

# Effect of Housing Delivery Process on Housing Affordability in Southwest, Nigeria

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## Abstract

The creation, production, and acquisition of housing have challenged the housing stock over time; worrisome is the broad gap between housing supply and distribution as well as the threat to housing affordability. The housing delivery process in developing countries appears inefficient, onerous, and ineffective, making housing out of reach of the majority of urban poor who must spend more than 30% of their income on rent or a mortgage, including utilities. In examining this challenge, this study seeks to understand the availability of affordable housing, investigate its cost-cutting measures, pinpoint user value systems, and understand regulatory framework requirements for housing affordability in Southwest Nigeria. Questionnaires were administered to the residents, stakeholders, and professionals involved in housing delivery to gather data on the socio-economic traits, available housing delivery options, challenges, and mitigation measures for affordable housing in Southwest Nigeria. Out of the 300 copies of the questionnaires administered to respondents using the systematic sampling technique, 269 were retrieved and subjected to descriptive and inferential statistical analysis. The relationships between housing affordability preferences and the socio-economic characteristics of respondents reveal a significant model ( $F = 27.390$ ;  $p < 0.001$ ), with adjusted R square = .481. The significant predictor variable in the analysis were gender ( $F = .351$ ,  $p < 0.001$ ), level of education ( $F = -.284$ ,  $p = 0.002$ ) and type of accommodation ( $F = .242$ ,  $p < 0.001$ ). The study posits that affordability is a relative term that varies depending on the age, income, housing needs, and requirements of the individuals. However, it suggests that insufficient local involvement in housing design and construction is a major barrier to housing affordability, and recommends increased professional involvement in housing provision.

**Keywords:** Housing Affordability, Housing Delivery, Housing Output, Housing Formation

## Introduction

Housing is a "social object and living environment" (Murphy & Hourani, 2016), its provision comprises the dwellings, infrastructure, and services that reflect people's living circumstances and social standing (Turner, 1972; Ayoola & Amole, 2014). Undeniably, housing is a fundamental human need that influences the social, economic, and cultural classes of the people as well as reflects their quality of life (Jinadu, 2007; Ojikpong, Agbor, & Emri, 2016; Olubi & Ayoola, 2020).

Housing is affordable when the cost of housing rent or ownership including utilities does not exceed 30 percent of the

household's income, while households that pay more are considered to be cost-burdened (O'Donnell *et al.*, 2004; HUD, 2012; Majelan *et al.*, 2020; Musa *et al.*, 2020). The National Housing Policy (NHP, 2011) and Majelan, *et al.* (2020) corroborate the aforementioned definition but emphasize housing affordability as offering decently priced housing that is accessible to those with limited resources such as the urban poor who can only afford low-cost housing but cannot afford medium or high-cost housing. Meeting housing needs and resolving all housing-related issues for low-income households are both related to affordable housing.

Studies reveal that housing has increased in cost with a very high financial burden for low-income families, and other necessities have become unattainable (Turner & Kingsley, 2008; Aghimien *et al.*, 2018). This has created a huge impact on housing affordability, which has emerged as a recurring problem in both rural and urban areas (Freeman, 2002; Aghimien, *et al.*, 2018). Despite housing being an essential need for human growth and development, its delivery and affordability are frequently fraught with difficulties (Vuyisani, 2003; Basorun & Fadairo, 2012; Makinde, 2014; Iwuagwu & Iwuagwu, 2015; Olutoge & Obakin, 2017).

The push-pull relationship between housing delivery systems and affordability in Southwest Nigeria is acknowledged in this study as the primary reason for housing shortages. The growing inability to own a house or a piece of property is largely attributable to the lack of effective housing delivery options, which is made worse by economic instability, lack of effective housing policies, quackery, and lack of infrastructure among others, thus increasing housing costs and placing a significant financial burden on low-income families. The allure is that there is a need to examine the creative strategies for delivering affordable housing in Southwest Nigeria; to this end, this study seeks to understand the availability of affordable housing, investigate its cost-cutting measures, pinpoint user value systems, and understand the regulatory framework required for housing to be affordable in Southwest Nigeria.

