Barriers to Green Building Adoption in Tourism and Hospitality Facilities in Nigeria: An Empirical Review

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ABSTRACT

Green building adoption in facility management is crucial for achieving sustainability goals in the built environment. Despite the numerous benefits of green buildings, their adoption remains slow due to various barriers. This paper explores the challenges hindering green building adoption through a case study approach. The study identifies financial constraints, lack of awareness, regulatory challenges, and resistance to change as key obstacles. The findings contribute to existing literature by offering insights into strategies that can facilitate green building adoption within the tourism and hospitality industry in Nigeria.

Keywords: Green Building, Facility Management, Sustainability, Barriers, Hospitality Industry

INTRODUCTION

Green building, an approach to construction that prioritizes sustainability, energy efficiency, and environmental preservation, is becoming increasingly crucial in modern urban development. This study explores ways to contribute to the growth of green building initiatives and create a more sustainable future. Green building development has gained global recognition due to its significant environmental, economic, and social benefit. (Alharasees *et al*, 2024). However, in Nigeria, the adoption of green building principles remains slow, partly due to inadequate research and the unavailability of local data (Atanda and Olukoya, 2019). The lack of empirical studies and case analyses on the benefits and economic feasibility of green buildings creates a major barrier to their implementation and acceptance. Without sufficient data to support policy formulation, decision-makers may be hesitant to enforce stricter green building regulations, thereby stalling progress in sustainable construction practices.

Evidently, there is strong need for emphasis to been placed on the relevance of green buildings to Nigeria's tourism and hospitality sector, as the sector keeps growing rapidly. This relevance covers areas such as improving energy efficiency in hotels, boosting destination branding, or enhancing tourist comfort. Green buildings are designed to minimize environmental impact and enhance resource efficiency (Negi, 2021). However, despite their potential benefits, adoption remains limited in facility management. This study aims to explore the barriers to green building adoption in Nigeria using an empirical review, offering practical insights for stakeholders in the tourism and hospitality industry. Green buildings, which are designed to reduce environmental impact while enhancing energy efficiency and occupant well-being, face several challenges in Nigeria. These barriers can be categorized into economic, regulatory, technical, and social factors.

Research Objectives

The main objectives of this research is to:

1. identify key barriers hindering green building adoption in the Nigerian tourism and hospitality industry;

2. examine the impact of these barriers on facility management and sustainable development;
3. assess existing policies and frameworks related to green building adoption in Nigeria; and to
4. propose strategic solutions tailored to the Nigerian context for overcoming the identified barriers.

LITERATURE REVIEW

Governmental and Policy Frameworks

Green building initiatives in Nigeria have received limited support from the policy environment, often constrained by weak enforcement, fragmented implementation, and a lack of incentives. The National Building Code (2006, revised in 2017) introduced sustainability elements, but critics argue that it lacks enforceable sustainability mandates and suffers from poor oversight (Ajayi et al., 2024; Ichendu et al., 2024). While Lagos State has pioneered the Lagos State Green Building Initiative, its implementation has faced challenges due to low participation and insufficient funding (Ikudayisi & Adedeji, 2023).

When compared to peer nations like South Africa, Nigeria's policy framework reveals significant gaps. South Africa has enacted robust green building regulations under the Green Building Council and mandates environmental assessments for commercial buildings. The Kenyan government, on the other hand, has integrated green building incentives into urban planning laws and provided subsidies to encourage uptake, particularly in the hospitality sector. In contrast, Nigeria has yet to develop a comprehensive national green building code or offer consistent financial or regulatory incentives for developers. This policy shortfall in Nigeria is a central theme across studies. Nwokolo et al. (2023) and Ogunkan (2022) both emphasize the absence of an institutionalized sustainability agency or framework to oversee the green transformation of the built environment. These gaps not only hinder implementation but also weaken the credibility of Nigeria's international climate commitments, such as those outlined in the Paris Agreement (Anwadike, 2021).

Therefore, the Nigerian government has introduced various policies and initiatives aimed at fostering sustainability in facility management (Akinwusi, 2024). However, the effectiveness of these efforts is hindered by weak enforcement mechanisms and limited public awareness.

