

Significance of Socioeconomic Characteristics and Construction Strategies Adopted on Informal Low-Cost Housing in Abeokuta Nigeria

Jolaoso, B. A.¹, Arayela, O.², Taiwo, A.A.³, Folorunso, C. O.⁴

¹Moshood Abiola Polytechnic, Department of Architecture, Ojere road, Abeokuta, Nigeria

²The Federal University of Technology, Department. of Architecture, Akure, Nigeria

³The Federal University of Technology, Department. of Architecture, Akure, Nigeria

Abstract: Literature have revealed that views on informal low-cost housing and informal housing had been contextually expressed rather than generalised. Underlying issues on their emergence have been largely viewed as problem and described as spontaneous, unplanned and uncoordinated development without necessarily complying with the planning and building regulations. Events have shown that government eviction strategies further fuel its proliferation in Abeokuta as in other cities. The paper investigates the significance of socio-economic characteristics of residents on informal low-cost housing development and its influence on construction strategy adopted in Abeokuta, Nigeria. Purposive and stratified random sampling techniques were adopted in the selection of study area and dwellings respectively. Data collection were from literature and structured questionnaires from 384 stratified randomly selected respondents. Data obtained were analysed and discussed with descriptive statistical analysis, Pearson Product Correlation Matrix; and factor analysis with extraction method of principal component analysis for the testing of hypotheses, study objectives and identified variables. Findings shows that the emergence of informal low-cost housing was collectively driven by respondents' age, average annual income, education, skill, occupation and employment status; preference for ownership of dwelling; location, type and status of the respondents' former; and has imperfect significant relationship with the construction strategies adopted. The paper recommends inclusive intervention strategies that ensures the integration of informal low-cost housing towards increasing housing supply, without translocating existing residents; and conclude that socio-economic characteristics are vital factors in the formulation, implementation and performance evaluation of housing policies, strategies and programmes.

Keywords: significance, socio-economic, characteristics, informal low-cost housing, strategies

1. Introduction

Rapid population growth, high rural-urban migration, urbanisation and inadequate housing supply to meet the pro-poor housing demand, have severally been noted to be responsible for the emergence and proliferation of informal low-cost housing in Nigerian cities, as in other developing. Literatures revealed that the provision of affordable housing for the citizenry as the principal focus of every successive government in Nigeria, because of its necessity to human lives and the pivotal roles it plays in National development and growth.

Viewpoints for, against and indifference further revealed that housing and housing development though, have suffered from definitional problems but can be aptly classified as formal and informal housing. Serra (2003) described it as an integral part of the urban landscape and a testimony of the poor's ingenuity. Hasan, (1998) and UN (2009) noted challenges of housing development as a fairly homogeneous phenomenon in nature, complex and diverse in manifestation such that its solutions could not be generalised but needed to be contextualised. Inferences from many of the definitions describes informal low-cost housing or informal housing as spontaneous, unplanned and uncoordinated emergent development, often carried out through self-help efforts and without compliance with the planning and building regulations or standards. They have been severally noted to be characterised by add-on structures, unhealthy living

conditions, defective material choice and application; poor access to basic infrastructures and services; unsecured tenure-ship and a social exclusion seemingly to be under perpetual threat of demolition. It therefore suggests that, most literature have subjectively and/or objectively viewed the underlying issues of informal low-cost housing largely as a problem, using survey method in examining a wide range of issues bordering on shanties, slum, squatter and informal settlement.

Events have also shown that government eviction strategies against the existence of informal settlements have further fuelled the growth and proliferation of informal settlements at a more complex dimension (Morka, 2007). Attempts by Nigeria government between 1972-1979 at addressing the housing problems of squatter settlements and slums in selected areas of Lagos, Nigeria (Idimagbo, Ijora-Badia, Isale-Eko, Apapa, Maroko, Surulere, Ikoyi and Victoria Island) had adopted clearance of such informal settlements and displacement of the residents to give way for the construction of new roads and bridges, re-development, site-and-services; and upgrading strategies (Abiodun, 1985; and George, 1999). This event led to reduction in the size of available residential plots of land, high cost of land and implementation. It further led to proliferation of the erection of more temporary housing scheme which later became permanent dwellings for the displaced residents; and as such opened up the areas as high and low density areas of Lagos (Omole, 2000). Hence, the inadequacy of the capacity of

public agencies to deliver housing was one of the key challenges of housing in Nigeria (Bana, 1991 and Emerole, 2002), which must have perhaps, prompted the poor urban dwellers to drift into the available low cost land in the peripheral-urban areas compared to what is obtainable at the inner city or urban centres and thus the emergence and proliferation of informal settlements by the low income households.

This therefore suggests that, informal low-cost housing have become a phenomenon that has come to stay in Abeokuta and its environs as in other cities. This position is instructive because, people in the informal housing naturally want better accommodation but are probably constraint and accepts the prevailing circumstances, as their need for shelter varies in scope and adaptable to economic and family needs, therefore, resulting into self-help development of houses. It further suggests that, informal housing provides inherent socio-economic and cultural changes advantages and opportunities for low cost housing delivery without the need for displacement of existing inhabitants, if properly harnessed and through strategic intervention. It therefore suggest a paradigm shift in approach and attitude is required of all stakeholders towards appreciating and offering support to the inhabitants of informal/informal low-cost housing, in their efforts towards building by themselves, while lifting informality out of the sphere of the illegality through interventions devoid total elimination .

