement of Manual Punching with Digital Design Systems

Initially, punching cards were prepared manually based on graph paper sketches. However, with technological advancements, manufacturers gradually shifted to computerized design software, eliminating the need for manual card punching. Digital Jacquard systems allowed direct pattern input, enhancing design accuracy and significantly reduced production time.

c. Increased Production Speed and Capacity

While handlooms could produce only a few Chaddars per day, power looms dramatically increased production output. Modern power looms operated continuously, enabled manufacturers to fulfil bulk orders with consistent quality and minimal defects, and made large-scale production more feasible.

d. Impact on Fabric Quality and Design Precision

Power looms improved control over weave density, uniformity, and pattern detailing, resulting in higher fabric quality. Unlike handloom weaving, where minor variations were common, power loom production ensured standardized designs, enhancing both the durability and aesthetic appeal of Solapur Chaddars.

4.1.2.3 Impact on Weaving Communities

The transition from handloom to power loom weaving significantly impacted Solapur's weaving communities, affecting their livelihoods, work structure, and traditional skills. While mechanization boosted production efficiency and profitability for manufacturers, it also led to the decline of handloom weaving and changes in employment patterns for artisans.

The data showed that a large percent of weavers had over 20 years of experience, signifying that the workforce was primarily composed of older artisans(Figure 4.2). Very few young individuals had joined the industry, indicating a lack of generational continuity. This decline in younger participation posed a long-term sustainability concern for the weaving tradition.

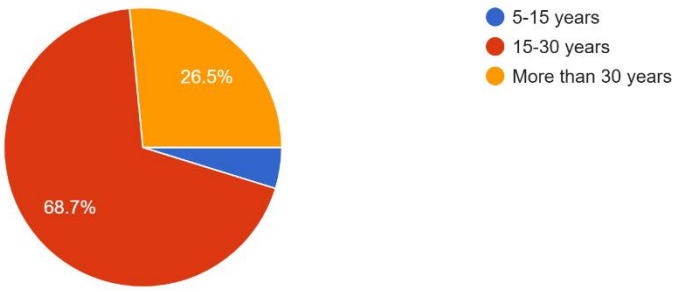


Figure 4.2: Years of Experience of weavers

a. Decline of Handloom Weaving and Artisanal Skills

Handloom weaving was traditionally passed down through generations, but the introduction of power looms reduced the demand for skilled artisans. Many handloom

weavers struggled to find work, as manufacturers favoured faster, power loom-based production over labour-intensive handweaving. As a result, traditional craftsmanship in Solapur had been at risk, with fewer artisans continuing the practice.

b. Shift in Employment Patterns

With the decline of handloom weaving, many artisans migrated to power loom units, taking up roles as machine operators rather than independent weavers. Though power loom jobs required less physical effort, they also offered lower wages and limited creative involvement, as workers were mainly responsible for monitoring machines rather than weaving intricate patterns. Some weavers, facing job insecurity and economic instability, left the textile industry altogether in search of alternative employment.

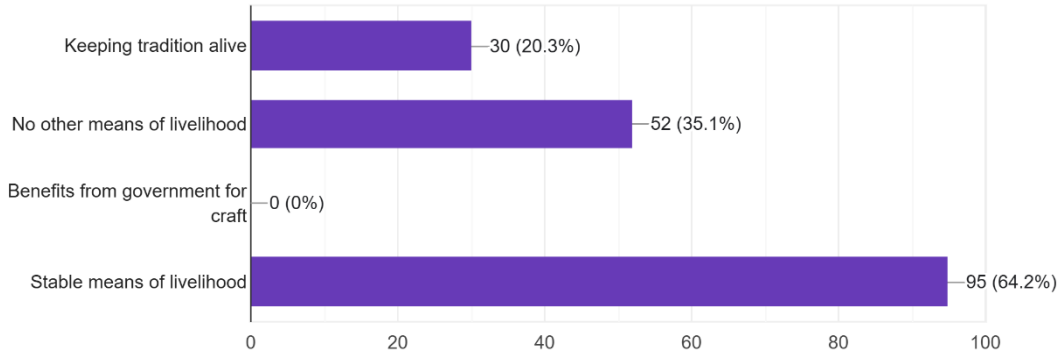


Figure 4.3: Weaver's reasons for still practicing the craft

The figure 4.3 illustrates the key reasons why weavers continued to practice Solapur Chaddar weaving despite challenges. The majority of weavers (64.2 percent) find a stable means of livelihood as their primary motivation, indicating economic necessity. Additionally, 35.1 percent of weavers had no other means of livelihood, making weaving their only source of income. A smaller portion of weavers (20.3 percent) engaged in craft to keep tradition alive, reflecting their cultural and emotional connection to weaving. Notably, none of the respondents had reported receiving government benefits as an incentive to continue the craft, highlighting a lack of external support.

c. Socio-Economic Challenges Faced by Weavers

The transition to mechanized production led to reduced incomes for traditional weavers, as handwoven Chaddars became less competitive in the market. Those unable to adapt to power looms struggled financially, especially as government support and subsidies for

handloom artisans remained limited. The shift also widened income disparities, as large-scale manufacturers profited, while smaller, independent weavers faced increasing difficulties in sustaining their craft.

4.1.2.4 Advantages of Power Loom Weaving

The adoption of power looms in Solapur brought significant advantages to the manufacturing of Solapur Chaddars, improving efficiency, scalability, and cost-effectiveness. This shift enabled manufacturers to meet rising market demands while ensuring design consistency and quality control.

a. Increased Production Speed and Efficiency

Power looms operated continuously, enabling higher production output compared to handlooms. While handloom weavers could only complete a few Chaddars per day, power looms allowed manufacturers to produce multiple Chaddars daily. This faster weaving process helped fulfil bulk orders and export demands, strengthening Solapur's position in the textile industry.

b. Cost-Effectiveness and Profitability

The reduced labour requirement in power loom weaving lowered production costs, made Chaddars more affordable for a broader market. Mass production further helped manufacturers benefit from economies of scale, were large-scale production increased profitability.

c. Consistency in Weaving and Design

Jacquard power looms ensured uniformity in patterns and motifs, eliminating variations common in handwoven fabrics. The precision of power looms improved fabric quality, reduced defects and production errors, and made Chaddars more reliable and marketable.

d. Adaptability to Modern Trends

Power looms allowed manufacturers to quickly adapt to changing consumer trends, enabling the production of customized designs, brand logos, and contemporary patterns. With the introduction of digital Jacquard systems, manufacturers could seamlessly transition between designs, making the production process more flexible and responsive to market needs.

Plate 4.19: Jacquard Power loom

4.1.2.5 Challenges and Consequences of Mechanization

While the transition to power loom weaving brought efficiency and scalability, it also introduced several challenges and negative consequences for the weaving community, market dynamics, and traditional craftsmanship.

a. Decline of Handloom Weaving and Loss of Craftsmanship

The shift to power looms led to a significant decline in handloom weaving, causing a loss of traditional skills passed down for generations. Handwoven Chaddars, known for their unique texture and artistic variations, were gradually replaced by mass-produced, standardized products. Additionally, younger generations showed less interest in learning handloom weaving, further accelerating the decline of the craft.

b. Displacement of Weavers and Labor Challenges

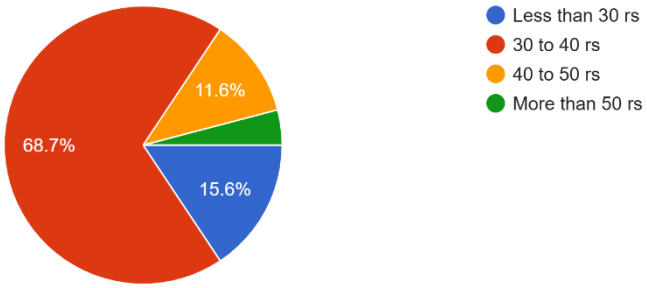


Figure 4.4: Weaver's earnings per Chaddar

The figure 4.4 illustrated the earnings of weavers per Solapur Chaddar. The majority of weavers (68.7 percent) earned between ₹30 to ₹40 per Chaddar, highlighting the low profitability of the craft. A smaller portion (15.6 percent) received less than ₹30, indicating the presence of even lower wage conditions. About 11.6 percent of weavers

earned between ₹40 to ₹50, while only a minimal 4.1percent reported earnings of more than ₹50 per Chaddar. These findings suggested that most weavers received very low compensation for their labour, which might have contributed to declining interest in the craft.

c. Market Saturation and Price Competition

The mass production of power loom Chaddars resulted in market saturation, intensifying competition and reduced product prices. This affected the profitability of small-scale manufacturers, as cheaper alternatives diminished the perceived value of Solapur Chaddars. Handwoven Chaddars, requiring higher labour and production time, became less competitive in mainstream markets.

d. Quality Trade-Offs in Large-Scale Production

Power loom weaving prioritized quantity over craftsmanship, sometimes affecting fabric texture and durability. The use of synthetic dyes and cost-cutting measures in some manufacturing units led to a decline in traditional quality standards. Unlike handloom fabrics, where weavers conducted individual quality checks, power loom production had batch-wise inconsistencies, impacting the overall fabric integrity. The mechanization of Solapur Chaddar weaving transformed the textile industry, increasing production and profitability. However, it also led to the decline of traditional weaving, labour displacement, and heightened competition. While power looms continued to dominate, efforts were needed to preserve handloom weaving as a heritage craft alongside industrialized production.

4.1.3 Documentation of Design, Motif, and Color

The design, motifs, and colour schemes of Solapur Chaddars defined their identity, aesthetics, and cultural significance. These elements had been developed and preserved over time, ensuring that each Chaddar maintained its distinct visual appeal and weaving tradition. This section documented the layout, motifs, and colour schemes used in Solapur Chaddars, along with the influence of market trends on design adaptation.

4.1.3.1 Layout of Chaddar Designs and Sizes

The layout of Solapur Chaddars balanced functionality, aesthetics, and branding elements. The arrangement of motifs, borders, and end panels followed a structured format that had remained largely consistent, with modern adaptations introduced new variations while preserved the traditional essence

1. Structural Composition of Solapur Chaddars

A typical Solapur Chaddar consisted of three key sections (Plate 4.20):

- **Main Body** – The central portion, often adorned with geometric patterns, floral motifs, or plain sections, forming the primary visual appeal.
- **Borders** – These framed the central design, enhanced the aesthetic appeal and structure of the Chaddar.
- **End Panels** – The most detailed section, often featured:
    - Manufacturer's name or brand logo, woven for authenticity.
    - Custom text or event-based branding, used for promotional or personalized orders.

Plate 4.20: Structural Composition of Solapur Chaddars

The placement of these elements ensured that Solapur Chaddars remained visually distinctive while maintaining their functional and commercial significance.

2. Types of Chaddar Layout Designs

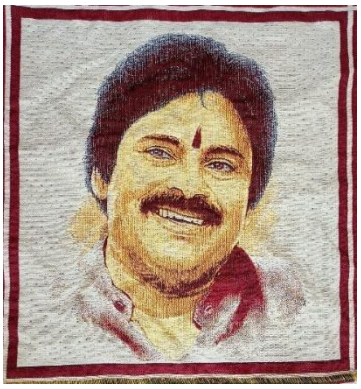
Over the time, Solapur Chaddars had been categorized based on pattern layout, allowed diverse styles while retaining the characteristic woven structure:

- **Full or All-Over Design** – The entire surface was covered with repeating motifs, creating a uniform pattern.
- **Full Figure Design** – A single large motif or figure dominated the Chaddar, often positioned centrally.
- **Mirror Image Design** – The pattern was symmetrically reflected across the central axis, ensuring a balanced composition.
- **Portrait or Customized Design** – Included religious imagery, celebrity portraits, or corporate branding, directly woven into the fabric.

a. Full or All-Over Design

b. Full Figure Design

c. Mirror Image Design



d. Portrait or Customized Design

Plate 4.21(a-d): Types of Chaddar Layout Designs

Each of these layouts was meticulously executed using Jacquard looms, ensuring precise motif placement and intricate pattern formation [Plate 4.21(a-d)].

3. Available Sizes of Solapur Chaddars

Solapur Chaddars were produced in various sizes to meet different functional and market requirements. The most common sizes Included:

Table 4.1: Size of Solapur Chaddar

Chaddar Type	Size (in inches)
Original Size	54 x 90
Single Bed Chaddar	60 x 90
Double Bed Chaddar	72 x 100
King Size Chaddar	90 x 108
Custom Sizes	Based on buyer specifications

Traditionally, single and double-bed sizes were the most in demand; however, king-size Chaddars had gained popularity in modern home furnishings. Some manufacturers also offered customized sizes, particularly for exports and institutional orders, catered to diverse consumer preferences.

By maintaining a structured design layout, incorporating branding elements, and offering size variations, Solapur Chaddars had successfully preserved their traditional appeal while adapting to modern market demands.

4.1.3.2 Documentation of Motifs Used in Chaddars

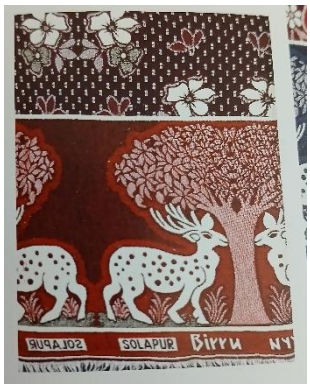
The motifs in Solapur Chaddars had evolved over time, focusing on aesthetic appeal and pattern consistency rather than cultural or symbolic significance. These motifs enhance the visual identity of the fabric, catered to both traditional and modern consumer preferences.[Plate 4.22(a-e)]

- JUNI TATA (Earliest Design) – The oldest documented design, featured geometric shapes with small floral elements.
- Floral Designs – Inspired by nature, incorporated flowers, leaves, and vines for decorative appeal.
- Geometric Patterns – Sharp, structured elements such as lines, squares, zigzags, and abstract forms, ensured a clean and modern aesthetic.
- Animal Designs (Earlier Common, Now Reduced) – Previously used in early Chaddars, these motifs declined from the 2000s onward due to religious concerns and shifted market trends

a. JUNI TATA Design

b. Floral Designs

c. Geometric Patterns



d. Animal Designs

e. Custom Designs

Plate 4.22(a-e): Types of Motifs

- Portrait & Custom Designs – Modern adaptations included custom-woven logos, religious imagery, and personalized graphics, especially for bulk and special-order Chaddars.(Appendix - IV)

4.1.3.3 Documentation of Colour Schemes Practiced in Production

The colour schemes of Solapur Chaddars had evolved from a limited natural dye palette to a diverse range of bold, pastel, and customized shades. This transformation had been driven by consumer demand, market expansion, and advancements in dyeing technology.

1. Traditional Colour Palette

In the early stages, Solapur Chaddars were produced in a restricted colour range, relying on natural and early synthetic dyes. The most commonly used colours included:

- Indigo (Blue) – Vat Dye – One of the earliest and most widely used shades.
- Maroon – Naphthol Dye – A deep reddish-brown hue, frequently featured in traditional designs.
- Black – Sulphur Dye – Used selectively to create contrast in patterns.

- Off-White – Bleached Cotton – Served as a neutral base for simpler designs.

During this period, colour choices were limited by the availability of natural dyes, and Chaddars primarily featured bold, high-contrast patterns.[Plate 4.23(a-c)]

a. Indigo (Blue)

b. Maroon

c. Black and white

Plate 4.23(a-c): Traditional Colour Palette

2. Expansion of the Colour Palette

With the introduction of chemical dyes, the Solapur Chaddar industry experienced a significant expansion in colour diversity. Bold primary colours were introduced to attract buyers and compete with mass-market textiles, while pastel shades such as beige, peach, and lavender gained popularity, catered to modern home décor trends. Additionally, custom colour combinations were developed to appeal to institutional and export markets, broadening the industry's global reach.[Plate 4.24(a-c)]

Manufacturers could produce up to 300 shades, using Vat, Naphthol, Sulphur, and Direct dyes, providing greater design flexibility and allowing Solapur Chaddars to adapt to contemporary market demands.

a. Bold Colour

b. Pastel Colour

c. Custom Colour

Plate 4.24(a-c): Extended Colour Palette

3. Modern Trends in Colour Preferences

Traditional deep and contrasting colours continued to be popular in regional markets, while lighter shades and monochrome designs had gained preference in urban and international markets. Additionally, custom colour matching was now available for branding and special orders, allowing manufacturers to tailor Chaddars to specific buyer requirements. The documentation of colour schemes in Solapur Chaddars highlighted a shift from natural, limited hues to a diverse modern palette, enabled manufacturers to adapt to evolving consumer preferences and expanded their presence in both domestic and global markets.

4.2 Evolution of Solapur Chaddar

The Solapur Chaddar industry had undergone significant transformations over time, shaped by changes in production techniques, design elements, and market dynamics. This section explored its journey from traditional handloom weaving to mechanized production, the evolution of motifs and colour combinations, and the industry's growth and expansion. The study had provided a comprehensive understanding of the industry's progression and adaptation to contemporary demands.

The evolution of Solapur Chaddar was analysed by comparing secondary data, including historical documents, with practices observed in the field and data collected from weavers and manufacturers. This approach ensured a thorough examination of the industry's transformation over time.

4.2.1 Foundation and Transformation of the Solapur Chaddar Industry

The evolution of the Solapur Chaddar industry was shaped by its historical roots, the impact of industrial shifts, and the gradual transformation of design elements. This

section explores the early origins and establishment of the industry, the transition brought about by mechanization and its associated challenges, and the evolution of designs, motifs, and colours over time. Together, these aspects highlight the industry's progression from traditional handloom practices to its present state. Initially a handloom-based craft practiced by skilled artisans, the industry gradually shifted towards mechanization, leading to increased production efficiency and large-scale manufacturing. This transformation not only impacted traditional weaving techniques but also influenced design aesthetics, colour preferences, and employment patterns. This section explored the historical evolution of the industry, covering the origins of Chaddar weaving, the transition from handlooms to power looms, changes in design and colour trends, and the impact of industrialization on weaving communities. This section examined the historical evolution of the Solapur Chaddar industry, covering:

- The early development of Chaddar weaving and its role in Solapur's textile economy.
- Industrial shifts and mechanization, including the transition from handloom to power loom production.
- The changes in Chaddar designs, motifs, and colour palettes, influenced by technological innovations and consumer trends.
- The growth of the industry and its impact on weaving communities, employment, and trade.

Through this, a comprehensive understanding of the historical and industrial evolution of Solapur Chaddars was established, providing insights into how this traditional craft adapted to modernization while facing challenges.(Table 4.2)

Table 4.2: Timeline of development in Solapur Chaddar industry

Time Period	Key Developments	Impact on Production
1761–1772	Migration of Padmashali and Kosti weaving communities to Solapur.	Introduction of handloom weaving, established the textile sector. Early Chaddars had simple designs woven on pit looms.
Early 19th century	Jacquard mechanism introduced in handlooms by the British.	Enabled intricate designs but with limited production capacity, made Chaddars a luxury item used mainly as gifts.
1860s	Introduction of power looms in India and Solapur.	Increased weaving efficiency, leading to mechanization.

