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The Dynamics of Housing Preferences and Affordability in Oyo State, Nigeria

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Abstract

This study examines the dynamics of housing preferences and affordability among low-income civil servants in Oyo state, Nigeria. The theory of trade-offs provided the anchor for the study, while a case-study research design was utilized, sourcing both primary and secondary data. A multi-stage sampling technique was used to randomly select 394 respondents from 2144 low-income civil servants, on grade levels 1 – 6 in 20 ministries for questionnaire administration, in the state secretariat, while 285 (72.3%) were retrieved for analysis, using descriptive (frequency, ratio analysis, mean score analysis) and inferential statistics. The result of ratio analysis indicated that civil servants in the state spent 51.9% of their gross monthly income on housing, above the 30% stipulated threshold for affordable housing. The findings on the respondents' housing characteristics indicated that the majority, constituting 58.2% and 44.4% were tenants, and lived in flats, respectively. Also, the highest proportion (39.4%) occupied 3 bedrooms while 54.1% of the respondents were having 1 toilet in their houses. Using 5-point Likert Scale to measure the preferred house, the mean rating showed that in the state, the preferred building type, number of bedrooms, number of toilets and tenure type was duplex (3.47), 3 bedrooms (3.61), 3 toilets (3.28) and owner occupier (3.34), respectively. To test if we can scientifically generalize these findings among the male and female respondents, independent samples t-test was employed for the 4 variables. The p value, at $p \leq 0.05$ was only statistically significant for tenure, being 0.024. In essence, the findings can majorly be generalized across the gender for the other variables and by implication, the low-income earners had to forego their preferred accommodation and embark on a "trade-off" of certain housing attributes based on their affordability limit. The study thus recommends a review of the monthly income of the low-income earners to enhance their ability to access their preferred housing.

Keywords
Trade-offs, Housing affordability, Housing preference, Low-income civil servants, Oyo state, Nigeria

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1. Introduction

United Nations (2014) documented that 54 per cent of the world's population were residing in urban areas in 2014 and estimated that 66 per cent of the world's population will be urban residents by 2050. The United Nations further projected that 90 per cent of the increase will be concentrated in Asia and Africa, particularly India, China, and Nigeria.

The increasing rate of urban population growth has exerted great stress on various nations' means to deliver adequate and affordable housing (Ndubueze, 2009). Thus, international concern has been growing over housing in relation to its deteriorating conditions, inadequacy in supply and non-affordability in urban areas. This issue was highlighted at the United Nations Habitat I Conference held in Vancouver in 1976; during the International Year of Shelter for the Homeless in 1987; and at the Habitat II Conference held in Istanbul in 1996 (United Nations (UN), 1996).

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Housing affordability is concerned with securing some given standards of housing or different standards at a price or rent which does not impose an unreasonable burden on household incomes (U.S. Department of Housing and Urban Development (HUD), 2011). A commonly accepted guideline for housing affordability is a housing cost that does not exceed 30% of a household's gross income (HUD, 2011). While affordability is a major factor that drives housing decisions of majority of low-income earners, other factors have also been identified to be crucial.

According to Wong, Hui, Ko, and Chung (2010), the fact that housing is affordable does not necessarily mean that it is preferred. In essence, preferred housing and affordable housing may not necessarily mean one and the same thing. This is because most often than not, low-income households are forced to forego their preferred housing and settle for affordable housing (Ndubueze, 2009). Given a higher affordability level, the choice of housing tends to be dictated by preference, but with lower affordability level, the extent of affordability will compel a household to embark on a "trade-off" of certain housing attributes (Wong, et al., 2010; Rowley & Ong, 2012; National Association of Realtors, 2013; Litman, 2015). Thus, there is a likelihood of affordability determining between a range of affordable locations, as well as the type and size of dwellings in such locations for certain group of the population due to budget constraint while preference dictates for those with adequate financial capacity. As such, focusing only on housing affordability issue might be inappropriate for understanding housing needs or inadequate for understanding the full housing needs of low-income earners. This suggests the need to incorporate housing preference in housing affordability studies to facilitate a holistic study of same.

Housing preference of low-income earners is critical since they are constrained by the challenges of affordability. The aim of this paper is to understand the housing characteristics of low-income civil servants in Nigeria, relative to their housing preference, using Oyo state as a case study. Civil servants refer to workers in government employment in a country, excluding those in the military (Federal Republic of Nigeria (FRN) 1999 and Nigeria Exchange (Ngex), 2013). In the Nigerian civil service, workers are categorized based on their income level into either low-, middle- or high-income earners on salary grade levels 1-6, 7-10 or 12-17 respectively. Low-income earners are the least paid. Thus, affordability is likely to be the decisive factor over preference in housing choice for this category of workers, more than the middle- and high-income earners. While studies have focused on various aspects of housing affordability globally, realities of the relationship that exist between housing affordability of households in relation to their housing preferences have not been adequately explored in literature, universally. According to Obi and Ubani (2014) and Anthony, Dabara, Joseph, Odewande and Agidi (2016), housing affordability problem has become an intractable challenge confronting the low-income earners, thus making them the focus of this study. This study, therefore, analyses the dynamics of housing preferences and affordability in Oyo state.

2. The Study Area

Oyo as one of the six states of the Southwest geopolitical zone of Nigeria is bounded in the north by Kwara State, Ogun State to the south, shares an international boundary with the Republic of Benin to the west, and interstate boundaries with Osun State to the east as shown in figure 1. The main cities and towns are Ibadan, Eruwa, Igbo-Ora, Igboho, Ilora, Iseyin, Kishi, Ogbomoso, Okeho, Oyo and Saki. Oyo State covering an area of 27,460 sq kilometers, has a population of 5,591,589 (National Population Commission, 2006).

The Yoruba people are the main ethnic group in Oyo state. The only indigenous language spoken in the state is Yoruba in various dialects. The state has 33 local government areas, and it is known as the 'pace setter state'. Ibadan, the capital, and most important city is the third largest metropolitan area by population in Nigeria after Lagos and Kano with a population of over 3 million.

Urbanisation in the prominent cities of Oyo State such as lbadan, Ogbomoso, Oyo, lseyin and Shaki had long existed prior to the arrival of the

Europeans. This is, for instance, attested to by the growth in the population of lbadan from being the largest traditional city in sub-Saharan Africa to a cosmopolitan and densely populated urban centre of 70,000 inhabitants in 1856 (Adelekan, 2016).