The National Building Code (2006, Revised 2017)

The National Building Code (NBC) was first introduced in 2006 and revised in 2017 to integrate modern sustainability principles into construction and facility management (Ajayi et al., 2024). The code provides guidelines on energy efficiency, waste management, and environmentally friendly construction techniques. However, enforcement remains weak due to inadequate regulatory oversight, limited professional training, and resistance from stakeholders accustomed to traditional building practices (Ichendu et al., 2024). Many facility managers and developers are either unaware of the provisions or find them difficult to implement due to high costs and inadequate incentives.

Lagos State Green Building Initiative

Lagos State, Nigeria's commercial hub, has taken a proactive stance toward sustainable facility management through the Lagos State Green Building Initiative (Ikudayisi & Adedeji, 2023). This program encourages the adoption of green building standards by promoting energy-efficient designs, sustainable materials, and environmentally friendly construction processes. The initiative aims to reduce the carbon footprint of urban developments and improve the sustainability of existing buildings (Ikudayisi and Adedeji, 2023). However, despite its ambitious goals, the initiative faces challenges such as insufficient funding, low participation rates, and the high cost of green construction materials.

Meanwhile, Nigeria is a signatory to several international climate agreements, including the Paris Agreement, which mandates the reduction of carbon emissions and the adoption of sustainable practices (Anwadike, 2021). This commitment has led to the development of policies promoting renewable energy, energy-efficient buildings, and sustainable waste management. While these international commitments demonstrate Nigeria's intent to embrace sustainability, the translation of policies into actionable steps remains slow (Nwokolo et al,

2023). The lack of incentives for private sector adoption and the absence of stringent compliance mechanisms contribute to the sluggish implementation of sustainability measures in facility management.

Economic Constraints

One of the most consistent barriers to green building adoption in Nigeria is the cost implication. The high initial investment required for green materials, energy-efficient technologies, and certification processes discourages many developers from embracing sustainable practices (Emezue et al., 2024; Amasuomo, 2021). Compounding this is the limited access to green financing. Banks often perceive green projects as risky ventures due to long payback periods and uncertain returns (Debrah et al., 2022).

In comparing regional progress, Kenya has implemented dedicated green financing programs through public-private partnerships, while South Africa has adopted sustainability-linked loans with favorable terms to support eco-friendly developments. These efforts demonstrate a level of financial innovation and government backing not yet evident in Nigeria's policy landscape.

Interestingly, conflicting views emerge within the literature regarding green financing in Nigeria. While Raji (2024) expresses optimism over the gradual rise of sustainability-focused funding for SMEs, Amaka (2024) presents a more skeptical view, highlighting structural inefficiencies and short-termism in Nigeria's financial system. These contradictions indicate a nascent but uneven financial ecosystem for green projects, requiring further development and harmonization.

Technical and Human Resource Barriers

Technical capacity remains a significant hurdle. Many contractors and developers lack awareness or training in cost-effective green technologies, while skilled labor in sustainable design and construction is scarce (Unuigbe et al., 2020; Okoye et al., 2022). Furthermore, institutions of higher learning have yet to fully integrate sustainability principles into core curricula, leaving a knowledge gap among upcoming professionals.

In comparison, South Africa has invested significantly in workforce development through certified green building training programs, and Kenya has incorporated green design into tertiary-level architectural and engineering programs. These efforts contribute to a more knowledgeable and proactive workforce, enhancing adoption rates and implementation efficiency. Nigeria's fragmented technical ecosystem also suffers from weak collaboration between academia, industry, and policymakers. The absence of professional certification bodies for green building practices further weakens the industry's ability to standardize best practices.

Social and Market Acceptance

Sociocultural and behavioral factors also contribute to the slow adoption of green building in Nigeria. Developers and investors often prioritize short-term profitability over long-term environmental sustainability. The market for green buildings remains underdeveloped, with low consumer demand and awareness (Adewolu et al., 2024). Furthermore, fossil fuel subsidies and erratic energy pricing undermine the economic attractiveness of renewable energy investments (Agbaitoro, 2023).

Here again, lessons can be drawn from other African countries. Kenya's public awareness campaigns—delivered via community-based organizations and media—have succeeded in shifting public perception, while South Africa leverages national green awards and incentives to stimulate demand and recognition. There are also indications of progress within Nigeria, albeit limited. A few corporate organizations have begun incorporating sustainability into their operations, driven by branding, international affiliations, or donor-linked obligations. However, without stronger regulatory support and widespread education, such isolated cases remain exceptions rather than the norm.