## Literature Review

### Housing Delivery in Nigeria

Housing is the "social object and living environment" closely connected with passion and interaction (Murphy & Hourani, 2016). Housing "touches the inner emotional chords," and is associated with feelings of "personhood" and "belongingness" (Murphy & Hourani, 2016). These viewpoints on housing demonstrate both the complexity and the potential influence of its dissemination on

the social fabric of human civilization. Another opinion suggests housing as a broad, all-encompassing concept that encompasses the holistic human abode linked to the goods and services that make up a livelihood. It is envisioned as a component that supports both functionality and well-being and consists of a physical unit as well as neighbourhood utilities and services for convenience, decency, and liveability (Adeleye, *et al.*, 2005, Akintola, *et al.*, 2011).

Housing delivery is the mobilization, production, and acquisition of a physical dwelling unit with its accompanying social, cultural, functional, and related facilities, utilities, and services, as well as the overlay of the surrounding living environment where human interaction occurs. Its processes encompass a series of sequential actions beginning with planning and design, local authority approval to the actual construction, financing, and utilities. Housing delivery interventions in Nigeria vary over time. It includes; housing for the expatriate and selected indigenous workers (Onibokun, 1975; Aribigbola, 2000), housing as the social responsibility of the government (Ibimilua, 2015), self-help housing (Tunmer, 1972) and the public-private partnerships housing initiative (Zhang & Seto, 2011); these interventions are all geared towards ensuring that Nigerians owned or had access to decent housing.

Arguably, governmental housing initiatives in Nigeria are ineffective, inconsistent, and unreliable; they produced just 95,594 low-cost housing units, representing 14.63 percent of the required housing units, between 1962 and 2010. The poor implementation of housing as the social responsibility of the government necessitated the development of the self-help housing initiative which has played a vital role in providing housing accommodation for the urban poor. Majority of the housing delivered in Southwest Nigeria since the 1960s has been through self-help housing initiatives. This has offered low-income groups the

opportunity to satisfy their housing needs primarily with their labour and financial resources (Rose, 2000).

According to Ntema (2011), self-help housing enables people to take significant leadership positions in project planning, design, management, and implementation without the assistance of the government. It promotes a bottom-up strategy for housing distribution and grants the right to build, enabling people to alter the quality, design, and construction of their homes to suit their unique economic, social, and cultural requirements. However, Self-help housing is not only plagued by many irregularities in Nigeria, but it also lacks official funding, regulation, and support such that private property owners determine their prices for the purchase or tenancy of their residences; this grossly affects housing affordability.

### **Housing Affordability**

Housing affordability is a common phenomenon facing both developing and developed countries alike but since it is an economic-related housing challenge, it adversely affects the poor income nations. In developing countries, properly built housing is unaffordable while inadequately built homes are unfit for habitation (African Centre for Cities, 2015; Aghimien *et al.*, 2018). In Nigeria, findings suggest that, despite having a good understanding of their surroundings and available housing options, inflexible and expensive housing is often imposed on the urban poor with a huge financial burden. (Turner, 1972; Ayoola & Amole, 2014).

The housing market as a whole and housing affordability through the lens of the income and expenditure ratio (Western Australian Planning Commission, 2013; Mekawy, 2014) is best described using the Housing Expenditure to Income Ratio (HEIR). This ratio connects a household's income and expenditures with a ratio of about 30 percent (Shaqra'a, *et al.*, 2015; Adamu, 2019). This paradigm posits that a household faces an affordability challenge if its housing expense for rent, mortgages, services, and utilities exceeds the designated percentage