Informal low-cost housing in the context of this study is defined as residential buildings (either completed or uncompleted and inhabited) built on planned and unplanned areas, owned predominantly by individuals within the study area and do not have formal development permit. It is in this stead, seen as problem and solution, hence the need to investigate the significance of socio-economic characteristics of residents of informal low-cost housing development and its influence on construction strategy adopted in Abeokuta, Nigeria.

1.1. Aim and Objectives

The aim of the paper is to determine the extent to which the construction strategy adopted is influenced by the socio-economic characteristics of the residents. The objectives are to:

- 1) identify the socio-economic characteristics of residents of existing informal low-cost housing developments in the selected study area;
- 2) identify the factors responsible for the emergence of informal low-cost housing in the selected study area;
- 3) assess the extent to which the socio-economic characteristics of residents influenced the construction strategy adopted.

1.2 Hypothesis

H₀₁: There are no significant factors responsible for the emergence of informal low-cost housing

H₀₂: There is no significant relationship between socio-economic characteristics and the construction strategy adopted

1.3. The Study Area

The study area is Imala/Elega/Bode-Olude area which falls within the urban fringes of the capital city of Abeokuta, Ogun State, Nigeria. Abeokuta is the capital city Ogun State Nigeria, covering a landmass of about 350 square kilometres with about 60% of its settlements rural, semi-rural and peripheral urban in nature (Ogun State Government, 2008). The study area is characterised by development of clustered buildings, which are predominantly residential with pockets of commercial and cottage buildings along the major roads at the periphery of the city centre. It consist of ten (10) Wards, 5 contiguous villages, about 500 interwoven clans, about 53,184 buildings, with an average population of about 567,618 (FRN, 2009). In the study area, there resides the main source of pipe-borne water supply to the entire Abeokuta Township, presence of agrarian land/vegetation, public/private socio-economic facilities and consists of tributaries (i.e. major rivers and reservoirs of Oyan, Ogun and Osun). The inhabitants are heterogeneous in composition (mostly Nigerians of mixed tribes). The quality of life and inter-relationships of inhabitants have over time, brought about inter-cultural marriages. This have further generated interest of the people in the area, thus giving rise to demand for land beyond its availability in the core parts of the study area. Hence, precipitating a fast growing pattern of informal low-cost housing development, arising from the growing presence of public educational and health institutions and the concomitant increase in the socio-economic activities of the inhabitants, exposure to pressure of population influx, urban drift and other attendant effects of the consequential characteristic of an ever expanding State capital. It is therefore, not unusual to see proliferation of unplanned settlements, streets and dysfunctional development as people's survival reactions.

2. Overview of Factors Responsible for the Emergence of Informal Housing

Arayela (2002) and many other authors asserts that there is inadequate housing stock to cope with the ever-increasing population and the available housing facilities in Nigeria. Bana (1991) and Emerole (2002) posited that, the inadequacy of the capacity of public agencies to deliver housing was one of the key challenges of housing in Nigeria. Mukhija (2004) had also noted that, there has been little consensus on the strategies and approaches government should follow in addressing the housing need of their citizens. This must have been responsible for the increasing housing deficit in Nigeria (Emerole, 2002 and Oladapo, 2002) The deductions that can possibly be drawn from similar studies of Olotuah 1997; Nkwogu, 2001; Arayela, 2004; Adegbehingbe, 2011; Olotuah 2005, 2015; Jha, 1986; Srivinas, 2005; Taylor 2011; Turner, 1974, 1976; Tipple, 1987 and Myers, 2011 suggests that conditions of urban housing in Nigeria, Bangladesh and developing countries are very deplorable, in spite of public sector intervention. Olotuah (2005) and Olotuah and Taiwo (2015) also opined that 75% of the dwelling units in urban centres are substandard and the dwellings are sited in slums.

Reazul and Quamruzzamam (n.d.), as cited by Taylor (2011) opined that the urban population of developing countries is increasing at an alarming rate. The resulting feature of this

trend is the proliferation of informal housing development in cities of developing countries. Scholz (2005) reiterated that, rapid increase in the urban population and the limited capacity of the government to meet the high demand for building plots has led to mushrooming of the informal settlements. Turner (1968) as cited by Taylor (2011) was certainly not the first to discover the inherent value of self-help housing, but his work has become indispensable to the architectural discourse on informality because of his background and education within the field. His knowledge and beliefs were cultivated amidst the urban musings of such early theorists as Patrick Geddes and Lewis Mumford (1902-1980), who touted small-scaled, owner-involved levels of community development. People chose and/or found themselves living in informal low-cost housing as a result of their inability to afford any rent and obligation free accommodation ((Pugh, 2000 and Sivam, 2003) on one hand, and their respective desperate need of a family shelter and their inability to wait for the site allocation systems as obtainable through the formal system on the other hand (Tsenkova, 2009 and Azzan et al, 2005). Thus, the emergence and proliferation of informal settlements, which are largely embraced by the low income households. However, Sivam, 2003; Olsen, 2003; Arnott, 2008 and Taylor, 2011 posited that informal low-cost housing seems to match affordability and free of long-term financing obligations; offers the opportunity of being closer to the design and building process, which could form the basis of enhancement and upgrading. These suggest that, it requires an investigation into the development pattern, implications of socio-economic characteristics and factors that are responsible for the emergence of informal low-cost housing in Abeokuta, Nigeria.

