Low Income Housing Delivery Analysis: Causal Evidence from South East Nigeria

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Abstract- *Empirical evidence suggests that the Nigerian government at the national and state levels have not achieved the goal of bridging the deficit in low-income housing delivery, especially in light of the over 17 million housing units in the country. This deficit has manifested in the study area through a spate of price increases in the housing market, overcrowding, and informal housing such as urban blight and slums. In the face of this grim statistic, the study ascertained the extent to which housing delivery by housing providers met the housing needs of the low-income earners in South East, Nigeria, and identified the causes of the shortfall in the low-income housing market in South East, Nigeria. Descriptive research design was adopted for the study using the survey research method. The population of the study comprised all low-income properties in South East, Nigeria. The research instrument for data collection was questionnaire structured in Likert Scale format. Data were analyzed with Kolmogorov-Smirnov Test. It was found that housing provision by housing providers had not met the housing needs of the low-income earners in South East, Nigeria ($z=.8275$; $p<0.05$), while ineffective monetary and policy implementation were the major causes of shortfall in the low-income housing market in South East, Nigeria ($z=7.892$, $p<0.05$). The study concluded that housing provision by housing providers in South East Nigeria had not met the housing needs of low-income earners as a result of ineffective monetary and policy implementations. We recommend that stakeholders be carried along in the formulation and implementation of monetary and housing policy implementations with a view to ensure that the needs of the target population are met.*

Indexed Terms- Income Housing Delivery, Housing Deficit, Informal Housing, Housing Needs, Causes of Housing Deficit

I. INTRODUCTION

Government is obligated to provide infrastructure that supports the basic necessities of its citizens. One of these public obligations is the provision of affordable housing. Affordable housing refers to low cost housing for low income households and earners who make up the majority of the population of most developing countries of the world [1]. In spite of this noble and most basic of governmental responsibilities, empirical evidence [2] [3] suggest that the Nigerian government at the national and state levels have not achieved this goal as it should; especially in light of the resources expended. This has led to over 17 million housing-deficit in the country [4].

This deficit has manifested in the study area through a spate of price increases in the housing market, overcrowding, and informal housing such as urban blight and slum, and the direct implication is that many urban dwellers struggle to satisfy their housing needs from the few available stocks of lettable accommodation. In the face of this grim statistic, the situation has a gloomy forecast. [5] Estimates that between 2000 and 2030, Africa's urban population will increase from 294 million to 742 million. The implication of this increase is that providing housing and other basic services for urban residents, especially for the Sub-Saharan low-income demography, will be a daunting prospect.

This has necessitated a dynamic approach or strategy to combat the problem of housing shortage for low income earners in the face of the growing population of low-income earners [6]. Despite this proposition, few works have investigated the causes of the housing deficit as applicable to the South East of the country. This lacuna is critical given that for this deficit to be bridged, every geopolitical region in the country must look inwards at the peculiar causes, which must be

addressed in advocating a response. By this, the study fills the lacuna in literature by providing evidence on the actual causes of housing deficit for low-income earners in South East, Nigeria. More so, since past efforts documented in literature seemed not to have demonstrated meaningful effect on housing provision in the study area.

1.1 Objectives of the Study
- To ascertain the extent to which housing delivery by housing providers met the housing needs of the low-income earners in South East, Nigeria.
- To identify the causes of the shortfall in the low-income housing market in South East, Nigeria.

1.2 Justification of the Study
Generally, affordable housing has been recognized as a basic necessity of man and contributor to economic development. Yet, in Nigeria, the over 17 million housing deficit statistics shows that a substantial number of the population do not have quality accommodation [4]. Incidentally, few studies have measured the affordable housing deficit statistics of South East Nigeria as a precursor to any endeavor of offering a suitable panacea. The rationale of this study is that it underscores the need to analyze the causes of affordable housing deficit in South East Nigeria as a means of developing a strategy for any meaningful reduction of the deficit. Therefore, the study has been justified on the ground that in the study area, similar studies are still in an embryonic stage.