1877	First textile mill established by Seth Morarji Gokaldas.	Industrialized Chaddar production, beginning the shift from handlooms to mills.
Late 19th century	Expansion of textile mills.	Solapur became a major textile hub with coexisted handloom workshops and factories.
1947–1948	Post-independence mill closures (e.g., Juni Mill).	Weavers shifted to home-based power loom production, leading to a decentralized industry structure.
1950s–1970s	Growth of small-scale power loom units.	Power looms modernized production, reducing dependence on handlooms.
1970s–1990s	Factory modernization and introduction of chemical dyes.	Power loom weaving became dominant, leading to a decline in handloom weaving.
1990s–2000s	Computerized punching systems introduced.	Allowed faster design modifications and increased production efficiency.
Late 20th century	Expansion of export markets for Solapur Chaddars.	Boosted industrial output and market reach.
2000s–Present	Increased automation and branding.	Mass production, logo branding, and digital designs became prominent.

(Kakade, 1947 & Maharashtra State Gazetteer, 1977)

4.2.1.1 Early Origins and Establishment of the Chaddar Industry

The Solapur Chaddar industry was established by the Padmashali and Kosti weaving communities, who introduced traditional handloom weaving techniques during the reign of Peshwa Madhavrao I (1761–1772). These artisans played a crucial role in developing Chaddar weaving into a significant economic activity. Several factors contributed to the industry's growth, including Solapur's proximity to cotton-producing regions, which ensured a steady supply of raw materials, and its strategic location along major trade routes, which facilitated textile distribution. Skilled artisans used wooden looms to weave Chaddars with durable textures and intricate designs, making them highly valued commodities.

In the early 19th century, Solapur Chaddars were considered luxury items, primarily used as gifts for religious ceremonies, marriages, and social gatherings due to the labour-intensive handloom weaving process. Their production was limited, and they were not widely accessible for daily use. However, as weaving techniques improved, the

production capacity increased, making Chaddars more affordable and transforming them from prestigious gift items to household essentials valued for their durability and comfort.

Introduction of Jacquard Power Looms (1860s)

A significant transformation in the industry occurred in the 1860s with the introduction of Jacquard power looms, which enhanced weaving precision and enabled the production of more complex and standardized patterns. The installation of Jacquard looms allowed artisans to weave detailed motifs more efficiently, marking a shift towards mechanized production. During this period, large textile mills were established by industrialists such as Seth Morarji Gokaldas, leading to the emergence of Solapur as a major textile hub, often referred to as "Mill Town." The coexistence of handlooms and power looms provided employment opportunities to both traditional weavers and mill workers. However, while industrial mills contributed to economic growth, they also introduced challenges for handloom weavers, who began facing competition from factory-based mass production.

4.2.1.2 Industrial Shifts, Mechanization, and Challenges

The transition from handloom to power loom weaving brought profound changes to the Chaddar industry. While mechanization increased production efficiency and expanded market reach, it also resulted in job losses for traditional weavers and a decline in artisanal craftsmanship. The rise of large-scale textile mills in the early 20th century gradually replaced small weaving units with factory-based production systems.

1947–1948: Mill Disputes and Closures

The post-independence period was marked by labour unrest and economic disruptions that significantly impacted textile production in Solapur. Worker strikes and disputes between weavers and mill owners led to widespread job losses. The closure of British-owned textile mills, such as Juni Mill, following independence further affected the industry, leading to a decline in textile manufacturing. Many unemployed weavers responded to these challenges by purchasing old mill looms and establishing small-scale, home-based power loom units. This shift marked the beginning of a decentralized weaving structure, where independent workshops gradually replaced large textile mills as the primary mode of Chaddar production.

1950s–1970s: Growth of Small-Scale Power Loom Units

As the textile sector recovered in the post-independence era, handloom and power loom weaving continued to coexist. The industry witnessed a gradual transition towards small-scale weaving workshops, which sustained Chaddar production despite changing market conditions. During this period, the adoption of Jacquard power looms increased, enabled weavers to produce intricate designs with greater efficiency. Many traditional handloom artisans adapted to the new technology and became power loom operators, ensuring their continued participation in the industry. Domestic and export markets also expanded, reinforcing Solapur's reputation as a leading Chaddar manufacturing centre. This period played a crucial role in modernizing Chaddar production while preserving the industry's traditional roots.

1970s–1990s: Factory Modernization and Decline of Handlooms

The 1970s marked the beginning of large-scale mechanization, which further reduced reliance on manual labour and accelerated Chaddar production. The introduction of chemical dyes replaced traditional natural dyes, offering a wider range of colours and improving fabric consistency. However, the increasing dominance of power looms led to a significant decline in handloom weaving, as machine-made Chaddars were produced faster and at a lower cost, making them more appealing to consumers. Many handloom artisans faced financial hardships and either transitioned to power loom work or abandoned the profession altogether. While power loom Chaddars became widely popular due to their affordability and scalability, this shift resulted in the loss of the artisanal craftsmanship and quality once associated with traditional Solapur Chaddars.

1990s–Present: Digitalization, Automation, and Market Diversification

By the 1990s, the Solapur Chaddar industry underwent a major transformation with the adoption of computerized punching systems and advanced Rapier looms. The introduction of computerized punching systems replaced traditional hand-punched Jacquard cards, enabled rapid design modifications and reduced production time. Increased automation further minimized labour dependency, making the manufacturing process more efficient. The industry also diversified by offering customized Chaddars featuring logos, religious motifs, and personalized patterns, catering to modern consumer preferences. Market expansion continued, with Solapur Chaddars finding buyers in niche and luxury textile segments.

While these advancements strengthened industrial output, they also led to the near disappearance of traditional handwoven Chaddars. Additionally, power loom weavers faced economic challenges due to the lack of government support and intense price competition among local manufacturers. The evolution of the Solapur Chaddar industry highlights its ability to adapt to changing consumer demands and technological advancements while facing ongoing challenges in balancing mechanization with the preservation of traditional craftsmanship (Maharashtra State Gazetteer, 1977).

4.2.1.3 Evolution of Designs, Motifs, and Colours

The designs, motifs, and colour schemes of Solapur Chaddars evolved over time due to technological advancements, changing market demands, and consumer preferences. The transition from hand-drawn patterns to digitally created designs marked a significant shift in the aesthetic appeal and production efficiency of these textiles. Additionally, Chaddar layouts adapted to market requirements, expanding in size to meet consumer needs(Table 4.3).

Table 4.3: Timeline of evolution of designs, motifs and colours in Solapur Chaddar

Time Period	Design Characteristics	Motif Preferences	Colour Trends	Chaddar Layout
Pre-1950s (Traditional Era)	- Hand-drawn patterns with fixed motifs and minimal variations.	- JUNI TATA design (geometric patterns with small floral elements).	- Indigo, white, red (natural dyes).	54"x90"
1950s–1980s (Expansion Phase)	- Introduction of more intricate weaving techniques. - Experimentation with weaving techniques.	- Floral designs gained popularity (flowers, leaves, vines). - Geometric patterns became common. - Animal motifs introduced occasionally.	- Expansion into bold primary colours (yellow, green, maroon, royal blue). - Synthetic dyes enabled a wider variety of shades.	60"x90" added
1990s–2000s (Digitalization & Faster Design Changes)	- Transition to computerized designs. - Introduction of mirror image and full-figure designs.	- Religious motifs, custom brand logos, and portraits emerged. - More diverse design options for buyers.	- Diverse colour combinations introduced. - Designs updated twice a year based on market trends.	72"x90" added

		- Animal motifs are reduced due to changing preferences.		
2000s–Present (Modern Adaptations & On-Demand Customization)	- Highly customizable Chaddars with advanced weaving technology. - Contemporary & minimalistic designs preferred. - Digital Jacquard & Rapier looms allow on-demand design changes.	- Custom motifs dominate (portraits, religious imagery, branding). - Mirror image and customized patterns gained popularity. - Animal motifs continued to be reduced.	- Introduction of pastel and muted tones (soft pink, olive green, grey). - Designs could be changed anytime as per market demand.	90"x108" added

Pre-1950s (Traditional Era)

During this period, designs were simple and hand-drawn on graph paper, resulting in minimal variations. The "*JUNI TATA"* design, characterized by geometric patterns with small floral elements, was dominant. The colour palette was restricted to indigo, white, and red, derived from natural dyes. Chaddars were available in a standard 54"x90" inches size.

1950s–1980s (Expansion Phase)

New weaving techniques allowed for intricate patterns, introducing floral and geometric motifs, while animal motifs were occasionally used. The use of bold primary colours such as yellow, green, maroon, and royal blue expanded with the availability of synthetic dyes. To meet consumer demand, an additional 60"x90" inches size was introduced.

1990s–2000s (Digitalization & Faster Design Changes)

The adoption of computerized weaving enabled the creation of mirror image and full-figure designs. This phase saw the emergence of religious motifs, custom brand logos, and portrait weaving, catering to personalization trends. The colour range diversified, with updates occurring twice a year. A larger 72"x90" inches layout was introduced, and animal motifs started to be reduced due to cultural sensitivities.

2000s–Present (Modern Adaptations & On-Demand Customization)

With advancements in Jacquard and Rapier looms, Chaddars became highly customizable, incorporating contemporary and minimalistic designs. Custom motifs such as portraits, branding, and religious imagery became prominent, with mirror image patterns continuing to gain popularity. The colour palette expanded to include pastel and muted tones like soft pink, olive green, and grey. Market-driven flexibility allowed designs to be changed on demand. To accommodate consumer preferences, 90"x108" layouts were introduced, and the use of animal motifs continued to be reduced.

The figure 4.5 illustrates the key transformations in Solapur Chaddars over time, highlighting the most significant changes observed in the industry. Price and demand were identified as the most affected aspects, with 100 percent of respondents acknowledging shifts in these areas, indicating the growing market influence on production and sales strategies. The availability and use of raw materials also saw substantial changes, with 95.3 percent of respondents noted modifications, likely due to shifts in sourcing and manufacturing processes. Aesthetic appearance and government aid also played a role in the industry's evolution, while changes in product range and size were comparatively less pronounced.

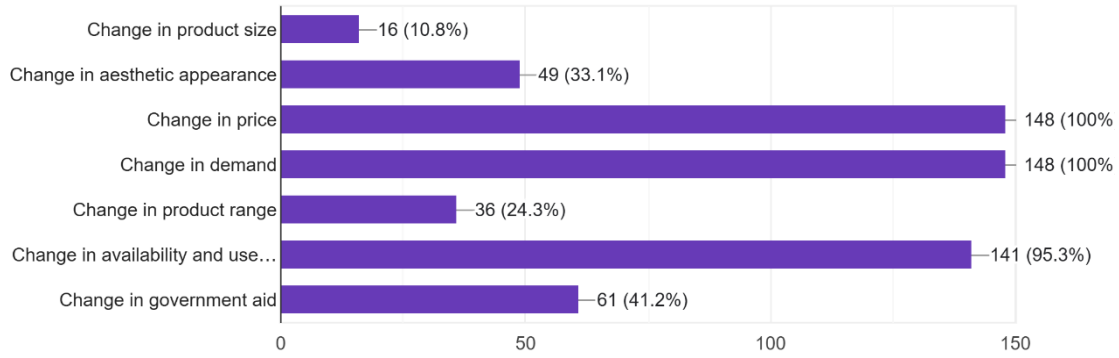


Figure 4.5: Aspects of Solapur Chaddar changes over time

This data reflected the adaptive strategies employed by manufacturers and weavers in response to economic and consumer-driven challenges. This transformation highlighted how Solapur Chaddars evolved from traditional, manually crafted textiles to modern, technologically driven products while maintaining their cultural essence.

4.2.2 Industrial Growth and Market Expansion: Identification of Key Changes Over Time

The industrial growth of the Solapur Chaddar sector was marked by significant changes in production techniques, market expansion, and adaptation to consumer demands. This section identifies key changes over time, including the impact of mechanization, shifts in manufacturing approaches, and the expansion of domestic and international markets. These transformations played a crucial role in shaping the current structure and competitiveness of the Solapur Chaddar industry(Table 4.4)

Table 4.4: Timeline of Industrial Growth and Market Expansion in Solapur Chaddar industry

Time Period	Market Demand & Expansion	Consumer Preferences	Challenges & Competition
Pre-1950s (Traditional Era)	Solapur Chaddars were widely used as bedding material, primarily in Maharashtra and neighbouring states.	Consumers preferred durable, heavy cotton Chaddars with limited colour and design choices.	No major competition, as Solapur Chaddars were a staple household product.
1950s–1980s (Expansion Phase)	Increased demand due to growing population and textile trade. The export market began emerging.	Consumers started preferring brighter colours, floral motifs, and geometrical & animal patterns.	Competition emerged from machine-made alternatives in other regions.
1990s–2000s (Digitalization & Competition Growth)	Decline in demand for traditional Chaddars as modern bedding alternatives like blankets became popular.	Preference shifted towards lighter, more decorative bedding.	Competition from Panipat (Haryana) and Erode (Tamil Nadu) began, with synthetic fibre alternatives affecting sales.
2002 (Recognition & Protection)	Solapur Chaddar received the Geographical Indication (GI) tag, recognizing its unique identity and heritage.	Consumers still valued authenticity, but market trends continued shifting toward modern designs.	The GI tag reinforced authenticity, but competition was steadily increasing.
2010s–Present (Modern	Shift towards home décor and	Customization became key, with	Competition intensified after 2010

Adaptation & Diversification)	apparel markets. Exports increased, targeting niche buyers and luxury textiles.	brand logos, religious motifs, and pastel-coloured Chaddars becoming more popular.	from Panipat and Erode. Lack of government support for power loom weavers and price competition among local manufacturers created further challenges.

Pre-1950s: Traditional Era

Before the 1950s, Solapur Chaddars were primarily produced for local markets in Maharashtra and neighbouring states. They were widely used as bedding material, known for their heavy, durable cotton fabric. Consumer preferences were limited to simple designs with minimal colour variations, as traditional craftsmanship focused on functionality rather than aesthetics. During this period, there was no significant competition, and Solapur Chaddars remained a staple household product.

1950s–1980s: Expansion Phase

With population growth and the expansion of the textile trade, demand for Solapur Chaddars increased. This era marked the beginning of exports, as Chaddars found buyers in markets beyond Maharashtra. Consumer preferences also evolved, with a rising demand for brighter colours, floral motifs, and intricate geometric and animal patterns. However, competition emerged as machine-made alternatives from other regions entered the market, challenging traditional handloom and power loom production.

1990s–2000s: Digitalization and Competition Growth

The late 20th century saw a decline in demand for traditional Chaddars due to the growing popularity of modern bedding alternatives like blankets. Consumers began favouring lighter and more decorative designs, leading to a shift away from the heavy cotton Chaddars of the past. During this period, competition intensified as textile hubs like Panipat (Haryana) and Erode (Tamil Nadu) started producing imitation Chaddars using synthetic fibres, significantly affecting sales in both domestic and export markets.

2002: Recognition and Protection

In 2002, Solapur Chaddar was granted a Geographical Indication (GI) tag, officially recognizing its unique heritage, traditional craftsmanship, and regional identity. This status helped distinguish authentic Solapur Chaddars from imitations, reinforcing

consumer trust in the product's quality and originality. However, while the GI tag offered some protection, it did not slow down the industry's challenges, as market trends continued to shift towards modern designs.

2010s–Present: Modern Adaptation and Diversification

After 2010, competition from Panipat and Erode intensified, as manufacturers in these regions flooded the market with synthetic fibre Chaddars at lower prices. This forced Solapur's manufacturers to rethink their strategies, leading to a shift toward home décor and apparel markets. Export demand increased, particularly among niche buyers and luxury textile markets. Customization became a key selling point, with Chaddars featuring brand logos, religious motifs, and pastel colours gaining popularity. However, local manufacturers faced difficulties due to lack of government support for power loom weavers and high price competition, which reduced profit margins and posed sustainability challenges for the industry.

This phase of industrial growth demonstrated the resilience of the Solapur Chaddar industry as it navigated evolving consumer demands and market pressures. Despite growing challenges, ongoing adaptations and innovations ensured its continued relevance in both domestic and international markets.(Vernekar, 1998 & Pawar, 2023)

4.2.3 SWOT Analysis of the Solapur Chaddar Industry

The Solapur Chaddar industry had evolved over centuries, retaining its distinct identity while facing modern challenges. A SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis provided insights into the industry's position by evaluating its competitive advantages, limitations, growth potential, and risks. Understanding these factors was crucial for sustaining and expanding the market while addressing concerns faced by manufacturers and weavers.

4.2.3.1 Strengths

The industry's strengths lie in its heritage, craftsmanship, and economic contribution. The Geographical Indication (GI) tag (2002) protected Solapur Chaddars from imitation, and reinforced their authenticity. These Chaddars were 100 percent cotton-based, eco-friendly, and durable, making them a sustainable textile option. The industry generated employment for thousands of weavers, supporting local economies. With varied designs, sizes, and customization, Solapur Chaddars catered to a broad consumer base. Despite

export challenges, there was still demand in Western Asia, and the domestic market remained strong.

Manufacturers benefited from an independent business model, operated through wholesale, retail, and custom orders. Locally sourced cotton kept raw material costs relatively low, though price fluctuations posed challenges. The industry's multiple distribution channels ensured market reach.

Weavers possessed specialized skills, adapted to production advancements when given training. The consistent demand for Chaddars ensured stable work availability, allowing artisans to sustain their livelihoods.

4.2.3.2 Weaknesses

The industry struggled with declining market demand, as modern bedding materials like blankets and synthetic textiles gained popularity. The export market was weak, controlled mainly by brokers, limiting direct manufacturer profits. A lack of government support and financial aid hinders technological advancements. Moreover, low young generation involvement threatened the industry's future, with many weavers' unwillingness to pass down their skills.(Figure 4.6)

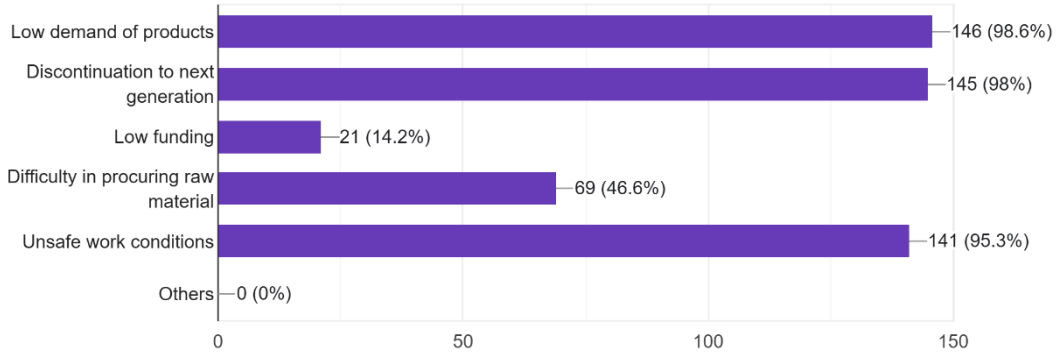


Figure 4.6: Major challenge faced by the craft

Manufacturers face rising operational costs, fluctuating raw cotton prices, and electricity and water shortages. Middlemen exploitation reduced profit margins, and intense local competition lowered product value. Limited adoption of modern technology also affected efficiency and innovation.

