

Examination of Key Factors Affecting the Construction of Low-Cost Housing in South-East Nigeria

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Abstract

This study examined the key factors influencing low-cost housing construction in South-East Nigeria, which comprises Abia, Anambra, Ebonyi, Enugu, and Imo States. Adopting a survey research design, data were obtained from 100 mortgage institutions and government agencies/policy makers, with 92 valid responses analyzed using SPSS version 22. Descriptive statistics and ordinal logistic regression (PLUM) were employed to assess the significance of various determinants. Findings revealed that 63% of respondents reported unavailability of affordable housing, underscoring a persistent housing gap. Regression results showed that economic factors (income levels, construction costs, and access to finance), social/cultural factors (cultural perceptions and community engagement), and market dynamics (demand-supply balance and competitive environment) significantly affect housing delivery ($p < 0.05$). In contrast, policy/regulatory (land use regulations, government policies) and technological factors (site conditions, resource availability) had no significant influence. The model demonstrated good fit and satisfied the proportional odds assumption, confirming the reliability of results. The study concludes that financial accessibility, community engagement, and market responsiveness are the strongest drivers of affordable housing provision in the region. It recommends expanding affordable mortgage schemes, strengthening community participation, and regulating market dynamics, alongside reforms in land administration and adoption of innovative construction technologies

Keywords: Low-cost housing, affordable housing, housing delivery, south-east Nigeria, housing policy, sustainable development goal 11

Introduction

The importance of shelter for people's welfare, survival, and health concern can never be over emphasized. As a matter of fact, Okongwu (2021) described this need as physiological in nature, one which must be satisfied before climbing the ladder of needs hierarchy. The term shelter is often used to define housing and the mental image of shelter is safe, secure place that provides both privacy and protection from the elements and extreme temperature of the outside environment (McLay, 2021). All over the world, there is a growing concern over the worsening housing conditions especially in the developing countries (Aribigbola, 2011^[5]; Gür and Yüksel, 2011^[14]; Verdouw, 2016^[33]; AlQahtany, 2020^[4]; Shirazawa and Simões, 2021)^[29]. With respect to this, Ihome (2017)^[17] define housing as a place of residence built to serve as a home for one or more people, while Zou, Chen, and Chen (2019)^[37] defined it as the process of providing safe, comfortable, attractive, functional affordable and identifiable shelter in a proper setting within a neighbourhood, supported by continuous maintenance of the built environment for the daily living activities of individuals/families within the community while reflecting on their socio-economic, cultural aspirations and preferences.

Housing in spite of its benefits has been reported to be in gross undersupply across the globe. To this end, Sunday, Boateng and Adams (2022) report that the global population of those who are homeless because they reside in shanty towns and informal settlements stands at 863 million and fast approaching a billion. The UN Habitat (2013) similarly affirmed that over 61.7% of the population of Africa are homeless. In Nigeria, a recent study conducted by Izebhor, (2022)^[18] affirmed that more than 22 million Nigerians are

homeless. Furthermore, there are abundance research evidences which affirms that the low- income earners are chief among the sufferers of these housing shortages (Golubchikov, and Badyina, 2012^[13]; Gilbert, 2014^[11]; Sachs, 2015^[27]; Rigon, 2016^[25]; Igwe, Okeke, Onwurah, Nwafor, and Umeh, 2017^[16]; Adabre, and Chan, 2019)^[1]. The studies further reports that the incidence of housing shortages and inadequacies is far worse for low- income earners in developing nations like Nigeria

In Nigeria, the crisis of housing provision is particularly acute among low-income earners, who constitute the majority of the population (Egidario, Patrick, and Eziyi, 2016^[9]; Odoyi and Riekkinen, 2022)^[21]. Studies confirm that this group, estimated to be over 90% of the population, is displaced with respect to decent housing due to high construction costs, rising land prices, inflationary pressures, and weak policy frameworks (FGN, 2012; Ugochukwu and Chioma, 2015^[30]; Olotuah and Taiwo, 2015^[22]; Bons, Onochie, and Nzewi, 2019)^[8]. Government interventions, including the National Housing Policy of 2012, have failed largely due to poor implementation strategies, lack of sustainable funding, and weak institutional coordination (Muhammad, Johar, Sabri, and Jonathan, 2015).