1.3 Study Area
The study was carried out in South East Nigeria, comprising five states namely; Imo, Anambra, Abia, Enugu and Ebonyi States. Figure 1 is the geospatial data of the Nigerian map showing the South East geopolitical zone.
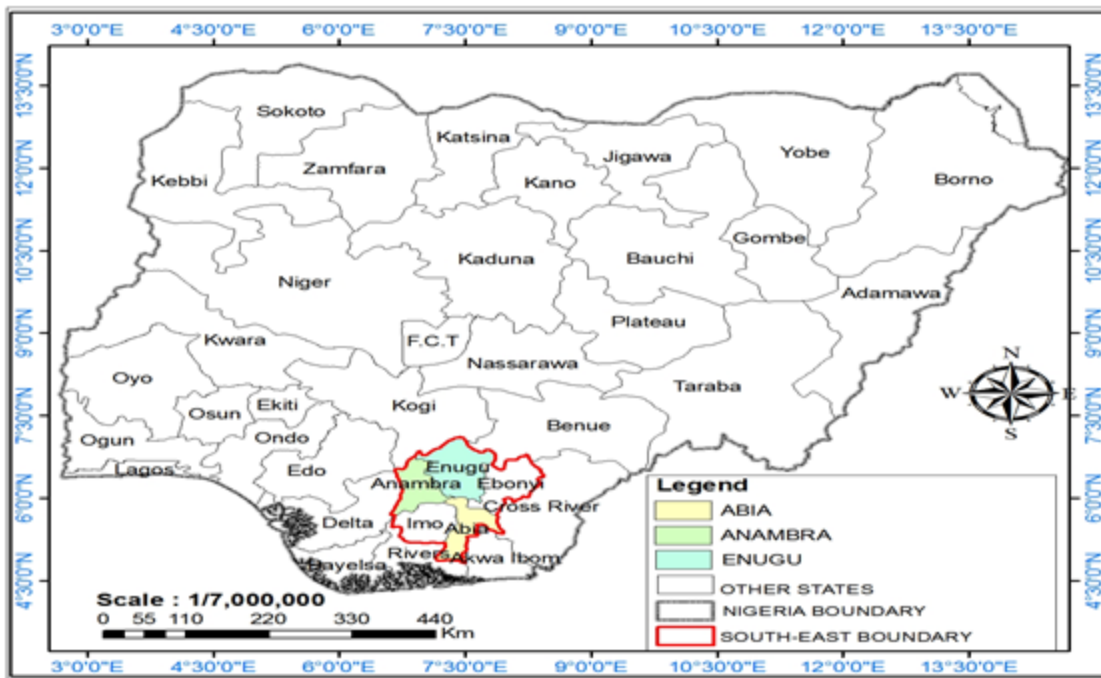

Figure 1: Geospatial Data of Nigeria showing the South East Geopolitical Zone
Source: Geographical Information System Laboratory (2019)