Weavers experience poor working conditions, with lack of ventilation, safety gear, and fair wages. Many manufacturers bypassed minimum wage laws by hiring contract

workers, leading to income instability. Without social security benefits, weavers faced an uncertain future, and their aging workforce added to sustainability concerns(Figure 4.7).

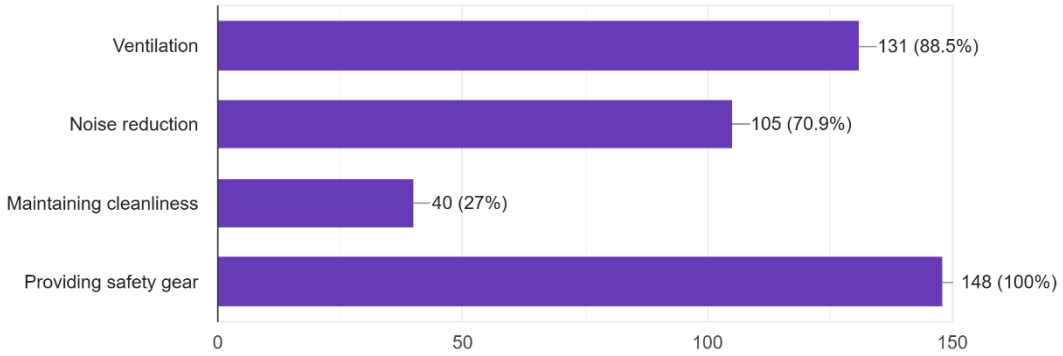


Figure 4.7: Challenges faced by weavers

4.2.3.3 Opportunities

Despite challenges, the industry had growth potential through global market expansion into the USA, Canada, and Europe, where demand for sustainable textiles had risen. E-commerce platforms provided an opportunity to reach consumers directly, reducing dependency on middlemen. Stronger government collaboration could improve subsidies, skill development programs, and financial support.

Manufacturers could explore product diversification by collaborating with interior designers, apparel brands, and home décor companies. Establishing retail showrooms or partnerships with large brands could increase visibility. Investing in modern weaving technologies would enhance efficiency and reduce labour dependency.

Weavers could benefit from training programs, learning digital weaving techniques and market skills. Direct sales platforms, cooperative societies, and collaborations with wholesalers could provide them better income security.

Promotion and awareness initiatives such as participation in trade fairs, exhibitions, and digital marketing could boost visibility. Encouraging young artisans to engage with the craft while integrating modern design elements could attract a new customer base.

4.2.3.4 Threats

The biggest threat was competition from synthetic Chaddars, especially from Panipat (Haryana) and Erode (Tamil Nadu), which produced cheaper machine-made alternatives. This had significantly impacted Solapur's market share since 2010. The declining

domestic demand further weakened the industry, as consumers prefer lighter, synthetic bedding options.(Figure 4.8)

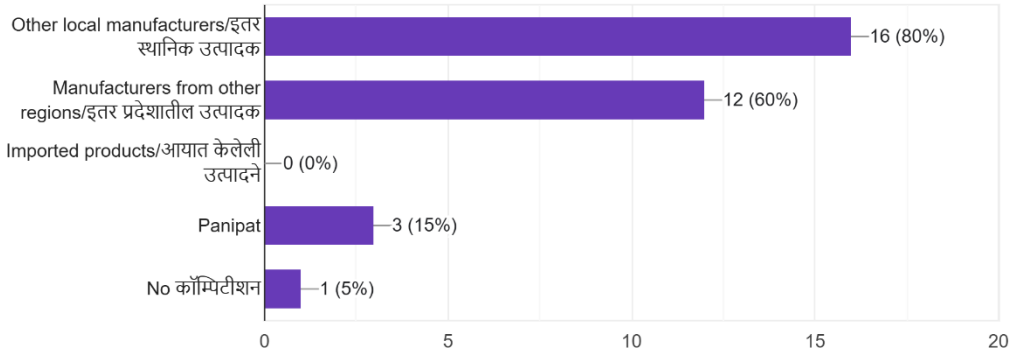


Figure 4.8: Sources of Competition in the Solapur Chaddar Industry

Government inaction and corruption in aid distribution prevented manufacturers and weavers from accessing essential support. Labor shortages and wage exploitation continued to affect production, leading to worker dissatisfaction. The aging workforce and lack of youth involvement put the future of the craft at risk, threatening its long-term survival.

The Solapur Chaddar industry, manufacturers, and weavers all faced unique strengths, weaknesses, opportunities, and threats. While the industry retained its heritage and market presence, modernization, government support, and marketing innovations were needed to ensure its future sustainability. Expanding global markets, digital sales, and product diversification could revitalize demand, while addressing labour concerns and technological gaps would help sustain the industry in an evolving textile landscape.

4.3 Product Diversification

Product diversification played a crucial role in exploring new applications for Solapur Chaddars beyond their traditional use. This initiative aimed to adapt the fabric to contemporary consumer needs while maintaining its authenticity and craftsmanship. Given the durability, aesthetic appeal, and cultural heritage of Solapur Chaddars, the study focused on repurposing mill surplus fabric in a systematic and planned manner, ensuring sustainability and minimal waste.

The diversification process involved careful selection of product categories, consumer-driven design development, and experimental construction to assess feasibility. Each piece of surplus fabric was evaluated for its design, motif, and colour suitability for

different product categories before being assigned for final use, making the process both resource-efficient and creatively aligned.

By integrating traditional textile techniques with modern product applications, this approach sought to expand the market potential of Solapur Chaddars, offering a sustainable and innovative pathway for preserving and promoting this traditional textile in contemporary contexts.

This section documents the product diversification process, covering:

- Selection of product categories and variations based on consumer preferences and market demand.
- Experimentation and development of finalized designs, including material adaptation, construction techniques, and product evaluation.

Through this initiative, Solapur Chaddars were transformed into functional and marketable products, reinforcing their relevance in contemporary textile applications while preserving their traditional essence.

4.3.1 Selection of Product Categories and Variations

The selection of product categories was a crucial step in product diversification, ensuring that Solapur Chaddars could be repurposed into functional and marketable items while maintaining their aesthetic and cultural appeal.

The selection process involved two key stages:

1. **Market Research and Initial Category Selection:**

A preliminary study was conducted to identify potential product categories that could incorporate Solapur Chaddars. The research considered existing textile diversification trends and consumer demand. Based on this, five broad categories were identified(Table 4.5):

Table 4.5: List of product categories

Sr. No	Product Categories	Products
1.	Home Décor	a. Cushion Cover b. Table Runner c. Wall Hanging
2.	Storage and Organizer	a. Laundry Hampers b. Jewellery Organizer c. Hanging Storage Organizer

3.	Desk and Office Essentials	a. Laptop Sleeves b. Pen Case c. File Organizer
4.	Travel Accessories	a. Backpacks b. Shoe Bags c. Toiletry Pouches
5.	Personal Accessories	a. Tote Bags b. Bottle Cover c. Lunch Bags

2. Final Product Selection for Development:

From the initial categories, five products were finalized in consultation with the research guide, ensuring feasibility and design adaptability. The selected products were:

- Cushion Cover (Home Décor)
- Hanging Storage Organizer (Storage & Organization)
- Pen Case (Desk & Office Essentials)
- Backpack (Travel Accessories)
- Tote Bag (Personal Accessories)

3. Sketch Development and Consumer Survey for Design Selection:

Sketch Development and Coding:

For each of these five selected products, ten design variations were created, resulting in a total of 50 sketches. Each product and its corresponding sketches were assigned a code:

- Cushion Cover → CC1, CC2, CC3, … CC10
- Hanging Storage Organizer → HS1, HS2, HS3, … HS10
- Pen Case → PC1, PC2, PC3, … PC10
- Backpack → BP1, BP2, BP3, … BP10
- Tote Bag → TB1, TB2, TB3, … TB10

Survey and Selection of Preferred Sketches:

To determine the most preferred variations, a survey was conducted among 50 hostel students of MS University. Each respondent was asked to select their top three preferred sketches for each product.

The collected data was analyzed to identify the most popular design variations based on student preferences. These findings provided insights into consumer choices, helping in the final selection of product designs for adaptation using Solapur Chaddar.

Selection of sketches for cushion cover

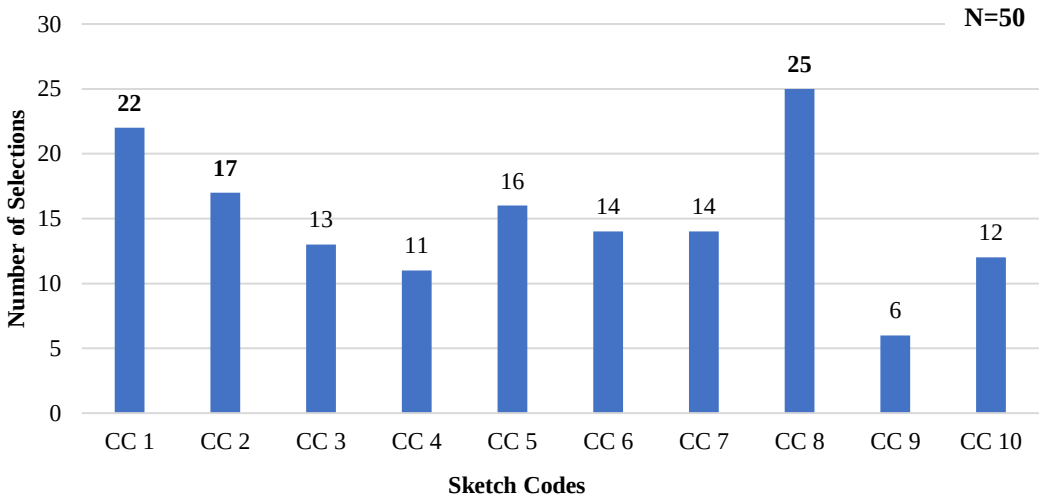
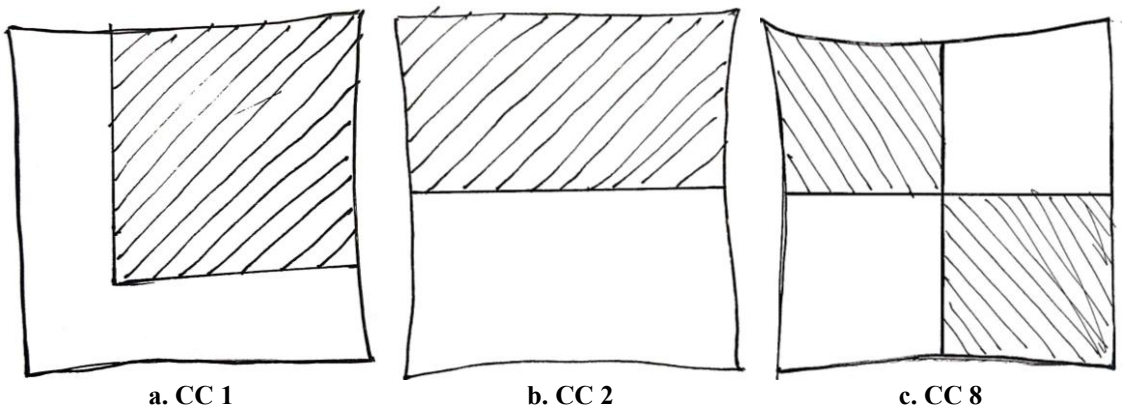


Figure 4.9: Selection of sketches for cushion cover

Figure 4.9 represented the results of the survey conducted for selecting cushion cover designs. The analysis showed that CC 8 was the most preferred design, receiving 25 selections, followed by CC 1, which was chosen 22 times, and CC 2, with 17 selections. These three designs were finalized for further product development. The selected sketches were presented in Illustration 4.1(a-c).



a. CC 1 **b. CC 2** **c. CC 8**

Illustration 4.1(a-c): Top 3 preferred sketches of Cushion Cover

Selection of sketches for hanging storage

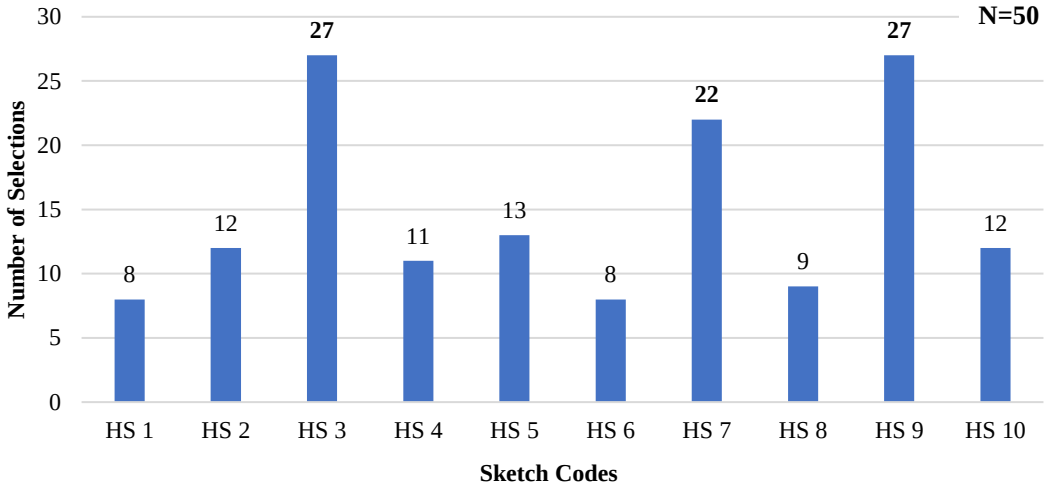
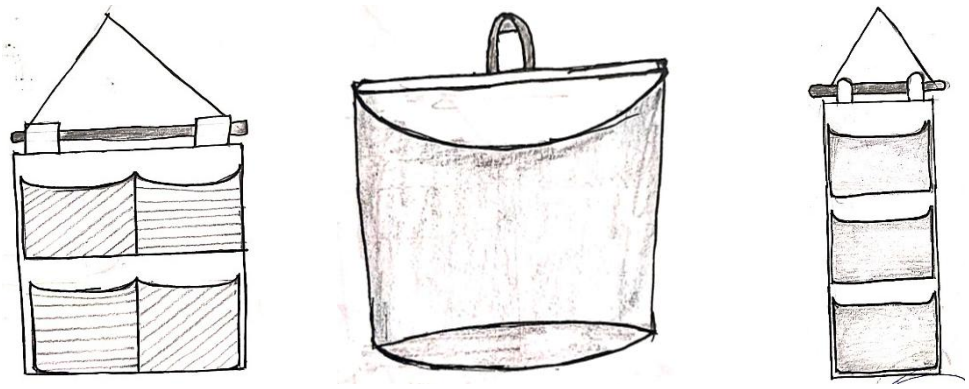


Figure 4.10: Selection of sketches for hanging storage

Figure 4.10 represented the results of the survey conducted for selecting hanging storage designs. The analysis showed that HS 3 and HS 9 were the most preferred designs, each receiving 27 selections, followed by HS 7, which was chosen 22 times. These three designs were finalized for further product development. The selected sketches were presented in Illustration 4.2(a-c).



a. HS 3 **b. HS 7** **c. HS 9**

Illustration 4.2(a-b): Top 3 preferred sketches of Hanging Storage Organizer

Selection of sketches for pen case

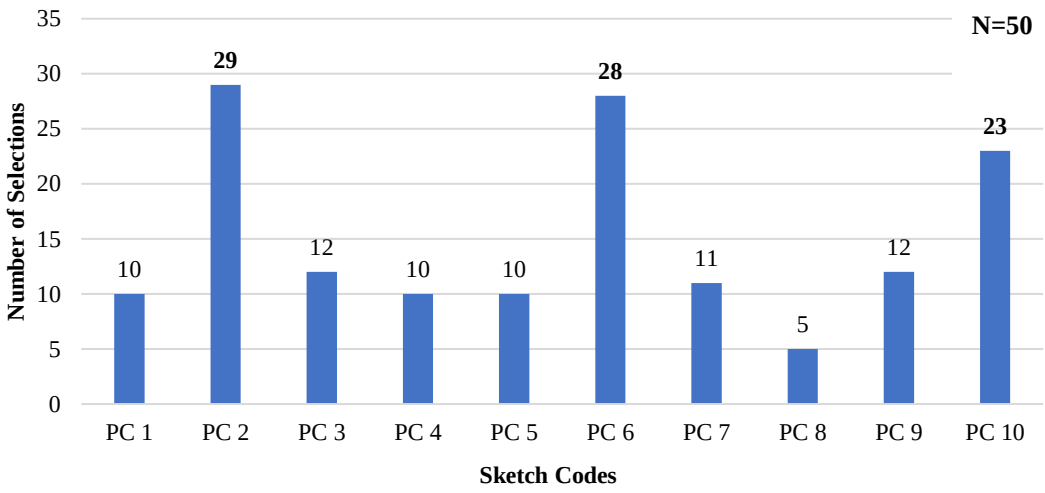
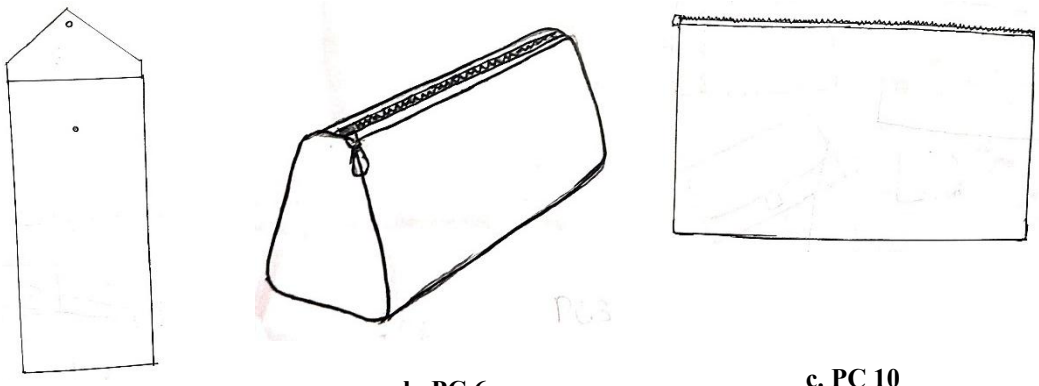


