

Factors of Spontaneous Physical Housing Changes in Urban Centres of Southwest Nigeria

Abdulrahman Mukaila El-Hussain

Department of Architecture, Federal University of Technology, Minna, Nigeria

Abstract The study examined the factors responsible for spontaneous physical housing changes among the privately owned housing in southwest Nigeria. The research employed both clustering and systematic random sampling techniques to select three urban centres from a total of twenty-one urban centres in the three sub-zones. The emerged urban centres were those with the highest population and serve as the administrative headquarters of their political entities. The three selected urban centres are Ibadan, Abeokuta and Akure. Principal Component Analysis extracted seven components from the 27 spontaneous physical housing variables employed. The seven-component solutions accounts for a total of 81.6% of the variation. The Component 1, 2, 3, 4, 5, 6 and 7 account for 34.9%, 14.8%, 10.0%, 8.4%, 5.3%, 4.3% and 4.0% of the variance respectively. The study discovered that ineffective housing administration; residents' level of awareness to the changes in the neighbourhood; support for socioeconomic enterprise; behaviour and attitude of the residents; inconvenience; population growth and change due to science and technology development over time are responsible for spontaneous physical housing changes in the southwest Nigeria. The research suggested that a Supplementary Planning and Development Document, SPDD, housing transformation policy based on the identified factors be put in place to regulate spontaneous physical housing alterations activities in order to create a balance between the benefits and the inconveniences of housing modifications in the region.

Keywords Administration, Changes, Housing, Policy, Spontaneous

1. Introduction

The importance of housing to human culture has been explored by many authors. Housing as a physical structure provides shelter and comfort for human habitations (Mohammed, *et al.*, 2012). The housing environment has a profound impact on physical, mental, cultural, health, economics and the productivity of the household members (Olatubara, 2007; Jiboye, 2014). Housing represents a major capital investment and reflects cultural, social and economic values of a given urban milieu (Bello, 2003). The desire to own a house has been observed by Olotuah and Bobadoye (2009) to constitute one of the needs for savings and capital formation among the people. Empirically, housing is an essential human physical asset through which the society determines social, economic and cultural wellbeing of the inhabitants. The importance of housing brought about the 1948 Universal declaration on housing rights. The essential elements of the declaration are the right to decent housing

which includes the access to housing of adequate standard and elimination of homelessness. The United Nations, UN general assembly also emphasises the promotion of the right to adequate housing as one of the habitat agenda 6 key commitments and strategies for shelter.

The need for housing quality for human satisfaction is inevitable. The housing quality is the standard and state of general satisfactory performance of the facilities in the building (Jones, 1979). Housing satisfaction is a product of residents' perception, attitude and experience (Jiboye, 2014). The perception varies among individuals due to the dynamic nature of the human needs from time to time. Housing satisfaction is an evaluation of the quality of the essential services rendered by the building (Muhit, *et al.*, 2011) and is a subjective assessment based on individual perception (Amerigo, 1997). Housing is a barometer for measuring the standard of living (Olayiwola *et al.*, 2006). The quality of housing impacts significantly on the wellbeing of the urban residents. Housing satisfaction is an important criterion in descriptions of the quality of life of the users and the most important function of a building. When housing no longer guarantees the satisfaction of the users the tendency to spontaneously alter the house becomes inevitable due to the dynamic nature of households' needs. One of the major challenges confronting quality housing in the urban centres of the southwest Nigeria is spontaneous alterations of the

* Corresponding author:

elhuseinimukaila@yahoo.com (Abdulrahman Mukaila El-Hussain)

Published online at <http://journal.sapub.org/arch>

Copyright © 2018 The Author(s). Published by Scientific & Academic Publishing

This work is licensed under the Creative Commons Attribution International

License (CC BY). <http://creativecommons.org/licenses/by/4.0/>

existing housing by the owners without recourse to the consequences of what the attitude does to the primary functions of the structure. Spontaneous housing change is a situation where house-owners embark upon the physical changes in the form of additions and modifications of the forms and patterns of the existing building (Alagbe, 2014; Aduwo and Ibem, 2017). The spontaneous housing changes embarked upon among the urban housing in the study area is substantial and is on the increase.