2.1 Characteristics of Building Construction Strategies and Mode of Development of Informal Housing

Informal low-cost housing are characterised by poor ventilation, poor lighting, overcrowding and high density of population, lack of potable water and regular electricity supply, sanitation, waste disposal, road network and park, (Ali, 2006 and Bose, 1995). Formation of squatter settlements are result of influx of migrants to either settle into large scale peripheral or move into undeveloped pockets of land within the central areas or start settlement along railway lines, roads or rivers without quality housing stock and lacked basic services (Llyod, 1979). The selected study area of Abeokuta reveals a development pattern characterised by temporary structures, partially completed and inhabited dwellings, as well as uncompleted and uninhabited dwellings built on planned and unplanned areas and/or largely without statutory development permit. It also reveals an area with dilapidated and poorly defined road network and street drains; undefined and uncoordinated waste disposal, water and electric power supply strategy as shown in plates 1-4, which is in line with the positions of Lloyd (1979); Blitzer, Hardoy and Satterthwaite (1981) and Uji (1994) in their related studies on spontaneous settlement phenomenon of the Third World Cites; as well as those of Agbola (1998); Olotuah (1997, 2000, 2001 & 2005) on the deplorable conditions of dwelling units in most urban centres where informal low-cost housing are developed.

1.



1



2

Plates 1-2: Views of dwellings with temporary structures for ancillary and socio-economic activities, partially completed and inhabited dwellings with undefined and uncoordinated wastes disposal, poorly aligned road network, electrical and water supply strategy.



3



4

Plates 3-4: Views of mixed-use dwellings/structures constructed with bricks/block and used building materials from the neighborhood without compliance with the building regulations/standard; Views of unsightly, uncoordinated and inappropriate refuse disposal method

3. Research Methodology

The study adopts survey approach with the use of structured questionnaires to extract quantitative and qualitative opinions. The study population include all inhabited residential buildings, predominately owned by individuals in the defined space either completed or uncompleted. The research population projection of 338,728 was used (i.e. at the rate of 3.18%) based on the FRN, (2009) for the coverage area of study (Abeokuta). Due to the total population size, spread and coverage of the study area; the spread of respondents; lack of reliable data on the number of existing buildings; and the limited time, the sample frame has been limited to owners or occupants of the estimated 53,184 building developments in the study area, either completed or uncompleted. This was determined from an updated cartographic map of the area (2016), upon which information were taken from the adult-occupants above the age of twenty-four (24) years, who presumably have at least, reasonable knowledge and control over their dwellings or could conceivably be in the position to take any decision on or control over the process of its production and/or any form of physical intervention in the state of dwellings. In the determination of the sampling size for this study, the established America Marketing Association, (AMA 2007-2012) sampling size calculator was adopted and applied, using the total projected population of household-heads/tenant-occupants, at a confidence level and confidence interval of 95% and 5 respectively. The total projected population figure of 338,728 was then imputed into the calculator after which, an expected sampling size of 384 was arrived at. A purposive sampling technique and stratified random sampling technique was adopted in the selection of study area and dwelling units respectively. The dwellings for the study are uncompleted and completed buildings that are already inhabited.

The collection of information was from relevant literature and use of structured questionnaires from where quantitative and qualitative information were elicited on socio-economic and demographic characteristics of participants and construction strategies adopted from the 384 stratified randomly selected respondents. The method of data analyses employed involved the use of descriptive statistical analysis, Pearson Product Correlation Matrix, factor analysis with extraction method of principal component analysis for the testing of related hypothesis. The data gathered were thereafter reviewed, discussed and presented in relation to the study objectives, hypotheses and identified variables.

4. Results and Discussion

The results of data collected on the Socio-economic and demographic characteristics of the respondents as presented in figures 1(a-j) are discussed in relation to the study objectives, hypotheses and identified variables.

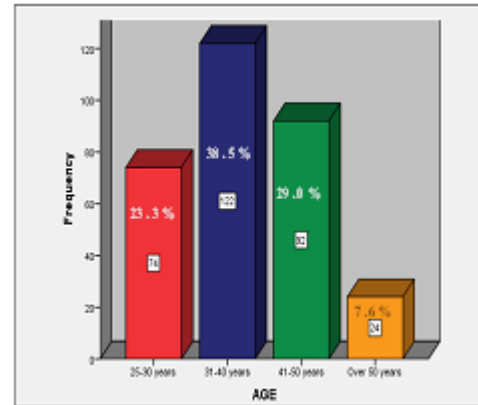


Figure 1 (a): Bar Chart of Frequency/Ages of Respondents
 Source: Researcher's Illustration, 2016