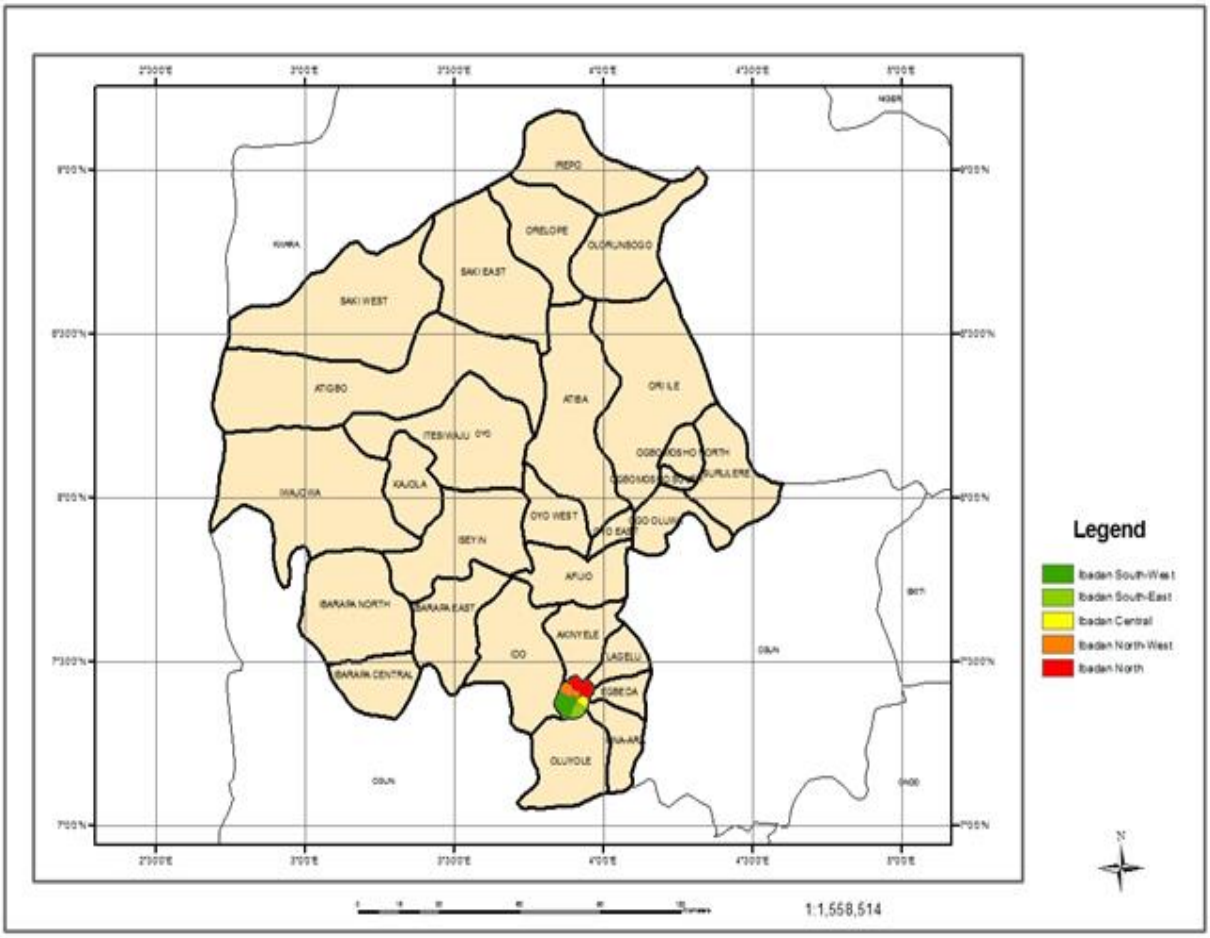

Figure 1. Oyo state showing the Study Area
Source: National Space Research and Development Agency (NASRDA) (2016)

Prolonged inter-ethnic wars which ravaged the old Oyo Empire led to intense development of Ibadan thus contributing to its unique rapid population explosion (Online Nigeria, 2003). In the wake of the oil boom experienced by the country also in the 1970s, there was also a massive influx of migrants from the rural to the city. This resulted in rapid development and spatial expansion of the city, transforming it from being a predominantly indigenous city to a multi-cultural and multi-ethnic urban settlement (Adelekan, 2016). Oyeleye, (2017) submitted that corresponding commensurate change in social, economic, and technological development have not attended the consequential explosion of the urban population. This led to enormous problems such as shortage of adequate housing, environmental degradation, unemployment, slum development, crimes, poor housing conditions, poor sanitary conditions, lack or inadequate basic facilities and amenities overcrowding, poverty, pollution, traffic congestion and proliferation of squatter settlements among others.

Egunjobi (1999) had asserted that in the traditional core areas of Ibadan, approximately 50 percent of houses cannot be accessed by vehicles whereby there are only footpaths. There is almost inexistent municipal water supply, poor healthcare, irregular electricity supply making the residents to seek alternative arrangements. Such arrangements in the instance of water include: purchase in kegs/sachets, sinking of wells/ boreholes or fetching from rivers or other available water bodies.

3. Trade-offs as a proxy for understanding the nexus between housing preferences, and housing affordability

Preference refers to behaviours that are value-oriented and goal-directed (Coolen, Boelhouwer, & Kees, 2002). Housing preference implies a desire or want for a certain form of accommodation in relation to type (single, multi-family, rental, owner-occupied, number of rooms, square feet, etc.), price and locational attributes such as neighbourhood attributes (safe and secure with low crime rates), distance to workplace, public transportation, educational facilities, retail outlets and other amenities (Kersloot & Kauko, 2004; Akinyode, 2017). People also express housing preferences and aspirations in relation to various dwelling attributes including design, construction materials, size, facilities provided, quality of finishing, and those desires change over time.

At any point, not all those desires and preferences can be met. Subsequently, a trade-off must be made (Burke, Pinnegar, Phibbs, Neske, Gabriel, Ralston, & Ruming, 2007; Rowley & Ong, 2012). Trade-off involves a decision between alternatives, each of which has advantages and disadvantages. To select one alternative generally means foregoing another. Meanwhile, housing preferences are unique to individuals and often affect their decision-making process in the choice of housing. However, choices, which implies autonomy and the ability to select between different alternatives, do not always match preferences due to the existence of constraint (Wildish, 2015), such as those imposed by inadequate income, limiting the extent of affordability (Obi & Ubani, 2014).

Consequently, Ezennia and Hoskara (2019) submitted that affordability is a key motivation guiding the choice of housing. As such, choice is also exercised based on affordability, and not merely on the basis of preference. According to Malpass (1993), an important determinant of what consumers regard as affordable housing is the scope for trade-offs between different forms of expenditure and their relative attraction. Cassells, Duncan, Gao, James, Leong, Markkanen, and Rowley (2014) viewed housing trade-offs in terms of neighbourhood quality with cheaper areas lacking many of the amenities households desire; or in terms of housing quality (allowing them to keep down mortgage or rental costs but perhaps resulting in a lower quality of life); location such as what occurs when a household move out of their existing communities to more affordable locations on the urban periphery. Factors that are crucial to determining the housing affordability of individuals, particularly in the traditional African setting include cultural identity and values, an individual owner's social class or status, personal taste, and group's preferences (Waziri and Roosli, 2013).

