

The Influence of Community Behaviour on the Characteristics of Houses in Tanjung Pering Village

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ABSTRAK: Penelitian ini menyelidiki bagaimana nilai-nilai lokal, khususnya kegiatan ekonomi seperti produksi kerupuk (Kerupuk), memengaruhi karakteristik arsitektur rumah di Desa Tanjung Pering. Produksi kerupuk, yang merupakan mata pencaharian yang diwariskan dari generasi ke generasi, secara signifikan membentuk identitas budaya masyarakat dan desain bangunan. Penelitian ini bertujuan untuk mengkaji dampak praktik ekonomi lokal terhadap desain arsitektur, dengan fokus pada fungsi, estetika, dan pemilihan bahan. Pendekatan fenomenologis kualitatif digunakan dengan mengumpulkan data melalui wawancara dengan penduduk untuk memahami warisan budaya dan mata pencaharian turun-temurun. Hasil penelitian menunjukkan bahwa kondisi sosial-ekonomi dan kebiasaan lokal sangat memengaruhi karakteristik arsitektur di Desa Tanjung Pering. Pengaturan ruang, desain struktur, dan pemilihan bahan semuanya disesuaikan untuk mendukung kegiatan produksi kerupuk. Dapur sering ditempatkan di bawah atau di luar rumah untuk mempermudah produksi, sementara peralihan dari kayu tembesu ke beton mencerminkan keterbatasan ekonomi dan kelangkaan bahan. Penempatan strategis jendela di bagian depan rumah meningkatkan sirkulasi udara, yang sangat penting di iklim tropis daerah tersebut. Studi ini menunjukkan bagaimana praktik ekonomi dan nilai-nilai budaya bersatu membentuk identitas arsitektur desa. Penelitian ini memberikan wawasan tentang bagaimana warisan budaya dan kegiatan ekonomi memengaruhi arsitektur vernakular. Dengan mengkaji hubungan antara mata pencaharian lokal dan desain bangunan, penelitian ini menawarkan panduan berharga untuk mengembangkan praktik arsitektur yang sensitif terhadap budaya yang dapat melestarikan identitas lokal sekaligus menjawab kebutuhan kontemporer.

Kata kunci: Kearifan Lokal, Studi Fenomenologi, Karakteristik Arsitektur, Produksi Kerupuk, Warisan Budaya

ABSTRACT: This study investigates how local values, especially economic activities like cracker (Kerupuk) production, influence the architectural characteristics of houses in Tanjung Pering Village. Cracker production, a long-standing livelihood passed down through generations, significantly shapes the community's cultural identity and building designs. This research aims to examine the impact of local economic practices on architectural design, focusing on functionality, aesthetics, and material selection. A qualitative phenomenological approach was employed, gathering data through interviews with residents to understand cultural heritage and hereditary livelihoods. The findings indicate that socio-economic conditions and local customs profoundly shape architectural characteristics in Tanjung Pering Village. Spatial organization, structural design, and material selection are all adapted to support cracker production activities. Kitchens are often placed below or outside houses to facilitate production, while the shift from tembesu wood to concrete illustrates economic constraints and material scarcity. The strategic placement of windows on the front facades improves air circulation, which is essential in the region's tropical climate. The study highlights how economic practices and cultural values combine to define the architectural identity of the village. This research provides insights into how cultural heritage and economic activities influence vernacular architecture. By examining the relationship between local livelihoods and building design, the study offers valuable guidance for developing culturally sensitive architectural practices that preserve local identity while addressing contemporary needs.

Keywords: Local Wisdom, Phenomenological Study, Architectural Characteristics, Cracker Production, Cultural Heritage

1. INTRODUCTION

Culture plays a fundamental role in shaping the architecture and spatial organization of communities worldwide. The beliefs, customs, and daily practices of a community are reflected in various aspects of life, including building design, clothing, food preparation, communication, and social interactions [1]. As cultures evolve, these components are continually adapted to meet the needs of the community, thereby influencing the built environment. Within this context, traditional architecture emerges as a manifestation of cultural identity, reflecting how societies respond to their environment and structure their lives. Architecture, therefore, becomes a cultural artifact shaped by the intricate interplay of social, economic, and environmental factors [2].