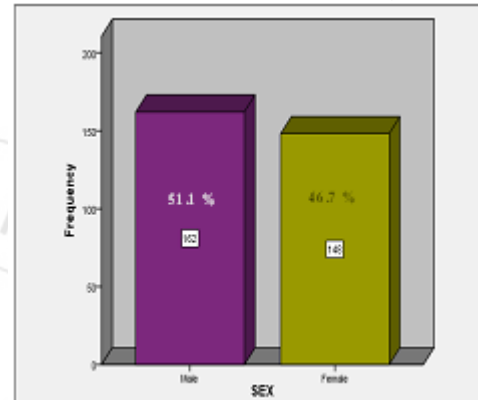


Figure 1 (b): Bar Chart of Frequency/Sex of Respondents
 Source: Researcher's Illustration, 2016

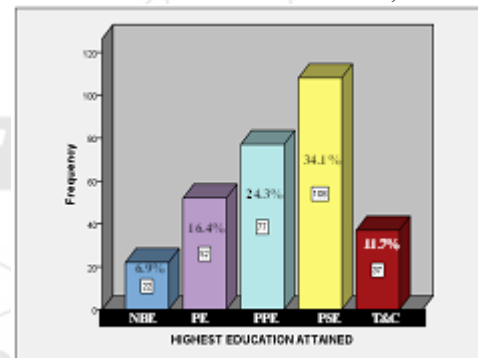


Figure 1(c): Bar Chart of Frequency/Education Status of Respondents
 Source: Researcher's Illustration, 2016

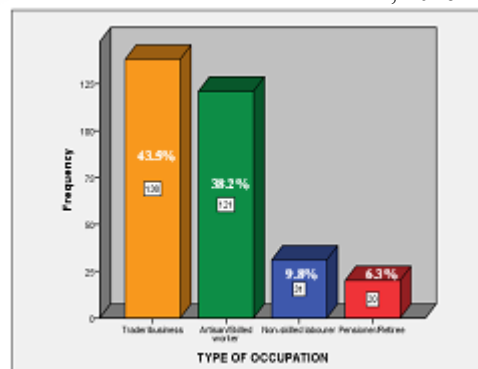


Figure 1 (d): Bar Chart of Frequency/Occupation type of Respondents
 Source: Researcher's Illustration, 2016

Figures 1 (a-j): Bar Chart of Frequencies of the Socio-economic and Demographic Characteristics of the Respondents

Key
NBE
PE
PPE
PSE
T&C

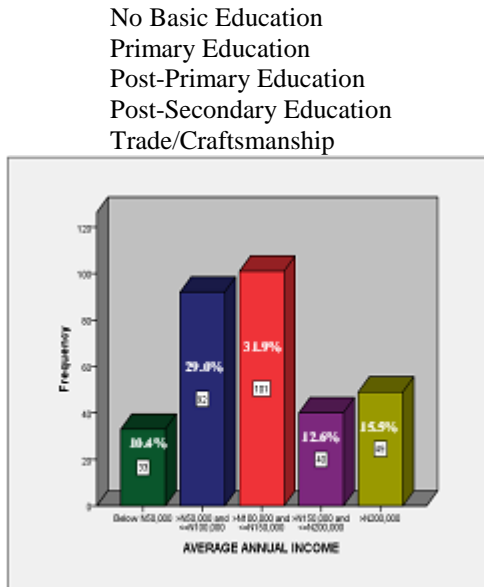


Figure 1e: Bar Chart of Frequency/Average Annual Income of Respondents
 Source: Researcher's Illustration, 2016

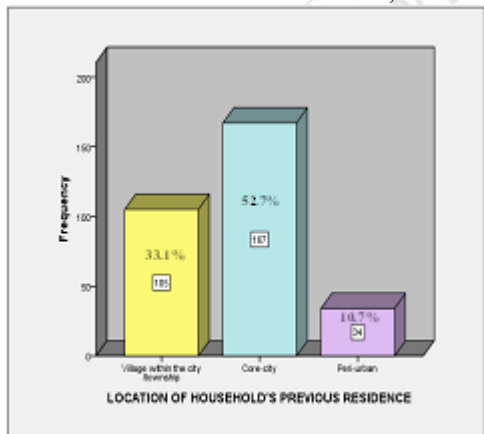


Figure 1f: Bar Chart of Frequency/location of household's previous residence
 Source: Researcher's Illustration, 2016

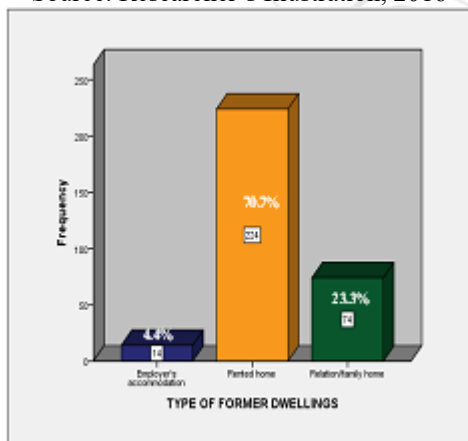


Figure 1g: Bar Chart of Frequency/type of former dwelling of Respondents
 Source: Researcher's Illustration, 2016

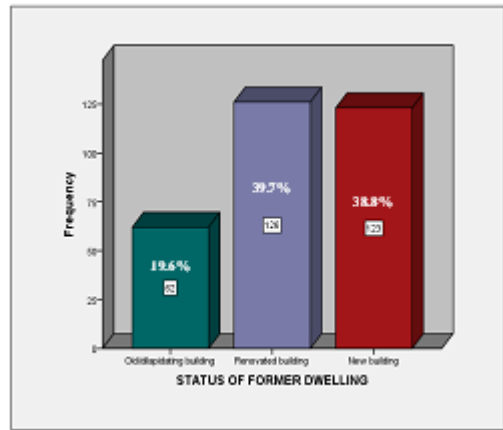


Figure 1h: Bar Chart of Frequency/Status of former Dwelling of Respondents
 Source: Researcher's Illustration, 2016

