

Research Article

Factors Affecting Craft Development and Competitiveness - A Case Study on *Naar Kadagam* of Tamil Nadu

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Abstract - The United Nations' sustainable development goals are supported by several distinct characteristics of creative social enterprises, which are a dynamic force for the community's economic and cultural sustainability. Artisans use creativity as a tool for social change and can be found addressing issues such as poverty eradication, access to health and education, women's empowerment, and ethical production, to name just a few. The crafts of India are known for their diversity and are rich in history, culture, the identity of the place, community, etc. Some crafts and artisan skills associated with it are on the verge of extinction due to several factors, and saving the dying crafts can be a method to preserve the country's culture or heritage. The study focuses on a unique heritage craft practised by two main artisans' clusters in Sivagangai, Tamil Nadu, a southern part of India, striving to preserve their handicraft traditions. In rural areas, handicraft industries are also an important source of supplemental income and remain a crucial factor in the daily existence of an individual and his or her household. A case study research design involving qualitative methods was used for this study. In-depth interviews, a literature review, and documentation were used for collecting data. This study makes two contributions: first, it provides a comprehensive understanding of the factors responsible for the dying craft using PESTLE analysis; second, it identifies the determinants of craft revival capabilities by government, organizations, professionals, and individuals to uplift both creative social enterprises and artisan communities.

Keywords - Creative social enterprises, Ethical production, Heritage craft, PESTLE analysis, Revival capabilities.

1. Introduction

Cultural/creative industries are defined as those industries that produce tangible or intangible artistic and original outputs. They have the potential for wealth creation and income generation through the exploitation of cultural assets and the production of knowledge-based goods and services (both traditional and contemporary) (UNESCO Bangkok, 2007). These industries use creativity, cultural knowledge, and intellectual property as common tools to produce products with social and cultural meaning. (Askerud & Engelhardt, 2007) The International Trade Centre (ITC) (UNCTAD/WTO 1997) categorized the handicraft industry as one of the sub-sectors of the larger group of creative industries. Indian handicrafts are known for their wide variety, grace, elegance, and highly developed artistic skills. India is known to be the largest exporter of handicraft items among all other developing countries. The industry has provided opportunities to more than six million artisans who can utilize their talents to earn a proper livelihood. One of the unique handicrafts of India is wicker-craft, a woven fibre formed to create structure and a solid shape. Intricate weaving patterns and fibres are key

components of woven crafts. The UN Comtrade database uses HS codes (Harmonized Commodity Coding System) to distinguish and measure handicrafts data, which may include basketwork, wickerwork, and other products made to shape from plaiting materials and fall under code #4602. (Grobar, 2019)

Woven crafts symbolize local wisdom and knowledge, which can be passed down to the next generation. Wicker crafts exemplify human ingenuity in the use of natural materials by weaving any material that is easily available, abundant, strong, long-lasting, and suitable for daily use. In India, there are many wicker-craft cultures, and one of them is the palmyra wicker-craft of Tamil Nadu from the Sivagangai and Melur districts.

The focus of this study is on one specific heritage craft, "*Naar Kadagam*" (woven palmyra baskets) that has its own unique traditional knowledge and skills being passed down from generation to generation. Mehrotra et al. (2020) discovered a 66.7% drop in net sales growth rate (due to the COVID-19 pandemic) in the first quarter of the fiscal year



2020–2021 in a study of 690 handicraft industries (small business) enterprises. In this era of globalization and industrialization, small creative firms in the craft sector are faced with numerous issues, including resource constraints, market competition, a short product life cycle, and so on (Shafi et al., 2019). They are on the verge of going extinct. These dying crafts must be studied, documented, and preserved. Otherwise, they will be left with a precarious existence (Scrase, 2003) and face socio-economic issues like poverty, lack of education, financial resources, and the dominance of machine-made, low-cost substitute products. Arts and crafts, though a niche industry included in the category of cultural and creative industries, can help the UN (United Nations) achieve its goals by having a positive impact on employment, fair trade, and ethical production, among other things, claims the author of Arts and Crafts and UN Sustainable Development Goals. (Gudowska, 2020)

Furthermore, according to Scrase (2003), handicraft products can be divided into "elite crafts" and "quotidian crafts"; the study focuses on the latter because the majority of crafts fall into this group, with woven baskets being one among many. Moreover, they are not produced in excessive quantities, for which there are many alternatives on the market. These crafts are undoubtedly functional, and unlike decorative ones, they serve utilitarian purposes. They also have some interesting characteristics that distinguish them from other industries, such as the implication of traditional knowledge, low investment, the creation of jobs at minimal cost, and the use of low-cost machinery and energy.

This article's objective is to map out the potential factors that influence the craft's existence and extinction through a PESTEL analysis, which is a prerequisite for planning and formulating policies. Further research in this area could lead to (i) resource availability and allocation and (ii) the development of cultural institutions and enterprises that function on traditional or contemporary knowledge management systems.