Given an ideal situation wherein all constraints are not taken into account in addressing household preferences, the foregoing variables are identified by authors (Hui, Wong, & Chung,, n.d.; Wallace, 2010; Wong, Hui & Chung, 2010; National Association of Realtors and American Strategies, 2013; Litman, 2015) as those that will shape preferences of households: Proximity to place of occupation, shop, friends and family; High street connectedness; Density; Housing location, size and type; Nature of accommodation (shared, alone, immediate family, extended family, partner, children); number of bedrooms; number of bathrooms and toilets; access to public transport; garden/ yard; recreational facilities; sense of community; security/ safety of the neighbourhood; privacy from neighbours; quietness; attachment to neighbourhood; improved accessibility (reduced commute time); high quality schools; sidewalks and places to take walks; parks and playgrounds; an established neighbourhood quality of environment; mix of ages, cultures and backgrounds; ease of driving; parking space; amongst others. On the basis of these factors, trade-offs are eventually made in arriving at a final decision on the choice of housing, when preference is matched against affordability.

3.1 Theoretical Framework: Trade-offs in Housing

The conventional trade-off theory is associated with the field of economics and it states that decision makers are not always able to have everything they want and must as such embark on trade-offs (Campbell & Kelly, 1994). The pioneering work on the theory of trade-offs in

housing was propounded by Alan Winger in 1969. It states that upon being constrained by limited budget and given the multi-dimensional nature of housing, households are forced to trade-off or substitute certain dwelling units' quality and locational attributes for other least desirable ones. They thus adjust their preferred accommodation choices to make up for their financial inabilities. An implicit assumption of this theory is that the income reported is gross household income.

Studies that have employed the theory of trade-offs in housing include Yeoman and Akehurst (2015); and Wildish (2015). Yeoman and Akehurst (2015) and Wildish (2015) explored the various forms of financial and non-financial factors that are traded off in housing choice. They stated that the range of financial factors include the housing costs, rents payable, mortgage payments, rates and taxes, insurance, maintenance costs, and utilities' bills. The range of trade-offs that are non-financial in nature include household characteristics (size and composition), and their tastes, preferences, expectations, and aspirations, and the housing features, qualities and locational attributes.

Further, in Yeoman and Akehurst (2015)'s study, a survey was conducted wherein respondents were required to state their preferred housing vis a vis their current living and income situations, in a self-reported analysis. The housing options provided include dwelling types, whether detached, or otherwise, or storey buildings, and number of bedrooms. The information provided relative to their living and budget situation helped in defining their financial limitations. From the findings, 23% of respondents could not afford their preferred housing. While the respondents considered the number of bedrooms to be very significant to their preferred choice, there is a general willingness to trade-off and settle for a smaller number of bedrooms, attached housing, like storey buildings and are also willing to settle in less desirable locations, given the constraints posed by limited income.

The phenomenon of trade-off embraces the presence of constraints and the need to accommodate substitutes in decision making. Thus, the application of the trade-off theory to this study fits perfectly, and would help policy makers, academics, developers, and other relevant stakeholders in decision making, by identify aspects of housing preferences that might be traded off, as a result of the challenges posed by low-income earners' budget constraint.

3.2 Literature Review

Traditionally, affordability as an approach is targeted at ensuring that housing is accessible to lower income earners. It is, therefore, not surprising that authors have examined housing affordability in the context of its relationship with the socio-economic and demographic factors of households, such as age, marital status, employment, income, among others (Bujang, Zarin & Jumadi, 2010 Boamah, 2010; Wardrip, Williams & Hague, 2011; Abimaje, Akingbohungbe, & Baba, 2014; Litman, 2015). To a large extent however, affordability is treated in isolation of some other critical and salient issues, such as housing preferences, which was also said to shape housing affordability (Hui, Wong & Chung, n.d.; Wallace, 2010; Wong et al., 2010; National Association of Realtors, 2013; Litman, 2015; Delgado & De Troyer, 2017).

Studies on housing preference include Bako and Jusan, 2012; State of Western Australia, 2013 and Delgado and De Troyer, 2017). Bako and Jusan (2012) examined the methodological and theoretical framework of housing choice and preference, using the theory of means-end chain (MEC). The study asserted that housing preference is a function of available choices. Also, there are underlying motivations for preference of certain housing attributes over another and a particular house. Kersloot and Kauko (2004) had earlier linked a growing diversity of housing preferences to an increase in affluence of households and individual lifestyles. Thus, housing preference and ultimate choice operates within the framework of housing attributes (Bako & Jusan, 2012).

National Association of Realtors and American Strategies (2013) reviewed the community preference of American households. Findings indicated that while majority of American households prefer detached, single-family dwellings, with shorter commute, a higher priority is placed on affordable housing by moderate and low incomes earners.

State of Western Australia (2013) surveyed the housing attributes that contributed to the housing preferences of households in Western Australia. The study identified the trade-offs involved in the selection among available housing stock, with respect to location, type of housing and the number of bedrooms. The intent was to guide government policy and industry and enhance the provision of affordable housing. Findings revealed that there was preference for single and detached houses, whereas, given population growth, and budget constraint, this may lead to problems for those willing to make trade-offs and settle for smaller and affordable semi-detached dwellings and apartments in the middle and outskirts areas.

Litman (2015) investigated housing location preference of consumers, in relation to Smart Growth. The study indicated that majority of households increasingly embrace Smart Growth communities, by exhibiting greater preferences for more compact, small sprawl/lot, multi-modal community with improved accessibility. They posited that the less housing cost burdened a household is, the more they are able to afford their preferred housing choice, since housing consumption is sensitive to the financial position of a family, particularly for a low-income household. In earlier studies, Saville-Smith and James (2010); Kelly, Weidmann and Walsh (2011) had submitted that housing demand does not just revolve around a mere desire for a specific type, size and location of housing, but majorly on the capacity and willingness to pay for same. Consequently, housing choice does not exist in a vacuum (Saville-Smith & James, 2010; Allen, 2015).

Delgado and De Troyer (2017) conducted a study aimed at understanding the housing preferences of house users in Guayaquil-Ecuador. The study was done to assist households to realize their expectations and aspirations of housing affordability and quality at a reasonable profit for the developer. The paper identified the most preferred housing attributes, while incorporating the element of affordability and capacity to pay, and profitability for the developers. It also explored housing preferences and tradeoffs of certain housing attributes against affordability, given budget restrictions. The study contributed to literature by introducing a model that links preferences to affordability, in the context of incomes, prices and budget restrictions.