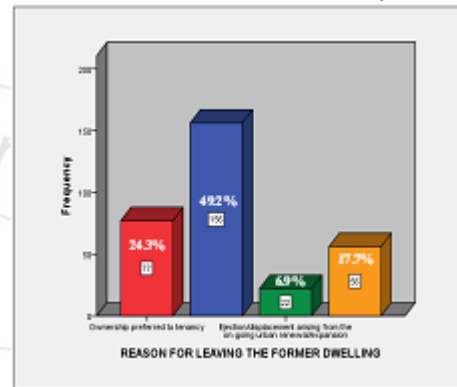


Figure 1i: Bar Chart of Frequency/Reason for Respondents' leaving the former dwelling
 Source: Researcher's Illustration, 2016

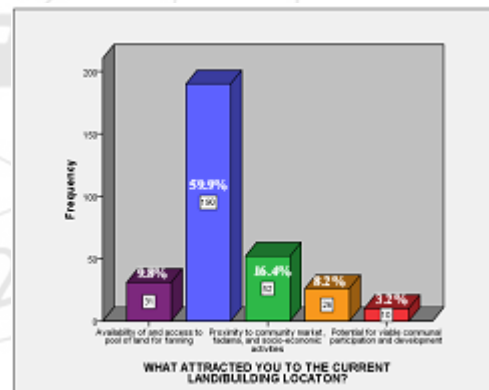


Figure 1j: Bar Chart of Frequency/Attraction of Respondents to the current land/building location.
 Source: Researcher's Illustration, 2016

Figures 1 (a-b) shows the cross-tabulations of respondents' age and sex. Figures 1 (c-d) shows the cross-tabulations of respondents' education status and occupation type. Figures 1(e-h) shows the cross-tabulations of respondents' average income, location, type and status of previous dwellings. Figures 1(i-j) shows the cross-tabulations of respondents' reason for leaving previous dwellings and attraction to current land/dwellings. The summary of findings shows that about 317 (82.5%) out of the 384 nos. administered questionnaire were retrieved, which is reasonable and good for statistical analysis. The respondents are largely within a very active middle aged adult of between 25 and 50 years (about 90.8%); which further revealed that the sex/gender is

not necessarily a significant factor responsible for the emergence of informal low-cost housing in the study area. About 86.5% of the respondents possesses at least basic education and/or skills; and that about 91.5% are gainfully engaged in trades/business, artisanship and non-skilled labour while about 20(6.3%) are not employed being pensioners/retirees. This further suggest that the respondents are relatively informed, with skills and are reliable sources for extracting the required quantitative and qualitative information. About 82% of the respondents earns average annual income within ₦50,000:00 – ₦150,000:00, while about 18% earns average income of over ₦150,000:00 per annum, while about 167(52.7%) and 105(33.1%) of the respondents had their previous residences located in the core-city and village within the city/township respectively; while about 34(10.7%) had theirs located at the peri-urban.

Findings also revealed that the respondents type of former dwellings were predominantly that of rented home/houses (about 70.7%); while the status of the respondents' respective former dwellings composed of about 126 (39.7%) renovated, 123 (38.8%) new and 62(19.6%) old/dilapidating buildings respectively; and that most of the respondents (about 59.9%) were attracted to the current land/building location by affordable consideration/cost of land acquisition. It therefore suggests, that, the emergence of the existing informal low-cost housing developments in the selected study area of Abeokuta, Nigeria was collectively driven by the respondents' socioeconomic characteristics of active age of between 25-50 years; average annual income, education, skill, occupation and employment status; the preference for

ownership of dwelling; the location, type and status of the respondents' former.

Tables 2 (a-b) reveals the results of the test of hypothesis 1, using factor analysis with extraction method of principal component analysis with respect to Objective I and II, related identified dependent and independent variables.

Table 2(a): Factor Analysis with Extraction Method of Principal Components

Communalities ^a		
Variables	Initial	Extraction
Highest education attained	1.000	.723
Reason for leaving the former dwelling	1.000	.889
What attracted you to the current land/building location?	1.000	.884
Type of household	1.000	.972
Average annual income	1.000	.663
Type of building	1.000	.716
Location of building	1.000	.311
Nature of the building	1.000	.926
Purpose for which the building was constructed	1.000	.957
Tenure-ship status	1.000	.700
Household size	1.000	.801
Type of ownership	1.000	.733
Extraction Method: Principal Component Analysis.^a		
a. Only cases for which CONSTRUCTION STRATEGY ADOPTED = Self-help and participatory/communal approach are used in the analysis phase.		