2. Review of Literature

2.1. Indian Handicraft Sector

Handicrafts are one of the most important industries in India, employing over six million people. Handicraft products have multiple uses; they can be utilitarian, decorative, artistic, imaginative, culturally attached, ornamental, functional, traditional, religious, and socially symbolic. (Bhat & Yadav, 2016) Wood-ware, art-metal wares, handprinted textiles, embroidered goods, zari goods, imitation jewellery, sculptures, pottery, glassware, attars, agarbattis, etc., are produced in the country. Female artisans account for more than 56% of the total artisan population in India, offering over 35,000 products. The majority of manufacturing units are located in rural and small towns,

and there is enormous market potential in all Indian cities and internationally. Total handicraft exports, excluding handmade carpets from India, totalled 120.06 million US dollars in May 2022, a 1.01% increase over April 2022. (Indian Handicrafts Industry & Exports, 2022) The USA has the highest demand for Indian handicrafts, with a share of 20 percent of total exports, followed by the UAE (1%), Germany (5%), and Latin American countries (5%). (Yadav et al., 2022)

Several factors influence or affect the consumer's decision to purchase handicraft products. According to Bain & Company's survey results from 2022, 52% of consumers in urban India expect to increase spending on sustainable brands in the next three years, and more than 60% of Indian consumers are willing to pay a premium for sustainable products. (Lightowler et al., 2022) Consumers' purchase motivations for handicrafts differ according to their cultural orientation, attitude, behavior, culture, tradition, taste, norms, values, eating habits, attire, and other factors. (Silver & Kundu, 2012) People purchase both handcrafted objects and those with artistic and useful value. As a result, there is always a market for handmade goods, and that market is very dependent on its customers.

In their current environment, artisans face a number of challenges in offering their goods and services in the same way that more established business ventures do, threatening the crafts. It is critical to preserve and pass on our cultural heritage to future generations, who are often disinterested due to a lack of stable income and awareness. (Yang et al., 2018) As said by Ben Oslen (2020) in his journal, nurturing new generations of artisans is highly essential for the proliferation of heritage crafts, with a need for adequate training, support, and role models to encourage those with a desire to learn.

2.2. Palm leaf crafts in Tamil Nadu

Ask a man to cut down a coconut or palmyrah tree, and he will say... 'What! Destroy that which gives me food? From which I have thatch for my house to defend me from the sun and rain? Which gives me oil for my lamp, a ladle for my kitchen, and charcoal for my fire? From which I have sugar for my board, baskets for my fruit.'

The above information is believed to have been first translated in Scotland on September 21, 1850, and was then published in the Scripture Botany of Ceylon in 1858 (Ferguson, 1858). The palmyra palm (scientific name: *Borassus flabellifer*) is not to be confused with the oil palm. The above quote signifies the versatility and economic dependency of both coconut and palmyrah trees in terms of livelihood.



Fig. 1 Palmyra tree

India's cultural capital, Tamil Nadu (TN), is known for its magnificent temples and buildings. Among the crafts spread across the state are sari weaving, mat weaving, stone and wood carving, tile manufacturing, metal ware, brass and bronze cast sculptures, conch shells, pottery & clay, Tanjore dolls & paintings, Kanchipuram silk, *Toda* embroidery, tie-dyeing, cane & bamboo items, and palm leaf products. TN is a pioneer in developing the palm products industry in India. (Krishnaveni & Arunachalam, 2020)

There are about 100 million palm trees in India, of which TN has 50 million trees grown in wastelands, farm field boundaries, seacoasts, parks, industrial estates, and house colonies (Rao et al., 2021). The Palmyra, also known as the "*karpaha*," "*nungu*," and "celestial tree," is the state tree of TN, known locally as *panamaram*. (Jasmin & Mary, 2022) It provides an impressive assortment of products extracted from roots to fibres and has many uses. The trees act as a source of food, timber and shelter. *Neera*, or *padaneer* as they call it, is palm nectar¹ regularly extracted and sold for consumption. Toddy (a raw alcoholic beverage legally banned for trading and consumption) is obtained by fermenting *neera*. Palm nectar is also used for preparing palm sugar (*karuppatti*). All the edible products derived from the palmyra tree have medicinal properties. Even the underground sprouting root, known locally as *panangkilangu*, is edible. Young, mature fronds and their fibre are used for making various products, such as brushes, mats, hand fans, rice-winnowing baskets, and low-to-high utility baskets. Dried leaves are used for roofing huts and building fences. Historically, manuscripts were written on palm leaves with the help of needle-like instruments used to engrave on the leaves (Ramaswamy, 2013).