Figure 1 shows the geospatial data of the South East within the map of Nigeria (illuminated with a red borderline).
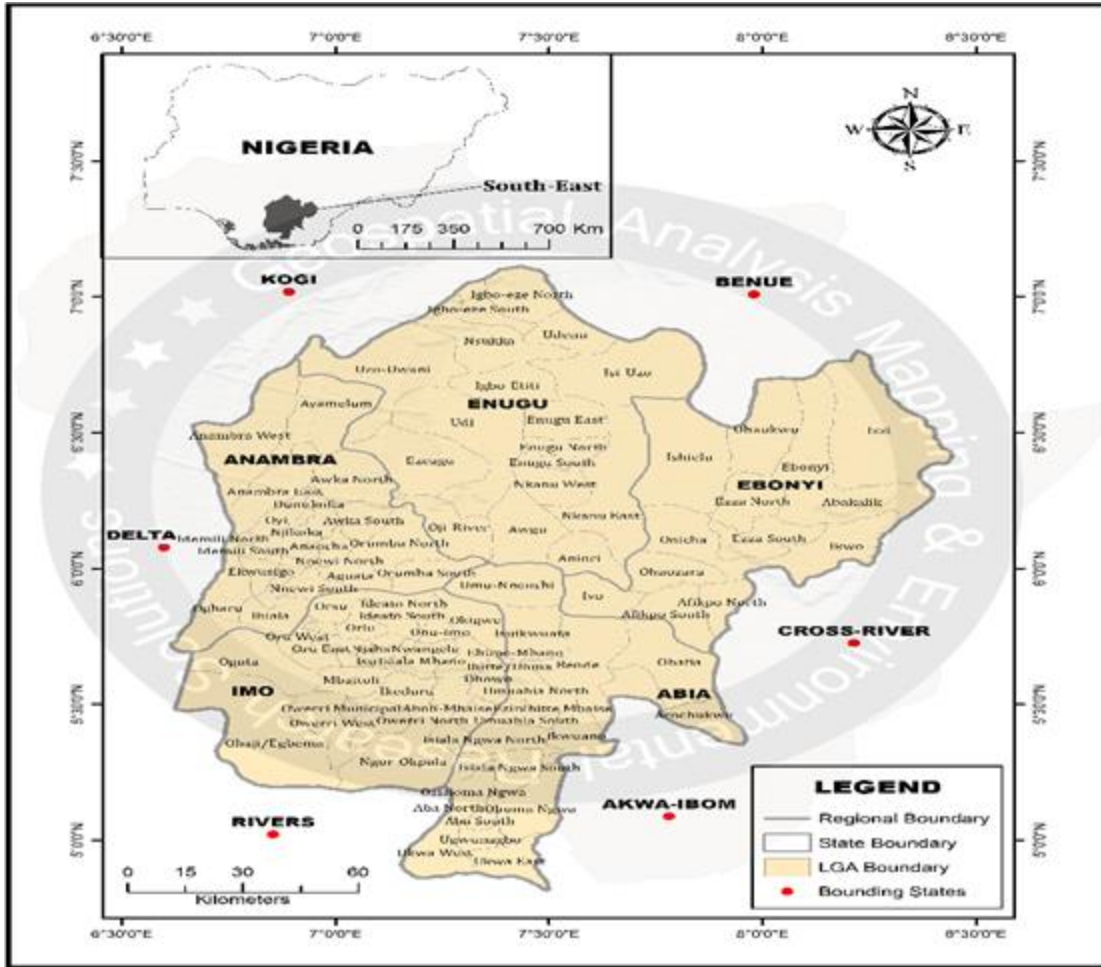
Figure 2: Geospatial Data of the South East region of Nigeria showing the five component states. Map of Nigeria is inset.

Source: Geoinformatics and Surveying Department, University of Nigeria

Figure 2 shows the geospatial data of South East, Nigeria.

Figure 2 shows the map of S.E. Nigeria comprising the five states of Enugu, Abia, Imo, Anambra and Ebonyi states. It is located within latitudes 4° 4' 35''N and 7° 7' 44''N, and longitudes 7° 54' 26''E and 8° 27' 10''E in the tropical rain forest zone of Nigeria, which means maximum temperature of 27oC, and total annual rainfall exceeding 2500mm. The region is home to predominantly 'Igbos' whose language, Igbo, is one of the three most widely recognised and spoken languages in the country. Alternatively, a minority of the population speak Nigerian English (Pidgin English) while quite a number of the educated ones speak, read and write English language fluently. Igbos are one of the largest and most influential ethnic groups in Nigeria.

II.   REVIEW OF RELATED LITERATURE

2.1   Concept of Low-Income Housing

[7] avers that there is no single definition of low-income housing across the nations. They however argue that definitional issues exist particularly around the position of co-operatives; time limited subsidies, and the role of private suppliers. Aside from covering housing provided with public subsidy, it is used in a general way to describe housing of any tenure that is judged to be affordable to a particular household or group by analysis of housing costs, income levels and other factors [8]. Such is the lack of consensus over what affordability means in this respect, that there

have even been suggestions that the adjective should be abandoned on the basis that it has become unhelpful when considering the difficulties faced by households in meeting their housing needs [9].

Clarifying the narrative, Sections 68-71 of the UK Housing and Regeneration Act 2008 define affordable housing for the purposes of regulating social landlords as low-cost rental and low-cost homeownership accommodation. The 2008 Act refers to accommodation at rents below market rates and let to people whose needs are not adequately served by the commercial housing market. This Statute confirms the inter-usage of affordable housing and low-income housing, and is strengthened by Section 70(2) of the 2008 Act, which sees low-income housing as dwellings "made available to people whose needs are not adequately served by the commercial housing market". This demographic cluster is also referred to as low-income earners.

