
An Empirical Review on Affordable Housing Estate Using Vernacular Architecture in Lagos State

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Abstract

Examining the possibilities of affordable housing estates with a touch of vernacular architecture, this empirical review delves into the core of Lagos State's housing problems. This study highlights the complex relationship between housing shortages, maintenance culture, and governance difficulties in Lagos by drawing on a thorough examination of recent studies. By examining the interplay between vernacular architecture, sustainable design, and community engagement, the review offers valuable insights into addressing these challenges. It emphasizes how crucial it is to combine sustainable design techniques with vernacular architectural principles to produce affordable, ecologically friendly, culturally appropriate, and socially inclusive housing solutions. Using a qualitative methodology, this study examines previous research on affordable housing and vernacular architecture that was published in relevant academic journals to do an empirical review. The research concludes by showing how urgent it is to address the lack of housing, enhance the culture of maintenance, and raise the affordability, sustainability, and cultural significance of the state's housing estates. It therefore recommends promoting collaborative efforts across stakeholders to develop thriving, resilient housing estates that honour Lagosians' history and ambitions.

Keywords: Affordable Housing, Housing Estate, Lagos State, Vernacular Architecture

1.0 Introduction

Lagos is a vibrant city that is filled with opportunities, life and energy (Uduku & Lawanson, 2022), but beneath the glittering buildings is a sobering truth: there is a severe lack of reasonably priced housing. Housing is a fundamental human need. Thus, the efficiency, well-being, and general health of a community are greatly impacted by an adequate supply of housing (Shittu & Olasokan, 2023). This study aims to explore the possibility of creating affordable housing estates that cater to the needs of the everyday *Lagosian*, using the knowledge gained from studying vernacular architecture.

Lagos has seen a long-standing flourishing of vernacular architecture. These age-old construction methods, which have been handed down through families and communities, are a monument to human ingenuity as well as aesthetics. They make use of reasonably priced, locally accessible materials and include design elements that are appropriately suited to Lagos' environment (Ifechukwu, 2023). Consider well-ventilated areas to beat the heat and overhanging eaves to handle heavy rain. This study investigates the possibility of exploring the advantages of vernacular design to develop affordable, sustainable housing estates in Lagos State.

Vernacular architecture draws attention to how desperately people need homes. To do this, it is necessary to build dwellings that complement the customs and lifestyle of the community in question. A construction is deemed and may be referred to as vernacular when it satisfies these needs without considering superior

workmanship, professional understanding, and competence but is instead built to satisfy the general wants of a certain culture (Alayande & Okpako, 2022).

According to Ajayi et al., 2023, it highlights how vital the bioclimatic design concepts present in vernacular architecture are. These ideas, such as passive solar architecture, can dramatically lower energy use, which is a big worry for those with low incomes. (Vassiliades et al., 2023).

However, challenges exist. A study by Ifechukwu, 2023 emphasises the necessity of using more locally produced building materials. Although conventional materials like clay and bamboo are inexpensive and environmentally beneficial, wider acceptance is required to ensure the viability of large-scale initiatives.

This research aims to bridge this gap. It intends to identify best practices and difficulties by looking into building techniques, material usage, and resident comments. This analysis will be essential to creating a foundation for future affordable housing estates that are environmentally sustainable, culturally appropriate, and affordable.

This research is about creating homes for *Lagosians*; homes that reflect their heritage and aspirations. Imagine vibrant estates where natural ventilation keeps dwellings cool, where locally sourced materials create a sense of community, and where every resident can afford a place to call home.

2.0 Literature Review

This literature review delves into the intersection of affordable housing and vernacular architecture in the context of Lagos State. It aims to critically analyse existing research, identify opportunities and challenges, and ultimately, pave the way for the development of sustainable and culturally-sensitive housing solutions.