Figure 4.11: Selection of sketches for pen case

Figure 4.11 represented the results of the survey conducted for selecting pen case designs. The analysis showed that PC 2 was the most preferred design, receiving 29 selections, followed closely by PC 6, with 28 selections, and PC 10, with 23 selections. These three designs were finalized for further product development. The selected sketches were presented in Illustration 4.3(a-c).



a. PC 2 **b. PC 6** **c. PC 10**

Illustration 4.3(a-c): Top 3 preferred sketches of Pen Case

Selection of sketches for Backpack

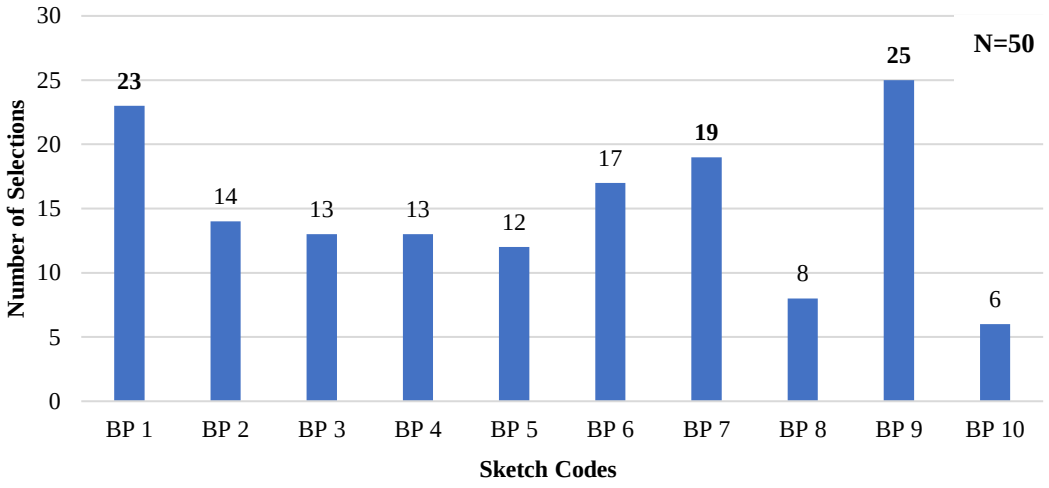
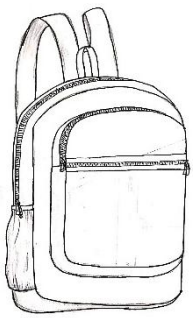
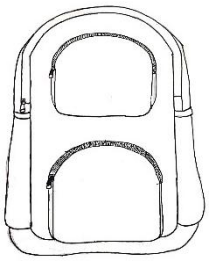


Figure 4.12: Selection of sketches for backpack

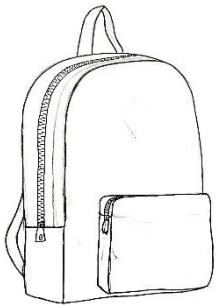
Figure 4.12 represented the results of the survey conducted for selecting backpack designs. The analysis showed that BP 9 was the most preferred design, receiving 25 selections, followed by BP 1, which was chosen 23 times, and BP 7, with 19 selections. These three designs were finalized for further product development. The selected sketches were presented in Illustration 4.4(a-c).



a. BP 1



b. BP 7



C. BP 9

Illustration 4.4(a-c): Top 3 preferred sketches of Backpack

Selection of sketches for Tote bag

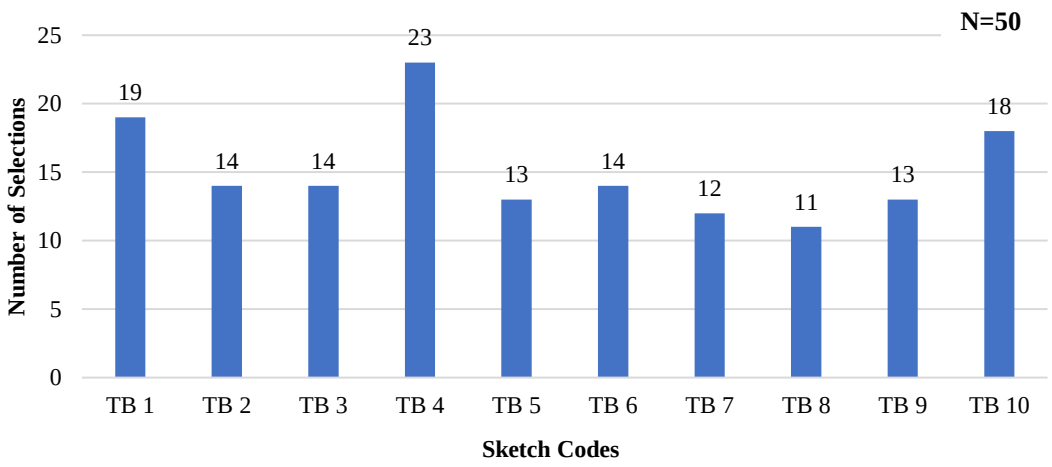


Figure 4.13: Selection of sketches for tote bag

Figure 4.13 represented the results of the survey conducted for selecting tote bag designs. The analysis showed that TB 4 was the most preferred design, receiving 23 selections, followed by TB 1, which was chosen 19 times, and TB 10, with 18 selections. These three designs were finalized for further product development. The selected sketches were presented in Illustration 4.5(a-c).

a. TB 1 **b. TB 4** **c. TB 10**

Illustration 4.5(a-c): Top 3 preferred sketches of Tote Bag

4.3.2 Experimentation and Development

To assess the feasibility of using Solapur Chaddar for product diversification, an initial sample product was constructed. This experimentation phase helped determine the material's compatibility and set essential construction parameters.

During the testing process, it was observed that Solapur Chaddar could be effectively stitched using both half-shuttle and full-shuttle sewing machines. Needle sizes 16 and 18 were found to be suitable for stitching, ensuring durability without damaging the fabric. Polyester sewing thread with a yarn count of 80 was used, providing adequate strength for the seams. For fastening components, plastic-moulded zippers were selected, while polyester straps were used for backpacks and tote bags to enhance durability and load-bearing capacity. Based on these findings, the following construction parameters were finalized for product development in Table 4.6

Table 4.6: Construction Parameters for Product Development

Parameter	Specification	Remarks
Sewing Machine	Half-shuttle, Full-shuttle	Compatible with Solapur Chaddar fabric
Needle Size	16, 18	Suitable for stitching without fabric damage
Thread Type	Polyester sewing thread	Yarn count: 80; ensured strong seam durability
Zipper Type	Plastic-moulded zipper	Used for secure fastening in products
Straps	Polyester	Used for backpacks and tote bags

After establishing these parameters, the actual construction of the finalized products commenced. The production process followed the defined guidelines to ensure consistency and quality. The selected designs were carefully executed, maintaining precision in cutting, stitching, and assembling components.

4.3.3 Construction of Products

The construction phase involved utilizing the mill surplus of Solapur Chaddar, which contained various designs and colours. Before initiating the production process, it was essential to determine which designs would be suitable for each product. In some cases,

two different designs were combined to create a single product, either through patchwork techniques or by strategically integrating different patterns to enhance aesthetics.

Once the fabric selections were finalized, the material was cut according to the drafted patterns of each product. Along with the fabric, necessary components such as fastening materials, polyester lining for bags (to enhance water resistance), and additional reinforcements were procured.

After preparation, the stitching process was carried out following the previously determined construction parameters. Each product was assembled with precision, ensured structural integrity and aesthetic appeal. Following the stitching, the finishing stage involved trimming excess threads and refining the overall appearance.

For wall hangings, wooden rods were inserted at designated points, and cords were securely attached to facilitate hanging. In other products, fastening elements such as touch buttons were incorporated to ensure functionality. Upon completion of these steps, the final products were ready. The developed items showcased the adaptability of Solapur Chaddar for contemporary product diversification.

After the construction of products, a revised coding system was implemented for evaluation purposes. The updated codes assigned to the final products were as follows: CC1 (formerly CC 1), CC2 (formerly CC 2), CC3 (formerly CC 8), HS1 (formerly HS3), HS2 (formerly HS9), HS3 (formerly HS7), PC1 (formerly PC2), PC2 (formerly PC6), PC3 (formerly PC10), BP1 (formerly BP), BP2 (formerly BP7), BP3 (formerly BP9), TB1 (formerly TB1), TB2 (formerly TB4), and TB3 (formerly TB10). These codes were used systematically during the evaluation process[(Plate 4.25(a-f), Plate 4.26(a-c), Plate 4.27(a-c), Plate 4.28(a-f), Plate 4.29(a-f)] .

CATEGORY I– CUSHION COVERS

a. Front View of CC 1

b. Back view of CC 1

c. Front View of CC 2

d. Back View of CC 2

e. Front View of CC 3

f. Back View of CC 3

Plate 4.25(a-f): Constructed products in category of Cushion Cover

CATEGORY II– Hanging Storage Organizer

a. HS 1

b. HS 2

c. HS 3

Plate 4.26(a-c): Constructed products in category of Hanging Storage Organizer

CATEGORY III– Pen Case

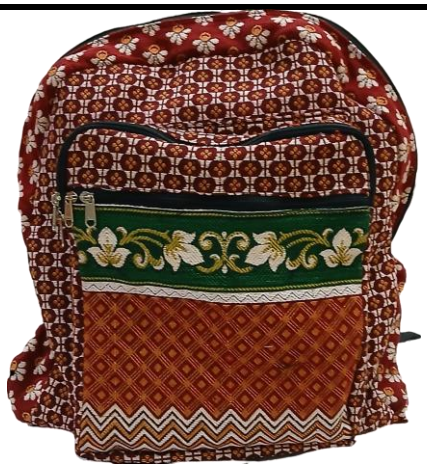
a. PC 1

b. PC 2

c. PC 3

Plate 4.27(a-c): Constructed products in category of Pen Case

CATEGORY IV– Backpack



a. Front View of BP 1

b. Back view of BP 1

c. Front View of BP 2

d. Back View of BP 2

e. Front View of BP 3

f. Back View of BP 3

Plate 4.28(a-f): Constructed products in category of Backpack

CATEGORY V– Tote Bag

a. Front View of TB 1

b. Back view of TB 1

c. Front View of TB 2

d. Back View of TB 2

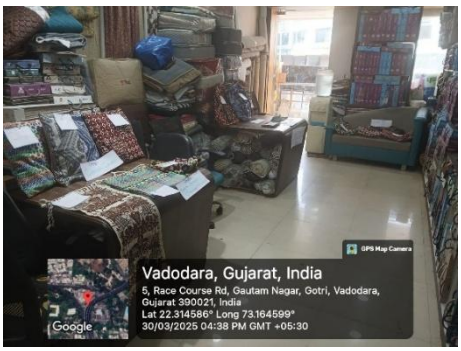
e. Front View of TB 3

f. Back View of TB 3

Plate 4.29(a-f): Constructed products in category of Tote Bag

4.4 Evaluation of Products and Market Acceptability

The evaluation of the developed products was conducted at two key locations to assess their market acceptability and consumer preferences. The first evaluation took place at *Khandelwal Home Saaz*, Shop No.9, 1st Floor, Trident Mall, Race Course Rd, Gautham Nagar, Subhanpura, Vadodara Gujarat 390007, a retail outlet specializing in home furnishings, including Solapur Chaddars. This location was selected to gauge consumer interest in a commercial setting where potential buyers were already familiar with Solapur Chaddars and their traditional applications. Observing customer reactions in this retail space provided insights into the feasibility of introducing diversified products into the market. [Plate 4.30(a-e)]



a. Khandelwal Home Saaz Store

b. Interacting with consumer

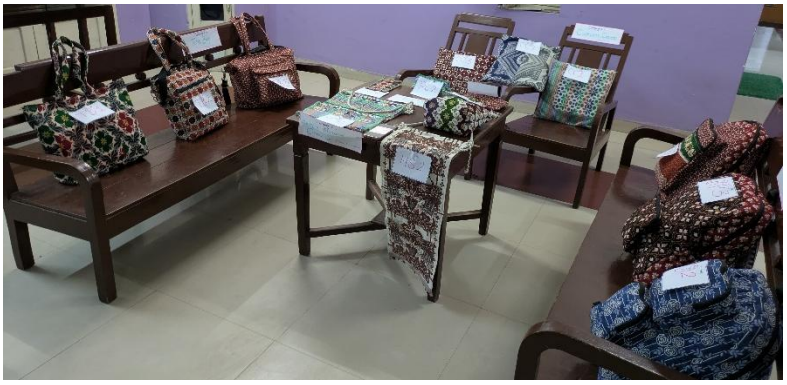
c. Display of category I and II

d. Display of category III and IV

e. Display of category V

Plate 4.30(a-e): Evaluation at Khandelwal Home Saaz, Vadodara

The second evaluation was carried out at The Maharaja Sayajirao University of Baroda's Girls' Hostel. This location was chosen because the initial sketch preferences for product development were collected from students residing there. By revisiting the same consumer group, the study aimed to analyse whether the final products aligned with their expectations and usability needs. Additionally, the younger demographic at this site represented a potential emerging market for Solapur Chaddar-based contemporary products. [Plate 4.31(a-c)]



a. Display at girl's hostel

b. Interacting with girl's

c. Interacting with warden

Plate 4.31(a-c): Evaluation at girl's hostel

To gather quantitative and qualitative feedback, data collection was conducted through a structured Google Form survey, allowing participants to express their opinions on design appeal, functionality, and overall satisfaction. The responses provided valuable insights into consumer preferences and helped determine the market potential of Solapur Chaddar product diversification.

4.4.1 Product Evaluation

The products were displayed for product evaluation to be tested in terms of overall aesthetic appeal, cost effectiveness and market acceptability. The products were

evaluated by 80 respondents which included both men and women. These were analysed and represented as tables, graphs under specific heads.

The data analysis of the profile of respondents revealed that the age group of the respondents was in the range of 18 - 60 years out of the total 80 respondents. 61 were females while 19 were males. All the male respondents belonged to the service class. The female respondents were further categorized as undergraduate and postgraduate, students with a majority of 45 percent , another 31 percent belonged to the service class and homemaker.(Figure 4.14)

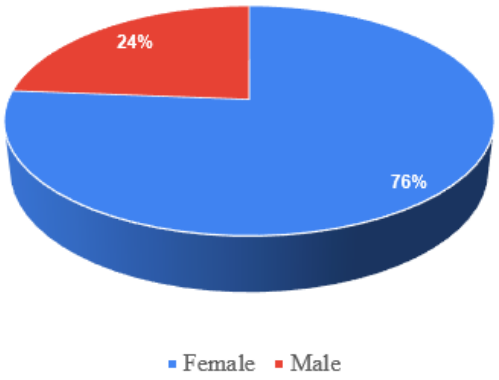


Figure 4.14: Profile of respondents

Out of the total 80 respondents**,** 62 individuals (78 percent) were familiar with Solapur Chaddar, while 18 respondents (22 percent) had not heard about it. This indicates that a significant majority of participants were aware of Solapur Chaddar, suggesting a strong regional or market presence.

4.4.1.1 Appeal of the Products

Table 4.7 presents an overview of consumer responses regarding the appeal of the developed products. The data indicates varying levels of preference across different product categories, with the majority of respondents finding the products either highly appealing or appealing.

Table 4.7: Consumer Perception of Product Aesthetic Appeal (percent)

N=80

Category	Code No.	Highly appealing	Appealing	Not appealing
Cushion Cover	CC 1	46	47	7
	CC 2	50	49	1
	CC 3	55	41	4
Hanging Storage Organizer	HS 1	48	46	6
	HS 2	60	39	1
	HS 3	45	54	1
Pen Case	PC 1	66	31	3
	PC 2	50	46	4
	PC 3	51	44	5
Backpack	BP 1	59	37	4
	BP 2	50	45	5
	BP 3	52	42	6
Tote Bag	TB 1	56	41	3
	TB 2	50	47	3
	TB 3	47	50	3

Regarding the Cushion Covers, CC 1 was found to be highly appealing by 46 percent of the respondents, followed by 47 percent who found it appealing, while 7 percent considered it not appealing. Similarly, CC 2 was rated as highly appealing by 50 of respondents, with 49 percent finding it appealing and only 1 percent marking it as not appealing. CC 3 received the highest rating among cushion covers, with 55 percent of respondents considering it highly appealing, while 41 percent found it appealing, and 4 percent found it not appealing.

For the Hanging Storage Organizer, HS 1 was highly appealing to 48 percent of respondents, followed by 46 percent who found it appealing, while 6 percent did not find it appealing. HS 2 received the highest positive response in this category, with 60 percent of respondents marking it as highly appealing, 39 percent as appealing, and only 1 percent as not appealing. HS 3 had 45 percent of respondents rating it as highly

appealing, while 54 percent found it appealing, and only 1 percent considered it not appealing.

For the Pen Case, PC 1 was perceived as highly appealing by 66 percent of respondents, followed by 31 percent who found it appealing and 3 percent who did not find it appealing. PC 2 had 50 percent of respondents rating it highly appealing, 46 percent finding it appealing, and 4 percent marking it as not appealing. PC 3 received 51 percent votes for being highly appealing, 44 percent for being appealing, and 5 percent for not appealing.

In the Backpack category, BP 1 was highly appealing to 59 percent of respondents, followed by 37 percent who found it appealing, while 4 percent considered it not appealing. BP 2 was highly appealing to 50 percent of respondents, appealing to 45 percent , and not appealing to 5 percent . BP 3 had a slightly lower preference, with 52 percent of respondents considering it highly appealing, 42 percent finding it appealing, and 6 percent marking it as not appealing.

Lastly, in the Tote Bag category, TB 1 was rated highly appealing by 56 percent of respondents, followed by 41 percent who found it appealing, and 3 percent who did not find it appealing. TB 2 was highly appealing to 50 percent of respondents, appealing to 47 percent, and not appealing to 3 percent. TB 3 had 47 percent of respondents rating it as highly appealing, 50 percent as appealing, and 3 percent as not appealing.

Overall, the Pen Case (PC 1) and Hanging Storage Organizer (HS 2) were the most well-received products, with the highest percentage of respondents rating them as highly appealing. The Cushion Covers and Tote Bags also received well, with most responses concentrated in the highly appealing and appealing categories, while a small fraction of respondents found some products less appealing.

4.4.1.2 Consumer preference of various components of product categories

The responses were collected using a five-point Likert scale, with the options: Very Good, Good, Average, Poor, and Very Poor. Table 4.8 presents consumer responses regarding the appeal of various product components, including appearance, look, size, shape, motifs, colour combination, and finishing. The data highlights consumer preferences and indicates how different aspects of the products influenced their perception.