Physical housing transformation has both advantages and challenges in the life of the urban housing environment. Housing transformation phenomenon creates unrelated, undefined, complicated and hybrid housing composition in urban centres (Tipple, 2000). The hybrid housing composition encourages informal settlement which consequently degenerates to slum and squalid settlements (Kalamu and Bolaane, 2014). Multiple habitations are housing situation in which people of different household members live together under the same roof (Schlyter, 2003). A multi habitations concept also includes the use of housing by different household for different kind of social, economic, and cultural activities (Tipple *et al.*, 2004). The housing quality is the general satisfactory performance of the facilities of the building (Adedayo, *et al.*, 2013). Unplanned housing transformations impact negatively on the housing dwellers by inhibiting the primary functions of the building fabrics. Spontaneous housing alterations lead to poor housing condition. Poor housing conditions impede on the quality of air, noise and general comfort of the built environment (Lowry, 1990). Poor housing is detrimental to child socialisation, education and deviance behaviour (Kalu, *et al* 2014). One of the major quality housing components usually affected by the spontaneous physical housing changes is the window openings meant for the provision of adequate lighting and ventilation. This affects the comfort and wellbeing of the activity space and the health of the occupants (BNRCC, 2011). Many studies have established that poor housing conditions affect the physical, intellectual and attitude of individuals (Vendivere *et al.*, 2006; Doling *et al.*, 2013). Poor housing conditions are more apparent in the urban centres of developing countries principal due to population growth and lack of adequate infrastructures (Olotuah, 2005; Vendivere *et al.*, 2006). Rapid population growth is always accompanied by numerous challenges (Njoh, 2003). Among these challenges are physical housing transformations due to a shortage of housing supply as are occasioned by changing needs of the households in a rapid population growth urban housing environment.

The Nigeria housing deficits have been estimated at 15-17 million housing units. This shows the need for between 600,000 – 900,000 housing units per annum for the next 40 years. It has been observed that the formal housing delivery system is a failure (Lemanski, 2009) and the alternative means of housing the urban teeming population is through the privately built housing delivery system. A study conducted by Kalabamu and Bolaane (2014) revealed some

reasons for the inevitability of urban housing transformations. First, it is adopted by the house-owners to eliminate economic threats that keep evolving from time to time. Second, housing change enables more people to benefit from urban services and sharing of such services reduces housing cost among the urban households. Third, rental space is created and this generates regular income to house-owners. Housing transformation also provides affordable shelter to low income households. Fourth, physical housing change generates rental space for small enterprises like shops, salons, clinics, home lessons, recording studios and other services. Fifth, physical housing change enables more space for core domestic activities. Sixth, compound extensions provide flexible and familiarised relationships among urban residents. Construction activity in little quantity like spontaneous physical housing structures provides employment opportunity for both skilled and unskilled labour force, provision of infrastructure like road, water, electricity and social amenities (Tse, 2001).

Several studies on different aspects of housing quality with housing transformations have been examined (Adegbingbe, 2011; Aduwo, 2011 and Adedayo, 2013). Most of these studies were focused on sample survey on housing transformations on a small area of coverage. The majority of these studies were directed at public housing where interest is geared toward the absence of user's input in the design of the housing scheme thereby leading to all forms of modifications. The results of these studies also show that it is inadequate to use small sample survey for an in-depth understanding of the major factors of housing transformations in heterogeneous urban centres.

However, none of these researches have delved into the study of factors responsible for spontaneous physical housing changes among the privately owned urban houses at a regional scale in southwest Nigeria. The characteristics of privately owned housing in the urban centres are; first, the houses are constructed with inputs from the house-owners in the design and construction of the building. Second, the housing comes in different typologies. Third, the housing typologies come in varying scales and dimensions. Despite inputs from the house owners the Individual housing units still show a significant degree of transformation in the urban centres under investigation. Empirically, there is a paucity of research on the underlying factors that influence housing transformations among privately built urban housing at regional scale of coverage like southwest Nigeria despite its diversified housing types and occupants. This study intends to fill this gap by identifying the causal factors of large scale spontaneous physical housing changes that is specific to urban centres of southwest Nigeria and to suggest measures to improve the applicability of planned housing transformations in southwest Nigeria urban centres. The outcome of the study would enhance planned housing transformations through adequate policy and monitoring of this activity among the house owners. The findings would

also ensure that adequate measures are put in place at design and construction stages by both developers and urban administrators for accommodating the dynamics urban dwellers' housing needs in a teeming population environment in a way that the other urban infrastructure would not be annihilated through the activities of physical alterations. The study did not cover public housing estates and other corporate housing estates in the region.