From the studies, it emerged that a crucial underlying motivation for housing choice, apart from housing preference, is affordability, necessitating trade-offs of housing attributes. Very few studies have been conducted on housing preferences in the context of affordability globally, rather, housing preferences and housing affordability are treated as isolated research issues. This study intends to bridge the gap in literature by examining the housing affordability and housing preferences of low-income civil servants in Nigeria, using Oyo state as a case study.

4. Methodology

The study adopted a case study research design, relying mainly on primary and secondary sources of data. A multi-stage systematic sampling procedure was utilised to randomly select 394 respondents from 2144 low-income civil servants, on grade levels 1 to 6 in 20 ministries at Agodi (State Secretariat), Ibadan, the capital of Oyo state for the study. This led to the administration of 394 questionnaires, while analyses were based on 285 (72.3%) questionnaires retrieved from the respondents. In calculating the housing affordability level of the respondents, the housing expenditure cost to income measure, otherwise known as the ratio analysis, was used. Also, in examining the actual preferences of the housing occupied by low-income civil servants in the study area, a five- point Likert ("not at all preferred" (N.A.A.P), "slightly preferred" (SL.P), "somewhat preferred" (SO.P), "moderately preferred" (M.P) and "Extremely preferred" (E.P)) was used. Subsequently, weight values of 1, 2, 3, 4 and 5 was assigned respectively. The mean for each factor was derived by dividing the summation of the weight value (SWV) by the total number of respondents. The SWV is the addition of the product of the numbers of responses on each of the variables/factors and the weight value attached to each rating. The relevance for each of the identified factors thus ranged between values of 1 and 5. The closer the mean was to 5, the higher the importance that respondents attached to such a factor.

Mean = $\overline{X}$ = SWV / $\sum x_1$ ---------- (1)

SWV= $\sum x_1 y_1$ ---------- (2)

Where:

SWV = Summation of the weight value ascribed

x_1 = Number of responses to rating

y_1 = The value to rating, ranging from 1-5.

Furthermore, the derivation of the mean, and the mean index was computed. This was obtained by summing the indices of all the identified factors and dividing by their total number. The difference between the mean of each factor and the mean index was deviation about the mean (DM). The deviation about the mean was positive when the mean value of the individual factor was greater than the average mean, that is, mean index. Deductions were drawn on the strength of each factor, by means of the mean and deviation about the mean. Descriptive and inferential (independent sample t-test) was used to analyze the data at $p \leq 0.05$ confidence level. The independent sample t-test was employed to compare the mean between the male and female respondents. The parametric test was considered appropriate since the data followed the assumption of normal distribution. Hypothesis, which says do male respondents have a different mean score than their female counterparts was tested.

H_0: the means of the male and female are not significantly different.

H_1: the means of the male and female are significantly different.

5. Results and Discussions

5.1 Socio-economic and housing characteristics of households

The main socio-economic characteristics considered in the study area, as presented in Table 1, are gender, age, marital status, household size, monthly income from civil service, additional jobs, and other sources of monthly income. The result shows that 56.2% and 43.8% were males and females respectively. This implies that the number of males exceeds their female counterpart. There is, however, a sizeable proportion of the female low-income civil servants in the state. Consequently, being male or female was not a prerequisite for being employed in the state.

The respondents' ages were categorised into four based on the World Health Organisation (2011). These are: the youth (18-30) years; young adult (31-45) years; adult (46-60) years and aged (above 60) years. Findings reveals that 32.8% were youth, 57.8% were young adult while 9.0% were adult. Negligible number of respondents was above 60 years. The young adult was predominant followed by the adults and youths respectively.

Table 1. Socio-economic Characteristics of Households

Gender	**Frequency**	**%**
Male	160	56.2
Female	125	43.8
Total	285	100
Age	**Frequency**	**%**
Youth (18-30) years	93	32.8
Young adult (31-45) year	165	57.8
Adult (46-60) years	26	9.0
Aged (above 60) years	1	0.4
Total	285	100
Marital status	**Frequency**	**%**
Married	212	74.4
Single	66	23.2
Divorced	3	1.1
Separated	3	1.1
Widowed	1	0.3
Total	285	100
Household size	**Frequency**	**%**
1-3	77	35.0
4-6	133	60.5
7-9	8	3.6
Above 9	2	0.9
Total	220	100.0
income from civil service	**Frequency**	**%**
18,000-20,000	73	31.1
21,000-23,000	64	27.2
24,000-26,000	53	22.6
27,000-29,000	9	3.8
30,000-32,000	24	10.2
33,000-35,000	10	4.3
36,000-38,000	2	0.9
Total	235	100.0
Has additional job	**Frequency**	**%**
Has extra job	86	33.3
No extra job	199	66.7
Total	285	100.0
Sources of monthly income	**Frequency**	**%**
Average income from Civil service	N23,579.00	35.0
Average income from other jobs	N11,123.19	16.5
Average income from spouse	N28,353.36	42.0
Average income from Gift/Tips	N4, 378. 57	6.5
Total	N67,434.12	100

Source: Author's field survey

Furthermore, respondents that were married accounted for 74.4%. On the other hand, singles represented 23.2% of the low-income civil

servants, while the divorced, separated, and widowed were 1.1%, 1.1% and 0.3 respectively. The predominance of the married suggests the possibility of existence of extra income from the spouses to cater for the housing and non-housing related expenses of the household. It also implied that majority of the respondents were stable and responsible with no option of movement from place to place due to their families. Necessity was also laid on them to ensure that their respective families had access to housing of one form or the other. In essence, it can be inferred that marital status influenced the housing affordability level of the households.

Another critical socio-economic factor that is central to households' housing affordability levels is household size. For ease of analysis, the household sizes were grouped into four ranges. These are: between one and three (1–3), four and six (4-6), seven and nine (7-9) and above 9 household sizes. The findings on the household's size of the respondents shows that 35.0%%, 60.5%, 3.6% and 0.9% had family sizes of between 1-3, 4-6, 7-9 and above 9 household sizes.

Civil servants in the state earned an average of N23,579 per month. Further results shows that the majority, 58.3%, were earning between N18,000 - N23,000 per month. The married had additional average monthly income of N28,353.36. The workers with additional jobs were 33.3% of the low-income workforce, earning an average of N11,123.19, as extra income, while gifts and tips was an average of N4, 378. 57 per month. Income from all the other sources will amount to N67,434.12 per month. The implication of this is that an average low-income civil servant earns between N23,579 and N67,434.12 per month, as income from the civil service and other sources.

5.2 Housing Characteristics of Households

The main housing characteristics considered in the study area, and presented in Table 2 include housing tenure, type of houses, number of bedrooms, number of toilets, length of residency in the area, rent paid per annum, and average monthly housing related expenses.