Table 4.8: Consumer Preference of Components of product categories (percent)

N=80

Category		**Cushion Cover**	**Hanging Storage Organizer**	**Pen Case**	**Backpack**	**Tote Bag**
Appearance	Very good	55	52	62	56	57
	Good	43	45	35	34	34
	Average	2	3	3	10	9
	Poor	-	-	-	-	-
	Very poor	-	-	-	-	-
Look	Very good	49	51	62	56	51
	Good	42	48	34	34	35
	Average	9	1	4	10	4
	Poor	-	-	-	-	-
	Very poor	-	-	-	-	-
Size	Very good	49	50	52	51	50
	Good	47	41	45	39	46
	Average	4	4	3	10	4
	Poor	-	-	-	-	-
	Very poor	-	-	-	-	-
Shape	Very good	44	50	50	52	55
	Good	40	41	47	39	39
	Average	15	4	3	9	6
	Poor	1	-	-	-	-
	Very poor	-	-	-	-	-
Motifs	Very good	46	55	59	55	52
	Good	49	40	35	40	39
	Average	5	5	6	5	9
	Poor	-	-	-	-	-
	Very poor	-	-	-	-	-
Colour Combination	Very good	52	59	56	55	56
	Good	39	34	42	37	39
	Average	9	7	2	8	5
	Poor	-	-	-	-	-
	Very poor	-	-	-	-	-
Finishing	Very good	61	55	61	56	51
	Good	35	42	35	36	45
	Average	4	3	4	8	4
	Poor	-	-	-	-	-

	Very poor	-	-	-	-	

In terms of appearance, the Pen Case received the highest rating, with 61 percent of respondents marking it as "very good," followed by the Hanging Storage Organizer at 52 percent, the Backpack at 37 percent, and the Tote Bag at 36 percent. The Cushion Covers had 35 percent of respondents rating their appearance as very good. The majority of the remaining respondents rated appearance as "good," with responses ranging from 33 percent to 43 percent across categories. Only a small fraction of respondents found appearance to be "average," and none rated it as "poor" or "very poor."

Regarding look, the Cushion Covers were rated "very good" by 49 percent of respondents, followed by the Hanging Storage Organizer (51 percent), Pen Case (52 percent), Backpack (36 percent), and Tote Bag (31 percent). A significant proportion of respondents also rated the look as "good," with values ranging between 34 percent and 48 percent. Only a few respondents considered the look "average," while none rated it as "poor" or "very poor."

For size, the highest positive response was for Cushion Covers, with 49 percent of respondents rating them as "very good," followed by the Hanging Storage Organizer (50 percent), Pen Case (32 percent), Backpack (31 percent), and Tote Bag (30 percent). The "good" rating was also substantial, ranging between 31 percent and 45 percent across categories. A small percentage of respondents rated the size as "average," but none found it to be "poor" or "very poor."

In terms of shape, the highest rating was received by the Hanging Storage Organizer (50 percent "very good"), followed by Cushion Covers (44 percent), Pen Case (32 percent), Tote Bag (35 percent), and Backpack (30 percent). The "good" category was also well-represented across all products, with ratings ranging from 30 percent to 44 percent . A smaller fraction rated shape as "average," but no responses were recorded under "poor" or "very poor."

For motifs, the Cushion Covers and Hanging Storage Organizer received the highest number of "very good" ratings at 46 percent and 35 percent , respectively, followed by the Pen Case (39 percent), Backpack (35 percent), and Tote Bag (32 percent). The majority of remaining responses fell under the "good" category, while very few

respondents rated motifs as "average." No respondents rated motifs as "poor" or "very poor."

Regarding colour combination, 39 percent of respondents rated Cushion Covers as "very good," followed by Hanging Storage Organizer (34 percent), Pen Case (32 percent), Backpack (35 percent), and Tote Bag (36 percent). A significant proportion also rated colour combination as "good," with values ranging between 29 percent and 39 percent. Only a small fraction considered it "average," and none rated it as "poor" or "very poor."

Lastly, in terms of finishing, the Hanging Storage Organizer was rated "very good" by the highest number of respondents (53 percent), followed by the Backpack (36 percent), Tote Bag (31 percent), Cushion Covers (01 percent), and Pen Case (01 percent). A large number of respondents also rated finishing as "good," with ratings ranging from 33 percent to 45 percent . A small number of respondents found finishing to be "average," but none rated it as "poor" or "very poor."

Overall, the Hanging Storage Organizer and Pen Case received the most positive responses across multiple parameters, with high ratings for appearance, shape, and finishing. Cushion Covers, Tote Bags, and Backpacks also performed well, with the majority of responses falling in the "very good" and "good" categories, indicating a strong market preference for these products.

4.4.2 Market Acceptability Analysis

Market acceptability plays a crucial role in determining the commercial viability of newly designed products. To assess consumer interest in purchasing products made from Solapur Chaddar, responses were gathered regarding pricing preferences, willingness to buy, and preferred purchasing channels. This analysis helps in understanding the potential demand and identifying suitable marketing strategies for these products.

The following sections present insights into consumer preferences, including the price range they were willing to pay, their inclination towards purchasing these products, and their preferred mode of purchase.

4.4.2.1 Preferred Price Range for the Product Categories

The pricing preferences of respondents for different product categories made from Solapur Chaddar were presented in Table 4.9. The responses indicate varying price expectations depending on the type of product.

Table 4.9: Preferred price range for the product categories (percent)

N=80

Category / **Price Range**		**Less than 100**	**100-200**	**200-300**	**300-400**	**400-500**	**More than 500**
Cushion Cover	CC 1	12	50	22	10	6	-
	CC 2	12	45	24	12	6	1
	CC 3	9	45	22	17	4	3
Hanging Storage Organizer	HS 1	12	45	31	9	2	1
	HS 2	6	35	35	16	6	2
	HS 3	11	40	31	12	6	-
Pen Case	PC 1	40	35	20	4	1	-
	PC 2	44	32	20	4	-	-
	PC 3	51	35	9	5	-	-
Backpack	BP 1	9	15	19	20	16	21
	BP 2	4	14	19	24	17	22
	BP 3	9	11	24	21	13	19
Tote Bag	TB 1	9	19	15	26	17	14
	TB 2	4	21	17	25	14	19
	TB 3	6	16	20	27	15	16

For Cushion Covers, the most preferred price range was ₹100–200, with 45–50% of respondents selecting this range for all three cushion cover variants (CC 1, CC 2, and CC 3). The second most preferred price range was ₹200–300, chosen by 22–24% of respondents. A smaller proportion (6–7%) considered ₹400–500, while very few respondents opted for a price above ₹500.

Similarly, for the Hanging Storage Organizers, a significant portion of respondents (35–39%) preferred the ₹100–200 range, followed by 31–35% who chose ₹200–300. Only 3–

5% considered a price range above ₹500, indicating that most consumers expected these products to be affordably priced.

In the Pen Case category, the majority of respondents preferred the ₹100–200 price range, with 35–51% selecting this range across all three pen case variants. Around 20–30% of respondents chose the ₹200–300 range, while only a small fraction considered prices beyond ₹400.

In contrast, Backpacks had a higher price acceptance compared to other product categories. 24–30% of respondents preferred a price range of ₹300–400, while 21–26% were willing to pay ₹400–500. A smaller proportion (9–14%) considered a price below ₹100, showing that consumers were willing to spend more on this category.

For Tote Bags, the price preferences were more evenly distributed. 16–27% of respondents opted for ₹300–400, while 12–16% preferred ₹400–500. Only 4–6% of respondents selected a price below ₹100, indicating that tote bags were perceived as slightly higher-value products.

Overall Consumer Insights

The survey findings suggest that:

- For smaller products such as Cushion Covers, Hanging Storage Organizers, and Pen Cases, consumers preferred a price range of ₹100–300, making affordability a key factor.
- For larger products like Backpacks and Tote Bags, respondents were willing to pay a higher price, with a preference for the ₹300–500 range.
- A very small percentage of respondents considered prices above ₹500, suggesting a limited market for high-end, premium-priced versions of these products.

These insights highlight the need for strategic pricing, ensuring that the products remain accessible to consumers while maintaining a balance between affordability and perceived value.

4.4.2.2 Consumer Interest in Purchasing Solapur Chaddar-Based Products

To evaluate consumer interest in purchasing the developed products, respondents were asked whether they would consider buying these Solapur Chaddar-based items. The responses indicated a high level of interest, with 73.2% of participants expressing a definite willingness to purchase the products. Notably, none of the respondents outright

rejected the idea of buying, while 26.8% remained uncertain, indicating a potential market segment that could be influenced through effective marketing strategies and product awareness initiatives.

The overwhelmingly positive response suggests that Solapur Chaddar-based diversified products had strong market potential, and with appropriate branding and promotional efforts, consumer confidence and purchase intent could further increase.

4.4.2.3 Preferred Purchase Channels for Solapur Chaddar-Based Products

To understand consumer preferences regarding where they would like to purchase Solapur Chaddar-based products, respondents were given multiple options, including retail shops, online platforms, direct purchase from Solapur Chaddar manufacturers, exhibitions, and all of the above.

The responses revealed that a significant portion of consumers preferred multiple purchase channels, highlighting the need for a multi-platform marketing strategy. A notable number of respondents opted for "All of the above", indicating flexibility in their shopping preferences. Retail shops and online platforms were also widely favoured, suggesting that a combination of traditional and digital sales channels would be beneficial for reaching a broader consumer base.

These findings emphasize the importance of both physical and online availability of the products to cater to diverse consumer preferences, ensured convenience and accessibility for potential buyers.(Figure 4.15)

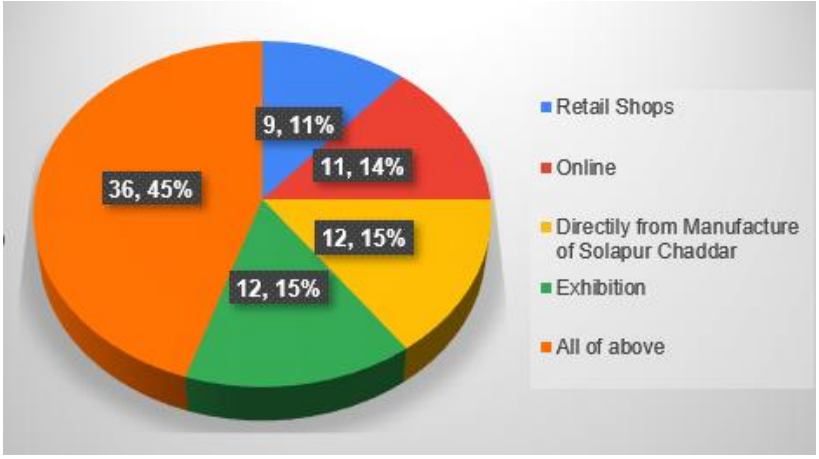


Figure 4.15: Preferred Purchase Channels for Solapur Chaddar-Based Products

4.4.2.4 Consumer Suggestions and Feedback

To gain insights into potential improvements and further product diversification, respondents were asked to provide suggestions regarding design modifications, additional product preferences, and general feedback on the developed Solapur Chaddar-based products.

1. Suggested Improvements in Product Design

Several respondents highlighted areas where the products could be enhanced for better market appeal. The key suggestions included:

- Finishing and Hardware Quality: Many respondents recommended better finishing and the use of high-quality fasteners like zippers to enhance durability and functionality.
- Colour Combination Enhancements: Multiple responses suggested experimenting with brighter colours and more vibrant colour combinations to make the products more visually attractive.
- Exploring Fabric Combinations: Some respondents proposed the inclusion of other fabrics along with Solapur Chaddar to create unique, fusion-based designs.
- Shape and Structure Modifications: Certain products, particularly the tote bags, pen cases, and cushion covers, were suggested to be redesigned for improved shape and structure.

2. Interest in Additional Product Categories

Respondents also expressed interest in seeing new product categories made from Solapur Chaddar, expanding the range beyond the developed items. The suggested products included:

- Apparel Items: Female vest coats
- Bags and Covers: Laptop covers/bags/sleeves, mobile pouches, bottle covers, wine bags
- Home Furnishing Products: Sofa covers, tablecloths, kitchen aprons, multi-utility bags, water-glass coasters, machine covers, doormats, floor mats, quilt covers, chair covers, bed covers
- Storage Solutions: Money pockets, comb holders, phone pouches

The diversity of suggested products indicates a strong consumer interest in expanding the utility of Solapur Chaddar beyond traditional applications, making it more relevant to contemporary lifestyles.

3. General Consumer Feedback

The feedback from respondents was largely positive, with many appreciating the innovative approach of using Solapur Chaddar for diverse products. Some of the key responses included:

- Encouragement for Reviving Handloom Craft: Many respondents appreciated the effort to revive the woven art and increase the value of Solapur Chaddar by introducing new product lines.
- Aesthetic and Design Appreciation: The products were described as beautiful, elegant, and innovative, with specific appreciation for the backpack, tote bag, and cushion covers.
- Scope for Improvement: Some respondents pointed out the need for enhancing quality, feel, and finishing, while others suggested adding premium elements to improve market appeal.
- Sustainability and Uniqueness: Several responses recognized the sustainable aspect of the products and encouraged further development in this direction.

Overall, the consumer feedback reinforced the potential of Solapur Chaddar-based products in contemporary markets. While the responses indicated high acceptance, they also provided valuable insights into areas of improvement and diversification, which could guide future product developments.

CHAPTER V

SUMMARY AND CONCLUSION

5.1 Introduction

The study aimed to document the evolution and product diversification of Solapur Chaddar, a traditionally woven textile from Solapur, Maharashtra. Over the time, the industry experienced various transformations in terms of production process and techniques, designs, and market expansion. The research focused on understanding these changes, analysis of the factors that influenced them, and exploring possibilities for product diversification.

5.1.1 Research Purpose

The purpose of this research was to document the historical and contemporary production process and techniques of Solapur Chaddar, its evolution, and explore its potential for diversification into new product categories. The study aimed to bridge the gap between traditional craftsmanship and contemporary market demands, ensuring the sustainability of the craft.

5.1.2 Objectives of the Study

The research was conducted with the following objectives:

1. To document the production techniques used in making Solapur Chaddar over time.
2. To analyse the evolution of Solapur Chaddar, highlighting key changes in production methods, designs, and market dynamics.
3. To create various products using Solapur Chaddar as raw material, demonstrating its adaptability for contemporary uses.
4. To evaluate the developed products for their suitability and market acceptability.

5.1.3 Significance of the Study

The study holds significance in preserving the heritage of Solapur Chaddar while adapting it to modern consumer preferences. By documenting its historical evolution and proposing new product applications, the research contributes to the sustainability of the craft and provides insights for artisans, manufacturers, and policymakers.

5.2 Review of Literature

The literature review pertaining to this study was collected from secondary sources, including published research papers, books, reports, and previous studies related to Solapur Chaddar, Maharashtra traditional textiles, handloom industries, and product diversification.

5.2.1 Theoretical Review

The theoretical review focused on understanding the Indian textile industry, the history of woven textiles in Maharashtra, and the history and evolution of the Solapur textile industry. It also covered aspects of textile production, handloom weaving, technological advancements, and craft sustainability. Various theories related to craft evolution and product adaptation were explored.

5.2.2 Related Research Review

Studies on product diversification and craft sustainability were explored to understand their relevance to this study. The related reviews provided insights into strategies for adapting traditional textiles to modern markets.

5.3 Methodology

The research employed a mixed-method approach, incorporating both qualitative and quantitative methods. Data collection involved field visits, interviews with manufacturers and weavers, observation of production processes, and survey for product evaluation.

5.3.1 Documentation of Production Process

The documentation process involved a preliminary survey of the craft, sample selection, preparation of the tools, and collection of data. These steps facilitated a comprehensive understanding of the production techniques, enabling detailed documentation.

5.3.2 Analysis of Evolution

The evolution of Solapur Chaddar was analysed by comparing historical and present practices. Changes in designs, motifs, colours, and production techniques were identified, along with factors influencing these transformations. A SWOT analysis was done to evaluate the industry's strengths, weaknesses, opportunities, and threats.

5.3.3 Product Diversification

To explore new applications of Solapur Chaddar, final product categories were selected and design sketches were developed for selected products under each category. The products were drafted using Rich peace software, and scaled-down versions were created before final construction.

5.3.4 Evaluation of Products

A product evaluation survey was conducted to gather consumer feedback and assess market acceptance. The survey was carried out at Khandelwal Home Saaz, Vadodara, Gujarat, and The Maharaja Sayajirao University girls' hostels. The responses provided insights into consumer preferences regarding aesthetics, functionality, pricing, and purchase intent.

5.4 Summary of Results and Discussion

5.4.1 Documentation of Production Process

The study documented the traditional weaving process, highlighting handloom practices that had been followed for generations. The transition to power loom weaving was analysed, revealing how mechanization impacted productivity, labour dynamics, and design capabilities. The documentation of design, motif, and colour showcased the changes in patterns over time, influenced by market trends and consumer preferences.

5.4.2 Evolution of Solapur Chaddar

The analysis of evolution revealed that Solapur Chaddar underwent significant changes in response to industrialization and globalization. The early origins and establishment phase saw its growth as a handloom craft, while industrial shifts and mechanization introduced power loom production, leading to both advantages and challenges for artisans. The evolution of designs, motifs, and colours, indicating a shift towards contemporary aesthetics to cater to modern markets was observed in the study.

Additionally, a SWOT analysis of the Solapur Chaddar Industry was conducted, evaluating the strengths, weaknesses, opportunities, and threats from the perspectives of the industry, manufacturers, and weavers. This analysis provided a structured understanding of the industry's current status and future prospects.

5.4.3 Product Diversification

The experimentation phase led to the development of diversified products using Solapur Chaddar fabric. The process of product diversification began with the utilization of mill surplus Chaddar as the primary material for construction. Suitable designs, motifs, and colour combinations were carefully selected to ensure aesthetic appeal and relevance to contemporary markets.

Following the selection process, drafts of the final product designs were created using Rich peace software, scaled down to 1:4 inches for documentation purposes. Initial sample products were then constructed to assess the feasibility of using Solapur Chaddar for different applications. This stage involved testing essential construction parameters such as stitching techniques, seam finishes, choice of fasteners, and reinforcement methods.

Based on these trials, necessary refinements were made before proceeding with the final construction of diversified products, including bags, cushion covers, and lifestyle accessories. The research demonstrated that Solapur Chaddar could be effectively utilized beyond its traditional use

5.4.4 Evaluation of Products and Market Acceptability

The evaluation phase assessed both the functional and aesthetic aspects of the constructed products, as well as their market acceptance. Each product category, including bags, cushion covers, and lifestyle accessories, was evaluated based on consumer preferences and usability. The evaluation was conducted through structured feedback from respondents, who assessed various aspects such as design appeal, fabric suitability, durability, and overall craftsmanship. The responses indicated a positive reception toward the products, with particular appreciation for the use of Solapur Chaddar in contemporary applications. However, areas for improvement were also identified, including the need for better finishing, refined colour combinations, and enhanced structural components such as fasteners and reinforcements.

