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A COMPREHENSIVE CASE STUDY ON TRADITIONAL WEAVING OF WESTERN RAJASTHAN

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ABSTRACT

The present paper discusses an age-old craft practised in India named Pattu weaving. This weaving technique is based on the extra weft weave design. Along with the ground warp and weft, few extra bright colored yarns are used in this technique to weave beautiful motifs on the fabric during the weaving process. The craft follows the sustainable way of fabric manufacturing as the fabrics are made on the handloom and follow the traditional ways for pre-weaving process also. The craft becomes more relevant in the present scenario considering the fact that for the last few decades unsustainable practices have increased drastically due to the imbalance of demand and supply, scarcity of natural resources, advent of unsustainable technologies among the other factors. While traditionally, sustainable practices were an integral part of the lifestyle of human beings and balanced the eco-system of the earth. One of the ways for balancing the natural energy consumption is utilization of all natural resources

wisely by reinventing traditional craft practices. Hence, the present study focuses on the materials, tools, techniques and processes used in the Pattu weaving craft. PASTLE analysis of the craft has also been done to understand the opportunity and challenges of the craft. Along with this, a comparative analysis of the traditional and contemporary raw materials, techniques, motifs, colour range and application of the craft have also been covered in this paper. For this study, the primary research is based on the information that was collected during Craft Research Documentation activity funded by the Ministry of Textiles, India. Data from Secondary research has also been added to strengthen the analysis.

Keywords: Sustainable manufacturing, craft, weaving, extra weft technique, geometrical motifs.

INTRODUCTION

Food, shelter and clothing are known to be the three traditional basic needs of mankind and have equal importance in the life of a human being. In modern context, clothing, as a need has an edge on the other two as it also creates a strong representation in the society according to economic, political, cultural and geographical preferences. Other than these basic needs there is another challenge known as “global warming” which the world currently faces. The effect of climate change, along with pollution and the depletion of non-renewable natural resources, has given rise to environmental awareness. Since the early 20th century, the average surface temperature of the earth has increased by about 0.8°C (1.4°F), with about two-thirds of the increase occurring since 1980. Researchers indicate that during the 21st century, the global surface temperature is likely to rise by a further 1.1 to 2.9°C (2 to 5.2°F) for the lowest emissions scenario and 2.4 to 6.4°C (4.3 to 11.5°F) for the highest emission scenario. Warming of the climate system is irreversible, and scientists are of the view that most of it is caused by increasing concentrations of greenhouse gases produced by activities such as deforestation and the burning of fossil fuels during industrialization. In 2017, greenhouse gases emission was 60 Giga tones (Gt.) globally which include 196 countries, around 5% of the total countries are responsible for more than 85% of the total emission. Industrialization, energy and agriculture are the major factors that contribute more than 80% of the total global emission. In

the global context, India is the fourth largest emitter of carbon dioxide at 1.65 Gt per year, after China (6.9 Gt. per year), United States (5.2 Gt. per year) and European Union (2.5 Gt. Per year). According to the report of World Resources Institute, India produces over 7% of global greenhouse gasses. Industries, agriculture and power generation are the main factors and produce more than 90% of Indian emission. The textile industry affects the environment by releasing carbon dioxide into the atmosphere. To reduce the greenhouse gas emission and to further minimize the adverse effect on the environment, the importance and effect of sustainable manufacturing has created a much wider debate in recent years.

The Fashion and Textile industry is the second most polluted industry globally. Fabric manufacturing process contributes about 50% carbon emission of the entire process. So, the concept of sustainability in fashion and apparel is not possible without discussing the sustainability practices in fabric manufacturing. It is important to mention that in the entire fashion supply chain from fiber to consumer, textile manufacturing contributes more than 70% share in carbon emission. Hence, practicing sustainability in textile manufacturing is the most important issue and need of the hour in the fashion and apparel manufacturing industry.

Sustainability has three major dimensions which include environmental sustainability, economical sustainability and social sustainability. Environmental sustainability can be achieved by utilizing the natural assets in a responsible manner and maintaining a balance between the available resources and consumption. Economical sustainability refers to the long-term economic gain that can be achieved through the sustainable practices. Social sustainability is associated with the welfare of the society by having equal opportunity to work, healthy working environment are among the important factors. From the last few decades researchers, academicians and industries have been focused on promoting the practices and techniques through which these dimensions of sustainability can be achieved. One of the ways to attain long-term suitability is to create awareness and help to revive the age-old craft practices in the manufacturing segment. The present paper discusses one such craft known as 'Pattu Weaving'.