(Hulchanski, 1995; Adamu, 2019). A housing gap or mismatch is another means of measuring housing affordability whereby housing demand and supply are integrated into one composite factor (Adamu, 2019). Finding the discrepancy or mismatch between different households based on sizes and income levels as well as between various affordable dwelling types that are appropriate for each of the itemized household categories is the rationale behind this measure of affordability. According to the general rule of thumb (30%), it is assumed that a particular type of household will draw the housing that is most appropriate for their price range. The surplus or deficit between the number of affordable housing units in a given category to the number of households in that category is termed the housing gap (Adamu, 2019). This method considers various income levels about various rents or mortgage amounts when determining affordability as well as balances the dynamics of housing supply and demand (Bogdon & Can, 1997; Adamu, 2019).

Furthermore, Stone (2006) argues that affordability is "an expression of the social and material experience of households in connection to their specific housing arrangements," Corroborating this, Adamu, (2019) posits that it is practical to balance the cost of the current or future home and its non-housing expenses within the confines of the household's income. Therefore, determining housing affordability requires knowledge of the residual income of the target population (Stone, 2006; Adamu, 2019). The residual income strategy emphasizes that households would spend all of their after-tax income on housing because it is such a fundamental need irrespective of other needs. Since the other areas of need account for smaller shares of household income after the housing expense, a household's affordability crisis is more the result of their inability to meet a minimum level of those needs.

The planning and design phase, which occurs at the beginning of the housing delivery system, has the greatest impact on

housing affordability (White *et al.*, 2003; Mekawy, 2014). Among all housing delivery options in Nigeria, governmental housing offers a more diversified system of housing provision whereby planning and design plays a bigger part in making sure that the urban development process produces enough affordable housing for low-income residents (Gurran *et al.*, 2008; Mekawy 2014). However, the shift to other forms of housing delivery especially self-help housing constitutes a lesser emphasis on the importance of design and planning. Housing among the urban poor is primarily to fulfill the fundamental housing needs without meeting the important design and planning requirements. Therefore, housing affordability addresses the housing-related problems experienced by low-income households and affirms the appropriate housing types and designs needed by the different income categories; regardless of housing market pricing, affordable housing encourages social mixing, and inclusiveness. The need therefore to adopt Curran *et al.* (2008) recommendation for a regionally focused, all-inclusive affordable housing strategy that is well-designed and tailored to the local climatic environments, building practices, and the housing market cannot be over-emphasized.

## Research Methods

This study seeks to unpack the need for the provision of affordable housing that satisfies societal and environmental needs within the context of housing delivery, income, expenditure, and housing gap in Southwest Nigeria. The study adopts a quantitative research methodology whereby data was collected by the administration of carefully structured questionnaires. The sample frame comprises randomly selected 400 volunteer residents, 50 stakeholders, and 50 built environment professionals across all states in Southwest Nigeria among which the respondents were systematically randomly selected. The criteria for selection were based on their good understanding of housing delivery and affordability. The data collection instrument used for the study was designed and divided into sections in line with the objectives of the study.

The first section of the questionnaire probes into the general characteristics of the respondents, the second section deals with housing delivery options and housing affordability and the third section considers the challenges and strategies to housing affordability where the respondents were asked to rank the effects of various challenges on housing affordability as well as the possible potential impacts of various strategies towards achieving affordable housing in the study area on a 5-point Likert scale ranging from very high to very low. In total, 300 copies of the questionnaire were administered while 269 (89.7%) were retrieved, and data gathered were subjected to descriptive statistics and content analysis which involved the calculation of percentages, frequency distribution, and categorical regression analysis to establish relationships.