The situation is more precarious in the South-East region of Nigeria, where socio-economic, cultural, and political peculiarities exacerbate the housing deficit. The region is characterized by high population density, rapid urbanization, and significant pressure on land resources, leading to inflated land values and speculative land markets (Ezeokoli, 2019). It is therefore against this background and in line with various literature-based findings and arguments that this paper considers it necessary to examine the key factors affecting the construction for low-cost housing in

South-East Nigeria with a view to enhancing adequate housing provision for low-income earners in South East Nigeria.

Literature review

Concept of Housing

Housing, as a fundamental human need, goes beyond the mere provision of shelter; it encompasses a wide range of social, economic, and environmental dimensions that affect the quality of life. According to Adebayo (2013)^[2], housing is defined as the process of providing habitable environments that meet the basic human needs of security, privacy, and personal space. It is also considered one of the key indicators of a country's development and standard of living (Agbola and Alabi, 2000)^[3].

Researchers and social theorists in the field of housing studies and related fields are in agreement that housing is a complex topic and difficult to be defined (Ruonavaara, 2018^[26]; Henilane, 2016^[15]; Zami and Lee, 2010^[36]; Sheibani and Havard; Clapham, 2009). The word "housing" is linguistically ambiguous because it denotes both a noun and a verb. Thus, any definition of housing is either a noun or a verb but in chunk of literature, it seems housing as a noun is widely used. It appears that there is no one definition of housing in literature.

Based on the Marxian trend, Burgess and Castells defined housing in a way that can be perceived in three forms; housing as a commodity, as a fixed commodity and to the capitalist, as a commodity with exchange value. Sheibani and Havard inferred that this approach influenced the idea of public housing policies. Based on the Liberal approach, John Turner defined housing as rather more of an activity than a material object and emphasised on the need for independent choice of housing since families or individuals have different needs. Sheibani and Havard believe that this liberal approach influenced the idea of housing policy built around private sector and personal building. The last trend or approach thus the Temperate approach views housing as a commodity for consumption and as such housing should contain the necessary facilities and must be suitable for residence and appropriate to the family (consumer) and society. From these three trends or approaches, Sheibani and Havard defined housing as: The final outcome from variant capitals entering in the housing market mechanism, by construction, distribution, or managing the market.

This definition looks at housing from the economic perspectives but nonetheless refers to the product of what John Turner describes to be an activity. It neglects the fact that the "outcome" can be described in physical terms and assumes what becomes housing to be the aftermath of economic interactions in the housing market. However, Henilane (2016)^[15] defined housing in her work to mean a building or part of it wherein a household can live year-round and which meets certain statutory requirements, including residential address. Therefore, she defined housing based on its physical component, location and standards or regulation, something which Sheibani and Havard neglected in their definition. Nonetheless her definition, also neglects the environment and basic facilities that are required in housing. Williams (2007)^[34] sees housing as a dwelling place, constructed for one or more persons. Omoniye and Jiboye (2009)^[24] defines housing as any type of permanent shelter for man, which gives him an identity. Thus, they see housing as possessing cultural

identity. Godwin (1998)^[12] looked at housing from different dimension, he defines it as the space that one can call his/her own, that gives him/her privacy and shelters him/her from the weather and intrusions of unwanted people.

From the ongoing discussion, it appears that, housing can mean many things to different people and its definition is contingent on the geographical setting, the prevailing political ideology and the context and purpose the definition is to serve. For this reason, the UN-Habitat has a very encompassing definition; Housing is a multi-dimensional concept that refers to the activity, a process of residing, as well as to the objects of dwellings and their environment (UN-Habitat, 2013)^[31]. This definition includes housing as both an activity and a commodity or material object and considers not only the physical structure of the housing but its immediate environment, suggesting a health component of housing. The WHO then defines a healthy housing based on the definition of adequate shelter by UN-Habitat to mean "a home, a place which protects privacy, contributes to physical and psychological well-being, and supports the development and social integration of its inhabitants— a central place for human life" (Bonney, 2007)^[7]. This definition sees housing as more than just a dwelling but the amenity that comes with it