The adaptation of building characteristics to local values is a significant aspect of architectural design, particularly in rural areas where traditional practices are more prevalent. Local values encompass not only social customs but also economic activities that have been passed down through generations. As noted by Aygen [3], traditional architecture is often shaped by efforts to preserve cultural identity through the integration of established customs and techniques. This notion is supported by various studies indicating that cultural heritage influences architectural forms and construction techniques, particularly in communities with strong economic traditions tied to specific livelihoods [4, 5]. For example, economic activities such as agriculture, fishing, and small-scale industries often dictate the spatial organization and material selection of buildings. Such adaptations are essential for facilitating daily tasks and maintaining cultural continuity [6].

Tanjung Pering Village in South Sumatra, Indonesia, presents a compelling case study of how local economic activities influence residential architecture. The village is known for its substantial production of fish and shrimp crackers (Kerupuk), which has been carried out for generations. This activity, integral to the community's economic sustainability, also contributes to the formation of cultural identity and shapes the characteristics of residential architecture in the area [7, 8]. The connection between livelihood activities and architectural design is evident in how houses are constructed and organized to accommodate production processes. Thus, understanding how these traditional practices influence housing design is essential for preserving the community's cultural values while adapting to modern needs.

Despite the importance of understanding this relationship, there is limited research that specifically examines how the architectural characteristics of

houses are shaped by the local economic activities of Tanjung Pering Village. Previous studies have addressed the influence of cultural values on building architecture in various contexts [9, 10], but few have focused on the intersection between hereditary livelihoods and architectural design within this particular community. This research aims to address this gap by analyzing the impact of cracker production and other local livelihoods on housing design, spatial organization, and material selection in Tanjung Pering Village.

The local economic activities of the village, especially cracker production, have prompted residents to modify their houses to facilitate efficient production processes [11]. These modifications include placing kitchens below or outside the main house to allow better access to production areas and designing open spaces for drying crackers. Additionally, changes in building materials due to economic factors and resource availability have resulted in the gradual transition from traditional wood structures to more affordable concrete pillars. Such adaptations demonstrate the community's resilience and creativity in responding to environmental and economic challenges [12].

Moreover, the adaptation of house designs to suit local economic activities reflects a broader pattern of how rural communities modify their built environment to support social and economic functions. The presence of production areas within residential spaces highlights the multifunctional nature of houses in Tanjung Pering Village. Additionally, the architectural features aimed at improving air circulation and accommodating social gatherings illustrate the community's efforts to enhance comfort and social cohesion despite economic constraints.

Therefore, this study aims to analyze and identify the influence of community behaviour and economic activities on the architectural characteristics of houses in Tanjung Pering Village. By examining how local livelihoods shape the spatial organization, building structure, and material selection, this research seeks to contribute to a more comprehensive understanding of how traditional practices and economic factors influence rural architecture. The findings are expected to provide insights into the relationship between culture, economy, and architecture, offering a basis for preserving cultural heritage while supporting sustainable development in rural areas.

2. METHODS

The qualitative approach used in this study as a phenomenological study. The study uses a qualitative approach because, according to Moleon

[13], "Phenomenology is included in the qualitative research approach. Phenomenological research is a scientific study that examines and investigates an event experienced by an individual, a group of individuals, or a group of living things. Such events are considered part of the life experiences of the research subjects. The experiences are treated as reality to obtain a valid statement and proper theories or methods [14].

The research process follows a structured approach known as the research method. The literature research method is employed to complete this research, with literature materials serving as the primary source of data [15].

Data related to local wisdom was collected through interviews conducted with residents of various ages, ranging from 10 to 60 years, involving approximately 6 to 7 participants. The data collection focused on cultural aspects related to ancestral heritage and traditional livelihoods passed down through generations in Tanjung Pering Village, North Indralaya District, Ogan Ilir Regency, South Sumatra. The research location is shown on the map below.