## Results and Discussions

### Socio-Economic Characteristics

Gender, age, annual income range, educational background, and type of accommodations are among the socio-economic factors examined. Table 1 reveals that male respondents dominate in gender distribution as 229 (85.1%) of the respondents were male, compared to 40 (14.9%) females. This confirms that housing is a male-dominated sector, with more males participating in housing decisions (Olubi & Ayoola, 2020). Arguably, this position is subjected to various reasons but most importantly, it tends to fulfill the social-cultural belief in the study area that men are mostly responsible for the provision of houses for their families. Investigating the ages of the respondents revealed that 159 (59.1%) of the respondents were between 21 - 30 years old, 50 (18.6%) of the respondents were between 31 - 40 years old, 50 (18.6%) of the respondents were between 41 - 50 years old, 7 (2.6%) of the respondents were between the ages of 51- 60, while 3 (1.1%) were over the age of 60. In terms of education, 10 (3.7%) of the respondents have secondary education, 159 (59.1%) of the respondents have a Higher National Diploma / first degree, 70 (26.0%) of the respondents have

Master's degree and 30 (11.2%) of the respondents have Ph.D.

The respondents' annual income shows that 29 (11.2%) of the respondents earned less than N100,000 per annum, 130 (48.1%) earned between N101,000 and N500,000 per annum, 50 (18.5%) earned between N500,000 and N1, 000,000 per annum, and 60 (22.2%) earned more than N1, 000,000 annually. The study also shows that 220 (81.8%) of the respondents lived in rented apartments, 30 (11.2%) of the respondents owned their houses and do not pay rent, and only a few percent of the respondents, 19 (7.0%) inherited their houses. The socio-economic characteristics of the participants show that their response can provide the information needed on the housing delivery process and housing affordability in Southwest Nigeria.

### Housing Delivery Options

Housing delivery options available to the respondents as reported in Table 2 indicates

that the majority of the respondents 210 (78.1%) embraced self-help housing, 49 (18.2%) of the respondents have access to public private housing while just 10 (3.7%) of the respondents have access to government housing estates. This shows that housing is very important in human life and that irrespective of the different available housing options; respondents are willing to forfeit every other comfort of life for housing. Table 3 investigates the suitability of the housing delivery option using income as the sole parameter and it was discovered that self-help housing is suitable for the majority 130 (48.3) of the respondents, governmental housing is desired by 79 (29.4%) of the respondents while 60 (22.3%) of the respondents are willing to go for public-private partnership housing. This discovery showcases the current over-dominance of self-help housing in the study area and the little quantity of governmental housing compared to the proportion of the populace that desired them.

**Table 1: Socio-Economic Characteristics of the Respondents**

<b>Distributions</b>	<b>Frequency</b>	<b>(%)</b>
<i>Gender</i>		
Male	229	85.1
Female	40	14.9
<i>Age</i>		
21 - 30years	159	59.1
31- 40years	50	18.6
41 - 50years	50	18.6
51 – 60years	7	2.6
Above 60years	3	1.1
<i>Highest Educational Attained</i>		
SSCE	10	3.7
HND/B.Sc. / B.Tech. / B.Ed.	159	59.1
Master	70	26.0
PhD	30	11.2
<i>Annual Income Range</i>		
Below N100,000 per annum	29	11.2
N101,000 – 500,000 per annum	130	48.1
N500,000 – N1M per annum	50	18.5
Above N1M per annum	60	22.2
<i>Types of Accommodation</i>		
Rented apartment	220	81.8
Self-owned	30	11.2
Inherited	19	7.0
<b>Total</b>	<b>269</b>	<b>100</b>

**Table 2: Housing Delivery Options Available to the Respondents**

Available Housing Delivery Options	Frequency	(%)
Governmental Housing Estates	10	3.7
Self-Help Housing	210	78.1
Public Private Housing	49	18.2
<b>Total</b>	<b>269</b>	<b>100</b>

**Table 3: Suitable Housing Delivery Options per Income**

Suitable Housing Delivery Options per Income	Frequency	(%)
Governmental Housing Estates	79	29.4
Self-Help Housing	130	48.3
Public Private Housing	60	22.3
<b>Total</b>	<b>269</b>	<b>100</b>