Findings on the housing tenure of the respondents, as presented in the table indicated that 20.5% of the respondents resided in personally built houses while tenants were 58.2%. Respondents squatting with parents, friends or other family members accounted for 21.3%. From the findings, it was conclusive that majority of the respondents were tenants. Given the enormous importance attached to home ownership in our socio-cultural environment, there was no gainsaying that most of the civil servants would have loved to own their houses but could not afford same. This is likely attributable to the capital-intensive nature of housing development which makes it to be out of the reach of low-income earners.

Worthy of note also was the proportion of respondents squatting instead of renting or owning their own accommodation. It can be inferred that a large proportion of this group were not financially capable to rent a house, while those renting were incapacitated to build their own personal houses as a result of low earnings. Besides, the culture of living in family houses, prevalent in inner city Ibadan may explain why 21.3% of respondents were squatters.

The information on the type of houses occupied by the respondents showed that 0.8%, 12.8%, 3.9%, 44.4%, 13.2% and 24.9% were living in detached house, bungalow, duplex, flat, boy squatters (BQ)/ Self contain and tenement buildings respectively. From the figures, majority of the respondents, 44.4% lived in flats. This was followed by tenement buildings which accounted for 24.9%. Following lack of studies on the type of houses occupied by medium and high income earners, a cursory observation of houses located in low density neighbourhoods such as in most Government Reserved Areas (GRAs) in Oyo state, for example, Agodi GRA in Ibadan revealed that most of them comprise of large single-family detached houses, bungalows and duplexes with self-contained boy squatters (BQ) for their domestic servants, whereas in poor, medium, high and very high density neighbourhoods, multi-family tenement buildings and flats dominates the landscape. Impliedly, majority of the low-income civil servants lived in medium, high, and very high-density neighbourhoods.

Another vital housing characteristic of the respondents which is the number of bedrooms occupied by them showed that 16.3%, 36.3%,

39.4%, 4.4% and 3.6% occupied 1, 2, 3, 4 and 5 bedrooms respectively. Highest proportion of the respondents occupied 3bedrooms followed by those occupying 2bedrooms.

Table 2. Housing Characteristics of Households

Housing tenure	**Frequency**	**%**
Landlord	50	20.5
Tenant	142	58.2
Squatting	52	21.3
Total	244	100.0
Type of houses	**Frequency**	**%**
Detached house	2	0.8
Bungalow	33	12.8
Duplex	10	3.9
Flat	114	44.4
BQ/ Self contain	34	13.2
Tenement	64	24.9
Total	257	100
Number (No) of bedroom(s)	**Frequency**	**%**
1 (no)	41	16.3
2 (no)	91	36.3
3 (no)	99	39.4
4 (no)	11	4.4
5 (no) and above	9	3.6
Total	251	100
Number (No) of toilets	**Frequency**	**%**
1 (no)	133 (%)	54.1
2 (no)	94	38.2
3 (no)	17	6.9
4 (no)	2	0.8
Total	246	100
Length of residency in the area	**Frequency**	**%**
Between 1-5years	148	67.3
6-10years	46	20.9
11-15years	14	6.4
16-20years	5	2.3
21-25years	4	1.8
26-30years	3	1.4
Above 30years	0	0.0
Total	220	100
Rent paid per month	**Frequency**	**%**
Free	43 (%)	17.6
N1,000 - N 4,900	64 (%)	26.1
N 5,000 - N 7,400	47 (%)	19.2
N 7,500 - N 10,000	27 (%)	11.0
Above - N 10,000	64 (%)	26.1
Total	245 (%)	100
Average housing related expenses	**Amount per month**	
Rent	N6,072.04	
Lighting/ Electricity	N2,053.90	
Water	N1,742.41	
Refuse disposal	N773.09	
Security	N812.52	
Sanitation	N777.24	
Total	N12,231.20	

Source: Author's field survey

The average family size in Oyo state (see Table 1) was 4.1. Accordingly, the room occupancy ratios of the respondents in the state were 2.00. According to Fiadzo (2004), crowding occurs when two people occupy a room while when 2.5 or more people are occupying a room implies overcrowding. This confirmed that the low-income civil servants in the state were at best living in crowded houses. A sizeable proportion, constituting 52.6% of the respondents were living in 1or 2 bedroom(s). This may have resulted in a good number of them finding accommodations more within their level of affordability due to high prices of goods and services of which housing is not excluded. The implication of the foregoing is that despite the incidence of overcrowding, the respondents were in no position to afford houses with more rooms than what they currently occupied.

Another important housing characteristic that is crucial is access to in-house toilet facilities and their number. This is because it will provide useful insight into the general hygiene practice in the respondents' homes. Findings in this regard for the study area indicated that 54.1%, 38.2%, 6.9% and 0.8% respondents were having 1, 2, 3 and 4 toilets in their houses. Considering the fact that each house had at least one toilet, it establishes the fact that great premium is placed on hygiene and sanitation in the study area despite the low income earned by the civil servants. This also has implications on the health of the people as they will be able to check the spread of sicknesses and diseases, provided there is adequate supply of water to support the continuous functioning of the available toilets. Finally, extra toilets tend to equally attract extra cost thus decreasing respondents' level of housing affordability.

In gaining further understanding of the respondents' perception of their houses and their respective neighbourhoods, their length of stay in such houses and locations was investigated. This is presented in a 7-year range for ease of analysis. These are: between 1-5years, 6-10years, 11-15years, 16-20years, 21-25years, 26-30years and above 30years. Out of a total of 220 respondents in Oyo state, 67.3% and 20.9% had spent between 1-5years and 6-10years in their neighbourhoods respectively. Respondents in the state that had spent between 11-15years and 16-20years in their area accounted for 6.4% and 2.3%. The proportion of respondents who had spent 21-

25years and 26-30years in the same environment accounted for 1.8% and 1.4% respectively. This established that most of the respondents were not particularly attached to their houses nor neighbourhood. This may be associated to the fact that majority of them were tenants. It may also reflect the fact that the low-income civil servants were not completely satisfied with their housing qualities and neighbourhoods and were therefore prone to move from time to time. This also suggests that their housing characteristics and neighbourhood qualities were not particularly what they would have preferred given higher level of housing affordability.

The results also shows that 26.1%, 19.2%, 11% and 26.1% of the respondents were paying average monthly rents of N2,950, N6,200, N8,750 and N10,000 per month respectively. They were also spending an average of N12,231.20 per month on rent and other housing related expenses, such as lighting, water, refuse disposal, security, and sanitation. Since average monthly income was N23,579 per month, it implies that they were spending more than half of their monthly income on housing.

In summary, many of the respondents were residing in 3 -bedroom flats with 1 toilet as tenants.

5.3 Housing expenditure cost to income/Ratio analysis

Typically, the ratio measurement implies that housing expenses of a household should not exceed 30 percent of a household income. However, from the calculation, households relying solely on a low-income civil servants' income had to spend 51.9% of their monthly income on housing. The threshold for being severely housing cost is above 50% (Adeleke & Olaleye, 2020). Accordingly, the low-income earners were finding housing unaffordable, and this may likely prevent them from insisting on, and accessing their preferred housing.