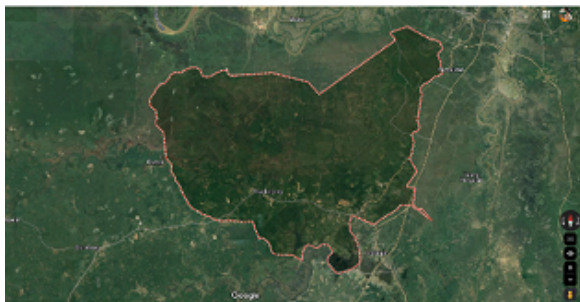


Figure 1. Location of North Indralaya, the District in Ogan Ilir Regency
Source: Google Earth (Edited by Authors), 2024

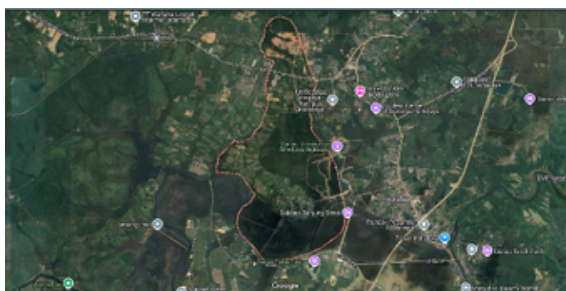


Figure 2. Location of Tanjung Pering Village
Source: Google Earth (Edited by Authors), 2024

The interview process began with individuals most closely associated with the ancestral heritage site. The researcher asked about the activities and customs related to the heritage. The second interview

was conducted with an elderly person working in a group. This occupation represents a livelihood that has been passed down through generations, leading many residents to establish workspaces within their homes. The researcher asked about the origins and processes involved in carrying out this livelihood.



Figure 3. Details of Tanjung Pering Village Area
Source: Google Earth (Edited by Authors), 2024

The next interview focused on residents who were still actively involved in the surrounding environment. The researcher collected information related to the business's sales process, including the distribution of materials, sales procedures, and the reasons why the business continues to serve as a primary livelihood for residents.

The earlier interviews were conducted semi-formally to ensure residents felt comfortable and more willing to share information. The final interview was conducted with children aged 10–13 years. To gather data from children, the researcher used an approach involving light, easy-to-understand questions. The purpose was to explore how residents and parents introduce their culture and livelihood to children, as well as the children's perceptions of their cultural practices and livelihoods, which have been consistently maintained by their parents.

3. RESULTS AND DISCUSSION

Tanjung Pering Village, North Indralaya, Ogan Ilir, is characterized by various activities and community practices, including cracker production, farming, fishing, and community meetings that have been maintained for generations. These activities not only serve as the primary sources of livelihood for the community but also shape the architectural characteristics of the village houses, creating a functional relationship between residential and production spaces [16].

The proximity of cracker production houses to residential areas, along with livestock farming and community gathering activities, influences how spaces

within houses are arranged. This demonstrates a distinct spatial pattern that emerges from the organization of space, house structure, building design, and the materials used.

3.1. Space Organisation

The space consists of the "Garang," which serves as the entrance, comprising a terrace and stairs leading into the house, and a spacious living room typically used to receive guests and accommodate large gatherings of residents. The house includes one bedroom, which is designated for girls. Parents and grandparents sleep in the middle area in front of the bedroom, while boys sleep in the living room. The middle area also functions as a space where parents can relax and chew betel ("Nyirih/Makan Sirih"). The bathroom is located in the middle area, directly in front of the bedroom. The kitchen is situated at the back of the building. However, if the homeowner is involved in cracker (Kerupuk) production, the kitchen is positioned at the bottom of the building to facilitate easier access.



Figure 4. Location of Kerupuk Production at Tanjung Pering Village
Source: Authors, 2024