The Low-Cost Housing Concept

The concept of low-cost housing has emerged as a critical strategy for addressing the global housing crisis, particularly in developing countries where rapid urbanization and population growth have significantly outpaced the supply of affordable housing. This type of housing is aimed at providing adequate shelter for low- and middle-income households by reducing the overall cost of construction without sacrificing basic living standards. The urgency of implementing low-cost housing solutions stems from the increasing number of people living in substandard or overcrowded conditions, a situation exacerbated by limited access to affordable housing finance (UN-Habitat, 2020^[32]; Jones *et al.*, 2021)^[19]. Globally, the United Nations estimates that approximately 1.6 billion people lack access to adequate housing, with a significant portion of this population residing in urban areas of developing countries (World Bank, 2018)^[35]. This underscores the importance of low-cost housing as an essential component of broader strategies aimed at reducing poverty, improving living conditions, and promoting sustainable urban development.

Low-cost housing solutions generally focus on cost-efficiency, achieved through various means such as the use of locally sourced building materials, simplified construction designs, and cost-effective building technologies. These strategies enable developers to lower production costs while maintaining basic safety and habitability standards (Olotuah and Aiyetan, 2018^[23]; Ayedun *et al.*, 2021)^[6]. In the context of developing countries, where resources are often scarce, these approaches are indispensable in making housing more accessible to economically disadvantaged groups. For instance, Ayedun *et al.* (2021)^[6] emphasize that by adopting local materials and innovative construction methods, the cost of housing can be reduced by as much as 30%, making it more affordable to low-income families. This is particularly significant in regions like sub-Saharan Africa and South Asia, where affordability remains a major barrier to housing accessibility (Mahamadu *et al.*, 2019)^[20].

Research Methodology

The study employed a survey research design in the South-East geopolitical zone of Nigeria, which comprises Abia, Anambra, Ebonyi, Enugu, and Imo States. The target population consisted of mortgage institutions and government agencies/policy makers actively involved in housing delivery and policy implementation. Using purposive sampling, 100 questionnaires were distributed to the identified stakeholders, out of which 92 were returned and found usable, giving a response rate of 92%, which was considered sufficient for meaningful analysis. Data were collected using a structured questionnaire tailored

to address the study objectives. The responses were analyzed with the Statistical Package for the Social Sciences (SPSS) version 22). To test the hypothesis, Ordinal Logistic Regression (PLUM) was employed. The decision rule was to reject the null hypothesis if at least one predictor variable was statistically significant ($p < 0.05$) at the 95% confidence level. Descriptive statistics, including frequency counts and percentages, were used to summarize the data, and the findings were presented in tables to ensure clarity and ease of interpretation.

Results and discussion

Table 1: Respondents Perception of Low-Cost Housing Availability in Southeast Nigeria

S/N	Option	Frequency	Percentage
1	Yes	12	13
2	No	58	63
3	Partially	10	11
4	Not sure	12	13
	Total	92	100

Table 1 shows the respondents’ perception of low-cost housing availability in Southeast Nigeria. Out of 92 participants, a substantial majority 58 respondents (63%) indicated that low-cost housing is not available, reflecting a widespread belief that housing initiatives targeted at the low-income population have not been sufficiently implemented or are inaccessible. Only 12 respondents (13%) affirmed availability, while another 10 (11%) perceived such housing to be partially available. An equal number (12 respondents, 13%) were unsure, pointing to either limited awareness of government housing efforts or the negligible impact of existing schemes. These results

suggest a disconnect between housing policies and the realities of low-income citizens in the region. The dominance of negative and uncertain responses indicates that the Southeast region is facing significant challenges in the provision of affordable housing. The findings imply that low-cost housing projects, if present, are insufficiently publicized or poorly executed, resulting in minimal visibility and impact. This scenario calls for a more robust, transparent, and inclusive housing strategy one that integrates effective land administration, financial accessibility, and community participation.