In the area of textile manufacturing, Pattu weaving is known as a traditional weaving process which is practiced in various parts of

India especially in western Rajasthan, Himachal Pradesh, Tamil Nadu, Andhra Pradesh and in some parts of northern region of Pakistan. Pattu woven fabrics are converted into a wide variety of application range such as blankets, shawls, carpets sarees, Kurta etc. In the present paper Pattu weaving of western Rajasthan is covered. In Rajasthan this technique is widely practiced in Jaisalmer, Bikaner, Barmer, Phalodi, Jodhpur and Jalore districts. Initially, Pattu with intricate design patterns were woven in Pakistan and Indian Pattu weaving used to be the plain and sober. The weavers of Barmer learnt to weave intricate motifs from the Pakistani weaver. In the weaver's community Pattu shawls were a part of their culture as these were gifted by bride's family to bridegroom and their family members as a token of love and respect to strengthen the bonding between the families.

Pattu is derived from a local word which stands for the narrow band of cloth. Pattu woven fabrics were originally woven as two feet wide band panels and then two panels used to be joined together length-wise to create a full width fabric by using the interlock stitching. In this weaving process, bright coloured extra weft yarns are also used along with the ground warp and weft yarns to enhance the appearance of the fabric where extra weft yarns provide embroidery like ornamentation effect in the fabric. Image 1 shows a Pattu fabric with intricate extra-weft motifs during the process of weaving on loom.

Image 1

Pattu Fabric with Extra-weft Motifs



HANDICRAFT AND SOCIETY

Art and Craft significantly impact society by controlling opinions, implanting values, and depicting experiences across space and time. Handicrafts, Paintings, music, sculptures, and other art forms are considered to be the archive of a society's concerted memory. Several research works have established the effect of handicrafts on the basic sense of self and community and also described how handicrafts can be a vital parameter to decode and understand any particular society and culture. Interrelation between handicraft and religion, culture, social beliefs, economy and sustainability are discussed in detail in the present section to understand the role of handicraft in society.

India is known for its ancient handicraft techniques. The Indian handloom industry is one of the oldest and largest cottage industries in India with a standing ancient tradition dating back thousands of years for their excellent craftsmanship, representing the vibrant Indian culture. India's handloom artists are globally known for their unique hand spinning, weaving and printing styles. They are based out of small towns and villages of the country which transfer skills from one generation to the next. The handloom industry is the country's largest cottage industry, with 23.77 lakh looms. It is also the second-largest employment provider in the rural region employing more than 3 million people in direct and allied activities. According to the Handloom Census 2019-20, the industry employs about 3,522,512 handloom workers across the country. The industry primarily employs women workers with a share of 72.29% of the total handloom workers.

Based on the climatic condition, cultural values, raw material availability and other factors, different handloom techniques are being used in different states of India. Few important and significant handlooms techniques are Jamdani and Tant from West Bengal, Patola from Gujarat, Banarasi Brocade from Uttar Pradesh, Chanderi from Madhya Pradesh, Kanjivaram from Tamil Nadu, Pochampally and Upadda from Andhra Pradesh and Kota doria and Pattu from Rajasthan among others. These handloom techniques are not only good ambassadors of Indian art and culture in the world but also reduce pressure on environment, which is generated from textile and apparel manufacturing Industries.

Interrelation between Handicraft and Religion

Many researchers have defined “Religion” as nothing but a community of human beings who collectively endorse one idea of the Almighty and live in compliance with its norms. Societies inspired by mythological stories and characters of such religions have created beautiful products that have become a benchmark. Handicrafts of India are diverse and rich in history and religion. Throughout centuries handicrafts have been embedded as a culture and tradition within rural communities. Handicrafts of each state are not only products but also an expression of different empires and religions.

Many crafts throughout the country explain the direct impact of religious beliefs on the products produced by the respective community. “Madhubani paintings” from Mithila is a classic example. The “Madhubani paintings” can be traced to the age of the Ramayana, when King Janaka of Nepal ordered his kingdom to decorate the town for the wedding of his daughter, Sita to Lord Rama. The original inspiration for Madhubani art emerged from women’s craving for religiousness and an intense desire to be one with God. Stone carving in the southern part of India and metal craft from the northern part of India also established the impact of religion on handicrafts.