Table 2(b): Factor Analysis of Total Variance with Extraction Method of Principal Components
 Total Variance Explained^a

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.403	28.359	28.359	3.403	28.359	28.359	3.008	25.067	25.067
2	3.072	25.599	53.958	3.072	25.599	53.958	2.882	24.013	49.080
3	1.694	14.116	68.074	1.694	14.116	68.074	2.038	16.984	66.064
4	1.105	9.208	77.282	1.105	9.208	77.282	1.346	11.218	77.282
5	.969	8.076	85.358						
6	.686	5.719	91.077						
7	.491	4.093	95.171						
8	.361	3.005	98.176						
9	.150	1.250	99.426						
10	.069	.574	100.000						
11	1.000E-013	1.003E-013	100.000						
12	-1.002E-013	-1.013E-013	100.000						

Extraction Method: Principal Component Analysis.

a. Only cases for which CONSTRUCTION STRATEGY ADOPTED = Self-help and participatory/communal approach are used in the analysis phase. **Source:** Researcher's Computation, 2016

The communalities therewith in table 2(a) shows high estimates of the variance in each variable except for the Building location, which indicates that the extracted components represent the variables very well. Table 2(b) shows the total variance explained table, with the total column in the initial eigen-values indicates eigenvalue or amount of variance in the original variables accounted for by each component. The % of variance column gives the ratio, expressed as a percentage of the variance accounted for by each component to the total variance in all of the variables. The cumulative % column gives the percentage of variance

accounted for by the first *n* components. Therefore, the initial solution reveals that, there are as many components as variables; and in a correlations analysis, the sum of the eigenvalues equals the number of components. Consequent upon that, the eigenvalues greater than 1 was extracted, thus making the first four principal components (i.e. the highest education attained, reason for leaving the former dwelling, attraction to the current land/building location; and household type) to form the extracted solution. The second section of the table 2(b) shows the extracted components which reveals about 77% of the variability in the original

twelve (12) variables. This informed the considerable reduction in the complexity of the data set by using these components with a 23% loss of information. The rotation in this stead maintains the cumulative percentage of variation explained by the extracted components. The variation was however noted to have spread more evenly over the components.

Table 2 (c): Factor Analysis of Component Transformation Matrix with Extraction Method of Principal Components

Component Transformation Matrix ^a				
Component	1	2	3	4
1	.737	-.643	-.129	-.163
2	.530	.629	-.482	.302
3	.414	.290	.862	.045
4	-.063	-.328	.091	.938

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.^a
a. Only cases for which CONSTRUCTION STRATEGY ADOPTED = Self-help and participatory/communal approach are used in the analysis phase.

Table 2 (d): Factor Analysis of Component Score Covariance Matrix with Extraction Method of Principal Components

Component Score Covariance Matrix ^a				
Component	1	2	3	4
1	1.000	.000	.000	.000
2	.000	1.000	.000	.000
3	.000	.000	1.000	.000
4	.000	.000	.000	1.000

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.
Component scores'

Tables 2(c-d) shows the analysis of data for objective II and testing hypothesis I with Component Matrix, Rotated Component Matrix, Component Transformation Matrix, Component Score Coefficient Matrix and Component Score Covariance Matrix against the independent variables (extracted principal components) and the dependent variable (construction strategy adopted). The Rotated Component Matrix table 2(d) shows that the first component is highly correlated with "Purpose for which the building was constructed", the second component is most highly correlated with "Household size", the third component is most highly correlated with "Attraction to the current land/building location" while the fourth component is most highly correlated with "Type of household". Thus, the null hypothesis (H_0) is rejected, while the alternative hypothesis (H_a) is accepted. This suggests that, the purpose for which the building was constructed; Household size; Attraction to the current land/building location; and Type of household are significant factors responsible for the emergence of informal low-cost housing.

Tables 3 (a-b) reveals the results of correlation matrix analysis relating to hypothesis II (**H_0 2:** There is no significant relationship between socio-economic characteristics and the construction strategy adopted) with respect to Objective II (determine the factors responsible for the emergence of informal housing in the selected study area), the identified dependent and independent variables.

Table 3(a): Correlation Matrix Analysis Correlation Matrix

		Socio-economic Characteristics	Construction Strategy Adopted
Socio-economic Characteristics	Pearson Correlation	1	-.142
	Sig. (2-tailed)		.472
	N	28	28
Construction Strategy Adopted	Pearson Correlation	-.142	1
	Sig. (2-tailed)	.472	
	N	28	314

Table 3 (b): Paired Correlation Matrix Analysis

Socio-economic Characteristics		Construction Strategy Adopted
Average Annual Income	Pearson Correlation	.025
	Sig. (2-tailed)	.662
	N	312
Location of Household's Previous Residence	Pearson Correlation	.093
	Sig. (2-tailed)	.108
	N	303
Type of former dwellings	Pearson Correlation	.038**
	Sig. (2-tailed)	.504
	N	309
Status of former dwelling	Pearson Correlation	.054
	Sig. (2-tailed)	.345
	N	308
Consideration paid for the occupation of building/month	Pearson Correlation	.048
	Sig. (2-tailed)	.408
	N	304
Rent paid per month	Pearson Correlation	.154**
	Sig. (2-tailed)	.011
	N	274
Reason for leaving the former dwelling	Pearson Correlation	.073
	Sig. (2-tailed)	.200
	N	308
What attracted you to the current land/building location?	Pearson Correlation	.238*
	Sig. (2-tailed)	.000
	N	306
Type of household	Pearson Correlation	-.133**
	Sig. (2-tailed)	.029
	N	268
Household size	Pearson Correlation	.056**
	Sig. (2-tailed)	.363
	N	262
Household number of children	Pearson Correlation	-.041
	Sig. (2-tailed)	.563
	N	202
Household number of wife(ves)	Pearson Correlation	-.206*
	Sig. (2-tailed)	.005
	N	182
Household number of relations	Pearson Correlation	.094
	Sig. (2-tailed)	.493
	N	56

** . Correlation is significant at the 0.01 level (2-tailed).
 * . Correlation is significant at the 0.05 level (2-tailed).