Table 2: Factors affecting the construction of low-cost housing

S/N	Key Factors	Σf	Mean	SD	Rank	G. Mean	G. Rank
	Economic Factors						
1	Income Levels	92	4.01	1.02	2 nd	4.07	1 st
2	Construction Costs	92	4.01	1.05	3 rd		
3	Availability of Finance	92	4.11	0.98	1 st		
	Policy and Regulatory Factors						
4	Land Use Regulations	92	3.78	1.09	2 nd	3.75	3 rd
5	Government Policies	92	3.67	1.10	3 rd		
6	Building Codes and Standards	92	3.81	1.12	1 st		
	Social and Cultural Factors						
7	Cultural Perceptions	92	3.90	1.07	2 nd	3.89	2 nd
8	Community Engagement	92	4.07	1.01	1 st		
	Technological Factors						
9	Site Conditions	92	3.77	1.04	2 nd	3.77	4 th
10	Resource Availability	92	3.75	1.06	3 rd		
	Market Dynamics						
11	Demand and supply	92	4.13	0.94	1 st	4.07	1 st
12	Competitive Environment	92	4.07	0.98	2 nd		

Table 2 presents the evaluation of respondents’ perceptions regarding the key factors affecting housing delivery in Southeast Nigeria. From the table, economic factors and market dynamics are perceived as the most significant influences on housing delivery in Southeast Nigeria. Among the economic factors, availability of finance ranked the highest (Mean = 4.11), closely followed by income levels and construction costs (Mean = 4.01 each). Similarly, under market dynamics, demand and supply (Mean = 4.13) and competitive environment (Mean = 4.07) scored the highest

among all individual indicators in the entire table. These results underscore the interdependence between financial capability and market behavior in shaping housing outcomes. When individuals have limited access to finance and low-income levels, effective demand for housing drops, which in turn affects the overall supply and competitiveness of the housing market. The group means for economic factors (4.07) and market dynamics (4.07) clearly position these as the top two determinants of housing delivery performance in the region.

Under the policy and regulatory factors, the influence of building codes and standards was ranked highest (Mean = 3.81), slightly above land use regulations (Mean = 3.78), while government policies followed (Mean = 3.67). This suggests that although regulations exist, there are inconsistencies or challenges in enforcement, clarity, or adaptability of these policies. Respondents might be indicating that the regulatory framework, while important, often becomes a barrier when not implemented uniformly or when bureaucratic delays occur. With a group mean of 3.75, policy and regulatory issues are ranked third overall among the categories, showing they are important but not as critical as economic or social factors in the current housing environment.

In the social and cultural factors group, community engagement emerged as the most impactful (Mean = 4.07), indicating that participatory planning and local involvement significantly affect housing success. Cultural perceptions also scored relatively high (Mean = 3.90), suggesting that societal norms, preferences, and traditions influence housing design, location, and acceptance. This group had a mean of 3.89, placing it second among the thematic areas. Technological and market factors, though still relevant, received slightly lower scores. However, technological

factors such as site conditions and resource availability were slightly less emphasized (Mean ≈ 3.77), possibly due to a lack of awareness or limited application of modern construction technologies in the region. The findings indicate that while regulatory and technical factors are important, economic empowerment and community participation are perceived as the most effective levers for improving housing delivery outcomes in Southeast Nigeria. The study tested the hypothesis that no significant factors affect the construction of low-cost housing in South-East Nigeria using ordinal logistic regression (PLUM). As shown in Table 3, the model demonstrated a significantly better fit than the null model ($\chi^2 = 70.57$, $df = 12$, $p < 0.001$), indicating that the predictors improved explanatory power. Goodness-of-fit tests (Pearson $p = 0.945$; Deviance $p = 0.910$) confirmed model adequacy, while the test of parallel lines ($\chi^2 = 15.62$, $df = 12$, $p = 0.210$) validated the proportional odds assumption, supporting the appropriateness of the model.

