

A Study on the Marketing Potential of Athangudi Tiles and Wood Carvings in Chettinad Architecture

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Abstract

Chettinad architecture, native to the Karaikudi, Sivaganga district of Tamil Nadu, is celebrated for its distinctive fusion of indigenous traditions and international influences. Among its most iconic elements are Athangudi tiles, handmade floor tiles renowned for their vibrant patterns and eco-friendly qualities, and ornamentally carved wooden doors, windows, and pillars, which reflect the artistry and cultural identity of the Chettiar community. These crafts, once central to the grandeur of Chettinad mansions, are today threatened by the decline of traditional homes, the spread of modern construction materials.

This study investigates the marketing potential of Athangudi tiles and Chettinad wood carvings through an analysis of their heritage values, cultural significance, and contemporary relevance. Using qualitative insights from artisan interviews, field documentation, and the research examines their role in heritage tourism, luxury housing, and global design markets. The analysis identifies both challenges such as declining production capacity and competition from mass-produced substitutes and opportunities in branding, digital commerce, and adaptive reuse.

By positioning these crafts as heritage luxury products, supported by government initiatives, artisan empowerment, and private sector collaboration, Athangudi tiles and wood carvings can be revitalized as sustainable cultural assets. The findings emphasize that their preservation and promotion not only safeguard Chettinad's architectural legacy but also open avenues for economic development and cultural continuity.

Keywords Architectural Values, Chettinadu, Mansions of Chettinad, Athangudi Tiles

Introduction

The people of Chettinad inherit a built environment deeply intertwined with their cultural identity and collective memory. The grandeur of Chettinad mansions, constructed between the late 19th and early 20th centuries, reflects the values, traditions, and global connections of the Nattukottai Chettiars. Within this architectural heritage, Athangudi tiles and wood carvings stand as distinctive elements, not merely functional components but carriers of cultural symbolism and craftsmanship.

Traditionally, Athangudi tiles were handmade using locally available sand, cement, and natural pigments. Their vivid colors, intricate floral and geometric patterns, and eco-friendly composition made them both functional and symbolic of refinement. Likewise, the carved wooden elements of Chettinad architecture—doors, windows, columns, and ceiling panels—crafted from durable hardwoods such as Burma teak and

satinwood, were designed with elaborate motifs, serving as visual statements of prosperity and cultural sophistication. Together, these elements demonstrate the tangible and intangible heritage values of Chettinad, combining artisanal knowledge, sustainable practices, and aesthetic sensibility.

However, contemporary challenges have placed these crafts at risk. The decline of traditional mansions, the rise of mass-produced industrial alternatives, and the migration of skilled artisans to other professions have weakened their continuity. At the same time, global interest in sustainable, handcrafted, and culturally rooted products has created new opportunities for revival and marketing. Identifying these values and aligning them with contemporary markets is vital for both conservation and economic sustainability.

By situating Athangudi tiles and wood carvings within broader frameworks of heritage value, sustainability, and marketing, this research aims to explore their potential not only as relics of a glorious past but as living traditions capable of adaptation and growth in today's global cultural economy.

Background of the study area

Profile

Chettinad is a culturally and architecturally distinctive region in southern Tamil Nadu, spanning the Sivagangai and Pudukkottai districts. It lies approximately between 10°10'N latitude and 78°46'E longitude, covering about 1,550 square kilometers (UNESCO, A Concept Paper on Chettinad Trail in Tamil Nadu, 2010). The region includes seventy-three villages and two towns, predominantly inhabited by the Nattukottai Chettiar community, historically known for their mercantile and financial enterprises.

Karaikudi, in the Sivagangai district, is regarded as the heart of Chettinad architecture. It is home to traditional Chettiar mansions with spacious courtyards, Athangudi tile flooring, and intricately carved wooden doors, windows, and columns, representing the region's craftsmanship and cultural identity. Karaikudi serves as the main hub for architectural heritage and tourism.

Chettinad is recognized in UNESCO's Tentative List (2014) for its Outstanding Universal Value, representing a unique ensemble of indigenous architecture, craft traditions, and spatial planning. Karaikudi remains the symbolic and physical center of this heritage landscape.