According to Tamil Nadu Handicrafts Development Corporation Ltd., palmyra craft clusters are mainly located in Dharmapuri, Krishnagiri, Thoothukkudi, Pudukkottai, Kancheepuram, Nagapattinam, and Kanyakumari districts. Products made from palm leaves vary widely depending on

the region. Items with both functional and decorative uses include de-husking trays, baskets, fans, square mats, suitcases, boxes, coasters, and vases that suit the needs of both the local and high-end markets. Each cluster maintains its uniqueness through incorporating variations in weaving, motifs, colours and using palm leaves with different materials (e.g., plastic).

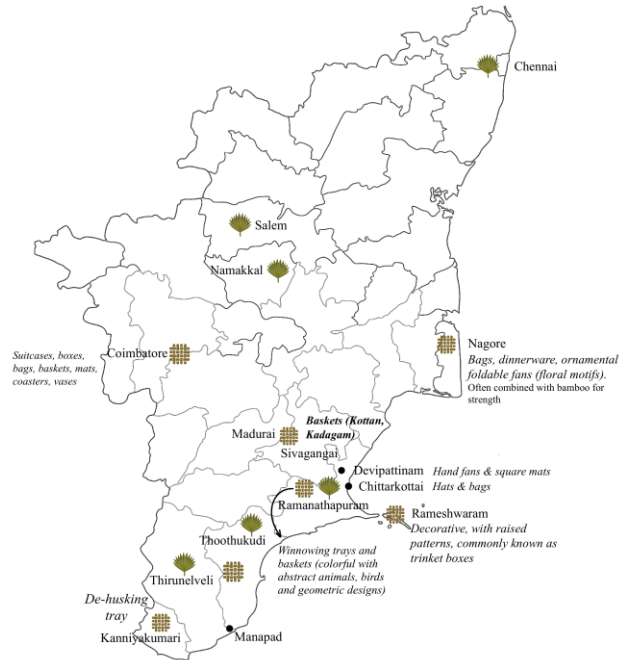


Fig. 2 Mapping of palmyra trees and weaving craft in TN

Various artistic communities in Tamil Nadu also develop wedding invitations, cots, chairs, industrial and household brushes, and rotary brooms for niche markets. TN's neighbouring state, Kerala, also thrives in palm leaf and stalk weaving crafts and has umbrellas as its unique product made from palm leaves. Sri Lanka specializes in making garlands, laptop cases, and baskets. Indonesia's palm-leaf baskets have six unique three-dimensional diamond weave patterns, each representing the local's life.

2.3. Naar Kadagam - The Heritage Crafts

"Naar Kadagam," also known as "*potti*," is derived from Tamil, a South Asian language natively spoken by the Tamil people. They are eco-friendly natural baskets made from palmyra leaves; "*naar*" means fibre, and "*kadagam*" or "*koodai*" means basket. These handcrafted palm leaf baskets come in various dimensions due to individual craftsmanship. Based on occasions and customer needs, artisans dye the basket's top edge in vibrant colours using red and green dyes, both synthetic and natural, to accentuate the minimalist composition. However, when and where the weaving of baskets using palmyra leaves first started is quite unknown.

¹phloem sap extracted from the inflorescence of various species of toddy palms used as a nutritious health drink and contains zero percentage alcohol



Fig. 3 A medium sized Naar Kadagam

Naar Kadagam is a heritage craft² practiced in two Tamil Nadu villages. It is considered viable if there are enough craftspeople to transfer the craft skills to the next generation. About a hundred families in Kirungakottai village, near Singampunari, have been weaving *kadagam* as a leisure activity and found pride of place in every activity, from ritual and ceremony to daily use. To be financially independent, one to two women in each family get themselves involved in weaving the basket. Although they do not rely completely on the craft, it helps them self-sustain and prevent the craft from going extinct.

Whereas in Kidaripatti village, Madurai district, over 500 women practice the craft full-time. During the day, prior to weaving the baskets, raw material sourced from palmyra trees undergoes preparation; meanwhile, they engage themselves in agriculture and other household activities. It takes 2–7 days to make a basket, depending on the size. It takes two days to weave a 20-inch-high, 15-inch-diameter basket and up to a week to weave a 50-inch-high, 40-inch-diameter basket. According to the gender-specific statistics for this craft, women outnumber men in terms of practitioners. Men usually collect the baskets from surrounding families and market them to nearby villages. Products produced by these people were sold locally. Customers buy this handicraft primarily for wedding ceremonies, but it is also useful for local and daily purposes like storing grains. *Naar Kadagam* costs between 200 and 600 INR, depending on size and finish.

Other palmyra basket forms, including *kottan*, can be distinguished from *naar kadagam* by their size, weaving technique, finishing style, value additions, and the parts or quality of the raw material harvested from the palmyra trees.