2.1 Theoretical Foundations of Vernacular Architecture and Affordable Housing

Vernacular architecture is a term used to describe a kind of regional building that is created by non-experts using information that is passed down and enhanced from one generation to the next. It is impacted by factors such as geography, climate, available materials, traditions, and culture. Traditional buildings are valued for their historical significance as well as their capacity to use resources sustainably, minimise expenses, reduce energy consumption, and have no adverse effect on the environment (Pardo, 2023). Srivastava refers to Rapoport's definition of vernacular architecture, which captures several key characteristics. Vernacular architecture is described as devoid of theoretical pretence, emphasizing practicality over abstract concepts. It is portrayed as being in harmony with the surrounding environment and microclimate, acknowledging the importance of contextual adaptation. Vernacular architecture demonstrates consideration for others, their dwellings, and the overall environment, reflecting a common belief. It operates within a specific idiom, with changes taking place in a specified order, showcasing a continuity of tradition. Vernacular architecture exhibits an adaptable quality, allowing occupants to make modifications and additions based on usage and necessity, thereby ensuring its relevance and functionality over time (Srivastava & Bijay, 2023). Vernacular architecture incorporates mud bricks, bamboo, thatch roofs, courtyards, domes, arches, and ornamental elements, reflecting native construction styles and processes (Ajayi et al., 2023).

Broadly speaking, affordable housing is characterized as sufficiently priced, appropriately located, and of sufficient quality to cover other essential living costs. A housing unit that is affordable for people whose income is less than the typical household income in a community is also referred to as "affordable housing" in many cases (Liu & Ong, 2021). Many people acknowledge that housing is a human right. Affordable housing is chosen when it comes to obtaining a suitable place to live without putting one in debt (Lekan et al., 2021). Given the low living standards of Nigerians in their own country, it is imperative to establish an affordable housing system that would serve the needs of all. The United Nations Sustainable Development Goals (SDG) 11 states that housing should remain a fundamental human right, and efforts are being made to accommodate all social classes and income brackets (Ifechukwu, 2023).

Affordable housing is still difficult to realize. The task at hand is made more difficult by the growing public expectation that sustainable design elements be included in these kinds of homes to enhance occupant health and well-being and maintain acceptable affordability levels. (Moghayedi et al., 2021). Housing estates can be classified into two categories: public and private, depending on the provider. Public housing estates are provided by the government, while private housing estates are supplied by an individual or by a group of people. With the shortage of affordable housing in Lagos and other Nigerian cities getting worse by the day, public housing estates are quickly taking over as the new norm in cities all over the world (Onamade & Daramola, 2022).

2.2 Vernacular Architecture and Housing in Lagos

In Lagos, Nigeria, numerous housing reform initiatives have been launched by the government to address the severe housing shortage. Low-cost housing remains a mirage for *Lagosians* despite previous efforts on various mass housing programmes for affordable housing projects (Ogunjobi, 2022).

Vernacular architecture in Lagos, Nigeria, plays a crucial role in shaping housing satisfaction among public housing tenants. A study by Jiboye, 2014, conducted in Lagos examined the relationship between socioeconomic characteristics and housing satisfaction among tenants in public housing estates. The research surveyed six randomly selected housing estates in Lagos, with data collected from 1022 households using systematic sampling techniques. The analysis revealed significant correlations between age, education, income, marital status, occupation, and household size with tenants' housing satisfaction. However, variables such as sex, religion, and ethnic origin showed no significant correlation with housing satisfaction (Jiboye, 2014). Although the study underscores the importance of considering people's socioeconomic parameters when planning new public housing developments in Lagos, nothing was said about how vernacular architecture might have affected the occupants in terms of comfort or affordability

In Lagos State, three governmental organizations are in charge of delivering public housing estates: Ministry of Works and Housing Provider of Lagos (LAGOSHOM), New Town Development Authority (NTDA) and Lagos State Development Property Corporation (LSDPC) and thanks to initiatives by the Nigerian Federal Government, there are now several affordable housing programs for middle-class citizens in various parts of the state. These housing options were more than just real estate development; rather, they represented cooperative efforts between the public and private sectors to improve people's quality of life. (Onamade & Daramola, 2022).

3.0 Methodology

This study used a qualitative approach, reviewing prior research published in relevant publications on affordable housing and vernacular architecture. Certain keywords which include, vernacular architecture, affordable housing and housing estate were used. Research from these findings using the mentioned keywords was filtered based on the relevance of the subject of this research – mixed-use development. This study made a comprehensive analysis of journals published between 2020 and 2024, utilizing several PDF files obtained from ResearchGate, Google Scholar, and more internet sources. These were grouped into thematic formats for critical analysis which forms the base of this qualitative analysis.