Source: Researcher's computation 2016

Table 3(a) shows that the socio-economic characteristics is a linearly transformed variable of Average annual income, location of household's previous residence, type of former dwellings, status of former dwelling, consideration paid for the occupation of previous building/month, rent paid per month, reason for leaving former dwelling, attraction to the current land/building location, type of household, household size and household composition. The bivariate correlations

matrix table 3(a) also shows the Pearson correlation value of -0.142 with a *Sig.* (2-tailed) value of 0.472 which implies that there is an insignificant weak negative imperfect relationship between socio-economic characteristics and the construction strategy adopted. However, table 3(b) further shows that, of the individual social-economic characteristics only type of household, household number of children and household number of wife (ves) have negative effect on the construction strategy adopted. Thus, rejecting the null hypothesis (H_02), while the alternative hypothesis (H_a2) is accepted.

5. Recommendation and Conclusion

The study has generally elicited information towards the re-interpretation of the significance of socio-economic characteristics of the residents away from the negative perceptions. It sets tone for better understanding of the inherent advantages and opportunities in informal low-cost housing, the significance of socio-economic characteristics and its influence on the choice of construction strategies; and implications for the development of low-income housing delivery strategies, through which the housing supply can be increased. The study further shown that informal low-cost housing development could positively impact on the housing delivery for the urban poor in Nigeria with governmental and professional interventions. The paper therefore advocates for inclusive interventions in the areas of formulation of appropriate regulatory framework, policies, strategies and development plans/programmes that will seek to promote and facilitate the integration of informal low-cost housing towards increasing the housing supply that is decent, healthy, safe and affordable, without necessarily displacing the existing residents. The paper concludes that socio-economic characteristics of the residents are vital factors in the formulation, implementation and performance evaluation of housing policies, strategies and programmes; their weak, negative and imperfect significant relationship with the construction strategies adopted notwithstanding.

References

- [1] J. Abiodun, "Housing problems in Nigeria cities", in Onibokun, A. (ed.); *Housing in Nigeria*. Nigerian Institute of Social and Economic Research (NISER), Ibadan, p49-63, 1985
- [2] V. Adegbehingbe, "Analysis of physical transformation of residential buildings in selected government estates in South Western Nigeria". *Unpublished* Ph.D. Thesis, Department of Architecture, Federal University of Technology, Akure, Nigeria, 2011.
- [3] T. Agbola, "The Housing of Nigerians: Review of Policy Development and Implementation in the Housing Sector". Development Policy Centre, Ibadan: Research Report No. 14, 1998.
- [4] S. Ali, "Managing Slums in Delhi". in *Managing Urban Poverty*, Sabir Ali ed. Uppal Publishing House, New Delhi, 432- 517, 2006.
- [5] American Marketing Association (2007-2012). Creative research systems, the survey system-sample size calculator. <http://www.surveysystem.com/sscal.htm>, accessed 10 Mar, 2012.
- [6] O. Arayela, "Increasing Housing Stocking at Reduced Cost in Nigeria". *Journal of the Association Architectural Educators in Nigeria*. 2(2):18 – 24, 2002
- [7] O. Arayela, "Towards a sustainable housing programme: the recurring problem of inadequate housing supply and urban environmental degradation in Nigeria." In proceedings of XXXII World Congress on Housing at the International Conference on Sustainability of Housing Project, organized by the International Association of Science (IAHS). University of Trento, Italy, Trento, September, 21-25; 2004
- [8] R. Arnott, "Housing Policy in Developing Countries: The Importance of the Informal Economy. Working paper 13(1-2)". The International Bank for Reconstruction and Development /The World Bank on behalf of the Commission on Growth and Development, 1818H Street NW. Washington, DC 20433, 2008
- [9] P. Bana, "Housing the urban poor in Nigeria". *The Nigerian Institute of Architects Journal*. 6 (1)22-25, 1991
- [10] S. Blitzer, J. Hardoy and D. Satterthwaite, "Shelter: People's Needs and Government Response". *Ekistics Journal*, P286, January/February, 1981
- [11] Bose, "Urbanisation and Slums", in *Urbanization and Slums*, Prodipto Roy and S. D. Gupta (ed), Har-Anand Publication, New Delhi, 19-42, 1995.
- [12] Emerole, "Restructuring Housing Development and Financing in Nigeria: The Role of Partnership and Collaboration Strategies." *Housing Today- The Journal of the Association of Housing Corporations of Nigeria (AHCN)*. 1(5). 26-29
- [13] Federal Government of Nigeria., "The National Housing Policy." Lagos: Federal Ministry of Works and Housing. Abuja, 1991
- [14] Federal Republic of Nigeria, "Legal Notice on Publication of 2006 Census Final Results", in *Official Gazette*. Government Notice No.2, Abuja. 2nd February, 2009
- [15] C. George, *Basic Principles and Method of Urban and Regional Planning*, Libro- Gen Limited, Lagos, 1999
- [16] S. Jha, *Situation of Urban Poverty: The Case of Bombay Slums*. Popular Publisher, Mumbai, 1986
- [17] P. Llyod, *Slums of Hope? Shanty Towns of the Third World*. Hamondsworth. Penguin Books Limited, 1979
- [18] F. Morka, *A Place to Live: A Case Study of the Ijora-Badia Community Lagos, Nigeria*. Global Report on Human Settlements. Retrieved December 2, 2009, from <http://www.unhabitat.org/grhs/2007>
- [19] V. Mukhija, "The Contradictions in Enabling Private Developer of Affordable Housing: A Cautionary Case from India." *Urban Studies*, 4(11)2231-2244, 2004
- [20] G. Myers, "Informal and Formal Cities", in *African Cities: Alternative Visions of Urban Theory and Practice*. Zed Books. London & New-York. Pp 70-103., 2011
- [21] National Population Commission, *2006 Population and Housing Census*. Enumerator's Manual' Abuja: Federal Republic of Nigeria Printer, 2006
- [22] U. Nkwogu, "Sustainable urban development policy issues in Nigeria", in *Architects and architecture in Nigeria: a tribute to Prof. E. A. Adeyemi*, Association of Architectural Educators in Nigeria, U. O. Nkwogu (Ed.) pp. 177 – 208, 2001