Average income from civil service = N23,579.00 (see Table 1)
Average housing related expenses = N12,231.20 (see Table 2)
Percentage (%) of income on housing = N12,231.20/N23,579.00 x 100 = 51.9%

Besides, it implies that the low-income earners might have to result to housing trade-offs on account of the budget constraint (Cassells *et al.,* 2014). This could be in terms of settling for cheaper neighbourhoods that are lacking in terms of quality relative to basic amenities required and desired. The trade-off could also be in terms of settling for cheaper houses of lower quality or fewer number of rooms, than what would have been preferred. This assertion establishes why as revealed in Table 2, the low-income civil servants in Oyo state had preference for 3 bedrooms duplex with 3 toilets in owner occupation but, were in reality occupying 3 bedrooms flat with 1 toilet. By implication, the low-income civil servants were constrained to live in houses within their level of affordability and not necessarily their preferred housing. The foregoing is a dilemma. This finding validates the assertion of authors such as Wong *et al.* (2010) that the fact that housing is said to be affordable does not necessarily mean that it is what people actually prefer.

5.4 Housing Preferences of the Low-income Civil Servants

Presented in Table 2 are the housing preferences of the low-income civil servants in Oyo state, using 5-point Likert Scale. The state had a mean index of 3.14. The perception of the respondents' housing characteristics was also based on their ratings of level of preference for the type of building, number of bedrooms, number of toilets and tenure type.

For the building type, four out of nine building type were relevant, having positive deviation about the overall mean. They were duplex, having a mean value of 3.47, a block of 4 flats (3.42), while bungalow and a block of 2 flats had the same mean values of 3.36 respectively. It indicated greater preference for a duplex, followed by a block of 4 flats and then bungalow and a block of 2 flats.

Five categories of bedrooms identified from the responses of the respondents surveyed ranged from 1 to 5 bedrooms. A total of 4-bedroom categories had positive deviation about the overall mean. In their order of importance, they were 3 (3.61), 5 (3.41), 2 (3.21) and 4 (3.15) bedrooms.

Perceived preference for number of available toilets in the respondents' houses was also surveyed. From the listed categories, analysis of the mean showed that three out of the six had positive deviation about the mean. These three, in the order of preference for them were 3, 2 and 5 toilets with mean values of 3.28, 3.18 and 3.16 respectively. In essence, the low-income earners had greater preference for 3 bedrooms duplex with 3 toilets.

Table 3. Housing preferences of low-income civil servants in Oyo state

Housing Preferences	N.A.A.P Freq%	SL.P Freq %	SO.P Freq%	M.P Freq%	E.P Freq%	Total	SWV	Mean	DM
Type of building									
A block of 4 flats	38 (18.1)	22 (10.5)	34 (16.2)	45 (21.4)	71 (33.8)	210	719	3.42	0.28
A block of 2 flats	25 (12.1)	35 (16.9)	35 (16.9)	65 (31.4)	47 (22.7)	207	695	3.36	0.22
Detached house	40 (20.6)	37 (19.1)	48 (24.7)	33 (17.0)	36 (18.6)	194	570	2.94	-0.20
Bungalow	29 (14.1)	24 (11.7)	39 (18.9)	71 (34.5)	43 (20.9)	206	693	3.36	0.22
Duplex	28 (14.1)	25 (12.6)	36 (18.2)	43 (21.7)	66 (33.3)	198	688	3.47	0.33
Terraced house	37 (19.7)	42 (22.3)	46 (24.5)	37 (19.7)	26 (13.8)	188	537	2.86	-0.28
Condominium	42 (23.5)	29 (16.2)	42 (23.5)	28 (15.6)	38 (21.2)	179	528	2.95	-0.19
Face me I face you	54 (27.0)	41 (20.5)	30 (15.0)	30 (15.0)	45 (22.5)	200	571	2.86	-0.28
Boy squatter	53 (27.2)	47 (24.1)	36 (18.5)	25 (12.8)	34 (17.4)	195	525	2.69	-0.45
Number of bedroom									
1 bedroom	38 (19.6)	27 (13.9)	44 (22.7)	44 (22.7)	41 (21.1)	194	605	3.12	-0.02
2 bedrooms	28 (14.0)	32 (16.0)	48 (24.0)	55 (27.5)	37 (18.5)	200	641	3.21	0.07
3 bedrooms	37 (17.5)	25 (11.8)	47 (22.3)	56 (26.5)	46 (21.8)	211	762	3.61	0.47
4 bedrooms	47 (21.7)	27 (12.4)	40 (18.4)	52 (24.0)	51 (23.5)	217	684	3.15	0.01
5 bedrooms	22 (11.7)	29 (15.4)	43 (22.9)	37 (19.7)	57 (30.3)	188	642	3.41	0.27
Number of toilets									
1 toilet	47 (24.7)	28 (14.7)	48 (25.3)	37 (19.5)	30 (15.8)	190	545	2.87	-0.27
2 toilets	34 (16.7)	31 (15.3)	39 (19.2)	62 (30.5)	37 (18.2)	203	646	3.18	0.04
3 toilets	31 (15.6)	27 (13.6)	41 (20.6)	56 (28.1)	44 (22.1)	199	652	3.28	0.14
4 toilets	37 (18.6)	32 (16.1)	47 (23.6)	36 (18.1)	47 (23.6)	199	621	3.12	-0.02
5 toilets	33 (17.6)	23 (12.2)	50 (26.6)	44 (23.4)	38 (20.2)	188	595	3.16	0.02
Above 5 toilets	45 (26.3)	21 (12.3)	42 (24.6)	34 (19.9)	29 (17.0)	171	504	2.95	-0.19
Tenure type									
Owner occupier	52 (22.9)	31 (13.7)	17 (7.5)	42 (18.5)	85 (37.4)	227	758	3.34	0.20
Tenant	43 (22.9)	46 (24.5)	42 (22.3)	31 (16.5)	26 (13.8)	188	515	2.74	-0.40

Mean=3.14

5.5 Group statistics for preferred housing across the male and female respondents

Apart from descriptive mean score analysis, inferential statistics was conducted, using independent sample test to compare the means of the male and female respondents. The mean score in Table 4 for female respondents was higher than that of their male counterparts, for type of building, meaning that the female group agreed more to preference for duplex than the male group, with a mean score of 3.5952. On the other hand, for number of bedrooms, toilets, and nature of tenure, there was greater agreement for 3 bedrooms, 3 toilets and owner occupation, with score values of 3.9504, 3.2920, and 3.5303 respectively, among the male gender.