3. Materials and Methods

The research uses descriptive qualitative and case study methods, aiming to gain concrete, contextual, and in-depth

² Heritage craft is a practice which employs manual dexterity, skill and an understanding of traditional materials, design and techniques which has been practiced for two or more successive generations. (Zabulis & Meghini, 2019)

knowledge about a specific craft belonging to one of the oldest communities in Tamil Nadu. Both primary and secondary data were used. A semi-structured interview, along with participant observation, was used as the primary data collection tool. This helps to understand what is happening in a given group and its cultural environment, giving greater credibility to the interpretations drawn from the observation. A review of previous studies in the form of journal articles, government reports, newspaper and periodical databases, and books formed the secondary data.

Table 1. Interviewee profile

Interviewees	Age	Work experience	Job profile
Periyasami (M)	70	30 years	Full-time Wholesale dealer
Mariammal (F)	55	25 years	Leisure weaver
Selvi (F)	47	22 years	Leisure weaver
Poongothai (F)	50	30 years	Leisure weaver
Pazhani Ammal (F)	75	41 years	Senior craftswomen teaching weaving
Rani (F)	38	15 years	Housewife, farmer, part-time weaver
Karuppayee (F)	87	45 years	Full-time weaver and senior craftswomen
Pooranam (F)	40	22 years	Housewife, farmer, part-time weaver
Deivanai (F)	39	13 years	Housewife, farmer, part-time weaver
Ponni (F)	19	2 years	Occasional weaver, Helper
Kavita (F)	32	7 years	Supplier and coordinator
Kannan (M)	37	10 years	Marketing and Sales
Azhagamma (F)	40	15 years	Part-time weaver; animal husbandry

Individual artisans working in their spare time and all formal production unit setups working with specific targets and strict time frames in the two rural areas were approached for interviews. Using cluster sampling, individuals were chosen from a list of the artisan community in each of the villages. The snow-bowling technique was also used, in which a non-probability purposive sampling

selected the first interviewee, and then subsequent ones were approached based on the common networking system. The system allows them to intentionally build effective relationships around a shared vision to accomplish goals and build a movement by working together as peers to go faster and keep motivated. All the interviews were conducted in person with artisans, recorded (with consent provided by interviewees to document and take photographs), and then transcribed to form relevant data.

In addition to the artisans, interviews were conducted with two of the main members of the Manjal, M.Rm.Rm. Cultural Foundation in Chennai, Tamil Nadu, to preserve culture and craft and revitalize artisan and community development by providing them with a reliable source of income, training, exposure, and a tremendous amount of confidence. Qualitative data analysis is used in this study. The process is inductive, exploring the raw data to derive concepts, recurring themes, and patterns and then describing and interpreting those categories in the PESTLE (Political, Economical, Social, Technological, Legal, and Environmental) framework. According to Gumulya et al. (2022), the data analysis technique used in this study consists of several steps: data reduction, categorization, prioritization, and conclusion. The complete framework can be found in appendix 1.

3.1. Research Questions

1. What are the main issues that the *naar kadagam* artisans in the Sivagangai and Melur districts face?
2. What are the reasons and/or factors responsible for a dying craft leading to a community's cultural loss?
3. What are the best strategies for protection, and what are the implications of intervention?

4. Primary Data

4.1. Palmyra Leaves –the Main Raw Material

“Thennai ah vidhaichavan thinnutu saavan, panai uh vidhaithavan paathutu saavan” - Karuppayee, age 87, Kidaripatti.

The quote translates to: "One who plants a coconut tree will have a chance to taste the fruit before he dies, but one who plants a palmyra tree will die after seeing." ("Seeing" here means that the person will be able to live and see three to four generations of his family line before passing away.) A tree can last up to 100 years and is known to grow up to 100 feet in 10 years.

Palm tree sprout leaf (*kuruthu*) is the main raw material to make the basket, followed by palm leaf stalk (*mattai*), the strongest part of the leaf used to finish the rim. Three types of fibre are being extracted from a single palm leaf stalk. Weaving this heritage basket requires a substantial amount of human skill or expertise with no input from machines

except for basic farming tools like a billhook machete, a knife and a wooden plank (sawn from shorter-lived palm trees or trees that did not survive a lightning strike). Based on the interview with the key informants, it is found that these baskets can only be made with palmyra leaves that are as young as three days old because of their soft texture and strong surface, which give off a nice light-yellow colour (suitable for recolouring if needed). The tree yields a new leaf once a month, and if the extraction is delayed, the leaf matures and may not be ideal for making these baskets. The palmyra's smooth, tenacious, and water-absorbing sprout and stalk make it an excellent weaving material.

4.1.1. Harvesting Leaves and their usages

Craftswomen usually request and pay the tree climbers to get them the raw materials every month. They pay 20 INR (about 25 cents, or 1/4 of a dollar) for one *kuruthu*, and the leaf stalk, being expensive, is charged 350 INR (4.29 USD) per 100 strands. One hundred stalks make one *kuppam* (unit of measurement). Palm tree climbing is often discouraged, ruled out, and even banned in many parts of Tamilnadu for two main reasons. One is due to the riskiness that results in death from free falling. Another reason is that, due to the alcohol content of toddy, the state government has prohibited its sale.