Beyond product-specific feedback, market acceptability was analysed through consumer interest in purchasing the designed products. A majority of respondents showed willingness to buy, with preferences for specific price ranges that aligned with perceived

product value. Additionally, the survey identified preferred purchasing channels, including retail stores, online platforms, exhibitions, and direct sales from manufacturers. These insights provided a strategic direction for expanding the market reach of Solapur Chaddar-based products, emphasizing the importance of accessibility and product positioning in both offline and online retail spaces.

5.5 Conclusion

The study successfully documented the traditional and modern production techniques of Solapur Chaddar. Evolution of production technique, colour, motifs and layout were analysed. The potential for product diversification was explored by utilizing mill surplus to promote sustainability. Key findings indicated that the industry had adapted to mechanization, challenges such as competition from synthetic alternatives and declining traditional craftsmanship persisted.

The research demonstrated that Solapur Chaddar could be revitalized through contemporary product diversification, ensuring its relevance in modern markets. Consumer feedback highlighted strong interest in these products, suggesting that targeted modifications could enhance their commercial appeal.

Implications of the Study:

1. The findings contributed to the preservation of Solapur Chaddar by providing a comprehensive industry analysis and documenting key changes over time.

2. The study emphasized the importance of innovation and adaptation in sustaining traditional crafts.

3. The insights from the evaluation process could guide future product development and market positioning strategies.

In conclusion, the study reinforced the cultural and economic value of Solapur Chaddar and presented a pathway for its continued growth through innovation, strategic marketing, and design adaptation. Future research could explore further product applications and assess long-term consumer trends to support the industry's sustainability.

Recommendations for Further Study

Based on the findings of this research, the following areas are recommended for further study to enhance the scope and sustainability of Solapur Chaddar products:

1. **Strengthening Online, Exhibition, and Retail Presence for Solapur Chaddar Products** – A detailed exploration of strategies to expand the market reach of Solapur Chaddar through digital platforms, trade exhibitions, and retail partnerships to increase consumer accessibility and brand visibility.

2. **Advancing Construction Techniques and Material Selection in Solapur Chaddar Products** – Investigating innovative construction methods, improved finishing techniques, and the potential integration of new materials to enhance the durability, functionality, and aesthetic appeal of Solapur Chaddar-based products.

3. **Upcycling and Eco-Friendly Practices in Solapur Chaddar Production** – Studying sustainable approaches such as fabric upcycling, waste minimization, and the adoption of eco-friendly production techniques to align with global sustainability trends and promote responsible textile practices.

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Appendix – I

Permission Letter

To,

Subject: Request for Permission to Conduct Research on Solapur Chaddar

Respected Sir,

Miss. Sharayu Late, is a second-year master's student in the Department of Clothing and Textile at The Maharaja Sayajirao University of Baroda. Under my guidance conducting research as part of her M.Sc. dissertation titled, "A Study on the Evolution and Product Diversification of Solapur Chaddar."

Study Overview:

The focus of this study is to document the techniques used in the production of Solapur Chaddar, analyse its historical evolution, and explore product diversification opportunities. The aim is to preserve this craft by identifying ways to adapt it for contemporary markets while supporting the artisans involved.

Study Methodology:

The research will involve interviews, surveys, and field visits with weavers, manufacturers, and industry experts in the Solapur Chaddar industry. Additionally, she will analyse historical records and gather primary data through in-person interactions with artisans and stakeholders to document production techniques, explore opportunities for product diversification, and assess market trends.

Request for Permission:

Through this letter, we kindly request your permission to conduct interviews and surveys with your artisans and access your records related to Solapur Chaddar production. The information collected will be used solely for academic purposes and will remain confidential.

Timeframe:

The data collection phase of the study is planned over the next 2–3 months, during which we hope to schedule visits and interactions with the artisans and relevant stakeholders at your convenience.

Benefits:

This research aims to contribute to the sustainable development of the Solapur Chaddar industry by documenting techniques used in the production of Solapur Chaddar and

exploring ways to diversify products for new markets. The findings could potentially support future policy decisions and development programs for artisans.

Conclusion:

If you require any additional information or have questions about this study, please do not hesitate to contact **Miss. Sharayu Late (Research Student) 7823006656** or via email at sharayulate8421@gmail.com

Thank you for considering our request. We look forward to your positive response and cooperation in this study.

Sincerely,

Guide- Dr. Hemlata Raval
Department of Clothing and Textiles
Faculty of Family and Community Sciences
The Maharaja Sayajirao University of
Baroda, Vadodara, Gujarat - 390002
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Appendix - II

Consent Form

DEPARTMENT OF CLOTHING AND TEXTILE

FACULTY OF FAMILY AND COMMUNITY SCIENCES

THE MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA,

VADODARA

STUDY TITLE: "A study on the evolution of Solapur Chaddar and its product diversification"

INVESTIGATORS

Guide – Dr. Hemlata Raval
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We invite you to take part in a research study, which seeks to gain insights into the A study on the evolution of Solapur Chaddar and its product diversification as a part of partial fulfilment of the master's degree program which is self-funded. Participation in this study is entirely voluntary. If you decide to participate, you must sign this form to show that you want to take part.

Purpose of the Research: This research study is being done to contribute to the preservation and adaptation of Solapur Chaddar craft by:

a) Creating a comprehensive historical record of the crafts techniques and evolution.
b) Identifying potential new applications and markets for Solapur Chaddar products.
c) Providing insights that could inform policy-making and craft development initiatives.
d) Exploring ways to enhance the economic sustainability of the craft for artisans.

Time Duration of the Procedures and Study: Your participation in this study will last approximately 2-3 months and it would be one time interaction at your convenience.

Procedures: If you agree to participate in this study, you will be expected / asked to share information related to:

- Your experiences, knowledge, and opinions regarding the production techniques and evolution of Solapur Chaddar.
- Any specific changes or innovations in designs, production methods, and materials used over time.
- The market dynamics and current challenges faced by artisans and manufacturers of Solapur Chaddar.

● Your thoughts on the potential for product diversification and adaptation of Solapur Chaddar in contemporary markets.
Participation may involve interviews, surveys, or field visits, depending on the scope of your involvement in the study.

Risks and Benefits: There are no known risks associated with participating in this study. However, we hope that the information we gather from this study will help us gain insights into the evolution of Solapur Chaddar, including its production techniques, design adaptations, and potential for product diversification. This research aims to contribute to the preservation of traditional craft and promote sustainable development of Solapur Chaddar in contemporary markets.

Confidentiality: All information collected during this study will be kept strictly confidential. Your name will not be used in any reports or publications resulting from this study. Your responses will be assigned a unique identification number that will be used to identify your data.

Voluntary Participation: Participation in this study is entirely voluntary. You may refuse to participate or withdraw from the study at any time without penalty or loss of benefits to which you are otherwise entitled.

Cost: Participating in this study will entail no associated costs or charges.

Contact Information: If you have any questions or concerns about this study, please contact Sharayu Late 7823006656 sharayulate8421@gmail.com

Consent: By signing this consent form, you are agreeing to participate in this study. You understand that you are free to withdraw from the study at any time without penalty. You also understand that your participation in this study is confidential.

_____

Signature of participant

Investigator's Statement: I have explained the research procedures and the purpose of the study. The participant was given an opportunity to discuss these procedures and ask any additional questions.

_____

(Sharayu Late)

Researcher's name and signature

Date:

Place:

Note: Please sign and return a copy of this consent form to confirm your participation in the study. Thank you for your willingness to contribute to this research.

Questionnaires

Questionnaire for Solapur Chaddar Manufacturers

1. Name of the manufacturing unit: _____

2. Year of establishment: _____

3. Number of employees: _____

4. Annual turnover (in INR):

☐ Less than 1 crore

☐ 1-5 crores

☐ 5-10 crores

☐ More than 10 crores

5. What type of loom do you typically use for weaving of Solapur Chaddar?

6. What is your average monthly production of Solapur Chaddar?

7. Which types of raw material do you use for manufacturing?

☐ Cotton

☐ Wool

☐ Synthetic blend

Others:

8. On a scale of 1 to 5 how would you rate the quality of raw materials available?

☐ Very poor

☐ Poor

☐ Fair

☐ Good

☐ Excellent

9. Do you face any challenges in procuring raw materials?

☐ Yes

☐ No

10. If the answer to the above question is yes then can you please specify the challenges?

11. Who are your primary customers or buyers?

☐ Local retailers

☐ Wholesalers

☐ Online platforms

☐ Export markets

Others :

12. On the scale of 1 to 5 how would you rate the current demand for Solapur chaddars?

☐ Very low

☐ Low

☐ Average

☐ High

☐ Very high

13. How has the demand changed in the last 5 years?

☐ Increased significantly

☐ Increased slightly

☐ Remain same

☐ Decreased slightly

☐ Decreased significantly

14. Who do you consider your main competitors?

☐ Other local manufacturers

☐ Manufacturers from other regions

☐ Imported products

Other :

15. Have you adopted any new technologies in your manufacturing process in the last 5 years?

☐ Yes

☐ No

16. If the answer to the above question is yes then can you please specify the technologies?

17 . On the scale of 1 to 5 how important do you think innovation is for the future of your business?

☐ Not important at all

☐ Slightly important

☐ Moderately important

☐ Important

☐ Extremely important

18. Are you planning to diversify your product range in the next 2 years ? (If yes, what new products are you considering?)

19. Are you aware of any government schemes supporting the Solapur Chaddar industry? (If yes, have you benefited from any please specify)

20. What do you think are the biggest challenges facing the Solapur Chaddar industry today?

21. In your opinion what steps could be taken to improve the global competitiveness of Solapur Chaddars?

22. How do you see the future of the Solapur Chaddar industry in the next 10 years?

Questionnaire for Solapur Chaddar Weavers

1. Name: _____

2. Gender: Male ☐ Female ☐

3. Education level:

☐ Illiterate

☐ Primary

☐ Secondary

☐ Higher secondary

4. Years of experience in weaving:

☐ 5-15 years

☐ 15-30 years

☐ More than 30 years

5. How do you learn Chaddar making?

☐ Family members

☐ Employer

☐ Workshops

☐ Self

6. How many chaddar do you weave per day?

☐ Less than 10

☐ 10 to 15

☐ More than 15

7. How much money do you get per piece of chaddar?

☐ Less than 30 Rs

☐ 30 to 40 Rs

☐ 40 to 50 Rs

☐ More than 50 Rs

8. What are the major reasons you are still practicing the craft?

☐ Keeping tradition alive

☐ No other means of livelihood

☐ Stable means of livelihood

☐ Benefits from government for craft

9. How has technology affected your practice of the craft?

☐ Made it easier

☐ Hasn't affected much

☐ Made it difficult

10. Which yarns have you used to make chaddars?

☐ Cotton

☐ Wool

☐ Synthetic

Other:

11. Which dye is used to dye the yarns?

☐ Natural

☐ Reactive

☐ Direct

☐ All of above

12. Which loom do you use to make the chaddars?

☐ Jacquard loom

☐ Pit loom

☐ Dobby loom

13. What are the patterns that are used in the chaddars?

☐ Stripes

☐ Checks

☐ Textures

☐ Motifs

14. Which type of motifs are incorporated in the chaddars?

☐ Figurative

☐ Floral

☐ Geometric

Other:

15. What are the traditional colour patterns of the chaddars?

☐ Brights colours

☐ Dull colours

☐ Pastel colours

Others:

16. What is the current trend in colour patterns of the chaddars?

☐ Brights colours

☐ Dull colours

☐ Pastel colours

17. Which size of the chaddar is the most popular?

☐ 54”x90”

☐ 60”x90”

☐ 72”x100”

☐ 90”x108”

18. In which of making chaddars can a technological advancement be made?

☐ Raw material processing

☐ Dyeing

☐ Pre-loom process

☐ On loom process

☐ Finishing

19. From where do you get the deign input?

☐ Designer

☐ Inspired

☐ Traditional

☐ Customised

20. Are you provided with any incentives from the employer?

☐ Yes

☐ No

21. How can the working conditions be improved?

☐ Ventilation

☐ Noise reduction

☐ Maintaining cleanliness

☐ Providing safety gear

Other :

22. Considering the effort behind the craft, how can its market value be increased?

☐ By government help

☐ By advertising and increasing market avenues

☐ By participation in competitions/exhibitions/workshops

☐ Not sure

23. How has the craft changed since you have started practicing it?

☐ Change in product size

☐ Change in aesthetic appearance

☐ Change in price

☐ Change in demand

☐ Change in product range

☐ Change in availability and use of technology

☐ Change in government aid

24. Which market do you mainly cater to?

☐ Within Maharashtra

☐ Other states of India

☐ International export

Other:

25. Which is the major challenge faced by the craft?

☐ Low demand of products

☐ Discontinuation to next generation

☐ Low funding

☐ Difficulty in procuring raw material

☐ Unsafe work conditions

Others:

संमती पत्र

वस्त्र विभाग
फॅमिली आणि कम्युनिटी सायन्सेस फॅकल्टी
महाराजा सयाजीराव विद्यापीठ बडोदा
वडोदरा

अभ्यासाचे शीर्षक: "सोलापूर चादरच्या उत्क्रांतीचा अभ्यास आणि त्याचे उत्पादन विविधीकरण"

तपासकर्ते

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संशोधक - शरयू लाटे
वस्त्र विभाग
फॅमिली अँड कम्युनिटी सायन्सेस फॅकल्टी
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आम्ही तुम्हाला एका संशोधन अभ्यासात भाग घेण्यासाठी आमंत्रित करतो, जो स्वयं-अनुदानित असलेल्या पदव्युत्तर पदवी कार्यक्रमाच्या आंशिक पूर्ततेचा एक भाग म्हणून सोलापूर चादरच्या उत्क्रांतीवरील अभ्यास आणि त्याच्या उत्पादनातील विविधतेबद्दल अंतर्दृष्टी मिळविण्याचा प्रयत्न करतो. या अभ्यासातील सहभाग पूर्णपणे ऐच्छिक आहे. तुम्ही सहभागी होण्याचे ठरवल्यास, तुम्हाला भाग घ्यायचा आहे हे दर्शविण्यासाठी तुम्ही या फॉर्मवर स्वाक्षरी करणे आवश्यक आहे.

संशोधनाचा उद्देश: हा संशोधन अभ्यास सोलापूर चादर हस्तकलेचे जतन आणि रुपांतर करण्यासाठी हातभार लावण्यासाठी केला जात आहे:

a) हस्तकलेचे तंत्र आणि उत्क्रांती यांचे सर्वसमावेशक ऐतिहासिक रेकॉर्ड तयार करणे.
b) सोलापूर चादर उत्पादनांसाठी संभाव्य नवीन अनुप्रयोग आणि बाजारपेठ ओळखणे.
c) अंतर्दृष्टी प्रदान करणे जे धोरण-निर्मिती आणि हस्तकला विकास उपक्रमांची माहिती देऊ शकेल.
d) कारागिरांसाठी क्राफ्टची आर्थिक स्थिरता वाढवण्याचे मार्ग शोधणे.

कार्यपद्धती आणि अभ्यासाचा कालावधी: या अभ्यासातील तुमचा सहभाग अंदाजे २-३ महिने टिकेल आणि तुमच्या सोयीनुसार तो एक वेळचा संवाद असेल.

कार्यपद्धती: जर तुम्ही या अभ्यासात सहभागी होण्यास सहमत असाल, तर तुम्हाला पुढील गोष्टींशी संबंधित माहिती सामायिक करण्यास सांगितले जाईल.

- सोलापूर चादरचे उत्पादन तंत्र आणि उत्क्रांतीबाबत तुमचे अनुभव, ज्ञान आणि मते.
- कालांतराने वापरल्या जाणाऱ्या डिझाईन्स, उत्पादन पद्धती आणि सामग्रीमध्ये कोणतेही विशिष्ट बदल किंवा नवकल्पना.
- सोलापूर चादरचे कारागीर आणि उत्पादकांसमोरील बाजारातील गतिशीलता आणि सध्याची आव्हाने.
- समकालीन बाजारपेठांमध्ये सोलापूर चादरचे उत्पादन वैविध्य आणि रुपांतर करण्याच्या संभाव्यतेबद्दल तुमचे विचार.

सहभागामध्ये मुलाखती, सर्वेक्षण किंवा फील्ड भेटींचा समावेश असू शकतो, अभ्यासातील तुमच्या सहभागाच्या व्याप्तीनुसार.

जोखीम आणि फायदे: या अभ्यासात सहभागी होण्याशी संबंधित कोणतेही ज्ञात धोके नाहीत. तथापि, आम्हाला आशा आहे की आम्ही या अभ्यासातून गोळा केलेली माहिती आम्हाला सोलापूर चादरच्या उत्क्रांतीबद्दल अंतर्दृष्टी मिळविण्यात मदत करेल, ज्यामध्ये उत्पादन तंत्रे, डिझाइन रुपांतरे आणि उत्पादनाच्या विविधीकरणाच्या संभाव्यतेचा समावेश आहे. या संशोधनाचे उद्दिष्ट पारंपारिक हस्तकला जतन करण्यासाठी आणि समकालीन बाजारपेठांमध्ये सोलापूर चादरच्या शाश्वत विकासाला चालना देण्यासाठी योगदान देणे आहे.

गोपनीयता: या अभ्यासादरम्यान गोळा केलेली सर्व माहिती पूर्णपणे गोपनीय ठेवली जाईल. या अभ्यासाच्या परिणामी कोणत्याही अहवालात किंवा प्रकाशनांमध्ये तुमचे नाव वापरले जाणार नाही. तुमच्या प्रतिसादांना एक अद्वितीय ओळख क्रमांक नियुक्त केला जाईल जो तुमचा डेटा ओळखण्यासाठी वापरला जाईल.

ऐच्छिक सहभाग: या अभ्यासातील सहभाग पूर्णपणे ऐच्छिक आहे. तुम्ही कोणत्याही वेळी दंड किंवा फायद्यांच्या नुकसानाशिवाय अभ्यासात सहभागी होण्यास किंवा मागे घेण्यास नकार देऊ शकता ज्याचे तुम्ही पात्र आहात.

खर्च: या अभ्यासात सहभागी होण्यासाठी कोणतेही संबंधित खर्च किंवा शुल्क आकारले जाणार नाही.