Interrelation between Handicraft and Culture

Handicrafts play a significant role in depicting the culture and traditions of any society or region. These crafts are an essential and unique expression of rich traditional art, culture, and heritage through local craftsmanship and materials. They also correctly illustrate nature, festivals, fragrances, colors, and languages of the society from where they originate and tell stories of a well lived past. Crafts signify the evolution of existence; they point us towards the role of rituals and traditions.

“Warli Paintings” is a classic example of understanding the cultural impact of society on handicraft, “Warli paintings” originated in the Western region and was performed by the tribes of Warli in 2500 BC. Warli paintings are one of the ancient art forms of India. They mainly comprise geometrical shapes (triangles, circles, and straight lines) and represent daily activities like hunting, fishing, festivals, dances, etc.

Interrelation between Handicraft and Social Beliefs

Handicrafts have played an essential role in the social development of a particular society from where they originate. The presence of craft is associated with improved neighborhood livability, social well-being, and community identity. Many researchers have proven that handicrafts, or any skill for that matter, can be linked with community empowerment, especially women empowerment, as they are equally associated with the activity. As published in "Cultural and Social Wellbeing" in 2017, Low-income neighborhoods with cultural resources and art forms have 14% fewer cases of child abuse and neglect and 18% less serious crime than low-income neighborhoods without cultural resources and art forms.

Interrelation between Handicraft and Economy

Along with cultural and religious expression, handicraft is also an essential fuel for the economic engine of the society. The handicraft sector plays a significant role in the economy of a country. More than 7 million people are associated with the handicraft sector directly or indirectly. In many parts of the country, where conventional forms of livelihood generation like farming, industrialization, etc., are not apt because of unsuitable climatic conditions, handicrafts can be an alternative form of employment generation. It also gives women an equal opportunity to contribute to the economic development of society with a sense of empowerment.

"Tsunamika"- dolls made by tsunami-affected women is a perfect example of economic empowerment of society by handicrafts. These dolls are made by the fisherwomen who survived the tsunami by using waste materials. Tsunamika has helped the community to rebuild the sites.

Interrelation between Handicraft and Sustainability

The entire world, including India, is facing severe global warming and climate change issues. Industrialization and depletion of natural resources are a few critical reasons for this. The handicraft sector can be a weapon to handle these challenges by using sustainable materials and techniques while making these crafts and products. These are primarily hand-made articles and use minimum energy.

Handicrafts play a vital role in the unique identity of the nation. The true essence and the flavor of a country like India are known for its

diversified rich culture and beliefs. “Unity in diversity” is the perfect tagline to express the country and the handicrafts. The art forms, materials, techniques, and products produced by different regions might be various, but their objective to strengthen and express the cultural, religious, and social beliefs are the same. Handicraft sectors also contribute to the economic empowerment of society and the country and can be a true ambassador of Indian culture at the global forum.

This paper presents the study on Pattu weaving craft of western Rajasthan of India which is one of the important craft of North India. The following section covers the major handicrafts of north India which have been practiced in the region for ages.

HANDICRAFT OF NORTH INDIA

The state of Jammu and Kashmir consists of three geographical zones-Jammu, Kashmir, and Ladakh. Each zone has its distinct climate and culture reflected in its handicraft. The list of handicrafts according to the zones is given in table 4.1.

Handicrafts of Himachal Pradesh

The state of Himachal Pradesh started from the foothills of Shivaliks. It extends up to the Zanskar range bordering the state of Punjab, Ladakh, and Tibet, which influences the state's handicraft. Himachal Pradesh covers the zones of Chamba, Kangra, and Kullu. The list of handicrafts according to the zones is given in table 4.2.

Handicrafts of Punjab

Punjab is another famous Indian region of handicrafts. Punjab, owing to its bio-diversity and distinct physical and cultural attributes, the state consists of three zones, Amritsar, Hoshiarpur, and Patiala.