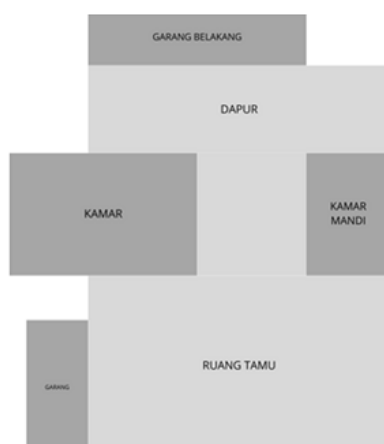


Figure 5. Layout of Space in Tanjung Pering Village
Source: Authors, 2024



Figure 6. Garang (Front) Area of the Local House
Source: Authors, 2024

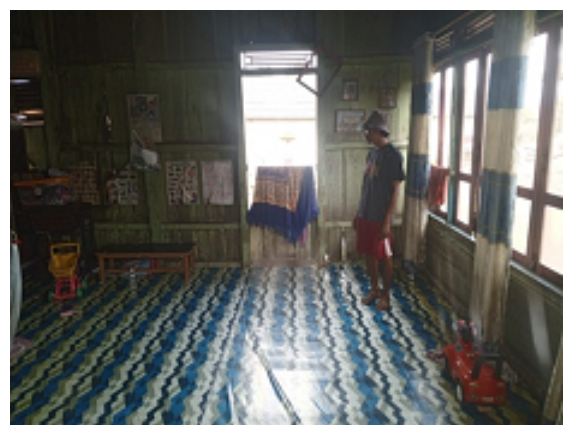


Figure 7. Living Room of the Local House
Source: Authors, 2024



Figure 8. Kitchen of layout the Local House
Source: Authors, 2024

One of the prominent characteristics of this production house is its kitchen, which is situated below or outside the house. This kitchen layout is designed to accommodate activities such as washing, bathing,

and ensuring direct access between the house and the cracker (Kerupuk) production site.

Placing the kitchen below or outside the house allows the owner to handle the production process more quickly and efficiently without leaving the house's environment. Additionally, this architectural arrangement serves as a practical solution that considers local climate and cultural conditions, where stilt houses are commonly utilized [17].



Figure 9. Kitchen Position of the Local House
Source: Authors, 2024



Figure 10. Lower Part of Houses/Lower Ground of the Local House
Source: Authors, 2024

The lower part or lower ground of the building serves different functions for each house, depending on the homeowner's work and activities. Most commonly, it is used as a kitchen for cracker (Kerupuk)

production. In some cases, it functions as animal pens or agricultural storage areas.

If the number of family members increases, the lower part of the building may also be converted into additional living space to accommodate the growing household.

3.2. Building Structure

The foundation structure of houses in the community has experienced a significant transformation over time, primarily due to the availability and cost of raw materials. Traditionally, the foundation pillars were made from tembesu wood, a durable and resilient timber highly valued for its strength and resistance to environmental conditions. This wood was preferred because of its ability to withstand humidity, termites, and the tropical climate, making it an ideal material for long-lasting structural support.

However, over time, the supply of tembesu wood has become increasingly scarce. Deforestation, environmental changes, and higher demand for this wood in various industries have all contributed to its declining availability. Consequently, the cost of acquiring tembesu wood rose, has risen, making it less accessible for local residents. The scarcity of raw materials has compelled the community to find alternative construction materials that are both affordable and readily available.

In response to these challenges, concrete has increasingly replaced tembesu wood as the primary material for foundation pillars. Concrete offers several advantages that make it a practical choice for modern construction. Firstly, it is more affordable than high-quality wood, making it a cost-effective option for homeowners. Secondly, concrete is widely available, reducing dependence on increasingly scarce natural timber. Additionally, concrete is more durable and requires less maintenance compared to wood, which is vulnerable to termite infestations, rot, and other forms of deterioration over time.

Another factor contributing to the transition from wood to concrete lies in the growing preference for long-term durability and stability. While tembesu wood once served as a reliable foundation material, concrete provides greater structural integrity, particularly in areas prone to flooding or soil movement. Moreover, it can be reinforced with steel to enhance its load-bearing capacity, making it a more sustainable choice for modern home construction.

This shift in foundation materials reflects the evolving availability of resources and broader economic and technological developments within the community. The transition from traditional timber to modern

concrete pillars illustrates how local architecture adapts to evolving environmental and economic conditions, ensuring that homes remain structurally sound and economically viable.

While the aesthetic and historical significance of tembesu wood remains appreciated, practical considerations have led to the widespread adoption of concrete as a more viable alternative for contemporary home construction.



Figure 11. Houses Structure of the Local House
Source: Authors, 2024

The roof features common structures known locally as the “Plaju” roof and the “Gudang” (warehouse) roof, according to information from residents. The distinction between these roof types lies in the construction costs, with the “Plaju” roof being more expensive than the “Gudang” roof.



Figure 12. “Plaju” Roof of the Local House
Source: Authors, 2024



Figure 13. “Gudang” Roof of the Local House
Source: Authors, 2024

3.3. Building Design

The design of houses in Tanjung Pering Village features a consistently distinctive characteristic found in nearly every home: the dense or intense placement of windows on the front facade. This architectural feature serves a crucial functional purpose, mainly by enhancing air circulation within the living room [18].