To check whether this was by chance or that we can scientifically generalize this finding, we check by considering the p value in Table 5. For duplex, 3 bedrooms and 3 toilets, the p-values were 0.247, 0.165, 0.795 respectively (equal variances assumed). These were statistically not significant, being above 0.05, therefore we tend to reject the null hypothesis that assumes that there is statistically difference between male and female respondents with respect to all the 3 variables. The p value of 0.024 is however statistically significant for tenure, as it is below 0.05, therefore we tend not to reject the null hypothesis that assumes that there is statistically difference between male and female respondents for owner occupation.

Table 4: Group statistics for preferred housing across gender derived from independent sample test

	var1gender	N	Mean	Std. Deviation	Std. Error Mean
preferred accomodation based on type of building: duplex	male	112	3.3571	1.41966	.13415
	female	84	3.5952	1.42372	.15534
preferred accomodation based on number of rooms: 3 bed room	male	121	3.9504	5.40656	.49151
	female	87	3.1264	1.30120	.13950
preferred accomodation based on number of toilt: 3 toilet	male	113	3.2920	1.30713	.12296
	female	83	3.2410	1.41930	.15579
preferred accomodation on nature of tenure: landlord (owner occupier)	male	132	3.5303	1.56507	.13622
	female	91	3.0330	1.65630	.17363

Table 5. Independent sample test for preferred housing variables across the male and female gender

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
preferred accomodation based on type of building: duplex	Equal variances assumed	.030	.863	-1.161	194	.247	-.23810	.20516	-.64273	.16654
	Equal variances not assumed			-1.160	178.658	.248	-.23810	.20525	-.64311	.16692
preferred accomodation based on number of rooms: 3 bed room	Equal variances assumed	2.054	.153	1.392	206	.165	.82398	.59196	-.34309	1.99104
	Equal variances not assumed			1.613	138.856	.109	.82398	.51092	-.18621	1.83416
preferred accomodation based on number of toilt: 3 toilet	Equal variances assumed	.941	.333	.261	194	.795	.05107	.19598	-.33545	.43759
	Equal variances not assumed			.257	168.202	.797	.05107	.19847	-.34074	.44288
preferred accomodation on nature of tenure: landlord (owner occupier)	Equal variances assumed	1.325	.251	2.277	221	.024	.49734	.21839	.06694	.92774
	Equal variances not assumed			2.254	186.381	.025	.49734	.22069	.06197	.93270

6. Conclusion and Recommendations

It is a lower affordability level that compels a household to embark on a "trade-off" of certain housing attributes. Given a higher affordability level, the choice of housing tends to be dictated by preference. The study thus recommends a review of the Nigerian housing policy to accommodate the provision of affordable housing for low-income earners, towards ensuring that the margin between their preferred housing and that which is affordable is bridged. Also, the government should consider and undertake an upward review of the low-income civil servant's monthly salary, towards ameliorating the challenges posed by budget constraints that necessitates trade-offs of preferred housing attributes that ultimately expose them to crowding, among other problems.

References

Abimaje, J., Akingbohungbe, D. O. & Baba, A. N. (2014). Housing affordability in Nigerian towns: A case of Idah, Nigeria. *International Journal of Civil Engineering, Construction and Estate Management, 1*(2), 31-38. http://www.eajournals.org

Adelekan, I.O. (2016). *Ibadan City Diagnostic Report.* Working Paper #4. Urban Africa Risk Knowledge. https://www.urbanark.org/sites/default/files/resources /Urban%20ARK-IBADAN%20CITY%20DIAGNOSTIC %20REPORT-07032016%255b2%255d%20%20IOA.pdf

Adeleke, F. G., & Olaleye, A. (2020). Housing affordability among low-income civil servants in Lagos State, Nigeria. *African Journal for the Psychological Study of Social Issues (AJPSSI), 23*(1), 1-13. http://ajpssi.org/ index.php/ajpssi/article/view/411

Adeleke, F. G. (2021). Residual approach to measurement of housing affordability among low-income civil servants in Lagos State, Nigeria. *African Journal for the Psychological Study of Social Issues, 24*(2), 108-123. http://www.ajpssi.org/index.php/ajpssi/article/view/480

Akinyode, B. F. & Taiwo, O. D. (2017). Challenges of housing affordability in Ogbomoso – Implication of migration. *International Journal of Innovative Research and Development, 6*(5), 65-70.

Allen, N. (2015). Understanding the importance of urban amenities: A case study from Auckland. *Buildings, 5*(1), 85-99.

Bako, Z. Z. & Jusan, M. M. (2012). Housing choice and preference: Theory and measurement. *Procedia - Social and Behavioral Sciences, 49*, 282–292. https://www.researchgate.net/publication/257716046_Housing_Choice_and_Preference_Theory_and_Measurement

Boamah, N. A. (2010). Housing affordability in Ghana: A focus on Kumasi and Tamale. *Ethiopian Journal of Environmental Studies and Management, 3*(3).

Bujang, A. A., Zarin, H. A. & Jumadi, N. (2010). The Relationship between Demographic Factors and Housing Affordability. *Malaysian Journal of Real Estate,* 5(1), 48-58. *intrest.utm.my/download.php?journalID=21*

Burke, T., & Pinnegar, S., Phibbs, P., Neske, C., Gabriel, M., Ralston, L. & Ruming, K. (2007). *Experiencing the housing affordability problem: blocked aspirations, trade-offs and financial hardships* National Research Venture 3: Housing affordability for lower income Australians Research Paper No. 9 Australian Housing Research Institute.

Campbell, D.E., & Kelly, J.S. (1994). Trade-off Theory. *The American Economic Review, 84*(2), 422-426. http://www .jstor.org/stable/2117871

Carter, T. & Polevychok, C. (2004). *Housing Is Good Social Policy.* Research Report F|50 Family Network. Canadian Policy Research Networks Inc. (CPRN), December. http://www.urbancenter.utoronto.ca/pdfs/elibrary/CPRN_Housing-Good-Soc-Polic.pdf

Cassells, R., Duncan, A., Gao, G., James, A., Leong, K., Markkanen, S. & Rowley, S. (2014). *Housing Affordability: The real costs of housing in WA,* Focus on Western Australia Series, Issue 14/2, Bankwest Curtin Economics Centre.

Coolen, H., Boelhouwer, P., & Kees, V. D. (2002). Values and goals as determinants of intended tenure choice. Journal of Housing and Built Environment, 17, 215-236.

Delgado, A.Á., & Troyer, F.D. (2017). Housing preferences for affordable social housing projects in Guayaquil, Ecuador. *International Journal of Housing Markets and Analysis, 10*, 112-139.

Dzangmah, H. T. (2012). *Prospects and challenges of rental housing in Greater Accra Region.* A Thesis submitted to the School of Graduate Studies, Kwame Nkrumah University of Science and Technology. In partial fulfillment of the requirements for the degree of Master of Science in Development Policy and Planning Department of Planning College of Architecture and Planning.