Other than these, Chowk Purana-mud work, basketry, folk toys, dolls making, peedhi making, and paranda making also come under the famous handicrafts of Punjab. Chandigarh, a union territory of India, is also the capital of Punjab and Haryana, situated at the foothills of the Shivalik mountain range. Sub-clusters of Chandigarh consist of Chandigarh and Kishangarh. The main craft of this region is Mitti da kaam, in which clay is used to make potteries and decorative items.

The city was developed as India's first urban planning experiment, so most artisans came from urban communities with large pottery studios.

Handicrafts of Haryana

Among other Northern states of India, Haryana is a state of importance because of its association with ancient history. The name of one of its cities, 'Kurukshetra,' is mentioned in the Mahabharata. The state is full of flora and fauna, contributing to its robust rural economy in agriculture, wool industries, and dairy products. The handicrafts of the state of Haryana consist of weaving, pottery making, jutti, Palm leaf work, Sanghi craft, brassware, and Sarkanda craft. A list of handicrafts of Haryana is covered in table 4.4 according to the different cities of the state.

Handicrafts of Delhi

In this list of handicrafts of north India, the next state is Delhi. Delhi is India's capital, bordered by Uttar Pradesh and Haryana states. This region's Handicrafts significantly impacted the Mughal era, especially that of Shahjahan, who established Delhi as his capital. Also, the craft sector of Delhi is greatly influenced by the diversity of immigrants who settled in Delhi and indulge in Handicraft making as a livelihood. The list of handicrafts of Delhi includes Wood carving, Wood inlay, Sandalwood carving, Papier-mache, Naqqashi, Chik making, terracotta, and zardozi embroidery. Most of the craft of Delhi has come to this region from some other states and is still a part of the art and craft sector.

Handicrafts of Rajasthan

The last state in this list is Rajasthan, the epitome of craft clusters in India. Rajasthan is known as the Land of kings and comprises more than twenty princely states. The handicraft of Rajasthan contains influences of royalties and the influence of Islamic armies who came and stayed in this region during the Mughal period. Due to its geographical connection with Pakistan, Afghanistan, and central Asia. Various cultural and societal factors have shaped the craft of western Rajasthan. The zones of Rajasthan have been segmented into six parts owing to its extensive craft cluster heritage. The zones include Jaipur, Ajmer, Bikaner, Jodhpur, Jaisalmer, and Udaipur.

Some other handicrafts of Rajasthan include Folk painting, Ajrakh printing, Kota Doria, Patwa jewelry, clay craft, Mughal form miniature, Bundi form miniature, Kota form miniature, Jodhpur miniature, Kishangarh form miniature, Alwar miniature, marble Handicraft, granite articles, semi-precious stone articles, kasth Kala, Kishangarh wooden painting, puppet making, Namda rugs, zinc toys and Zinc decorative items, Nagra Juti, leather goods, camel girth and jawaja leather work, aari Tari, Banjara embroidery, zardozi, applique work, Meghwal embroidery, and Danka embroidery. The list of handicrafts of Rajasthan seems endless as almost every part of this state is famous for its art and craftwork. Pattu weaving is also one of the major handloom-based craft of Rajasthan which is known for its simple yet vibrant and decorative pattern. The details of material, techniques. Process etc. are covered in the following sections in detail.

RAW MATERIALS AND TOOLS

Traditionally, natural brown or white color wool was used to make Pattu fabrics. With the introduction of new design and techniques, nowadays most of such fabrics are made by using cotton, merino wool, or their blends like poly-cotton, poly-wool etc. to cater the wider market segment. Earlier, yarn spinning was done on spinning wheels to convert the wool fibers into yarn, followed by weaving on pit loom. With the automation in the textile industry, wool is now directly procured from spinning mills and then given to the weavers to make the Pattu fabrics. Image 2 shows the different colored yarns used as extra weft in Pattu weaving.

Image 2

Muti-Colored Yarns for Extra Weft Weaving in Pattu Fabrics



MANUFACTURING PROCESS

Pattu weaving manufacturing involves yarn spinning followed by preparatory processes and weaving on handloom. A manual spinning wheel is used for converting fibres into yarn. Continuous drafting and twisting are carried out to achieve the desired thickness known as yarn count and twist in the yarn. Spinning process is then followed by yarn preparatory process which starts with the yarn winding to make to wound the yarn on a package in desired length. After winding, warping process is done in a traditional manner in open space to prepare the loom according to the required length, width and density of yarn per inch in the final fabric. In case cotton yarn is used for the weaving process, then sizing is also done on the yarn where starch is applied on yarn to give it strength and lubricity. Finally, the yarn is prepared to be converted into the fabric through the weaving process. Sized yarn is set on the loom which is called as the looming process where drafting and denting is done to for the setting of yarn.