The living room in these homes is typically the primary gathering space where family members and guests convene for social interactions and communal activities. The increased number of windows allows for a continuous flow of fresh air, creating a cooling effect within the indoor environment. This design choice is particularly beneficial in the region’s tropical climate, where high temperatures and humidity can make indoor spaces uncomfortable without proper ventilation. By allowing natural air movement, the design helps regulate indoor temperature, reducing reliance on artificial cooling methods and promoting a

more sustainable living environment.

This approach to home design in Tanjung Pering Village reflects an environmental adaptation in which architectural elements are specifically tailored to the region's climatic conditions. The strategic use of windows aligns with traditional passive cooling techniques commonly found in tropical regions, where maximizing ventilation is essential for maintaining indoor comfort. The design not only enhances the livability of the space but also supports energy efficiency principles by minimizing dependence on mechanical cooling systems, such as fans and air conditioning.

Apart from this distinctive window arrangement, other parts of the houses lack specific defining features, such as elaborate building ornaments or intricate decorative elements. This absence of ornamentation can be attributed to the economic conditions of the local community. Historically, decorative architectural features have been closely associated with social and economic status, representing wealth and prestige. In Tanjung Pering Village, where economic resources are more limited, the focus of home design has mainly remained utilitarian, emphasizing functionality over aesthetics. As a result, residents prioritize practical architectural elements, such as ventilation and structural durability, over decorative embellishments.

Another notable aspect of the village's housing design is the variation in construction materials used, despite the uniformity in building shapes and structures. While the overall architectural form of the houses remains similar, the materials chosen for construction often differ from one home to another. This variation is largely influenced by the financial capacity of individual households. Some families may have the means to invest in higher-quality, more durable materials, while others may rely on more affordable, locally available resources. This disparity in building materials further reflects the economic diversity within the community, highlighting how financial constraints shape the physical characteristics of the built environment.

Therefore, the design of houses in Tanjung Pering Village is primarily driven by functional considerations, particularly in response to the region's tropical climate. The placement of windows at the front of the house plays a crucial role in enhancing air circulation and cooling the living space, making homes more comfortable for daily living. The absence of significant ornamental details and the variation in construction materials further underscore the economic realities of the community, where practicality takes precedence over aesthetic flourishes. This architectural approach illustrates both an adaptation

to environmental conditions and a reflection of the village's social and economic landscape.



Figure 14. Windows Design of the Local House

Source: Authors, 2024

3.4. Building Materials

The selection of building materials in Tanjung Pering Village varies depending on the economic conditions of the community [19]. Households with greater financial resources can afford higher-quality or aesthetically refined materials, while those with limited budgets choose more cost-effective alternatives. This disparity in material choices is evident in several aspects of home construction, including roofing, window materials, and, most notably, wall structures.

Regarding roofing, homes in the village feature different materials, primarily tiles and zinc sheets. Tile roofs are generally preferred for their durability, better insulation, and aesthetic appeal; however, they are also more expensive. Conversely, while more affordable, zinc roofs can cause the house to become significantly warmer by absorbing and retaining more heat from the sun. The choice between these materials reflects the economic capacity of homeowners; those who can afford tiles opt for a more comfortable and long-lasting roofing solution, while others rely on zinc due to its lower cost and ease of installation.

Similarly, window materials also differ across

households. Some homes use glass windows, which allow more natural light to enter and offer better insulation. However, glass windows are relatively costly and are not always affordable for all households. Those with more limited resources may use alternative materials or simpler wooden windows that provide ventilation but lack the same insulating or aesthetic benefits.

One of the most distinctive variations in house construction involves the arrangement of wooden boards used for walls. While all houses may follow a similar basic form, the arrangement of boards can significantly impact construction costs. In homes where the boards are positioned vertically, the construction process is more expensive. This is because arranging boards upward typically requires more precise craftsmanship, additional fastening materials, and, in some cases, higher-quality wood to ensure structural integrity. Additionally, vertical board arrangements may provide better resistance to environmental factors such as moisture and wind, making them a preferred choice for those who can afford them.