Types of Buildings and Styles of Architecture

The architecture of Chettinad, particularly in Karaikudi, is recognized for its distinctive spatial organization and material expression. The built environment includes residential mansions, temples, clan shrines, and water structures, all arranged in well-planned grid layouts. Streets are typically oriented along the east–west axis, optimizing natural light and ventilation. The mansions—designed for large joint families—feature a progression of spaces from entrance verandas to inner courtyards, creating a balance between privacy, climate control, and community life.

The Chettinad mansions are constructed with thick brick walls coated in lime plaster and terracotta-tiled roofs, ensuring durability and thermal comfort. The interiors are defined by the extensive use of Athangudi tiles, handmade using local sand, cement, and natural pigments. These tiles are celebrated for their vivid colors, geometric and floral motifs, and polished finish, embodying both artistic refinement and sustainable craftsmanship. Their glossy surface helps cool interiors naturally, making them both functional and ornamental within the architectural fabric.

Equally significant are the wooden elements that enrich Chettinad architecture. Doors, windows, pillars, and ceiling panels are typically made from teak, rosewood, or satinwood, showcasing intricate carvings of mythological figures, floral motifs, and symbolic patterns. These carvings not only reflect cultural

narratives but also demonstrate the exceptional skill of regional artisans. Over time, colonial and Art Deco influences introduced arched facades and decorative plasterwork, blending seamlessly with indigenous forms. Together, the Athangudi tiles and wood carvings define the aesthetic identity and enduring legacy of Karaikudi's Chettinad architecture.



1. Chettinad Architecture

Plan of a Chettinad Home

The houses are typically rectangular in form, extending deep into the plot along the east–west axis, which maximizes shade and cross-ventilation. The layout reflects both hierarchical family structure and climatic functionality, integrating open, semi-open, and enclosed spaces.

The spatial sequence begins with the thinnai (front veranda)—a raised, semi-open platform facing the street that serves as a transitional zone for receiving guests and social interactions. Beyond this lies the valavu (first courtyard), an open-to-sky space surrounded by corridors and living areas. Further inside, successive courtyards—each more private—organize the house into zones of public, semi-private, and private use. The mutram (inner courtyard) forms the heart of the residence, allowing daylight, ventilation, and rainwater collection.

Surrounding these courtyards are living rooms, storage areas, kitchens, and prayer spaces, all designed with careful climatic consideration. The floors are paved with Athangudi tiles, whose glossy, cool surfaces regulate temperature, while wooden doors, columns, and ceiling panels—crafted from teak or rosewood—add warmth and intricacy to the interiors. Service spaces, including the kitchen and granary, are usually located toward the rear, with access to water storage tanks and backyard gardens.

Overall, the plan of a Chettinad home embodies a perfect synthesis of functionality, sustainability, and artistry. Its axial alignment, courtyard organization, and use of locally crafted materials such as Athangudi

tiles and carved woodwork demonstrate a sophisticated understanding of both aesthetics and environmental design, making it a model of traditional South Indian domestic architecture.

Manufacturing Process - Athangudi Tile

The manufacturing of Athangudi tiles is a traditional and eco-friendly process that combines artistry with craftsmanship. The procedure involves the following sequential steps:

1. Preparation of the Mould

A clean glass plate serves as the base to achieve the characteristic glossy surface of the tile. A metal frame, generally of dimensions 8×8 or 10×10 inches, is placed over the glass. For patterned designs, metallic stencils or moulds are arranged within the frame to outline the desired motifs.

2. Preparation of the Colored Slurry

Natural oxide pigments are mixed with white cement and finely sieved river sand to obtain the desired colors. This mixture is combined with water to form a smooth, liquid slurry of appropriate consistency for pouring.

3. Pouring the Colors into the Mould

The prepared colored slurry is carefully poured into the sections of the mould, following the design pattern. Each color is applied manually with precision to maintain the integrity of the motif. This step reflects the artisan's skill and aesthetic sense.

4. Formation of the Base Layers

Once the design layer is completed, a thin coat of dry cement and sand mixture is sprinkled over it to prevent color diffusion. Subsequently, a thicker layer of concrete (cement, sand, and small gravel) is added to provide strength and durability to the tile.

5. Pressing and Setting

The mould is gently vibrated or tapped to remove air bubbles and ensure even bonding of layers. The tile is then allowed to set undisturbed for several hours to gain initial hardness.