Plain or variations of twill weaves are used as a base weave to form the fabric. Extra weft yarns are used to weave intricate motifs on the fabric which gives an embroidered-effect on the fabric. Generally bright colors are used to in extra weft to create attractive designs. Pattu weaving process on handloom needs persistence, patience, and precise observation to details. Different varieties of Pattu are prepared by using wide range of colors palette and motifs. These processes are discussed in detail as follows:

Yarn Spinning: Spinning is the process of converting textile fibres into yarn. Traditionally spinning wheel locally known as *Charkha* was used for this process. Now the machine based spinning systems have taken over the process for industrial mass-manufacturing of yarn. The Pattu weaving still follows this traditional spinning at various places though industrial yarn is also used nowadays to simplify the process. *Charkha* is a spinning wheel which is manually operated. This has a belt and wheel rotating system as shown in Image 3. The spinner takes the fibres to be converted into the yarn, draws it and holds it in one hand and simultaneously twist the fibres from other hand to make the yarn. Continuous drafting and twisting are carried out to make the yarns with required thickness and length. Traditionally men used to collect the camel or sheep wool and then women of the weaver's community spun it on *Charkha* during their leisure time. However nowadays, machine made yarns have been provided to the weavers to fulfil the requirement of the current market trends.

Image 3

Traditional Spinning Wheel used for Yarn Spinning



Weaving Preparation process: The aim of weaving preparatory process is to prepare yarns for further weaving process and to transfer yarn from the yarn package to a yarn beam that can be placed behind the loom for weaving. The weaving preparation process are discussed in detail in following sections.

Winding: The yarns which are in vertical direction in woven fabric are called as warp and the yarns which are in horizontal direction of fabric are called as weft. Winding is the process to convert the smaller packages of yarn into the larger packages for ease of further setting up of the loom. Any defect in the yarn is also removed at this stage to ensure the manufacturing of a defect free fabric. Other than ground warp and weft yarns, Pattu weaving needed many colourful yarns which is used as extra weft to give the decorative effect on the fabric through weaving. These extra weft yarns are wound on small sticks which is locally called as *Nali*.

Warping: Preparation of Vertical warp yarn for fabric manufacturing process is called warping. In this process the yarn from yarn packages is taken and wounded on a beam called the warper's beam. The warper's beam then shifts to the back of the loom. For Pattu weaving, warp is prepared in large open space in traditional manner. Wooden lease rods are inserted between the warp yarns to keep the odd and even yarns separated for ease of weaving. Image 4 shows the traditional way of warping process carried out at Pattu weaving cluster.

Image 4

Traditional Warping Process



Sizing: During weaving, the warp yarns go through high tension and stress which may cause breakage of the yarn. To avoid this, a paste of starch and other ingredients such as oil and waxes are applied on the warp yarn which increases the strength and lubricity of the warp yarn. This process is called sizing. In the traditional Pattu weaving, a sizing paste is made up of mixture of wheat and water used to provide the strength to the warp yarn. The diluted paste of sizing solution is poured over the bundled warp yarns which are held intact using the lease rods. The excess amount of the paste is squeezed by hand. Warp yarns are then taken into the sunlight for to dry an hour and then stretched between temporary poles. The half-wet yarns are then combed to separate them which also helps to remove excess starch and ensure uniform application of sizing paste.

Drafting and Denting: After sizing, the warp yarn is wound onto the warper's beam. Each and every warp yarn is then inserted into the parts of loom to set the loom for fabric manufacturing process. The warp yarn is first inserted into the heald wires which is called as drafting process. Then every warp is inserted through the space between the reed wire, called as reed dent, this process is known as denting. After completion of both drafting and denting for all the warp yarns, these warp yarns are wound on the fabric beam which is located in front of the loom. The entire process is also known as looming process.