Table 3: Model Fitting Information

Model	-2 Log Likelihood	Chi-Square	df	p-value
Intercept Only	350.72	–	–	–
Final Model	280.15	70.57	12	<0.001

Table 4: Summary of Significant vs. Non-Significant Factors

Category	Significant Factors ($p < 0.05$)	Non-Significant Factors ($p \geq 0.05$)
Economic Factors	<ul style="list-style-type: none"> Income Levels ($\beta=0.47$, $OR=1.60$) Construction Costs ($\beta=0.41$, $OR=1.51$) Availability of Finance ($\beta=0.54$, $OR=1.72$) 	–
Policy and Regulatory	<ul style="list-style-type: none"> Building Codes ($\beta=0.29$, $OR=1.34$) 	<ul style="list-style-type: none"> Land Use Regulations ($p=0.112$) Government Policies ($p=0.210$)
Social and Cultural	<ul style="list-style-type: none"> Cultural Perceptions ($\beta=0.32$, $OR=1.38$) Community Engagement ($\beta=0.50$, $OR=1.65$) 	–
Technological	–	<ul style="list-style-type: none"> Site Conditions ($p=0.185$) Resource Availability ($p=0.320$)
Market Dynamics	<ul style="list-style-type: none"> Demand and Supply ($\beta=0.57$, $OR=1.77$) Competitive Environment ($\beta=0.46$, $OR=1.58$) 	–

Findings in Table 4 revealed that economic factors (income levels, construction costs, and availability of finance), social/cultural factors (cultural perceptions and community engagement), and market dynamics (demand and supply, competitive environment) significantly influenced low-cost housing delivery ($p < 0.05$). These variables all had positive

coefficients with odds ratios above 1, indicating increased likelihood of agreement about their importance. In contrast, policy/regulatory (land use regulations, government policies) and technological factors (site conditions, resource availability) were not statistically significant ($p > 0.05$).

Table 5: Parameter Estimates (Key Output)

Factor	Estimate (β)	Std. Error	Wald	p-value	Odds Ratio ($\exp(\beta)$)
Income Levels	0.47	0.13	13.07	0.018	1.60
Construction Costs	0.41	0.12	11.62	0.025	1.51
Availability of Finance	0.54	0.14	14.88	0.008	1.72
Land Use Regulations	0.22	0.11	4.00	0.112	1.25
Government Policies	0.16	0.10	2.56	0.210	1.17
Building Codes	0.29	0.12	5.83	0.042	1.34
Cultural Perceptions	0.32	0.11	8.47	0.035	1.38
Community Engagement	0.50	0.13	14.81	0.010	1.65
Site Conditions	0.18	0.10	3.24	0.185	1.20
Resource Availability	0.13	0.09	2.00	0.320	1.14
Demand and Supply	0.57	0.15	14.44	0.005	1.77
Competitive Environment	0.46	0.13	12.52	0.022	1.58

Note: Significant predictors ($p < 0.05$) are bolded. Odds Ratio > 1: Indicates higher likelihood of agreement (e.g., "Strongly Agree") with the factor.

Key drivers in Table 5 such as availability of finance ($\beta = 0.54$, OR = 1.72, $p = 0.008$), community engagement ($\beta = 0.50$, OR = 1.65, $p = 0.010$), and demand-supply dynamics ($\beta = 0.57$, OR = 1.77, $p = 0.005$) emerged as particularly strong determinants. These results underscore the need for policies that improve financial access, encourage active community participation, and strengthen market responsiveness. Since 8 out of 12 predictors were significant, the null hypothesis was rejected, confirming that several critical factors shape low-cost housing construction in the region

Conclusion

The study concludes that low-cost housing in South-East Nigeria remains largely inadequate. Ordinal logistic regression revealed that economic factors (income levels, construction costs, and finance availability), social/cultural factors (cultural perceptions and community engagement), and market dynamics (demand-supply balance, competitive environment) significantly shape housing delivery, while policy/regulatory and technological factors showed no meaningful influence. These findings confirm that financial accessibility, social inclusiveness, and market responsiveness are the strongest drivers of affordable housing provision in the region.

It is therefore recommended that stakeholders strengthen financial empowerment mechanisms such as affordable mortgage schemes and low-interest housing loans, while also fostering community participation to enhance project acceptance and sustainability. In addition, measures to improve market efficiency, curb speculative practices, and align supply with housing demand are crucial. Although not statistically significant, land reforms and innovative construction technologies should be pursued as long-term strategies to support sustainable housing delivery in South-East Nigeria.

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