### Housing Affordability

Investigating the percentage of the respondent's income that goes for housing rent, mortgages, maintenance, and utilities, Table 4 reveals that the majority of the respondents 149 (55.4) spent less than 30% of their annual income on housing and other utilities, 100 (37.2%) of the respondents spent between 31 – 60% of their income on housing and other utilities, while 10 (3.7%) of the respondents each spent 61- 90% and above 90% of their incomes respectively on housing and other utilities. In corollary, Table 5 reveals the availability of affordable housing in the study; cumulatively, 129 (48.2%) of the respondents consider housing as rare and not affordable, 120 (44.4%) of the respondents consider housing as very affordable while just 20 (7.4%) of the respondents were undecided. Therefore, using HEIR's concept, whereby housing is considered affordable when expenditure on housing rent and other utilities does not exceed 30% of the total income (Adamu, 2019), housing in the study area can be considered affordable.

### Challenges and Strategies for Affordable Housing

The challenges and effects of the different factors militating against housing affordability in Nigeria (Table 6) and the suggested coping strategies are studied on a five-point Likert scale ranging from very high to very low (Table 7). The results of the analysis as indicated by their mean score show that lack of local participation in housing ranked first followed by low return

on housing investment, poor utilization of open spaces, planning bureaucracies, lack of implementation of housing policies, lack of housing fund, high cost of land, outdated housing delivery policies while the high cost of building materials is considered the factor with least impact. The result implies that over-dependence on foreign ideas, design, and materials in the provision and delivery of housing without due consideration of the local ideology, materials, and design options limits housing affordability. Housing among the urban poor is primarily to fulfill a fundamental need without necessarily meeting the important design and planning requirements. This result buttresses the need to embrace a locally focused and all-inclusive affordable housing strategy that is well-designed and tailored to the local climatic environments, building practices, and housing market suggested by Curran *et al.* (2008).

More so, the need for proper professional involvement in housing delivery is considered the best strategy for achieving housing affordability in the study area followed by the provision of subsidies, review of land policies, involvement of residents, efficient use of open spaces, provision of mortgages facilities, low interest on housing loan, and improved planning approval processes, while efficient housing delivery programs ranks least. This result emphasizes the role of building professionals in the housing delivery process and housing affordability.

**Table 4: Measuring Housing Affordability using the HEIR model**

Measuring Housing Affordability per Income	Frequency	(%)
Below 30%	149	55.4
31– 60%	100	37.2
61 – 90%	10	3.7
Above 91%	10	3.7
<b>Total</b>	<b>269</b>	<b>100</b>

**Table 5: Housing Affordability**

Housing Affordability	Frequency	(%)
Very affordable	10	3.7
Affordable	110	40.7
Undecided	20	7.4
Rarely Affordable	120	44.6
Not Affordable	9	3.6
<b>Total</b>	<b>269</b>	<b>100</b>

**Table 6: Challenges to Housing Affordability**

Challenges	V. High (5)%	High (4)%	Average (3)%	Low (2)%	V. Low (1)%	Mean
Lack of local participation in housing	18.6	26.0	48.0		7.4	2.5167
Low return on investments	21.9	37.2	18.6	22.3		2.4126
Poor utilization of open spaces	26.0	25.7	33.5	11.2	3.7	2.4089
Planning bureaucracies	29.7	25.7	33.5	11.2		2.2602
Lack of implementation of policies	18.6	44.6	33.1	3.7		2.2193
Lack of housing funds	24.1	47.8	20.1	8.0		2.1205
High cost of land	23.2	53.7	19.3		3.9	2.0772
Outdated housing delivery policies	29.7	44.6	25.7			1.9591
High cost of building materials	61.4	30.9	7.7			1.4633