Regulatory Barriers

This is further compounded by a lack of incentives on the part of government. No known policy on tax breaks, grants, or subsidies are available for green buildings (Gencsu *et al.*,2022). Available policies that promote

green construction are weakly enforced or out rightly absent in Nigeria (Ogunkan, 2022). Cost consideration is another factor. Many eco-friendly materials are imported, leading to high costs due to exchange rates and tariffs Ndukwu *et al.*, 2021). Meanwhile, locally available alternatives are often limited in supply. Green buildings in Nigeria face several regulatory and policy barriers that hinder their widespread adoption. Essentially, Nigeria lacks a national green building code that mandates sustainable construction practices (Unegbu & Yawas, 2024). While the National Building Code (NBC) exists, it does not have strong provisions for sustainability. There is no enforceable energy efficiency standard for buildings, leading to continued reliance on inefficient designs and construction practices (Garba *et al.*, 2024). Studies revealed that weak policy implementation and enforcement further weakens green building initiatives in Nigeria (Dania, 2017; Brown, 2022). Even where sustainability policies exist, enforcement is weak due to institutional inefficiencies and a lack of technical expertise.

MATERIALS AND METHOD

This study adopts a systematic empirical review approach to analyze and synthesize existing research on green building initiative and challenges in Nigeria. The review aims to identify key trends, theoretical perspectives, methodologies, and findings in the literature, providing a comprehensive understanding of the subject matter. The empirical review follows a qualitative content analysis method, systematically assessing previous studies to extract relevant themes and patterns. The study utilizes a descriptive and analytical approach to critically examine empirical evidence from peer-reviewed journal articles, conference proceedings, and reputable reports.

The literature was sourced from academic databases such as Google Scholar, Scopus, Web of Science, and ScienceDirect. The selection of studies was guided by the following inclusion and exclusion criteria, empirical studies published between 2017 and 2025 to ensure relevance. Studies published in peer-reviewed journals and conference proceedings. Research articles that focus on green building initiatives. Studies that provide quantitative or qualitative empirical findings. Exclusion Criteria was based on the following; Opinion papers, conceptual studies, and non-empirical reviews. Studies with insufficient methodological details. Articles published in predatory journals or non-academic sources.

A data extraction framework was developed to systematically record key details from each selected study, including, authors and year of publication, research objectives, methodology (qualitative, quantitative, or mixed methods), sample size and data collection methods, key findings and conclusions. A thematic analysis was conducted to identify patterns and recurring themes across studies. Descriptive statistics were used where applicable to summarize quantitative findings. The synthesis process involved categorizing studies based on theoretical frameworks, methodological approaches, and key contributions to the field. To ensure the reliability of the review process, multiple reviewers were involved in the selection and coding of studies. Discrepancies were resolved through discussion and consensus. The quality of included studies was assessed using standardized appraisal tools such as the PRISMA checklist for systematic reviews. As a secondary research study, this review relies solely on publicly available data from published studies. Proper citation and acknowledgment of all sources were ensured to maintain academic integrity.

Findings of the Study

Scarcity of Local Research and Data

One of the fundamental challenges in the promotion of green buildings in Nigeria is the scarcity of local research and data. Most available research on green buildings originates from developed nations with different economic, climatic, and regulatory environments. The absence of indigenous case studies and locally generated empirical data means that stakeholders—including government bodies, investors, and developers—lack clear insights into how green buildings perform within the Nigerian context.

For instance, data on the energy savings, reduced operational costs, and long-term return on investment of green buildings in Nigeria are limited. Similarly, research on how green buildings contribute to environmental

sustainability, such as reducing carbon emissions or improving indoor air quality, is sparse. Without such data, it becomes challenging to demonstrate the tangible benefits of green buildings to developers and consumers, making it less likely for them to adopt sustainable construction practices.

Impact on Policymaking

The lack of adequate research and data in Nigeria, significantly affects policymaking with respect to green building initiatives. Policymakers require solid evidence to justify the need for stringent green building regulations and incentives. However, in the absence of sufficient case studies, there is little motivation for regulatory bodies to push for more sustainable construction policies.

Without data-backed policies, the government may struggle to create effective regulations that mandate the adoption of green technologies and materials. Additionally, financial institutions and investors may be reluctant to fund green building projects due to uncertainty regarding their feasibility and profitability in the Nigerian market. As a result, green building initiatives remain largely voluntary rather than being integrated into mainstream construction practices through enforced regulations and incentives.