Egunjobi (1999). *Our Gasping Cities.* An Inaugural Lecture, 1999, University of Ibadan, Oyo State, Nigeria.

Ezennia S, & Hoskara S. O. (2019). Methodological weaknesses in the measurement approaches and concept of housing affordability used in housing research: a qualitative study. PloS one. 14 (8). https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0221246

Federal Republic of Nigeria (FRN) (1999). *Constitution of the Federal Republic of Nigeria.* http://www.nigeria-law.org/ConstitutionOfTheFederalRepublicOfNigeria.htm

Fiadzo, E. (2004). Estimating the determinants of housing quality: The case of Ghana. W04e6. Joint Centre for Housing Studies, Harvard University. http://siteresources.worldbank.org/inturbandevelopment/Resources/3363871268963780932/6881414-1268963797099/fiadzo.pdf

Haarhoff, E., Beattie, L. & Dupuis, A. (2016). Does higher density housing enhance liveability? Case studies of housing intensification in Auckland, Cogent Social Sciences, 2(1), 1243289.

Hui, E. C. M., Wong, F. K. W. & Chung, K. (n.d.). *Housing Affordability and Housing Preferences of Elderly in Hong Kong.* Research project funded by Faculty of Construction and Land Use (FCLU) of The Hong Kong Polytechnic University. Research Centre for Construction and Real Estate Economics, 40-41. http://www.bre.polyu.edu.hk/rccree/select_proj/4Housing/Housing_affordability.pd

James B. (2020). The meaning of home and affordability: housing trade-offs among seniors and among 20-40 years olds. https://www.buildingbetter.nz/publications/homes_spaces/James_2020_meaning_of_home_and_affordability_housing_trade-offs.pdf

Kelly, J-F., Weidmann, B., & Walsh, M. (2011). *The housing we'd choose.* Melbourne, Australia: Grattan Institute.

Kersloot, J. & Kauko, T. (2004). Measurement of Housing Preferences – A Comparison of Research Activity in the Netherlands and Finland. *Nordic Journal of Surveying and Real Estate Research, 1*, 144-163. https://www.researchgate.net/publication/27346839_Measurement_of_housing_preferences_a_comparison_of_research_activity_in_the_Netherlands_and_Finland

Litman, T. A. (2015). *Affordable-Accessible Housing in a Dynamic City Why and How to Increase Affordable Housing Development in Accessible Locations.* Victoria Transport Policy Institute.

Malpass, P. (1993). Housing Tenure and Affordability. The British disease. In G. Hallet (Ed.), *The New Housing Shortage: Housing Affordability in Europe and USA.* London, Routledge, 87- 88.

National Association of Realtors and American Strategies (2013). *National Community Preference Survey, October, 2013.* National Association of Realtors and American Strategies. http://www.realtor.org/sites/default/files/reports/2013/2013-community-preference-analysis-slides.pdf

National Population Commission (NPC). *2006 Census Figures* http://www.population.gov.ng/downloads.htm#census

Nigeria Exchange (Ngex) (2013). *Nigerian Constitution: Supplementary Provisions- Part IV- Interpretation, Citation and Commencement*, 318. http://ngex.com/nigeria/constitution/con8p4p1.htm

Obi, N. I. & Ubani O. (2014). Dynamics of Housing Affordability in Nigeria. *Civil and Environmental Research,* 6(3), 2014. ISSN 2224-5790 (Paper) ISSN 2225-0514 (Online). Retrieved from www.iiste.org

Online Nigeria (2003). *People, Population and Settlement.* Online Nigeria. http://www.onlinenigeria.com/oyo-state/?blurb=356. Accessed 17-03-2017.

Oyeleye, O. I. (2017). Challenges of Urbanization and Urban Growth in Nigeria. *American Journal of Sustainable Cities and Society*, Issue 2, Vol. 1 Jan-Dec 2013. http://www.rspublication.com/ajscs/ajsas.html

Preece, J., Crawford, J., McKee, K., Flint, J. & Robinson, D. (2020). Understanding changing housing aspirations: A review of the evidence, *Housing Studies*, 35, 87–106.

Rowley, S. & Ong, R. (2012). *Housing affordability, housing stress and household wellbeing in Australia* AHURI Final Report No. 192. Melbourne: Australian Housing and Urban Research Institute.

Saville-Smith, K. and James, B. (2010). The Determinants of Tenure and Location Choices of 20-40 Year Old Households in the Auckland Region, Centre for Housing Research.

State of Western Australia (2013). THE HOUSING WE'D CHOOSE: a study for Perth and Peel Report. https://www.wa.gov.au/system/files/2021-05/FUT_the-housing-we-d-choose-report.pdf

United Nations (UN) (1996). *Strategies to implement human settlement policies on urban renewal and housing modernization.* United Nations Publication, Geneva.

United Nations (UN) (2014). *World's population increasingly urban with more than half living in urban areas*. http://www.un.org/en/development/desa/news/population/world-urbanization-prospects- 2014.html

United States Department of Housing and Urban Development (HUD) (2011). "Affordable Housing." *Homes and Communities*. http://hud.gov/offices/cpd/affordablehousing//

Wallace, A. (2010). *Development Strategies for Sustainable Growth: Housing Preferences Survey.* http://www.sage.unsw.edu.au/currentstudents/ug/projects/Wallace/Housing.html. 2015. 09.022.

Wardrip, K., Williams L. & Hague, S. (2011). The Role of Affordable housing in Creating Jobs and Stimulating Local Economic Development: A Review of the Literature.

Waziri, A. G. & Roosli, R. (2013). Housing Policies and Programmes in Nigeria: A Review of the Concept and Implementation. *Business Management Dynamics*, 3(2), 60-68 http://www.academia.edu/8537137/Aminu_Garba _Waziri_and_Ruhizal_Roosli_2013

Wildish, B (2015). *Housing Choice and Preference: A Review of the Literature*. July Technical Report 2015/019 Auckland Council Technical Report.

Wong, F. K. W., Hui, E. C. M., Ko, C. K. & Chung, K. W. (2010). Published in Randolph, B., Burke, T., Hulse, K. and Milligan, V. (Eds) Refereed papers presented at the 4th Australasian Housing Researchers Conference, Sydney, 5th - 7th August 2009. Sydney: City Futures Research Centre, University of New South Wales. http://www.bre.polyu.edu.hk/BRE_workshop/pdf_2010/francis_wong.pdf.

Yeoman, R & Akehurst, G (2015). *The housing we'd choose: a study of housing preferences, choices and trade-offs in Auckland*. Auckland Council technical report, TR2015/ 016. Prepared by Market Economics Limited for Auckland Council. Auckland: Market Economics Limited.