Weaving: For weaving of Pattu fabrics, a pit loom is used where the weaver sits in behind the loom keeping his legs in the pit. He operates the treadles with his legs which helps to give movement to the heald frames to form shed of warp yarns as per the requirement of weave. In that shed of warp yarns, weft is inserted and then beating of the weft is carried out by the reed which forces the weft towards the fell of the cloth. It helps to tighten and secure the weft in the completed fabric. As shown in Image 5, as per the design, extra weft yarns, which is wounded on *Nali*, are inserted to create different geometrical motifs in the fabric. Warp yarns are lifted manually to form the shed and insert the extra weft yarns. This process requires patience, focus and time to create the motifs exactly as per the requirement. According to the variety of Pattu, different weaves and yarns colors are used. Generally basic plain or twill weaves are used as a base weave to form the ground fabric whereas motifs are made by using bright colored extra weft yarns to highlight the pattern.

Image 5

Pattu Weaving Process by using Extra Weft Yarn



MOTIFS

Pattu fabrics are famous for their geometric shape motifs where a combination of shapes such as square, triangle, rectangles, diamonds etc. are used to create different motifs. The motifs of Pattu are generally inspired by the natural objects such as fish, hut, wasp, tress, birds and household articles. Horizontal multi-width stripes with weft-dominated thin stripes that run along the selvedge on both the sides of the Pattu fabrics are used to make the traditional Pattu as presented in Image 6 (a). Image 6 (b) shows the motifs created by extra weft technique on the Pattu woven fabrics.

Image 6

*a) Multi-Colour Stripes
Created on Pattu Fabrics*



*b) Multiple Motifs
Created on Pattu Fabrics*



PRODUCT RANGE

Traditionally products such as bedsheets, cotton rugs, blankets, shawls were made using the Pattu craft. With the intervention of contemporary designs in the craft, Pattu can be used in various apparel and accessories segments such as sarees (a long piece of cloth draped around the body worn by women), kurta (loose collar less shirts for both men and women), jackets, skirts, stoles, table cloth, cushion covers, tote bags, duffle bags, pouches etc. Image 7 shows few cotemporary applications of Pattu woven fabrics for reference.

Image 7

(a) Ladies Garment



(b) Cushion Cover



(c) Tote Bag



(d) Pouch made by Pattu Fabrics



TYPES OF PATTU

Pattu fabrics are distinguished by its motifs and colors used on the fabric. Each motif and color have its cultural significance. Different types of Pattu fabrics are a part of rituals of weaves community. The variety of Pattu includes Simple Pattu, Bardi Pattu, Hiravalli Pattu, Malani Pattu, Bhojasari Pattu, Bakla Pattu and Chatri-Kangsa Pattu. These Pattu varieties are discussed as following:

Simple Pattu: Simple Pattu fabrics are made with plain ground with the use of coloured warp borders that run along the length of the

fabric. Generally, these types of Pattu fabrics are kept simple without using any motifs and as per the choice of wearer, embroidery is done after the weaving for ornamentation.

Bhojsari Pattu: The base of fabric has formation of motifs in triangle form and its borders has weft patterning bars running horizontally. These are commonly made in Jaisalmer region of western Rajasthan.

Malani Pattu: Malani Pattu has surface ornamentation all over the fabric. The motifs are dominated by fish motif runs along with the muti-colored strips throughout the fabric. These Pattus are from Barmer region of western Rajasthan, formerly called 'malani'.

Hiravali Pattu: Hiravali pattu has characteristic sets of triple lines running warp-wise. It has its design evolved from simple Pattu. It has borders similar to that of the simple Pattu and does not have any motifs woven in its body.

Chatri-Kangsia Pattu: Chatri-Kangsia are also known as kashida Pattu as the motifs give embroidery like effect in weaving. This Pattu fabric has temple motifs represented with motifs that form two pillars with a *chatri* (dome) and kangsia motifs which refers to *damru* (pellet-drum).

Bardi Pattu: Bardi Pattu has a distinctively chequered pattern, hence also known as Bardi Check. Traditionally, the checks were made with black and white coloured yarns but now it is available in different colour combinations. Vertical borders are kept simple whereas horizontal borders are ornamented with bright colored stripes.

Lunkar Pattu: Lunkar Pattu has traditional weft patterning bars in its borders. This variety of Pattu is specially made for women and have red color ground. The size of Pattu Shawl is also smaller as compared to other Pattu fabrics made for men.