Conversely, houses with boards arranged horizontally tend to have lower construction costs. This method is simpler and requires fewer resources, making it a more economical option for families with financial constraints. While horizontal board arrangements may provide adequate protection and durability, they may not offer the same structural strength or longevity as vertically arranged boards.

These variations in building materials and construction techniques highlight how economic factors directly influence architectural decisions within the village. The materials and assembly methods reflect not only aesthetic preferences but also practical decisions driven by financial capacity. This economically-driven differentiation in housing design reflects the social and financial diversity within the community.

Despite these differences, all homes in Tanjung Pering Village share common fundamental architectural elements, reinforcing a sense of cultural and environmental adaptation while accommodating economic variability among residents.



Figure 15. Woods Material dan Design of the Local House

Source: Authors, 2024

Based on the research and observations conducted, the following general conclusions can be drawn:

Economic Activities and Spatial Patterns: The economic activities of the community significantly influence the spatial pattern of buildings, resulting in an inevitable transformation [20]. The activities of the Tanjung Pering Village community, such as cracker (Kerupuk) production, livestock farming, and social gatherings, affect the layout and use of space within houses. For example, the kitchen used for cracker production is situated below the house, while the living room is made larger to accommodate social activities [21].

Economic Factors and Material Scarcity: Economic factors and the scarcity of raw materials have a direct impact on building structure. The replacement of building materials, such as opting for cheaper “Gudang” (warehouse) roofs and the transition from using tembesu wood to concrete, occurs due to the scarcity of raw materials and the economic limitations faced by the community.

Design Adaptations for Air Circulation and Climate: The design of buildings is adapted to enhance air circulation and suit the local climate. The extensive use of windows on the front of houses is intended to optimize air circulation and maintain a comfortable temperature within the living room, which often serves as a gathering place for residents.

Influence of Financial Capacity on Ornaments and Materials: The selection of ornaments and building materials is largely determined by financial capacity [22]. Differences in the use of decorative elements, such as glass windows, wooden structures, or iron trellises, depend on both the craftsmanship skills available and the homeowner’s economic conditions.

4. CONCLUSION

The research demonstrates the strong influence of local values on architectural design, showing how cultural identity and heritage shape the built environment. The most affected architectural elements include space organization or layout, building structure, design, and the selection of materials. These components are not only functional but also carry symbolic meanings that reflect the community's traditions, social structures, and historical narratives.

One of the study's key findings is that traditional social practices and communal interactions heavily influence the organization of home spaces. The arrangement of rooms and open spaces often aligns with cultural norms regarding privacy, hospitality, and family hierarchy. For example, communal areas such as living rooms or verandas are typically designed to accommodate social gatherings, reinforcing the importance of community engagement. Meanwhile, private spaces are positioned to respect the household's cultural expectations of seclusion and hierarchy.

Building structures also reflect local values and environmental adaptations. Traditional construction methods often incorporate materials that are readily available in the region, ensuring sustainability and harmony with the natural surroundings. Whether using wood, bamboo, or stone, these materials are both practical and symbolic, representing a deep connection to the land and cultural heritage. Structural designs often accommodate climate conditions, such as elevated floors for flood protection or extended eaves for shading against the tropical sun.

Architectural design elements, including façades, roof shapes, and decorative motifs, also carry cultural significance. While some design aspects serve aesthetic purposes, many features have roots in historical and spiritual beliefs. Ornamentation, for instance, may be used to symbolize prosperity, protection, or social status. However, as economic conditions evolve, some decorative elements are often simplified or omitted, reflecting the community's shifting priorities.

Material selection is another crucial aspect influenced by local values. Traditional materials contribute to the sustainability of construction and reinforce a sense of identity. The preference for certain materials over others often stems from cultural traditions, historical use, and economic accessibility. While wealthier households might invest in more durable or visually appealing materials, others may prioritize affordability and practicality, leading to variations in housing quality within the same community.

The study reveals that architecture in this context extends beyond mere shelter; it embodies cultural identity and collective memory. By understanding these relationships, architects and planners can design buildings that honor local traditions while accommodating contemporary needs. The findings emphasize the importance of integrating indigenous knowledge with modern architectural practices to create spaces that are both meaningful and functional. This approach ensures that as communities develop, they preserve their unique heritage while benefiting from modern construction and design innovations.

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