4.1.2. Process and Finishing



Fig. 4 Tools and the process

Once the leaves are sourced, they are left to dry in the sunlight for 5 days before being stored in dry places with no humidity. The artisan removes some unwanted parts, as they may be too short and narrow for weaving. The dried palm leaves are soaked in plain water for 3–5 days and then washed to remove dirt. The leaf's midrib is removed with the help of a *sathagam* (knife), and the leaf is cut into strips of the required size (usually between 11–14mm wide) with the help of a traditional cutting machine locally known as the *arivaal*. Few artisans skip the process of dipping the leaf strips in boiled water, while some follow it to strengthen the baskets. Before weaving water is sprinkled on the strips before weaving to keep them moist and avoid breakages. Based on the required size of the basket, the palm stripes are arranged vertically and horizontally, interlocking each other. Over that, a wooden slab is placed and held with hands and feet for support. They start by weaving the base of the

basket first. Then strips are bent to finish the sides, which are then interlaced and woven until the required length is achieved. Finally, the 55-mm-thick stalk, usually dyed with vibrant colours like green and red, is used as a rim to keep the ends of the basket from unraveling, and midribs from the petiole or frond are used to tie it to the baskets. One of the observations from the site visit revealed no residual waste in this handicraft production. The leftover bases of the fronds and other unused parts were used as fuel for their fireplace.



Fig. 5 Women Entrepreneurship

4.1.3. Practice and Distribution

The history and customs every artisan carries are distinct from other communities. The majority of the women practicing crafts are elderly or older than 35. Poongothai, age 50, has been practicing the craft for nearly 30 years. She learned the weaving technique from her mother-in-law and took it up as a hobby during her initial married life. After her husband passed away, weaving *kadagam* was what helped her keep up with the basic expenses. Both of her daughters are married and live outside of town. She insists that her daughters learn the craft so that it does not become obsolete after her passing. Poongothai, along with a few other mothers in the community, claimed that the younger generations do not understand the value of craft preservation. When asked the reason behind it, the descendants and daughters-in-law of senior artisans said that they do not see commercializing traditional crafts as a viable path or as one that can provide a varied, stimulating, and rewarding career. Instead, they perform jobs as agricultural labourers, traders, heavy-duty drivers, landlords, and money lenders. Some of them even migrate to cities in search of a better life with a stable income. It is noted that women who got married and moved to the villages lend a helping hand to the elderly artisans when they are done with household chores, animal husbandry, etc. They spend at least 4-6 hours a day collecting, storing, preparing, weaving the leaves and stalks, and finishing the baskets.

The supply chain of this heritage craft involves a wide range of actors, such as artisans, buyers, suppliers, competitors, middlemen, wholesalers, retailers, non-profit organizations, and consumers. A strong relationship prevails between these supply chain actors, as each one of them adds unique value to the craft. Usually, the artisans produce the

products, and buyers or retailers either directly buy from producers or through the middlemen in the form of agents. In some cases, the wholesaler, middleman, or supplier pays and provides the raw materials to the craftsman, who in turn provides them with finished products. It is the retailers who fix the price of the products, as sometimes they are also the ones who provide the product specifications to artisans: a private, non-profit organization, the M.Rm.Rm. Cultural Foundation in Chennai, Tamil Nadu, plays a substantial role in supporting the upstream channel members, especially the artisans, through product and process innovations and finding suitable clients to market the products both locally and internationally.

5. Results and Discussion

5.1. The shortage of Raw Materials and the Difficulties in Procurement

The main reason the craft is going extinct is because of prevailing difficulties in raw material procurement. Unlike coconut trees, palmyra trees have petioles (grooves on the trunk) which can cause excruciating pain and scratches, resulting in blood on the climber's body. In this case study, the increasing difficulty in obtaining raw materials forces artisans to take on other jobs (for example, farming, coir twisting/trading, etc.) or use different materials to create products that meet the customers' demands (for example, plastics and bamboo). The state government restricted farmers from climbing palmyra trees due to the increased risk of injury or death from falling and the likelihood that they would extract, consume, and sell toddy.

However, in March 2022, the government announced a 75% subsidy for any innovative outputs in tree climbing equipment to make the process a risk-free affair and assist small and medium enterprises (SMEs) in their palm jaggery and palm candy production, as well as individuals who sell *neera*. Furthermore, the scheme has a financial outlay of Rs. 26.5 million (~324,000 USD), including palm leaf handicraft training costs for 100 women. The minister pledged to plant 2.5 million palm seedlings each year as part of the Palmyrah Development Mission to ensure continuous employment. (Dass, 2022) The artisans also reported a lack of information on government or private sector assistance.