The United Nations refer to low-income earners as those whose household's disposable money income per consumption unit (equivalent income) is lower than 60 per cent of the equivalent median money income of all households. A significant proportion of this group in developing countries live in unsanitary conditions, inadequate housing without access to basic facilities like convenience, bathroom, kitchen and refuse facilities [5]. While there is the possibility of accessing a mortgage facility as a means of departure from squalid and informal settlements, the stringent collateral conditions and mortgage lending rate in many developing countries (characterized by lowest income per capita) are higher in relation to household income of this demography [2]. This shifts the burden of providing for subsidized housing on the public authorities. Yet, in South East Nigeria, a deficit in low-income housing persists [10]. What then is the prognosis of this deficit?

2.2   Causes of Low-Income Housing Deficit
Government initiatives to boost housing development in many parts of the global south have not performed satisfactorily [11]. Some of the reasons for this anomaly have centered on security of tenure. In mixed and socialist emerging economies, the development of urban land and housing is severely constrained by government control such as the Land Use Act (1978)

[12], keeping large quantities of land off the market while making real estate development extremely difficult [6]. In addition to ineffective land tenure system as a predictor of low-income housing deficit, [13] alludes that ineffective policy implementation is also culpable. [6] contends that a successful shelter project depends not only on the planning and availability of finance but also on the existence of a thriving policy atmosphere.

The inability of public authorities in developing economies to enact sustainable policies directed at the heart of introducing a vibrancy in the housing market has been accentuated by lack of market research [14], creation of vast block market for real estate [6], and aberrative public relations strategies [15]. The net effect of such inadequacies of government influence is that informal housing development increasingly dominates the urban areas in the form of slum formation and illegal squatting. Reinforcing the argument, [16] asserts that low-income housing deficit may not have been a major problem if there was no mismatch between the people for whom the houses are being built and those who need them. This echoes of a disconnect between the plan and the planned which is also evident from the miles in distance between the Land Use Act (1978) and its intended beneficiaries [17].

The extent of this incongruity is strengthened by the premise that housing policies are normally designed for specific groups, such as low-incomes, elderly, and public workers [18]. It would, however, be unrealistic to assume that policy makers have integrated the bargaining power of low-income households in enacting housing policies. Take Nigeria for instance, the national minimum wage increased from N18,000 monthly to N30,000 in 2019. This increment dims into insignificance pari-pasu price of complementary goods such as a bag of cement which goes for N2,500, a 500 litre tank of water priced at N4,000, a trip of sand for N11,000, labour for an average of N3,500 per head, and a drum of paint for N4,500.

These very basic and insufficient collections of building materials has already negated the potency of the developer's income, irrespective of other pressing needs such as family, clothing and feeding. Since equity is defeated, the alternative is to go for bank

loan. However, [19] posit that a key requirement for obtaining loan for property development is the deposit of an equity consistent with 30% of the property value, while interest rates are pegged between 11 and 28% over a repayment term of 10 to 15 years. The National Mortgage Refinance Company of Nigeria pegs the mortgage-gross domestic product ratio at 0.6% as at 2018; a figure dwarfed by 2% for Ghana, 31% (South Africa), 32% (Malaysia) and 77% (United States).

These disturbing statistics can also be categorized as a finance problem. Finance, as a cause of low-income housing deficit, has been supported by the works of [6], [7] and [13]. In the construction of housing, access to credit is vital, but must be accompanied by less cumbersome processes such as unnecessary expenses incurred at the early stages of housing development [2]. The study examines these submissions with a view to determining the actual causes of low-income housing deficit in South East Nigeria.

2.3 Theoretical Foundation

The study is anchored on the Neo-Classical Theory which draws its theoretical guidance from neoclassical economics. The Theory is largely concerned with the analysis of utility maximization on the part of individual consumers in an atomistic housing market. Put at its simplest, the Neo-Classical Approach draws on the analysis of consumer needs and utilizes such information in the delivery and satisfaction of those needs. The theory is relevant in the analysis of the first hypothesis of the study which states that housing provision by housing providers has not met the housing needs of the low-income earners in South East, Nigeria. Thus, the study examines the potency of this theory in the unearthing of causal evidences of low-income housing deficit in South East, Nigeria.