संपर्क माहिती: या अभ्यासाबाबत तुम्हाला काही प्रश्न किंवा समस्या असल्यास, कृपया शरयु लाटेशी संपर्क साधा = ७८२३००६६५६, sharayulate8421@gmail.com

संमती: या संमती फॉर्मवर स्वाक्षरी करून, तुम्ही या अभ्यासात सहभागी होण्यास सहमत आहात. तुम्ही समजता की तुम्ही कोणत्याही वेळी दंडाशिवाय अभ्यासातून माघार घेण्यास मोकळे आहात. तुम्ही हे देखील समजता की या अभ्यासातील तुमचा सहभाग गोपनीय आहे.

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सहभागीची स्वाक्षरी

अन्वेषकाचे विधान: मी संशोधन प्रक्रिया आणि अभ्यासाचा उद्देश स्पष्ट केला आहे. सहभागीला या प्रक्रियेवर चर्चा करण्याची आणि कोणतेही अतिरिक्त प्रश्न विचारण्याची संधी देण्यात आली.

_____

(शरयू लाटे)
संशोधकाचे नाव आणि स्वाक्षरी

तारीख:
ठिकाण:

टीप: अभ्यासात तुमचा सहभाग निश्चित करण्यासाठी कृपया स्वाक्षरी करा आणि या संमती फॉर्मची एक प्रत परत करा. या संशोधनात योगदान देण्याच्या इच्छेबद्दल धन्यवाद.

प्रश्नावली

सोलापूर चादर उत्पादकांसाठी प्रश्नावली

१. उत्पादन युनिटचे नाव: _____
२. स्थापनेचे वर्ष: _____
३. कर्मचाऱ्यांची संख्या: _____
४. वार्षिक उलाढाल (भारतीय रुपयांमध्ये):

☐ १ कोटींपेक्षा कमी
☐ १-५ कोटी
☐ ५-१० कोटी
☐ १० कोटींपेक्षा जास्त

५. सोलापूर चादर विणण्यासाठी तुम्ही सामान्यतः कोणत्या प्रकारच्या यंत्रमागाचा वापर करता?

६. सोलापूर चादरचे तुमचे सरासरी मासिक उत्पादन किती आहे?

७. उत्पादनासाठी तुम्ही कोणत्या प्रकारचा कच्चा माल वापरता?

☐ कापूस
☐ लोकर
☐ सिंथेटिक मिश्रण
इतर:

८. १ ते ५ च्या प्रमाणात उपलब्ध असलेल्या कच्च्या मालाच्या गुणवत्तेचे तुम्ही कसे मूल्यांकन कराल?

☐ खूपच निकृष्ट
☐ निकृष्ट
☐ चांगले
☐ उत्कृष्ट

९. कच्चा माल खरेदी करताना तुम्हाला काही आव्हाने येतात का?

☐ होय
☐ नाही
१०. जर वरील प्रश्नाचे उत्तर हो असेल तर कृपया तुम्ही आव्हाने निर्दिष्ट करू शकता का?

११. तुमचे प्राथमिक ग्राहक किंवा खरेदीदार कोण आहेत?

☐ स्थानिक किरकोळ विक्रेते
☐ घाऊक विक्रेते
☐ ऑनलाइन प्लॅटफॉर्म
☐ निर्यात बाजारपेठ
इतर:
१२. १ ते ५ च्या स्केलवर तुम्ही सोलापूरच्या चादरीच्या सध्याच्या मागणीला कसे रेट कराल?

☐ खूप कमी
☐ कमी
☐ सरासरी
☐ उच्च

☐ खूप जास्त

१३. गेल्या ५ वर्षात मागणी कशी बदलली आहे?
☐ लक्षणीय वाढ झाली
☐ किंचित वाढ झाली
☐ तशीच राहा
☐ किंचित कमी झाली
☐ लक्षणीय घट झाली

१४. तुम्ही तुमचे मुख्य स्पर्धक कोणाला मानता?
☐ इतर स्थानिक उत्पादक
☐ इतर प्रदेशातील उत्पादक
☐ आयात केलेली उत्पादने
इतर:

१५. गेल्या ५ वर्षात तुम्ही तुमच्या उत्पादन प्रक्रियेत काही नवीन तंत्रज्ञान स्वीकारले आहे का?
☐ होय
☐ नाही

१६. जर वरील प्रश्नाचे उत्तर हो असेल तर तुम्ही कृपया तंत्रज्ञान निर्दिष्ट करू शकाल का?

१७. १ ते ५ च्या स्केलवर तुमच्या व्यवसायाच्या भविष्यासाठी नावीन्य किती महत्त्वाचे आहे असे तुम्हाला वाटते?
☐ अजिबात महत्वाचे नाही
☐ थोडेसे महत्वाचे
☐ मध्यम महत्वाचे
☐ महत्त्वाचे
☐ अत्यंत महत्वाचे

१८. पुढील २ वर्षांत तुम्ही तुमच्या उत्पादन श्रेणीत विविधता आणण्याचा विचार करत आहात का? (जर हो, तर तुम्ही कोणत्या नवीन उत्पादनांचा विचार करत आहात?)

१९. सोलापूर चादर उद्योगाला पाठिंबा देणाऱ्या कोणत्याही सरकारी योजनांविषयी तुम्हाला माहिती आहे का? (जर हो, तर तुम्हाला कोणत्याही योजनांचा फायदा झाला आहे का ते कृपया सांगा)

२०. सोलापूर चादर उद्योगासमोरील आज सर्वात मोठी आव्हाने कोणती आहेत असे तुम्हाला वाटते?

२१. तुमच्या मते सोलापूर चादर उद्योगाची जागतिक स्पर्धात्मकता सुधारण्यासाठी कोणती पावले उचलता येतील?

२२. पुढील १० वर्षांत सोलापूर चादर उद्योगाचे भविष्य तुम्हाला कसे दिसते?

सोलापूर चादर विणकरांसाठी प्रश्नावली

१. नाव: _____

२. लिंग: पुरुष महिला

३. शिक्षण पातळी:
☐ निरक्षर
☐ प्राथमिक
☐ माध्यमिक
☐ उच्च माध्यमिक

४. विणकामाचा अनुभव वर्षे:
☐ ५-१५ वर्षे
☐ १५-३० वर्षे
☐ ३० वर्षांपेक्षा जास्त

५. तुम्ही चादर बनवणे कसे शिकता?
☐ कुटुंबातील सदस्य
☐ नियोक्ता
☐ कार्यशाळा
☐ स्वतः

६. तुम्ही दररोज किती चादर विणता?
☐ १० पेक्षा कमी
☐ १० ते १५
☐ १५ पेक्षा जास्त

७. प्रत्येक चादरसाठी तुम्हाला किती पैसे मिळतात?
☐ ३० रुपयांपेक्षा कमी
☐ ३० ते ४० रुपये
☐ ४० ते ५० रुपये
☐ ५० रुपयांपेक्षा जास्त

८. तुम्ही अजूनही या कलाकृतीचा सराव का करत आहात याचे प्रमुख कारण काय आहे?
☐ परंपरा जिवंत ठेवणे
☐ उपजीविकेचे इतर कोणतेही साधन नाही
☐ उपजीविकेचे स्थिर साधन
☐ कामाकरिता सरकारकडून मिळणारे फायदे

९. तंत्रज्ञानाचा तुमच्या कलाकृतीवर कसा परिणाम झाला आहे?
☐ ते सोपे केले
☐ जास्त परिणाम झाला नाही
☐ ते कठीण केले

१०. चददार बनवण्यासाठी तुम्ही कोणते धागे वापरले आहेत?

☐ कापूस
☐ लोकर
☐ सिंथेटिक

इतर:

११. धागे रंगविण्यासाठी कोणता रंग वापरला जातो?

☐ नैसर्गिक
☐ प्रतिक्रियाशील
☐ थेट
☐ वरील सर्व

१२. चददार बनवण्यासाठी तुम्ही कोणत्या लूमचा वापर करता?

☐ जॅकवर्ड लूम
☐ पिट लूम
☐ डॉबी लूम

१३. चददारांमध्ये कोणते नमुने वापरले जातात?

☐ पट्टे
☐ तपासणी
☐ पोत
☐ नमुने

१४. चददारांमध्ये कोणत्या प्रकारचे नमुने समाविष्ट केले जातात?

☐ लाक्षणिक
☐ फुलांचा
☐ भूमितीय

इतर:

१५. चददारांचे पारंपारिक रंग नमुने कोणते आहेत?

☐ चमकदार रंग
☐ निस्तेज रंग
☐ पेस्टल रंग

इतर:

१६. चदरांच्या रंगांच्या नमुन्यांमध्ये सध्याचा ट्रेंड काय आहे?

☐ चमकदार रंग
☐ निस्तेज रंग
☐ पेस्टल रंग

१७. चदरचा कोणता आकार सर्वात लोकप्रिय आहे?

☐ ५४”x९०”

☐ ६०”x९०”
☐ ७२”x१००”
☐ ९०”x१०८”

१८. कोणत्या चदर बनवण्यात तांत्रिक प्रगती करता येईल?
☐ कच्च्या मालाची प्रक्रिया
☐ रंगाई
☐ प्री-लूम प्रक्रिया
☐ लूम प्रक्रियेवर
☐ फिनिशिंग

१९. तुम्हाला डिझाईन्स इनपुट कुठून मिळतो?
☐ डिझायनर
☐ प्रेरित
☐ पारंपारिक
☐ सानुकूलित

२०. तुम्हाला नियोक्त्याकडून काही प्रोत्साहन दिले जाते का?
☐ हो
☐ नाही

२१. कामाच्या परिस्थितीत सुधारणा कशी करता येईल?
☐ वायुवीजन
☐ आवाज कमी करणे
☐ स्वच्छता राखणे
☐ सुरक्षा उपकरणे पुरवणे
इतर :

२२. या हस्तकलेमागील प्रयत्नांचा विचार करता त्याचे बाजार मूल्य कसे वाढवता येईल?
☐ सरकारी मदतीद्वारे
☐ जाहिराती आणि बाजारपेठेतील संधी वाढवून
☐ स्पर्धा/प्रदर्शन/कार्यशाळांमध्ये सहभाग घेऊन
☐ खात्री नाही

२३. तुम्ही या हस्तकलेचा सराव सुरू केल्यापासून ते कसे बदलले आहे?
☐ उत्पादनाच्या आकारात बदल
☐ सौंदर्यपूर्ण स्वरूपातील बदल
☐ किंमतीत बदल
☐ मागणीतील बदल
☐ उत्पादन श्रेणीत बदल
☐ तंत्रज्ञानाची उपलब्धता आणि वापरात बदल

☐ सरकारी मदतीत बदल

२४. तुम्ही प्रामुख्याने कोणत्या बाजारपेठेला प्राधान्य देता?

☐ महाराष्ट्रात
☐ भारतातील इतर राज्ये
☐ आंतरराष्ट्रीय निर्यात

इतर:

२५. या हस्तकलेसमोरील प्रमुख आव्हान कोणते आहे?

☐ उत्पादनांची कमी मागणी
☐ पुढील पिढीला बंद करणे
☐ कमी निधी
☐ कच्चा माल खरेदी करण्यात अडचण
☐ असुरक्षित कामाची परिस्थिती

इतर:

Appendix – III

Questionnaire for Diversified Solapur Chaddar Products for consumer evaluation

I am conducting this survey as part of my master's dissertation on "A Study on the Evolution and Product Diversification of Solapur Chaddar." The purpose of this survey is to analyze the Solapur Chaddar products, focusing on their design, market potential, and adaptability in contemporary applications.

Name:-

Age:-

Gender:-

Occupation:-

1. Have you heard about Solapur Chaddar?

Yes

No

2. Please give your opinion for the designed products below

Category	Code of products	Highly appealing	Appealing	Not appealing
Cushion Cover	CC 1			
	CC 2			
	CC 3			
Hanging Storage Organizer	HS 1			
	HS 2			
	HS 3			
Pen Case	PC 1			
	PC 2			
	PC 3			
Backpack	BP 1			
	BP 2			
	BP 3			
Tote bag	TB 1			
	TB 2			
	TB 3			

3. Mark the appeal of the products in terms of specific components using this Likert scale –

Scale :

Appeal	Very good	Good	Average	Poor	Very poor
Score	5	4	3	2	1

Product code	Appearance	Texture		Designs				Finishing
		Feel	Look	Size	Shape	Motif	Colour combination	
CC 1								
CC 2								
CC 3								
HS 1								
HS 2								
HS 3								
PC 1								
PC 2								
PC 3								
BP 1								
BP 2								
BP 3								
TB 1								
TB 2								
TB 3								

4. At what price range would you prefer to buy the displayed products?

Product code	Price range in rupees					
	Less than 100	100-200	200-300	300-400	400-500	More than 500
CC 1						
CC 2						
CC 3						
HS 1						
HS 2						
HS 3						
PC 1						
PC 2						
PC 3						
BP 1						
BP 2						
BP 3						
TB 1						
TB 2						
TB 3						

5. Check any three products that you would you like to purchase

Cushion Cover (Home Decor)

Hanging Storage Organizer (Storage & Organization)

Pen Case (Desk & Office Essential)

Backpack (Travel Accessory)

Tote Bag (Personal Accessory)

6. Give your opinion for the following statements:

Statements	Yes	No	Can't say
Designing of products using Solapur Chaddar is an innovative idea			

The shape of the products is appropriate according to the design.			
The colour combination of the designed products is appealing.			
The feel of the products is appropriate according to its end use.			
The look of products is appropriate according to its end use.			
The size of designed products is appropriate according to the end use.			
The utility of products is appropriate according to the end use.			

7. Would you prefer to buy the designed products of Solapur Chaddar?

Yes

No

May be

8. Would you prefer to buy these products from –

Retail shops

Online

Directly from Manufacture of Solapur Chaddar

Exhibition

All of above

9. Would you like to bring any change in products?

Yes

No

Can’t say

10. If yes, then specify what changes you would like to make –

11. Would you like to see other products than those displayed?

Yes

No

May be

12. If yes, please mention those products –

13. Give your valuable comments and suggestions on the work :-

Appendix – IV

Designs, Colours, and Motifs of Solapur Chaddar


Birru
BIRRU MAGIC
ESSEL WORLD

Appendix – V

Statical Analysis of Data Collected from the Field

In which step of making chaddars can a technological advancement be made?

	N	%
Dyeing	2	1.4%
Dyeing, Pre-loom process	13	8.8%
Dyeing, Pre-loom process, On loom process	21	14.2%
Pre-loom process	8	5.4%
Pre-loom process, On loom process	9	6.1%
Raw material processing, Dyeing	1	0.7%
Raw material processing, Dyeing, Pre-loom process	19	12.8%
Raw material processing, Dyeing, Pre-loom process, On loom process	18	12.2%
Raw material processing, Pre-loom process	33	22.3%
Raw material processing, Pre-loom process, On loom process	24	16.2%

Considering the effort behind the craft, how can its market value be increased?

	N	%
By government help	46	31.1%
By government help, By advertising and increasing market avenues	23	15.5%
By government help, By advertising and increasing market avenues, By participation in competitions/exhibitions/workshops	20	13.5%
By government help, By participation in competitions/exhibitions/workshops	59	39.9%

Which market do you mainly cater to?

From where do you get the design inputs?

	N	%
Designer	29	19.6%
Designer, Customised	25	16.9%
Designer, Inspired, Traditional	1	0.7%
Designer, Inspired, Traditional, Customised	14	9.5%
Designer, Traditional	16	10.8%
Designer, Traditional, Customised	62	41.9%
Not responded	1	0.7%

Are you provided with any incentives from the employer?

	N	%
No	143	96.6%
Not responded	2	1.4%
Yes	3	2.0%

How can the working conditions be improved?

	N	%
Noise reduction, Providing safety gear	14	9.5%
Providing safety gear	3	2.0%
Ventilation, Maintaining cleanliness, Providing safety gear	10	6.8%
Ventilation, Noise reduction, Maintaining cleanliness, Providing safety gear	30	20.3%
Ventilation, Noise reduction, Providing safety gear	61	41.2%
Ventilation, Providing safety gear	30	20.3%

Which type of motifs are incorporated in the chaddars?

	N	%
Figurative, Floral, Geometric	51	34.5%
Floral	1	0.7%
Floral, Geometric	95	64.2%
Not responded	1	0.7%

What are the patterns that are used in the chaddars?

	N	%
Checks, Motifs	7	4.7%
Checks, Textures, Motifs	1	0.7%
Motifs	75	50.7%
Stripes, Checks, Motifs	8	5.4%
Stripes, Checks, Textures, Motifs	3	2.0%
Stripes, Motifs	53	35.8%
Textures, Motifs	1	0.7%

how many chaddar you weave per day? * Educational Qualification Crosstabulation

	Educational Qualification	Total

		Illiterate		Not responded		Primary		Secondary			
		N	%	N	%	N	%	N	%	N	%
how many chaddar you weave per day?	Less than 10	2	7.70%	0	0.00%	7	8.30%	3	8.10%	12	8.10%
	10 to 15	21	80.80%	1	100.00%	59	70.20%	25	67.60%	106	71.60%
	More than 15	3	11.50%	0	0.00%	18	21.40%	9	24.30%	30	20.30%
Total		26	100.00%	1	100.00%	84	100.00%	37	100.00%	148	100.00%

how many chaddar you weave per day? * How did you learn chaddar making? Crosstabulation

		How did you learn chaddar making?						Total	
		Employer		Family members		Self			
		N	%	N	%	N	%	N	%
how many chaddar you weave per day?	Less than 10	3	6.30%	0	0.00%	9	9.70%	12	8.10%
	10 to 15	34	70.80%	6	85.70%	66	71.00%	106	71.60%
	More than 15	11	22.90%	1	14.30%	18	19.40%	30	20.30%
Total		48	100.00%	7	100.00%	93	100.00%	148	100.00%

how many chaddar you weave per day? * Years of Experience Crosstabulation

		Years of Experience								Total	
		15-30 years		5-15 years		More than 30 years		not responded			
		N	%	N	%	N	%	N	%	N	%
how many chaddar you weave per day?	Less than 10	1	1.00%	1	14.30%	10	25.60%	0	0.00%	12	8.10%
	10 to 15	84	83.20%	4	57.10%	17	43.60%	1	100.00%	106	71.60%
	More than 15	16	15.80%	2	28.60%	12	30.80%	0	0.00%	30	20.30%
Total		101	100.00%	7	100.00%	39	100.00%	1	100.00%	148	100.00%

how much money you get for per piece of chaddar?* Educational Qualification Crosstabulation

		Educational Qualification								Total	
		Illiterate		Not responded		Primary		Secondary			
		N	%	N	%	N	%	N	%	N	%
how much money you get for per piece of chaddar?	Less than 30 rs	2	7.70%	0	0.00%	14	16.70%	7	18.90%	23	15.50%
	30 to 40 rs	12	46.20%	1	100.00%	62	73.80%	26	70.30%	101	68.20%
	40 to 50 rs	9	34.60%	0	0.00%	5	6.00%	3	8.10%	17	11.50%
	More than 50 rs	3	11.50%	0	0.00%	2	2.40%	1	2.70%	6	4.10%
	Not responded	0	0.00%	0	0.00%	1	1.20%	0	0.00%	1	0.70%
Total		26	100.00%	1	100.00%	84	100.00%	37	100.00%	148	100.00%

How has the craft changed since you started practicing it?