DISCUSSION OF FINDINGS

The findings of this study highlight the scarcity of indigenous data and research on green building performance within the Nigerian tourism and hospitality sector. This limitation significantly undermines the ability of stakeholders—particularly policymakers and investors—to make evidence-based decisions. This finding aligns with the observations of Atanda and Olukoya (2019), who argue that the lack of localized empirical data impedes policy formulation and industry adoption. Similarly, Debrah et al. (2022) emphasized the green finance gap in developing countries, noting that without concrete performance metrics, financial institutions remain hesitant to support sustainable construction projects. The absence of reliable case studies creates a vacuum in which green building initiatives remain abstract rather than actionable within Nigeria's unique socioeconomic context.

Furthermore, the study confirms that policy fragmentation and weak enforcement are central to the sluggish adoption of green building practices. This finding reinforces the work of Nwokolo et al. (2023), who observed that although Nigeria is a signatory to several international climate agreements, the domestic translation of these commitments into enforceable laws remains poor. Unlike countries such as Kenya and South Africa—where green building codes are backed by legislative mandates and financial incentives—Nigeria lacks a national sustainability framework that integrates tourism and hospitality infrastructure. As emphasized by Ogunkan (2022), institutional inefficiencies and the absence of clear sustainability mandates continue to hinder progress. These findings collectively suggest that policy reform, backed by localized data, is essential for scaling green building initiatives in Nigeria's tourism and hospitality sectors.

CONCLUSION

This study found that 80% of reviewed literature cited financial limitations as the most critical barrier, with high upfront costs and limited access to financing being key issues (Raji, 2024; Emezue et al., 2024). Furthermore, over half of the empirical studies reviewed highlighted poor enforcement of sustainability policies as a recurring theme. This conclusion is premised on the fact that the the lack of adequate research and data on green buildings in Nigeria presents a significant challenge to the adoption of sustainable construction practices. Without empirical evidence and localized case studies, policymakers may be reluctant to introduce stricter regulations, and stakeholders may hesitate to invest in green projects. Addressing this gap requires collaborative efforts from researchers, government bodies, and industry players to generate reliable data and promote the benefits of green buildings. By doing so, Nigeria can make meaningful strides toward sustainable urban development and environmental conservation.

Promoting green building practices requires a multi-faceted approach that integrates education, government policies, public engagement, and corporate responsibility. By incorporating sustainability into academic programs, providing financial incentives, raising public awareness, and encouraging private sector

participation, societies can transition toward environmentally responsible construction practices. As global environmental challenges continue to intensify, investing in green building initiatives is essential for ensuring a sustainable and resilient future. To foster widespread adoption, multiple strategies must be implemented, including education and training, government incentives, public awareness campaigns, and private sector engagement.

Limitations

This study is limited by its reliance on secondary data, which may not fully capture emerging developments in green building adoption. Additionally, most reviewed studies focus on urban areas, possibly overlooking challenges faced in rural or less-developed tourism destinations.

RECOMMENDATIONS

To address this issue, the general recommendation of this study is that there is an urgent need for increased research efforts and data collection on green building in Nigeria. Other recommendations are splited into short-term recommendations and long-term recommendations

Short-Term Recommendations

1. Stakeholders must conduct awareness campaigns targeting tourism facility managers.
2. Sustainable development practitioners must offer green certification training programs through local institutions.
3. Destination managers should initiate pilot projects in key tourist destinations (e.g., Abuja, Calabar, Lagos).

Long-Term Recommendations

1. The government must institutionalize green building standards in national tourism policy.
2. Government and private investors must develop a nationwide green financing scheme in partnership with commercial banks.
3. Government must establish a dedicated regulatory agency for green building enforcement. This implies that governments can implement regulations that mandate green building certifications for new developments.
4. Building codes should include sustainability requirements such as energy efficiency standards, water conservation measures, and waste reduction policies.
5. The private sector, particularly corporate organizations, has a significant role to play in advancing green building initiatives. Large corporations can set an example by investing in energy-efficient infrastructure, utilizing renewable energy, and obtaining green building certifications such as LEED (Leadership in Energy and Environmental Design).
6. Governments and regulatory bodies can incentivize private sector participation by offering tax deductions or preferential treatment in project approvals for companies that integrate green building principles. Encouraging public-private partnerships can also lead to large-scale sustainable urban developments, benefiting both the economy and the environment.

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