6. Demoulding

After partial setting, the frame and pattern mould are carefully removed. The glass plate is inverted to release the tile, revealing its glossy, patterned surface.

7. Curing

The tiles are submerged in water for a curing period of 7 to 10 days. This step enhances the strength, color fastness, and surface sheen of the tiles through proper hydration of the cement.

8. Drying

Post-curing, the tiles are air-dried under shade to prevent cracking or fading. Direct exposure to sunlight is avoided to maintain surface quality.

9. Polishing and Finishing

Once dried, the tiles are polished either manually or using a polishing machine to enhance their shine and smoothness. The finished tiles display vibrant colors, intricate designs, and a characteristic glossy finish.

Athangudi tiles Manufacturing Process – Field Study Images



Recent Trends

1. Heritage revival

Heritage restoration and adaptive reuse projects, especially in **Karaikudi**, have revived interest in Athangudi tiles and wood carvings. Converted mansions, museums, and boutique hotels now showcase these crafts as cultural assets.

2. Modern design adaptation

Artisans are introducing **new colors, patterns, and applications** such as wall panels and furniture. Traditional woodwork is now used in contemporary interiors, balancing authenticity with modern aesthetics.

3. Sustainable and cultural value

Athangudi tiles are promoted for their **eco-friendly, handmade process** and use of local materials. Similarly, Chettinad woodwork symbolizes durability, artistry, and sustainable craftsmanship, appealing to environmentally conscious markets.

4. Recognition and expanding reach

Efforts toward **Geographical Indication (GI)** status and greater exposure through design schools, exhibitions, and online sales have improved recognition and expanded market reach beyond Tamil Nadu.

Challenges

1. Declining artisan community

Fewer young people are entering the craft, leading to an **aging workforce** and loss of traditional skills. Migration to cities for better income further weakens continuity.

2. Low profitability

High labor costs and limited demand make the crafts less profitable. **Mass-produced tiles and machine-made woodwork** dominate due to affordability and convenience.

3. Raw material and technical issues

Scarcity of quality sand, pigments, and hardwoods, along with problems like cracking or uneven finishes, affect product quality and market confidence.

4. Loss of traditional context

The deterioration or modernization of Chettinad mansions reduces natural demand for these materials. Without restoration projects, their architectural use is declining.

5. Limited awareness and promotion

Lack of organized marketing, branding, and online visibility restricts artisans from reaching wider or premium markets. Public awareness about the crafts' cultural value remains low.

Review of Literature

(Ramanathan, 2024)¹ conducted a study on vernacular heritage and craft traditions, focusing on the handcrafted Athangudi tiles of Chettinad, India. The research aimed to document the traditional tile-making process and analyze its cultural, architectural, and socio-economic significance. The authors highlighted how Athangudi tiles represent a sustainable craft tradition that combines indigenous materials, manual craftsmanship, and aesthetic excellence rooted in local heritage. The study also emphasized the challenges faced by artisans due to modernization, declining demand, and lack of institutional support. The researchers concluded that preserving and promoting such vernacular crafts is essential not only for cultural continuity but also for empowering local communities and sustaining regional identities.

(Sudha, 2016)² conducted a study on sustainable practices in vernacular architecture, focusing on the revival and relevance of traditional design principles in modern construction. The research examined how indigenous building techniques, local materials, and climatic adaptability contribute to sustainability and environmental efficiency. The authors emphasized that vernacular architecture embodies eco-friendly concepts such as passive cooling, natural ventilation, and thermal comfort, which are often overlooked in contemporary architectural practices. The study concluded that integrating vernacular wisdom with modern technology can rejuvenate sustainable trends in architecture, promoting designs that are both culturally rooted and environmentally responsible.

(Myneni, 2013)³ conducted a study on the role and application of courtyards as a building component in traditional architecture, with specific reference to Athangudi Village, India. The research analyzed how courtyards contribute to thermal comfort, natural lighting, and ventilation within traditional built forms, while also serving as social and cultural spaces that enhance community interaction. The study highlighted that the courtyard acts as a climatic moderator, reducing heat gain and maintaining interior comfort levels suitable for the region's warm climate. The author concluded that incorporating courtyard design principles into modern architecture can promote sustainable, climate-responsive, and culturally contextual built environments, reaffirming the value of traditional design wisdom in contemporary architectural practices.