	N	%
Change in aesthetic appearance, Change in price, Change in demand, Change in availability and use of technology	11	7.4%
Change in aesthetic appearance, Change in price, Change in demand, Change in availability and use of technology, Change in government aid	21	14.2%
Change in aesthetic appearance, Change in price, Change in demand, Change in product range, Change in availability and use of technology	2	1.4%
Change in aesthetic appearance, Change in price, Change in demand, Change in product range, Change in availability and use of technology, Change in government aid	7	4.7%
Change in price, Change in demand	3	2.0%
Change in price, Change in demand, Change in availability and use of technology	44	29.7%
Change in price, Change in demand, Change in availability and use of technology, Change in government aid	25	16.9%
Change in price, Change in demand, Change in product range	1	0.7%
Change in price, Change in demand, Change in product range, Change in availability and use of technology	14	9.5%
Change in price, Change in demand, Change in product range, Change in availability and use of technology, Change in government aid	4	2.7%
Change in product size, Change in aesthetic appearance, Change in price, Change in demand	1	0.7%
Change in product size, Change in aesthetic appearance, Change in price, Change in demand, Change in availability and use of technology	1	0.7%
Change in product size, Change in aesthetic appearance, Change in price, Change in demand, Change in product range	1	0.7%
Change in product size, Change in aesthetic appearance, Change in price, Change in demand, Change in product range, Change in availability and use of technology	2	1.4%
Change in product size, Change in aesthetic appearance, Change in price, Change in demand, Change in product range, Change in availability and use of technology, Change in government aid	2	1.4%
Change in product size, Change in aesthetic appearance, Change in price, Change in demand, Change in product range, Change in government aid	1	0.7%
Change in product size, Change in price, Change in demand, Change in availability and use of technology	5	3.4%
Change in product size, Change in price, Change in demand, Change in availability and use of technology, Change in government aid	1	0.7%
Change in product size, Change in price, Change in demand, Change in product range, Change in availability and use of technology	2	1.4%

how much money you get for per piece of chaddar? * Years of Experience Crosstabulation

		Years of Experience								Total	
		15-30 years		5-15 years		More than 30 years		not responded			
		N	%	N	%	N	%	N	%	N	%
how much money you get for per piece of chaddar?	Less than 30 rs	16	15.80%	2	28.60%	5	12.80%	0	0.00%	23	15.50%
	30 to 40 rs	77	76.20%	4	57.10%	19	48.70%	1	100.00%	101	68.20%
	40 to 50 rs	7	6.90%	1	14.30%	9	23.10%	0	0.00%	17	11.50%
	More than 50 rs	0	0.00%	0	0.00%	6	15.40%	0	0.00%	6	4.10%
	Not responded	1	1.00%	0	0.00%	0	0.00%	0	0.00%	1	0.70%
Total		101	100.00%	7	100.00%	39	100.00%	1	100.00%	148	100.00%

how much money you get for per piece of chaddar? * How did you learn chaddar making? Crosstabulation

		How did you learn chaddar making?						Total	
		Employer		Family members		Self			
		N	%	N	%	N	%	N	%
how much money you get for per piece of chaddar?	Less than 30 rs	10	20.80%	0	0.00%	13	14.00%	23	15.50%
	30 to 40 rs	34	70.80%	6	85.70%	61	65.60%	101	68.20%
	40 to 50 rs	3	6.30%	1	14.30%	13	14.00%	17	11.50%
	More than 50 rs	0	0.00%	0	0.00%	6	6.50%	6	4.10%
	Not responded	1	2.10%	0	0.00%	0	0.00%	1	0.70%
Total		48	100.00%	7	100.00%	93	100.00%	148	100.00%

What is the major reason you are still practicing the craft? * Educational Qualification Crosstabulation

		Educational Qualification								Total	
		Illiterate		Not responded		Primary		Secondary			
		N	%	N	%	N	%	N	%	N	%
What is the major reason you are still practicing the craft?	Keeping tradition alive	1	3.8%	0	0.0%	0	0.0%	0	0.0%	1	0.7%
	Keeping tradition alive, No other means of livelihood	7	26.9%	0	0.0%	6	7.1%	3	8.1%	16	10.8%
	Keeping tradition alive, Stable means of livelihood	6	23.1%	0	0.0%	7	8.3%	0	0.0%	13	8.8%
	No other means of livelihood	5	19.2%	0	0.0%	27	32.1%	4	10.8%	36	24.3%
	Stable means of livelihood	7	26.9%	1	100.0 %	44	52.4%	30	81.1%	82	55.4%
Total		26	100.0 %	1	100.0 %	84	100.0 %	37	100.0 %	148	100.0 %

What is the major reason you are still practicing the craft? * Years of Experience Crosstabulation

		Years of Experience								Total	
		15-30 years		5-15 years		More than 30 years		not responded			
		N	%	N	%	N	%	N	%	N	%
What is the major reason you are still practicing the craft?	Keeping tradition alive	0	0.0%	0	0.0%	1	2.6%	0	0.0%	1	0.7%
	Keeping tradition alive, No other means of livelihood	3	3.0%	0	0.0%	13	33.3%	0	0.0%	16	10.8%
	Keeping tradition alive, Stable means of livelihood	6	5.9%	0	0.0%	7	17.9%	0	0.0%	13	8.8%
	No other means of livelihood	28	27.7%	0	0.0%	8	20.5%	0	0.0%	36	24.3%
	Stable means of livelihood	64	63.4%	7	100.0 %	10	25.6%	1	100.0 %	82	55.4%
Total		101	100.0 %	7	100.0 %	39	100.0 %	1	100.0 %	148	100.0 %

What is the major reason you are still practicing the craft? * How did you learn chaddar making? Crosstabulation

	How did you learn chaddar making?						Total	
	Employer		Family members		Self			
	N	%	N	%	N	%	N	%
Keeping tradition alive	0	0.0%	0	0.0%	1	1.1%	1	0.7%

What is the major reason you are still practicing the craft?	Keeping tradition alive, No other means of livelihood	1	2.1%	3	42.9%	12	12.9%	16	10.8%
	Keeping tradition alive, Stable means of livelihood	3	6.3%	0	0.0%	10	10.8%	13	8.8%
	No other means of livelihood	8	16.7%	2	28.6%	26	28.0%	36	24.3%
	Stable means of livelihood	36	75.0%	2	28.6%	44	47.3%	82	55.4%
Total		48	100.0%	7	100.0%	93	100.0%	148	100.0%

How has technology affected your practice of the craft? * Educational Qualification Crosstabulation

		Educational Qualification								Total	
		Illiterate		Not responded		Primary		Secondary			
		N	%	N	%	N	%	N	%	N	%
How has technology affected your practice of the craft?	Hasn't affected much	13	50.0%	0	0.0%	28	33.3%	11	29.7%	52	35.1%
	Made it easier	13	50.0%	1	100.0%	56	66.7%	26	70.3%	96	64.9%
Total		26	100.0%	1	100.0%	84	100.0%	37	100.0%	148	100.0%

How has technology affected your practice of the craft? * Years of Experience Crosstabulation

		Years of Experience								Total	
		15-30 years		5-15 years		More than 30 years		not responded			
		N	%	N	%	N	%	N	%	N	%
How has technology affected your practice of the craft?	Hasn't affected much	36	35.6%	1	14.3%	15	38.5%	0	0.0%	52	35.1%
	Made it easier	65	64.4%	6	85.7%	24	61.5%	1	100.0%	96	64.9%
Total		101	100.0%	7	100.0%	39	100.0%	1	100.0%	148	100.0%

How has technology affected your practice of the craft? * How did you learn chaddar making? Crosstabulation

		How did you learn chaddar making?						Total	
		Employer		Family members		Self			
		N	%	N	%	N	%	N	%
How has technology affected your practice of the craft?	Hasn't affected much	10	20.8%	3	42.9%	39	41.9%	52	35.1%
	Made it easier	38	79.2%	4	57.1%	54	58.1%	96	64.9%
Total		48	100.0%	7	100.0%	93	100.0%	148	100.0%

Which dye is used to dye the yarns? * Educational Qualification Crosstabulation

		Educational Qualification								Total	
		Illiterate		Not responded		Primary		Secondary			
		N	%	N	%	N	%	N	%	N	%
Which dye is used to dye the yarns?	All of above	12	46.2%	0	0.0%	23	27.4%	10	27.0%	45	30.4%
	Natural	0	0.0%	0	0.0%	1	1.2%	0	0.0%	1	0.7%
	Natural, Reactive	5	19.2%	0	0.0%	26	31.0%	4	10.8%	35	23.6%
	Natural, Reactive, Direct	1	3.8%	0	0.0%	0	0.0%	0	0.0%	1	0.7%

	Reactive	5	19.2%	1	100.0 %	21	25.0%	13	35.1%	40	27.0%
	Reactive, Direct	3	11.5%	0	0.0%	13	15.5%	10	27.0%	26	17.6%
Total		26	100.0 %	1	100.0 %	84	100.0 %	37	100.0 %	148	100.0 %

Which dye is used to dye the yarns? * Years of Experience Crosstabulation

		Years of Experience								Total	
		15-30 years		5-15 years		More than 30 years		not responded			
		N	%	N	%	N	%	N	%	N	%
Which dye is used to dye the yarns?	All of above	20	19.8%	1	14.3%	24	61.5%	0	0.0%	45	30.4%
	Natural	1	1.0%	0	0.0%	0	0.0%	0	0.0%	1	0.7%
	Natural, Reactive	27	26.7%	1	14.3%	7	17.9%	0	0.0%	35	23.6%
	Natural, Reactive, Direct	1	1.0%	0	0.0%	0	0.0%	0	0.0%	1	0.7%
	Reactive	31	30.7%	4	57.1%	5	12.8%	0	0.0%	40	27.0%
	Reactive, Direct	21	20.8%	1	14.3%	3	7.7%	1	100.0 %	26	17.6%
Total		101	100.0 %	7	100.0 %	39	100.0 %	1	100.0 %	148	100.0 %

Which dye is used to dye the yarns? * How did you learn chaddar making? Crosstabulation

		How did you learn chaddar making?						Total	
		Employer		Family members		Self			
		N	%	N	%	N	%	N	%
Which dye is used to dye the yarns?	All of above	15	31.3%	2	28.6%	28	30.1%	45	30.4%
	Natural	1	2.1%	0	0.0%	0	0.0%	1	0.7%
	Natural, Reactive	9	18.8%	0	0.0%	26	28.0%	35	23.6%
	Natural, Reactive, Direct	0	0.0%	0	0.0%	1	1.1%	1	0.7%
	Reactive	15	31.3%	5	71.4%	20	21.5%	40	27.0%
	Reactive, Direct	8	16.7%	0	0.0%	18	19.4%	26	17.6%
Total		48	100.0%	7	100.0%	93	100.0%	148	100.0%

What are the patterns that are used in the chaddars? * Educational Qualification Crosstabulation

		Educational Qualification								Total	
		Illiterate		Not responded		Primary		Secondary			
		N	%	N	%	N	%	N	%	N	%
What are the patterns that are used in the chaddars?	Checks, Motifs	2	7.7%	0	0.0%	2	2.4%	3	8.1%	7	4.7%
	Checks, Textures, Motifs	1	3.8%	0	0.0%	0	0.0%	0	0.0%	1	0.7%
	Motifs	12	46.2%	0	0.0%	48	57.1%	15	40.5%	75	50.7%
	Stripes, Checks, Motifs	2	7.7%	0	0.0%	5	6.0%	1	2.7%	8	5.4%
	Stripes, Checks, Textures, Motifs	0	0.0%	0	0.0%	1	1.2%	2	5.4%	3	2.0%
	Stripes, Motifs	9	34.6%	1	100.0 %	27	32.1%	16	43.2%	53	35.8%
	Textures, Motifs	0	0.0%	0	0.0%	1	1.2%	0	0.0%	1	0.7%
Total		26	100.0 %	1	100.0 %	84	100.0 %	37	100.0 %	148	100.0 %

What are the patterns that are used in the chaddars? * Years of Experience Crosstabulation

		Years of Experience								Total	
		15-30 years		5-15 years		More than 30 years		not responded			
		N	%	N	%	N	%	N	%	N	%
What are the patterns that are used in the chaddars?	Checks, Motifs	5	5.0%	0	0.0%	2	5.1%	0	0.0%	7	4.7%
	Checks, Textures, Motifs	1	1.0%	0	0.0%	0	0.0%	0	0.0%	1	0.7%
	Motifs	55	54.5%	3	42.9%	17	43.6%	0	0.0%	75	50.7%
	Stripes, Checks, Motifs	5	5.0%	0	0.0%	3	7.7%	0	0.0%	8	5.4%
	Stripes, Checks, Textures, Motifs	2	2.0%	1	14.3%	0	0.0%	0	0.0%	3	2.0%
	Stripes, Motifs	32	31.7%	3	42.9%	17	43.6%	1	100.0%	53	35.8%
	Textures, Motifs	1	1.0%	0	0.0%	0	0.0%	0	0.0%	1	0.7%
Total		101	100.0%	7	100.0%	39	100.0%	1	100.0%	148	100.0%

What are the patterns that are used in the chaddars? * How did you learn chaddar making? Crosstabulation

		How did you learn chaddar making?						Total	
		Employer		Family members		Self			
		N	%	N	%	N	%	N	%
What are the patterns that are used in the chaddars?	Checks, Motifs	3	6.3%	1	14.3%	3	3.2%	7	4.7%
	Checks, Textures, Motifs	0	0.0%	1	14.3%	0	0.0%	1	0.7%
	Motifs	18	37.5%	3	42.9%	54	58.1%	75	50.7%
	Stripes, Checks, Motifs	5	10.4%	1	14.3%	2	2.2%	8	5.4%
	Stripes, Checks, Textures, Motifs	3	6.3%	0	0.0%	0	0.0%	3	2.0%
	Stripes, Motifs	19	39.6%	1	14.3%	33	35.5%	53	35.8%
	Textures, Motifs	0	0.0%	0	0.0%	1	1.1%	1	0.7%
Total		48	100.0%	7	100.0%	93	100.0%	148	100.0%

Which type of motifs are incorporated in the chaddars? * Educational Qualification Crosstabulation

		Educational Qualification								Total	
		Illiterate		Not responded		Primary		Secondary			
		N	%	N	%	N	%	N	%	N	%
Which type of motifs are incorporated in the chaddars?	Figurative, Floral, Geometric	15	57.7%	0	0.0%	27	32.1%	9	24.3%	51	34.5%
	Floral	0	0.0%	0	0.0%	1	1.2%	0	0.0%	1	0.7%
	Floral, Geometric	11	42.3%	1	100.0%	56	66.7%	27	73.0%	95	64.2%
	Not responded	0	0.0%	0	0.0%	0	0.0%	1	2.7%	1	0.7%
Total		26	100.0%	1	100.0%	84	100.0%	37	100.0%	148	100.0%

Which type of motifs are incorporated in the chaddars? * Years of Experience Crosstabulation

		Years of Experience								Total	
		15-30 years		5-15 years		More than 30 years		not responded			
		N	%	N	%	N	%	N	%	N	%
Which type of motifs are incorporated in the chaddars?	Figurative, Floral, Geometric	22	21.8%	2	28.6%	27	69.2%	0	0.0%	51	34.5%
	Floral	1	1.0%	0	0.0%	0	0.0%	0	0.0%	1	0.7%
	Floral, Geometric	77	76.2%	5	71.4%	12	30.8%	1	100.0%	95	64.2%

	Not responded	1	1.0%	0	0.0%	0	0.0%	0	0.0%	1	0.7%
Total		101	100.0 %	7	100.0 %	39	100.0 %	1	100.0 %	148	100.0 %

Which type of motifs are incorporated in the chaddars? * How did you learn chaddar making? Crosstabulation

		How did you learn chaddar making?						Total	
		Employer		Family members		Self			
		N	%	N	%	N	%	N	%
Which type of motifs are incorporated in the chaddars?	Figurative, Floral, Geometric	11	22.9%	3	42.9%	37	39.8%	51	34.5%
	Floral	1	2.1%	0	0.0%	0	0.0%	1	0.7%
	Floral, Geometric	36	75.0%	4	57.1%	55	59.1%	95	64.2%
	Not responded	0	0.0%	0	0.0%	1	1.1%	1	0.7%
Total		48	100.0%	7	100.0%	93	100.0%	148	100.0%

Which size of the chaddar is the most popular? * Educational Qualification Crosstabulation

		Educational Qualification								Total	
		Illiterate		Not responded		Primary		Secondary			
		N	%	N	%	N	%	N	%	N	%
Which size of the chaddar is the most popular?	54"x90"	10	38.5%	0	0.0%	33	39.3%	16	43.2%	59	39.9%
	60"x90"	16	61.5%	1	100.0%	46	54.8%	21	56.8%	84	56.8%
	72"x100"	0	0.0%	0	0.0%	4	4.8%	0	0.0%	4	2.7%
	90”x 108”	0	0.0%	0	0.0%	1	1.2%	0	0.0%	1	0.7%
Total		26	100.0%	1	100.0%	84	100.0%	37	100.0%	148	100.0%

Which size of the chaddar is the most popular? * Years of Experience Crosstabulation

		Years of Experience								Total	
		15-30 years		5-15 years		More than 30 years		not responded			
		N	%	N	%	N	%	N	%	N	%
Which size of the chaddar is the most popular?	54"x90"	45	44.6%	5	71.4%	8	20.5%	1	100.0%	59	39.9%
	60"x90"	52	51.5%	2	28.6%	30	76.9%	0	0.0%	84	56.8%
	72"x100"	3	3.0%	0	0.0%	1	2.6%	0	0.0%	4	2.7%
	90”x 108”	1	1.0%	0	0.0%	0	0.0%	0	0.0%	1	0.7%
Total		101	100.0%	7	100.0%	39	100.0%	1	100.0%	148	100.0%

Which size of the chaddar is the most popular? * How did you learn chaddar making? Crosstabulation

		How did you learn chaddar making?						Total	
		Employer		Family members		Self			
		N	%	N	%	N	%	N	%
Which size of the chaddar is the most popular?	54"x90"	18	37.5%	1	14.3%	40	43.0%	59	39.9%
	60"x90"	29	60.4%	5	71.4%	50	53.8%	84	56.8%
	72"x100"	0	0.0%	1	14.3%	3	3.2%	4	2.7%
	90”x 108”	1	2.1%	0	0.0%	0	0.0%	1	0.7%
Total		48	100.0%	7	100.0%	93	100.0%	148	100.0%