Other than these traditional Pattu fabrics, nowadays different varieties are available according to the market trend and demand of the consumer.

PESTLE ANALYSIS OF PATTU WEAVING

PESTLE analysis is an assessment of the political, economic, social, technological, legal and environmental factors related to an

organization, industry or business. These factors are analysed to avoid or minimize any related threats that could affect the organization in future and utilize the opportunities in the best possible manner. In the case of Pattu weaving, these factors are analysed to observe the current scenario and future aspects of the craft.

Political: Preservation of Indian art and culture is one of the priorities of Indian Government through the 'Make in India' policy so all handlooms' techniques including Pattu weaving have strong political relevance in the current era. Political factors exert a strong influence on the long-term sustainability and profitability of the craft. These factors determine the extent to which government policies may influence the industry or business. The Government of India constantly supports the handloom and handicraft sector to revive the ancient crafts. Various schemes are introduced by the Government for the upliftment of the artisans. Pattu weavers are also benefitted by these schemes and it is expected to be resulted in expansion of the market for the craft in near future.

Economic: In this era of machines and automation, Indian handmade (handloom and handicraft) has its own charm on the global market which contribute significantly in Indian economy. The economic development of a country directly influences the craft segment. Economic factors include foreign exchange, interest rate, labour market conditions, inflation and saving rates etc. of a country. As India has recently evolved as the fastest growing economy in the world, this will certainly positively impact the craft sectors also. Pattu being one of the ancient craft of western Rajasthan would likely to be benefitted by the economic status of the country.

Social: Social factors include the parameters such as demographic consideration, lifestyle trends, consumer beliefs and attitudes around working conditions. These factors are significant for any organization or business in targeting their customers and understand their demand according to the present and future social conditions. Additionally, this factor also helps in identifying the local workforce and their zeal to work for the industry. Social factors play a major role in defining the growth of craft of the country. Pattu weaving is considered as a traditional craft that holds a strong social and cultural significance for the weaver's community who practised this craft. Weavers have

the facility to work from home with flexible timings as the handloom used to be set up in their home. Female members of their family also participate actively for pre-weaving process such as bobbin winding. But a lot is needed to be done to spread the awareness about this craft among the consumers to explore the possibilities of expanding the market of the craft. This is only possible with the design intervention, new material exploration along with the right marketing strategies to expand the reach towards the consumers.

Technological: Technological factors refers to the innovations and developments in technologies such as rate of technological change, the evolution of infrastructure, and government or institutional research in the segment. In the case of Pattu weaving, technological factor plays a crucial role as similar products can be made on the power loom which hampers the demand of the Pattu made on the hand loom. The power looms products are available at a much cheaper rates that again affect the demand of the authentic Pattu fabrics. Considering this, weavers have now started using the machine-spun yarn instead of hand-spun yarn to meet the demand of the market. Also, new colour palette of yarns has been added to explore the design possibilities according to the latest trend. Pre-weaving process and weaving is still done in the traditional manner to retain the essence of the craft. Designers are now taking interest this craft and they are trying to make contemporary products with the Pattu woven fabric to attract the consumers, especially youth.

Legal: Legal factor includes parameters such as industry regulations, licenses and permits required to operate, employment and consumer protection laws, protection of intellectual property rights, quotas, resources, imports/exports, and taxation etc. Being one of the craft sectors of India, Pattu weaving craft is also abided by the rules and policies imposed by the Indian government for the handloom and handicrafts of India.

Environmental: As mentioned earlier, the textile and apparel industry is one of the most polluted industries globally so Pattu Weaving being a sustainable and environment-friendly fabric manufacturing technique has a major impact on environment. These factors are mainly concerned with the effect on the surrounding environment and the influence of ecological aspects because of the organization or

business. Factors of a business environmental analysis include but are not limited to climate, weather, geographical location, global changes in climate, environmental offsets etc. In the case of Pattu weaving, it follows the sustainable way of fabric manufacturing on handloom by using natural fibres such as cotton and wool. This makes Pattu an eco-friendly craft with minimum utilization of natural resources and energy consumption.