5.2. Issues in Defining the Craft's Authenticity

Although innovation and creativity in sustainability remain a competitive edge, low productivity and the inability to be adaptive enough to the changing needs of consumers have become the limiting factors in the growth of the handicraft industry. (Ghosh, 2012) Additionally, there has always been a controversial issue concerning innovation in crafts. (Shafi et al., 2019) Crafts undergo product and process innovations and are built on the principle of continuous improvement. The palmyra basket's size, value, and use have evolved, as have processes such as dyeing, finishing, and packaging based on new markets. The

innovation of small creative businesses involving women is more dependent on collective action than artisanal factors. The government must take the necessary precautions to protect this knowledge. This will aid in distinguishing traditional crafts from those produced by machines by giving them legitimacy. If handicrafts are innovated beyond a certain limit, there is a risk of losing their cultural heritage, and the authenticity and originality of the product may degrade. Shafi et al. (2021) concluded that consumers prefer innovations that do not harm or compromise with the traditional nature of handicraft products. However, no studies have been conducted to demonstrate the extent to which crafts can be innovated.

The palmyra basket itself is a 100% biodegradable product. However, due to constant pressure to bring in innovations, the use of coloured plastic strands is being highly incorporated into palmyra baskets to bring in geometric, floral, and animal motifs. Furthermore, because of technical difficulties such as dye intake and preservation, the use of natural dyes is still less popular among artisans than synthetic dyes. Alternatives to palmyra basket handicrafts are gaining traction due to their sturdiness and the fact that they last longer and are much cheaper. However, women artisans in both village communities who pass down their baskets to their daughters claim that if properly cared for, the baskets can last up to two generations.

5.3. Absence of Market Intelligence

Most consumers buy crafts and artisanal products because they want to feel connected with their indigenous traditions, ancestral roots, and cultures in a global and increasingly materialized world. (Mahgoub & Alsoud, 2015) *Naar Kadagam* and other woven palmyra baskets are part of a much larger home accessory market that includes purely handcrafted or semi-handcrafted goods made without the use of machines. The market is influenced by fashion trends, consumer purchasing patterns, and end-market economic conditions to a much greater degree than anticipated. (Barber & Krivoshlykova, 2006) In many cases, artisans are out of touch or lack the marketing skills to build connections with those end markets, which poses a challenge to those seeking to export their products. In order for them to export, artisans must comply with mandatory and legal requirements of the importing country, as well as any additional or niche requirements their buyers may have. Product damages from shipping, ancillary tags, surplus packaging charges, and expensive and often complex payment and delivery terms recognize a deep understanding of how they cannot sustain themselves as individuals.

The world has been changing rapidly, especially because the Internet of Things (IoT) and mobile technology have made previously impossible things possible in terms of

shopping for consumers who intended to purchase finished handicrafts and artisans purchasing raw materials. The conventional methods are replaced with modern ones: cash to cashless, paper tickets to e-tickets, physical goods to digital assets (lacking the benefit of tactile stimuli), etc. A new digital divide in internet usage between rich and poor people has been detected, leading to unequal access to technology based on earnings. Finding and creating a new product category that maintains the brand's artisanal identity while offering delivery and costs suitable for today's online consumer is, therefore, challenging.

Many researchers and academicians have reported that collaboration with designers and brands could help revive craft products and empower artisans to diversify their product range further to suit niche markets (Tung, 2021). But in this case, their proposed price quotation to artisans does not equal value because the value has many intangibles that may be difficult to quantify. When asked how the foundation maintains the craft, the director stated that the sales revenue from the merchant is insufficient to support the artisans during their entire journey. This paper contends that handicrafts' significance should go beyond simply being emphasized as a viable alternative to sustainable fashion, where environmental friendliness is merely a marketing gimmick.

6. Recommendations

Despite adequate food production, hunger and malnutrition exist (Rao et al., 2021). This could be attributed to inequitable food distribution as well as food losses and deterioration.

- Hence, maximum utilization of products from trees that naturally sustain themselves with minimum care and reducing post-harvest losses are absolutely essential in the current scenario.
- Horticultural crops, like the palmyra palm that are mostly consumed unprocessed or with limited processing, must carefully apply all processes of improved pre- and post-harvest technology that greatly boost shelf life, utilizing their value-added products to their advantage.

The fundamental value of crafts lies in their opposition to mass-production methods.

- Artisans and other stakeholders working to save the dying craft and improve the artisan's livelihoods must ensure that traditional motifs, colours, and materials are not compromised to meet customers' needs and desires. Otherwise, the product will become something else that could destroy traditional craftsmanship.
- The role of the government in informing the craftsmen and the stakeholders of heritage crafts about intellectual property rights (IPR) is undefined and needs to be

clearly specified so that more copyright registrations of heritage crafts can take place from the side of rural and minority craftsmen.