2.4 Empirical Review

[7] explored the imperatives of growing the Nigerian housing investment sector through affordable housing and social enterprise while drawing heavily from the lessons and experiences of some leading nations of the world such as South Africa, UK, New Zealand and other European countries. The paper postulated that given Nigeria's extensive resource base of social capital, such as a long history and tradition of catalyzing community self-help projects, a foundation exists for social innovation in housing provision in Nigeria and Africa. The study concluded that the lessons learned and the experiences gained will serve as a platform for recommending affordable housing and social enterprise programmes that will be the solution for growing and diversifying the Nigerian housing investment sector.

Citing affordability as a housing deficit issue, [20] compared the earnings of government workers in Owerri, Nigeria with the market value of bungalows in the city, in line with the annual mortgage premium of 6 and 8 percentage points in a 25-year period. The study revealed that, as at the beginning of the year 2007, under the 17–level wage structure for government workers, only workers on level 13 upwards in the federal civil service, and those on level 16 and above in the state civil service could be able to pay for the lowest priced bungalows at 6% interest rate. The study therefore concluded that the average government worker in Owerri will not be able to afford suitable shelter without enormous help.

[21] evaluated the extent of incorporation of customers' specific affordability needs in the Nigeria National Housing Fund (NHF) scheme. It ascertains the adequacy of the consideration given to the specific affordability needs of potential beneficiaries of the NHF scheme and determines the adequacy of the consideration given to the inputs from the intended beneficiaries of the NHF scheme. Descriptive and exploratory research designs are adopted for the study. Different offices of the Federal Mortgage Bank of Nigeria, namely the implementers of the NHF scheme, in Abuja, Port-Harcourt, Ibadan, Enugu, Lagos, as well as the 19 state/district offices in these zones are studied. The population of the study includes 201 management staff and officers in these offices. Considering the size of the population and the nature of the investigation, a census is undertaken.

Data for the study were collected through structured questionnaire. The formulated hypotheses are tested using analysis of variance (ANOVA), at 5% level of significance. Results of the hypotheses tests show that; the consideration given to the specific affordability needs of the intended beneficiaries in the NHF affordability criteria is not adequate ($F_{cal} = 73.064$, $P = 0.000 < 0.05$). And, the consideration given to the inputs from the intended beneficiaries of the NHF

scheme is not adequate (Fcal = 116.009, P = 0.000 < 0.05). In line with findings of this study, it was concluded that little attention is paid to the specific affordability needs of the target beneficiaries of the NHF scheme. Following the findings and study conclusion, it is proposed that the implementation of the Need-based Housing Affordability Model developed in this study, will aid the successful planning and execution of housing affordability strategies, thus boosting the performance of housing development programs.

A study by [22] examined the factors that limit the supply of adequate affordable housing in Ghana especially in the urban areas. The study was motivated by the problem which specifies that at an estimated average urban growth rate of more than three percent per annum between 2000 and 2030, the urban population in the country is expected to increase by 65% by 2030 and this will further increase the demand for housing in the country. The research utilized secondary sources of data to analyze and identify the major impediments to the provision of affordable housing. It was found that the scarcity of land in urban areas and the high cost of building materials make it difficult for low-income groups to become homeowners.

Additionally, the study found that the rent system in the country is unfriendly and this leads to homelessness in the urban centers. The study also found that high poverty levels and the lack of easy access to finance in the form of mortgage loans further compound the housing situation in the country. Recommendations and suggestions of the study relate to preventing the population explosion in the country, facilitating and safeguarding access to land, promoting the use of local building materials, changing the rent system in the country, and ensuring access to home finance and other credit facilities.

2.5 Summary of the Review

The review of related literature on affordable housing deficit shows that majority of research on causes of housing deficit such as [13] and [6] examined the causes of housing deficit without adjusting for the peculiar realities of our study area. [21] cited the essence of a localization of such determinant elements in addressing the problem as it specifically applies to the area of study. Of course, studies like [7] discussed the concept of affordable housing but they approached it from the context of social housing as they attempted to present the imperatives of social housing adoption in South East, Nigeria. This varies from the focus of the study which concerns an analysis of the deficit of housing for low income earners with a view to determining the causes in the South East.