(Devi, 2024)⁴ carried out a study on the influence of the Indian Chettiyar community's heritage on the architecture of Chettie houses in Malaysia. The research explored how migration and cultural exchange contributed to the adaptation of Chettinad architectural principles within the Malaysian context, particularly in terms of spatial organization, ornamentation, and material usage. The study found that while the core elements of Chettinad architecture—such as courtyards, intricate tilework, and symmetrical layouts—were retained, they were also modified to suit local climatic and cultural conditions. The authors concluded that the Chettie houses of Malaysia represent a fusion of South Indian vernacular traditions and Southeast Asian influences, reflecting the enduring impact of cultural heritage on transnational architectural identity.

¹ Ramanathan, Raammnath, Jayanthi Dhakshinamoorthi, and Mohammad Arif Kamal. "Vernacular Heritage and Craft Traditions: The Case of Handcrafted Athangudi Tiles in Chettinad, India." *Journal of the International Society for the Study of Vernacular Settlements* 11.6 (2024): 22-38.

² Sudha, P. R., and K. Nishanth. "Sustainable practices in vernacular architecture—rejuvenating trends." *Indian J Sci Technol* 9.6 (2016): 1-7.

³ Myneni, Kranti Kumar. "Courtyard as a building component; its role and application in developing a traditional built form, creating comfort; a case of Athangudi Village, India." *International Journal of Chemical, Environmental & Biological Sciences* 1.4 (2013): 633-639.

⁴ Devi, Renuka, and Muhammad Faizal Abdul Rani. "Influence of Indian Chettiyar Community Heritage on Chettie House Architecture of Malaysia." *International Journal of Built Environment and Sustainability* 11.3 (2024): 21-28.

Research Design

Type of Study: Both Descriptive and Analytical study

Methods of Data Collection: The primary data for this study were collected from artisans and workers engaged in Athangudi tile-making and traditional wood carving in Karaikudi. Data were gathered through a structured questionnaire created on Google Forms, focusing on production processes, challenges faced, cultural significance, market awareness, and income patterns. Secondary data were collected from published articles, books, and online resources on Chettinad architecture and traditional craftsmanship.

Sampling Size and Area: A total of 124 respondents participated in the study. The sample primarily includes skilled artisans, craftsmen, and workers involved in tile-making and wood carving in Karaikudi and nearby villages. Respondents were selected based on their active involvement in these traditional crafts.

Sample Method: Convenient sampling technique was adopted for selecting respondents, ensuring that participants are directly engaged in Chettinad craftsmanship.

Statistical Tool: The data collected were analyzed using Simple Percentage analysis and Correlation to identify patterns in artisan practices, market awareness, challenges, and potential areas for sustainable business development.

Analysis

Table 1: Support Needed to Improve Craft and Income

S.No	Type of Support	No. of Respondents	Percentage
1	Training in modern design and trends	12	10
2	Better marketing and promotion	31	25
3	Financial support/loans	32	26
4	Government subsidies and incentives	47	37
5	Collaboration with architects/heritage tourism	2	2
	Total	124	100

Source: Primary Data

Table 2: Design Preference in Craft Work

S.No	Buying Behavior / Response Option	No. of Respondents	Percentage
1	Only traditional	50	40

2	Sometimes new designs	52	42
3	Mostly new designs for modern buyers	22	18
	Total	124	100

Source: Primary Data

Table 3: Learning Source of Craft Skills

S.No	How Did You Learn the Craft?	No. of Respondents	Percentage
1	Family tradition	70	57
2	Training program / workshop	44	35
3	Self-taught	10	8
Total		124	100

Source: Primary Data

Table 4: Perception of Heritage Luxury Product Potential

S. No	Response Option	No. of Respondents	Percentage
1	Strongly Agree	95	77
2	Agree	26	21
3	Neutral / Disagree / Strongly Disagree	3	2
	Total	124	100

Source: Primary Data

Table 5: Preferred Selling Platforms

S. No	Selling Platform	No. of Respondents	Percentage
1	Direct orders from architects / designers	99	80
2	Local shops	15	12
3	Online platforms (Amazon, Etsy, etc.)	7	6