- [23] Ogun State Government of Nigeria, Ogun State regional development plan 2005-2025. Final report. Comprehensive Project Management Services, Lagos. Nigeria. ISBN: 978 978 085790-5. May 2008.
- [24] M. Oladapo, "Procurement Systems and Project Organisation Model for Low-cost Housing." *Housing Today*. 1(6)32-36, 2002
- [25] A. Olotuah, "The House: Accessibility and Development - A Critical Evaluation of the Nigerian Situation". In, *Proceedings of the National Symposium: The House in Nigeria*, Bayo Amole (Ed.) Obafemi Awolowo University Ile-Ife, Nigeria, 23 – 24 July, 312 – 317, 1997
- [26] A. Olotuah, and A. Taiwo, "Housing Strategies and Quality of Housing in Nigeria: what lessons from Wales?" *Developing Country Studies*. www.iiste.org ISSN 2224-607X (Paper) ISSN 2225-0565 (Online) Vol.5, No.16, 2015 .Accessed September 12, 2016.
- [27] E. Olsen, "Housing programs for low-income households". In *Tested Transfer Programs in the United States*, R. Moffit, (ed), Chicago: University of Chicago Press. 2003
- [28] F. Omole, *Urban Renewal Process: Issues and Strategies*. Concept Book sand Publication Company Limited, Ondo, Nigeria, 2000
- [29] A Reazul and J. Quamruzzamam, "Informal Housing and Approaches towards the Low-Income Society in Developing Countries. The Architectural Imperative: A Dual History of Sustainability and Informal Housing within Architectural Discourse". *Unpublished*. M.Arch Thesis. Faculty of the Graduate School of the University of Texas. May 2011
- [30] Scholz, et al. "Collaborative Planning Rhetoric and Reality in Zanzibar, Tanzania", *Unpublished Paper*; Zanzibar, 2005
- [31] A. Sivam, Housing supply in Delhi. *Cities*, 20(2):135-141, 2003.
- [32] H. Srivinas, *Urban Squatters and Slums*; www.gdrc.org/uem 2005, accessed September 12, 2016
- [33] C. Taylor, *The Architectural Imperative: A Dual History of Sustainability and Informal Housing within Architectural Discourse*. *Unpublished*. M. Arch Thesis. Faculty of the Graduate School of the University of Texas, Austin. May 2011
- [34] A. Tipple, "Questioning the Assumption: A Tentative Examination of Cultural Barrier to Housing Policy Acceptance". Centre for Architectural Research and Development Overseas (CARDO). School of Architecture. The University of New Castle-Upon-Tyne, England, 1987
- [35] S. Tsenkova, "Housing Policy Reforms in Post Socialist Europe", in *Vienna Declaration on National Regional Policy and Programmes 2004 on Informal Settlements*, updated 18 May, 2009, Physica-VerlagHeidelberg, Vienna,.
<http://www.springerlink.com/content/mg0275373351347/1/fulltext.pdf>>.accessed on 12h march 2012
- [36] J. Turner, "The Squatter Settlement: An Architecture that Works." in *Architectural Design*, August 1968; Taylor 2011.
- [37] J. Turner, "Housing Priorities, Settlement Patterns and Urban Development in Modernizing Counties." *Journal of the American Institute of Planners*, 34, 354-63, 1968
- [38] J. Turner, *Housing by the People*. London, London: Marion Boyars Publishers Limited. 1974
- [39] J. Turner, *Housing by People- Towards Autonomy in Building Environments*. London: Marion Boyars Publishers Limited., 1976.
- [40] Z. Uji, "Functional Imperatives of the Urbanisation Process in Nigeria". *The Journal of the Nigerian Institute of Architects*, Vol. 8, No. 3 & 4, January/March, April/June, p31-34., 1994.