Crafts are more than just a method of producing things; they are linked to the cultural structures, values, history, and identities of the communities in which they are practiced. The conservation parties must examine craft values in terms of knowledge, as a method of education and employment, as well as in terms of social, religious, and cultural settings.

- A portal that offers single-window access to a comprehensive, accurate, reliable, and one-stop source of information about crafts that are on the verge of extinction and their different facets shall be implemented. This platform could be a metadata-driven one that connects to other portals and websites run by the Indian Government Craft Association to provide the most recent information. This allows interested individuals to investigate, discover, document, or interfere by fulfilling the craft's security needs, thus creating a concrete database management system for disappearing crafts.

7. Conclusion

The focus on cultural industries is linked to a newly emerging global paradigm for development. (UNESCO Bangkok, 2007) Cultural industries have particular potential for participatory and community-based development and change. Recognizing and mobilizing individual and community talents, skills, and assets is necessary, but it should also extend its focus to their basic problems and needs. The strengthening of cultural industries requires integrated policy support and development (inclusion in overall national development goals and cohesive policy interventions that benefit all the stakeholders). Creativity and creative/cultural industries need to be strengthened

everywhere to bridge the gap between industrialized and developing countries and regions and ensure equal participation in knowledge societies, creativity and creative/cultural industries need to be strengthened everywhere. Not all collaborations have the potential to evolve into profitable enterprises and aid in the long-term growth of local crafts and communities. This case study is an example of how artisans were trained through workshops to make hats, laptop cases, coasters, and other items. However, they were unable to commercialize and market these items because the market for baskets already existed. The evaluation of entrepreneurial success in indigenous crafts should go beyond economic development and concentrate on how entrepreneurship can contribute to holistic sustainability by concurrently addressing social, cultural, and economic concerns.

The analysis and recommendations in this document are primarily intended for policymakers and officials, statisticians, and cultural researchers who are concerned with the elaboration and implementation of revival and empowerment programs, training and support, community development plans, etc. The actionable outcomes are both at the macro and micro levels.

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Appendix 1. PESTEL Analysis

POLITICAL	ECONOMIC	SOCIAL	TECHNOLOGICAL	LEGAL	ENVIRONMENTAL
<p>Current tax policy</p> <ul style="list-style-type: none"> • Lost identity: When officials do not find sufficient data to identify the craft's originality, authenticity, product relevancy or the artisans themselves, they may not be able to provide tax exemption. 	<p>Inflation rate imposes a high and acute rate of social and economic costs on communities.</p> <ul style="list-style-type: none"> • In 2022, the inflation rate in India was around 6.89 percent compared to 2021 (5.51%). • The constant increase in prices results in reduced customer purchasing power over non-functional and decorative artifacts. <p>Disposable income</p> <ul style="list-style-type: none"> • Declining income and rising expenses. • Predominantly agricultural society. • Artisans lack contact with intermediaries and/or lack resources to distribute their handcrafted goods successfully. 	<p>Lifestyle attitudes</p> <ul style="list-style-type: none"> • Migration • The unwillingness of the young generation to continue this craft as a profession. • Unable to find a wider market. • Unpredictable consumer demand patterns and prevailing supply gap in the market. • Collaboration with designers and established brands might have the potential for conflict. • The growth of urbanism distanced from genuine values. 	<p>Level of innovation</p> <ul style="list-style-type: none"> • Lack of innovation in designs and technology (products produced in the palmyra handicraft industry tend to be monotonous from year to year. • Lack of education (tech-ed), awareness seminars and training facilities. • High training costs. • The product is not much differentiated in terms of size, material, or methods from other similar products from neighbouring cities, states, and even countries. 	<p>Employment laws</p> <ul style="list-style-type: none"> • The most crucial thing is that there has been no clear legal framework regarding this heritage craft at the state/national level, either in the form of laws or government regulations. • Little or no recognition of artisans for their creativity and hard work. • Lack of financial resources or support to motivate • The risk associated with climbing has been the prime reason the government restricts palmyra tappers from climbing trees and switching to other businesses. 	<p>Weather</p> <ul style="list-style-type: none"> • Lack of supply and distribution of raw materials. • Lack of appropriate standards in production lead time, logistic cost, and material availability. • Less focus on restorative and regenerative practices. • There is little to no water allocation to handicrafts over agriculture due to conflicts over water reservoirs and scarcity.
<p><i>Trade policies</i></p> <ul style="list-style-type: none"> • Primary competition from countries like Sri Lanka, Indonesia, Bangladesh and South Africa. • This craft does not meet the criteria for the Government of India's list of qualities for Indian handicrafts intended for export, principally because it is not a cottage enterprise. 	<p><i>Unemployment rates</i></p> <ul style="list-style-type: none"> • Due to the low visibility and reproducibility of art, artisans are frequently forced to sell their handcrafted objects at mass production prices, discouraging younger generations from practicing the craft and ultimately leading to its extinction. • Absence of facts and figures about employment and income generation. 	<p><i>Cultural barriers</i></p> <ul style="list-style-type: none"> • Weak infrastructure and poor institutional settings. • Less focus on marketing and advertising in tourist areas. • Challenges in co-creation due to social hierarchy restricting resource sharing. • Scattered and poorly organized manufacturing base. • The village's isolation, lack of communication methods for accessing the market and technical knowledge. • Craftspeople's ignorance of international norms and markets. 	<p><i>Automation & technological awareness</i></p> <ul style="list-style-type: none"> • Technological advancements and changes in traditional ways of consumption have resulted in an increase in demand and popularity for the mass production of economic products over craft products. • Artisans no longer profit from informational and technological monopolies due to rapid internet access to knowledge and practices. 	<p><i>Discrimination laws</i></p> <ul style="list-style-type: none"> • Caste-based inequality and discrimination in climbing trees for material extraction. • High-caste or dominant caste communities that own land in the area have influence over who can own the goods produced there. • The unequal distribution of opportunities among craftspeople results in caste-based labor division. For instance, caste-based sharing of orders from cities destroys integrity and transparency. <p><i>Consumer Safety</i></p> <ul style="list-style-type: none"> • Lack of labelling and price indication rules pose a threat to selling baskets outside the designated area. 	<p><i>Climate change & sustainability</i></p> <ul style="list-style-type: none"> • Palmyra trees are facing extinction because of construction activities and cutting down trees for firewood. • Markets for white sugar and other energy drinks are stronger than those for value-added palmyra goods like palm <i>gur</i> or <i>karupatti</i>, palm sap, etc. • Off-season unemployment: After a tree has produced fruit, it takes three months for it to sprout a new leaf that may be used to make baskets.