SWOT ANALYSIS OF PATTU WEAVING

SWOT analysis is carried out for the Pattu craft where the strength, weakness, opportunities and threats are discussed as follows:

Strengths: Being a traditional craft, Pattu fabrics has a strong cultural significance among the weaver's community. This fabric still holds its value as no power-driven machines or techniques are involved in the fabric manufacturing process which makes it a sustainable way of manufacturing. Mostly natural fibres such as cotton and wool are used to make the Pattu fabrics. In this craft, low capital investment is required as loom and other traditional equipment are available at the weaver's house. The weavers can work from their home with flexible working hours. Women of the community also helps in bobbin winding and other related work in their leisure time. There is a wide scope for experimentation and exploration in colors, motifs and product range is possible as per the requirement of the fashion trend which may further help in the growth of this craft.

Weaknesses: To make the Pattu fabric, weavers work on traditional pit loom instead of improved power looms that restricted the productivity and efficiency. Infrastructure facilities are also not sufficient at weavers' home which makes it unattractive for the future generation of weavers. Lack of information on national and international market trends and technological upgradation keeps the Pattu manufacturing behind. Consumers are also unaware of the craft and its importance due to lack of promotional activities. Therefore, Pattu craft is mostly confined to rural areas, small cities and untapped market. This scenario restricts the earning of the weavers thus they have been shifting to other employment options.

Opportunities: Ministry of Textiles, Government of India is constantly working towards the upliftment of handloom and handicraft sector

and trying to revive the traditional craft practices. Government is providing platforms like exhibitions/fairs etc. to the weavers so they can be able to showcase their work to the wider range of consumers. Few Fashion designers are now working with this craft to cater the national and international market. An NGO named Urmul Marusthali Bunker Vikas Samiti is also working for the upliftment and welfare of the weavers by introducing various initiatives for the development of the weavers and their family. Few educational institutes of India, such as National Institute of Fashion Technology (NIFT), are working towards upliftment of the craft by introducing contemporary motifs, colors palate and product range which is suitable for the upcoming fashion segment. NIFT has also started programs such as craft bazaar, artisan awareness workshop and other craft cluster activities to increase awareness among the consumers which may expand the horizon of the craft.

Threats: The craft of Pattu weaving is declining due to low economic gain to the artisan's despite of requirement of specific skillset and long working hours. Due to higher cost of the handloom and handicraft products as compared to the machine-made products and lack of awareness of the crafts, the consumers do not pay attention to these crafts. New Printing technologies have made it easier to make intricate designs digitally at very low cost. Almost all the woven patterns including Pattu weaving craft can be easily replicate on power looms where the productivity and efficiency is much higher which decreases the final cost of the fabric. The Covid-19 protocols and lockdown situations have further affected the sale and demand of the craft.

CURRENT SCENARIO

The Pattu craft has kept its original essence of construction and design and now adopting new ways to revive the craft according to the current fashion trends. From incorporation of wider range of raw materials to motifs and colour palate this craft is trying to cater to newer product categories. Adding to the traditional camel and sheep wool, cotton and other natural fibres are being used in making the Pattu woven fabrics that can be wore throughout the year, irrespective of the season. According to fashion forecasting multiple hues and shades of yarns are available now to make the Pattu products. Designers are coming up with new patterns and silhouette to introduce new products to the consumers. The pandemic of covid-19 has badly affected the craft sector but Urmul NGO has helped them to provide the orders and raw

materials to survive in this situation. In the post-Covid scenario, now artisans are able to showcase their products in various state level and national level exhibitions and fairs.

CONCLUSION

Sustainable fabric manufacturing techniques such as ‘Pattu weaving’ will play an important role to make textile industry more sustainable and environment friendly and reduce the adverse impact on environment. All these handloom crafts have their own history and significance according the climatic and cultural conditions of the specific region. These handlooms and handicrafts use sustainable materials, techniques, processes and disposal systems which are important to sustain the eco-system. This makes it utmost relevant to spread the awareness of these crafts and re-invent them to meet the demand of current market trends.

Pattu weaving is also a handloom-based craft technique which requires attention of the market to survive among the power loom based woven products. With the keen interest shown by the designers and academicians in this craft, multiple initiatives taken by the government for the upliftment of the craft, and the with awareness spread through social media and other related platforms, it is expected that the craft may revive and contribute in continuing the traditional sustainable practices. Successful upliftment of these techniques will not only help artisans to preserve their art but also contribute in making a sustainable future for everyone.

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