4.0 Findings

Based on the findings from various studies, the housing situation in Lagos State, Nigeria, presents multifaceted challenges that require comprehensive solutions. Ogunjobi (2022) emphasizes the urgent need to solve Lagos' housing shortage and the need to put in place practical solutions to meet the state's expanding housing demand. Lekan et al. (2021) examines the maintenance practices of the occupants of affordable housing estates in Lagos to understand the part that residents play in maintaining and repairing housing infrastructure.

Furthermore, Pardo (2023) gives information about the difficulties and global research trends facing vernacular architecture, highlighting the need to remove socioeconomic obstacles to its use in environmentally friendly housing developments. In the context of Lagos, Uduku and Lawanson (2022) talks about the difficulties of running a metropolis the size of Lagos, and the effects these have on housing policy and urban development initiatives. Vassiliades et al. (2023) examines the socioeconomic obstacles that prevent sustainable real estate settings from implementing energy-saving bioclimatic solutions, with a focus on the significance of taking residents' viewpoints into account when designing housing interventions.

Josiah Omotosho et al. (2020) explores how private developers may enhance the supply of affordable housing in Lagos State while emphasizing the function of public-private partnerships in resolving the issue of housing affordability. Shittu and Olasokan (2023) compare the housing quality differences between Lagos's public and private estates to highlight the differences in the circumstances and standards of housing.

Bustán-Gaona et al. (2023) examine the natural lighting performance of vernacular architecture in Ecuador, demonstrating the importance of passive design strategies in enhancing indoor environmental quality. Moghayedi et al. (2021) provide a methodical framework for tackling housing difficulties and a vital success factor framework for putting affordable and sustainable housing solutions into practice. Srivastava and Das (2023) provide an overview of vernacular architecture in India, highlighting its cultural significance and relevance in addressing contemporary housing needs.

Ifechukwu (2023) explores indigenous building materials for affordable housing in Lagos State, emphasizing the potential of locally sourced materials in promoting sustainable and culturally appropriate housing solutions. Ajayi et al. (2023) review sustainable design approaches for low-income housing in Nigeria, offering insights into innovative strategies for enhancing housing affordability and sustainability.

Liu and Ong (2021) investigate Malaysia's national affordable housing policy and its effectiveness in guaranteeing housing affordability for low-income households, providing lessons for housing policy development in other contexts.

Finally, Lodson et al. (2018) draw lessons from vernacular architecture in Nigeria, highlighting its relevance in addressing contemporary housing challenges and promoting cultural heritage preservation. Alayande & Okpako (2022) propose reviving vernacular architecture as a panacea to issues in contemporary residential buildings in the Yoruba context, underlining the importance of integrating traditional building practices into modern housing developments to address socio-cultural and environmental concerns. These findings collectively underscore the importance of adopting a holistic approach to address housing deficiencies in Lagos State, leveraging vernacular architecture principles, sustainable design strategies, and community engagement initiatives to promote affordable, culturally appropriate, and environmentally sustainable housing solutions.

5.0 Conclusion and Recommendations

5.1 Conclusion

Drawing from a comprehensive assessment of literature on affordable housing complexes in Lagos State, Nigeria, that employ vernacular design, it is apparent that Lagos' housing crisis poses intricate problems requiring diverse approaches. The results of numerous studies show how urgent it is to address housing shortages, strengthen the culture of maintenance, and raise the state's housing complexes' affordability, sustainability, and cultural significance.

5.2 Recommendations

Based on the findings of this study, it is necessary to propose actionable recommendations to address the housing challenges in Lagos State. Collaboration among all stakeholders involved (policymakers, developers, architects, urban planners, and community leaders), is crucial to implement practical solutions. Firstly, incorporating vernacular architecture and sustainable design principles into housing projects can enhance affordability, environmental sustainability, and cultural relevance. Secondly, promoting public-private partnerships can facilitate the development of affordable housing initiatives and address housing affordability issues effectively. Thirdly, strengthening governance and urban planning efforts is essential to accommodating the growing housing demand and ensuring equitable access to housing for all residents. Lastly, encouraging community engagement and participation in housing development processes can generate a sense of ownership and promote inclusive decision-making, leading to the creation of housing solutions that truly meet the needs of the community. By adopting these strategies collectively, stakeholders can work towards creating resilient, vibrant, and inclusive housing estates that reflect the heritage and aspirations of *Lagosians*.

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