So, there remains much to learn about the South East States and how best to analyze the predictors of affordable housing deficit in the area. It is this gap in knowledge that the research seeks to fill.

III. METHODOLOGY

The descriptive research design was adopted for the study using the survey research method. The population of the study comprised all low-income properties in South East, Nigeria. The sample frame was low income households, management staff of the Physical Planning Units of Abakiliki, Awka, Enugu, Owerri and Umuahia. According to the National Populations Commission (2019), there are 909,977 low income earners in the area; while the population of the Management Staff cadre of the Physical Planning Units is 56. The inclusion of the Physical Planning Unit in the population is justified by the fact that it is responsible for building approval and are in the best position to determine the quantity of low-cost buildings in the area. Therefore, the target population of the study is 910,033. Sample size of 424 was determined using Cochran formula for finite populations. The research instrument for data collection was questionnaire structured in Likert Scale format. Data were analyzed with Kolmogorov-Smirnov Test.

IV. ANALYSIS AND RESULTS

4.1 Analysis

The study analyzed data obtained from the study questionnaire. 424 copies of the questionnaire were distributed while 373 copies were successfully and validly returned. Data were analyzed using Statistical Package for Social Sciences Version 21.

- Hypothesis One

Hypothesis one states that housing provision by housing providers has not met the housing needs of the low-income earners in South East, Nigeria. This was tested with Kolmogorov-Smirnov Test as shown in Table 1.

Table 1: Kolmogorov-Smirnov Test

		Housing provision by housing providers has not met the housing needs of the low-income earners in South East, Nigeria
N		373
Normal Parameters[a,b]	Mean	4.2425
	Std. Deviation	3.28575
Most Extreme	Absolute	.218

Most Extreme	Positive	.218
Differences	Negative	-.280
Kolmogorov-Smirnov Z		.8275
Asymp. Sig. (2-tailed)		.000

a. Test distribution is Normal
b. Calculated from data

From Table 1, comparing the calculated z-value of .8275 against the critical z-value of 1.645 (2-tailed test at 5% level of significance) the null hypothesis was not rejected. Thus, housing provision by housing providers has not met the housing needs of the low-income earners in South East, Nigeria.

- Hypothesis Two

The shortfall in the low-income housing market in South East, Nigeria is not due to poor monetary and policy implementation. This was tested using the Kolmogorov-Smirnov Test.

Table 2: Descriptive Statistics

	N	Mean	Std. Deviation	Minimum	Maximum
Shortfall in the housing market is not due to ineffective monetary and policy implementation.	373	1.8576	1.41849	1.00	5.00

Table 3: One-Sample Kolmogorov-Smirnov Test

		Shortfall in the low-income housing market is not due to ineffective monetary and policy implementation
N		373
Normal Parameters[a,b]	Mean	1.8576
	Std. Deviation	1.41849
Most Extreme	Absolute	.499
Differences	Positive	.449
	Negative	-.273
Kolmogorov-Smirnov Z		7.892
Asymp. Sig. (2-tailed)		.000

a. Test distribution is Normal.
b. Calculated from data

From Table 3, the computed Z–value of 7.892 against Z tabulated of 1.96 and a significance of 0.000 implies

that the null hypothesis should be rejected and alternate accepted. This is an indication that the shortfall in the low-income housing market is as a result of ineffective monetary and policy implementation.

4.2 Results

1. Housing provision by housing providers had not met the housing needs of the low-income earners in South East, Nigeria (z=.8275; p<0.05).

2. Ineffective monetary and policy implementation were the major causes of shortfall in the low-income housing market in South East, Nigeria (z=7.892, p<0.05).

V. CONCLUSION AND RECOMMENDATIONS

Housing provision by housing providers in South East Nigeria had not met the housing needs of low-income earners as a result of ineffective monetary and policy implementations. So, we recommend that housing providers must be constantly reminded of the strategic direction and vision of housing delivery through market research endeavours to establish the housing needs of the target population. Also, it is advocated that stakeholders be carried along in the formulation and implementation of monetary and housing policy implementations with a view to ensure that the needs of the target population are met.

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