4	Exhibitions / Fairs	3	2
Total		124	100

Source: Primary Data

Table 6: Perception of Export Market Potential for Athangudi Tiles and Wood Carvings

S. No	Response Option	No. of Respondents	Percentage
1	Strongly Agree	85	69
2	Agree	39	31
3	Neutral	0	0
4	Disagree	0	0
5	Strongly Disagree	0	0
Total		124	100

Source: Primary Data

Correlation Analysis

		Income	Tools
Income	Pearson Correlation	1	.226*
	Sig. (2-Tailed)		.012
	N	124	124
Tools	Pearson Correlation	.226*	1
	Sig. (2-Tailed)	.012	
	N	124	124

*. Correlation is significant at the 0.05 level (2-Tailed).

Interpretation

The correlation analysis indicates a statistically significant weak positive relationship ($r = 0.226$, $p = 0.012$) between access to tools and income levels. This suggests that as access to tools increases, income also tends to increase slightly. Although the strength of the relationship is modest, the significance level ($p < 0.05$) indicates that the correlation is unlikely to have occurred by chance. Therefore, the null hypothesis

of no relationship between tools and income is rejected, implying that improved access to tools can contribute, even if modestly, to higher income among the participants.

Correlation Analysis

		Selling	Online
Selling	Pearson Correlation	1	-.011
	Sig. (2-Tailed)		.905
	N	124	124
Online	Pearson Correlation	-.011	1
	Sig. (2-Tailed)	.905	
	N	124	124

Interpretation

The analysis reveals a very weak negative correlation ($r = -0.011$, $p = 0.905$) between selling and online engagement. This indicates that there is almost no relationship between the two variables — changes in selling activity do not correspond to changes in online engagement. Since the p-value is greater than 0.05, the correlation is not statistically significant. Therefore, the null hypothesis cannot be rejected, suggesting that online engagement has no meaningful influence on selling behavior among the respondents.

Limitations of the Study

- **Sample Size and Scope:** The study is limited to 124 artisans and workers in Karaikudi and nearby villages, which may not fully represent all Chettinad craftsmen across the region.
- **Geographical Constraint:** Focused only on Karaikudi, limiting insights from other Chettinad villages where traditional craftsmanship may have different challenges or practices.
- **Self-Reported Data:** Responses are based on self-reporting by artisans, which could include biases or inaccuracies regarding income, market awareness, and production challenges.
- **Limited Market Analysis:** The study emphasizes artisan perspectives but lacks in-depth quantitative analysis of global or domestic consumer demand trends.

Findings of the Study

- **Strong Heritage Value Recognition:** 77% of respondents strongly agree that Athangudi tiles and Chettinad wood carvings have potential as heritage luxury products, indicating high cultural and market significance.
- **Need for Financial and Marketing Support:** The majority (38% for government support, 26% for financial support, 25% for marketing assistance) expressed that external support is crucial for improving production and income.

- **Traditional Skills Dominate Craft Transmission:** 57% of artisans learned the craft through family tradition, highlighting the importance of intergenerational skill transfer.
- **Prefer**
- **Preference for Modern Designs Exists:** While 40% prefer only traditional designs, 42% incorporate occasional new designs, showing openness to adapt crafts for contemporary markets.
- **Limited Digital Presence:** Only 6% sell products online, and correlation analysis shows that online selling currently has no significant impact on income, suggesting a gap in digital marketing adoption.

Suggestions

1. **Skill Enhancement and Design Training:** Organize workshops to train artisans in contemporary design trends, international standards, and innovative applications of Athangudi tiles and wood carvings.
2. **Strengthen Marketing and Branding:** Develop a heritage branding strategy, including storytelling, artisan profiles, and certifications (e.g., GI tags) to position products as premium cultural assets.
3. **Expand Online and Export Channels:** Encourage digital marketing and e-commerce platforms (Amazon, Etsy, boutique websites) and explore international markets to increase visibility and demand.
4. **Financial and Policy Support:** Provide targeted subsidies, low-interest loans, and incentives to artisans to improve production quality, accessibility to raw materials, and income stability.
5. **Collaborations and Heritage Tourism Integration:** Partner with architects, interior designers, heritage hotels, and tourism projects to incorporate Athangudi tiles and wood carvings in modern and heritage-adaptive constructions.

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