**Table 7: Strategies for Improving Housing Affordability**

Strategies	V. High (5)%	High (4)%	Average (3)%	Low (2)%	V. Low (1)%	Mean
Professionals' Involvement in Housing Delivery	18.6	29.7	33.1	7.4	3.7	3.5948
Provision of housing subsidies	15.4	23.2	34.4	15.4	11.6	2.8456
Review of land policies	11.2	29.4	33.5	22.3	3.7	2.7807
Involvement of residents in housing	14.9	22.3	36.8	22.3	3.7	2.7770
Efficient use of open spaces	7.7	38.2	27.0	23.2	3.9	2.7722
Provision of mortgages facilities	11.2	37.2	29.4	18.6	3.7	2.6654
Low interest on housing loan	18.6	37.2	25.7	11.2	7.4	2.5167
Improved planning approval processes	22.8	34.7	23.2	15.4	3.9	2.4286
Efficient housing delivery programs	18.6	37.2	36.8	7.4		2.3309

### Predictors of Affordable Housing

The relationships between housing affordability preferences and the socioeconomic characteristics of respondents were investigated to understand the influence of the respondent's socioeconomic factors on housing affordability using categorical regression. The analysis yields a significant model ( $F =$

27.390;  $p < 0.001$ ), with adjusted R square = .481. The significant predictor variable in the analysis were gender ( $F = .351$ ,  $p < 0.001$ ), level of education ( $F = -.284$ ,  $p = 0.002$ ) and type of accommodation ( $F = .242$ ,  $p < 0.001$ ). However, age ( $F = .128$ ,  $p = 0.060$ ), annual income ( $F = .046$ ,  $p = 0.563$ ), and term of rent payment ( $F = .022$ ,  $p = 0.746$ ) were the insignificant variables

on housing affordability. This result thus suggests that to a reasonable extent, socioeconomic characteristic affects housing affordability especially gender, level of education, and chosen accommodation. Affordability is a relative term that varies depending on the age, income, housing needs, and requirements of the individuals.

## **Conclusion and Recommendations**

In conclusion, this study examines the processes of housing formation, production, and acquisition, and how affordable housing can be attained in the context of income, governmental policies, and housing availability. The governmental interventions in housing seem inefficient, inappropriate, and inadequate with a slight effect on housing supply and affordability thus leaving a huge housing gap and encouraging housing shortages. Due to the significance of housing to human life and well-being, self-help housing, which is provided without the involvement, influence, or financial support of the government, becomes the most widely used and accepted method of housing delivery in Southwest Nigeria. Even though self-help housing increases the housing supply and decreases the housing shortage, the cost of construction, rent, maintenance, and utilities occasionally exceeds 30% of a household's income. Thus, such house owners and tenants are living a cost-burdened life whereby a significant part of their annual income is spent on acquisition, production, maintenance, utilities, and infrastructure.

Therefore, a responsive housing policy that will be in line with the current national and socio-economic realities is necessary to achieve sustainable development. In Southwest Nigeria, self-help housing delivery is unquestionably here to stay, while housing as a social responsibility of the government is now unrealistic and out of date. However, the government still has a crucial role to play in ensuring that housing is affordable for everyone through initiatives like empowering professionals

and residents to be more and fully involved in the delivery of housing, providing mortgage institutions to offer housing subsidies and loans to the average and low-income earners, using a straightforward method for allocating land and eliminating the bureaucracies of planning authorities. More importantly, the government needs to fulfill its obligation to build the necessary infrastructure that will lessen stress and increase housing affordability.

In addition, it is important to bring back and incorporate into the process of providing housing the neglected indigenous and traditional house types, designs, and construction. Modern house designs should take important elements of traditional design into consideration that might improve quality through alternative or locally created low-cost housing, as opposed to producing housing that is spatially irrelevant and unaffordable to its occupants. Benchmarking affordable housing reveals that an efficient housing delivery process, when properly put into place, offers affordable, accessible housing with support services to different income groups, helps people with housing problems, provides assistance as needed, and is adaptable to draw in and combine funds from various sources. This study contributes to the growing body of knowledge on housing delivery processes and housing affordability in Southwest Nigeria.

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