<p><i>Government policy</i></p> <ul style="list-style-type: none"> • Despite the obstacles to starting a business, obtaining business licenses, hiring employees, registering property, obtaining credit, protecting investors, paying taxes, trading globally, enforcing contracts, avoiding bankruptcy, and using energy, all of which have been improving, this handicraft is excluded from the framework of national planning and development strategies. • Local government bodies lack funding when artisans seek a loan to meet demand when large orders are received. 	<p><i>Economic growth</i></p> <ul style="list-style-type: none"> • The private sector investment is one of the most significant variables of macro-economy. • The recent surge in COVID-19 cases disrupted the recovery of tourism in early 2022. • The saturated market is the market growth whereby the trajectory of palmyra leaf baskets stagnates, leading to the pressurization of product diversification and line expansion. <p><i>Interest and exchange rates</i></p> <ul style="list-style-type: none"> • Artisans are not able to increase their circulating capital from banks because of high-interest rates. 	<p><i>Population age & growth</i></p> <ul style="list-style-type: none"> • Increase in the proportion of older persons practicing the crafts. • Artisans suffer from a significant educational deficiency. 96% of the interviewees do not have an educational background • When accepting orders from brands, artisans find difficulty in understanding quality control, industrial terminologies and deadlines. • Lack of self-sufficiency towards revival programs. <p><i>Target demographics</i></p> <ul style="list-style-type: none"> • Price sensitivity consumers with bargaining leverage. 	<p><i>Change in the method of production</i></p> <ul style="list-style-type: none"> • Natural dyes and weave pattern variations are limited. • High rate of human errors from auxiliary traditional tools and moulds lacking precision. • The presence of various alternative materials and methods <p><i>Internet availability/speed</i></p> <ul style="list-style-type: none"> • Non-availability of information, communications and technology (ICT) that could broaden marketing opportunities for local entrepreneurs. • No digital media usage in terms of social media, e-commerce, or accepting digital payments. • Less exposure in creating multiple spaces and markets for sale. 	<p><i>Health safety and risks</i></p> <ul style="list-style-type: none"> • Power outages/load shedding up to 10-12 hours a day. • Operational risks are higher due to the lack of number and competence of human resources. <p><i>Copyright protection</i></p> <ul style="list-style-type: none"> • Inadequate measures in the field of intellectual property rights reduce the potential to develop and produce high-quality industrial products. • Low-cost substitutes available • Lack of branding and ISO standards • Lack of advertising and limited range of promotional activities. 	<p><i>Environmental policies</i></p> <ul style="list-style-type: none"> • Less emphasis on non-traditional crop cultivation (crop diversification). • Assessment of current palmyra germ-plasm and hybridization for generating dwarf kinds. <p><i>NGO pressure and code of ethics</i></p> <ul style="list-style-type: none"> • An insecure and unstable environment allows artisans to sell the products on the street the whole year. <p><i>Pollution and Recycling</i></p> <ul style="list-style-type: none"> • Combinations of two or more materials make it difficult to sort and recycle once the product is discarded.
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