1.1. Theoretical Background to the Study

The conception of the Sustainability Livelihood Framework (SLF) has been adapted in various assets based models. The main objective is primarily to develop the underlying resources and capacities employed by household to overcome poverty threats. Generally, an asset is identified as a stock of financial, human, social, physical and personal assets (Murry and Ferguson, 2001; Ford, 2004). The SLF considers a livelihood to be sustainable when people are able to maintain and improve their standard of living while

reducing their vulnerability (Carney, 1998). On the SLF concept urban households operate in a context of vulnerability due to globalisation. The Globalisation has driven by science, technology, communication, good governance, policy, social and economic factors has kept the urban households needs dynamics on a daily basis.

Assets are the building blocks of a sustainable livelihood. By building assets, individuals and households develop their capacity to cope with the challenges encountered and to meet the dynamic needs on a sustained basis. Figure 1 shows the relationship between the descriptive (Urban Households) and the study variables (Spontaneous Physical Housing Changes) and the asset to be transformed for livelihood sustainability. The approach shows the level of vulnerability perceived by the urban households in terms of the influence of threats to their livelihood due to the challenges of globalisation and how transforming their houses spontaneously help in reducing the vulnerability.

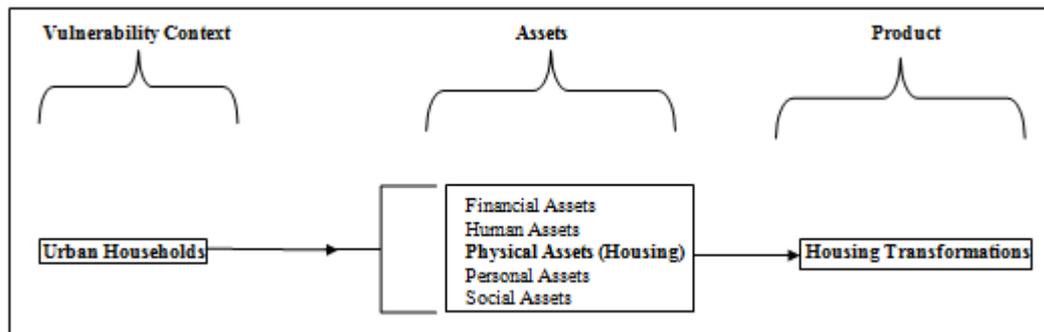


Figure 1. Sustainable Livelihood Framework (Source: Modified From Carney, 1998)

1.2. The Study Area

The study area is southwest Nigeria. The region lies between Longitude 2° and 6° E and latitudes 6° and 9° N. The region is inhabited traditionally by the Yoruba speaking group of individuals that is made up of Oyo, Osun, Ondo, Ogun, Ekiti and Lagos States. The population of the six Yoruba speaking states put together by the 2006 Population census was 27,511,992 million, representing 21% of the country's population and 2018 projected at 3 percent growth rate gives the region 39,225,522 populations. Yoruba language in the region has many dialects (Bakare-Yusuf, 2011). The zone is classified according to the dialects into three sub-zones, namely Northwest, Central and Southeast sub-zones (Aremo, 2009). Accordingly, three most populated urban centres which also serve as administrative headquarters were selected from each of the sub-zones. On this basis Ibadan was selected from the Northwest (NWY) sub-zone, Akure represents the central Yoruba (CY) and Abeokuta was selected for Southeast Yoruba (SEY). The morphology of Ibadan, Abeokuta and Akure exhibits the common features of typical Yoruba traditional urban centres with three distinct spatial development patterns (Johnson, 2001); the core centre with concentrations of flocks of

residential units with the traditional market square and Oba's palace at the centre; the intermediate zone with fairly concentrations of residential developments of both traditional and modern house-types as earlier established by Johnson (2001) and Jiboye, (2014). The outer part is the new and open up areas with modern buildings in a relatively defined layout with more ease of accessibility and concentrations of socioeconomic structures capable of attracting economic activities in the area. The selected urban centres for the study are the administrative headquarters of in the respective states and the most populated urban centres in each of the sub-zone. Besides, each of the selected urban centres has diversified house-types and some apartment buildings. However, most of the residential areas within the urban centres are characterised by interwoven of residential, social, commercial and administrative buildings.

2. Understanding the Determinants of Urban Physical Housing Changes

The problem of quantitative and qualitative housing has long been identified with Nigeria urban housing (Fatima and Kawu, 2011; Morenikeji *et al.*, 2017). In recent times, there

has been an emerging necessity to improve the degree of urban resident satisfaction through the production of quality housing. The problem of quality housing is more pronounced in urban areas due to a series of deprivations, congestions, poor housing conditions, indiscriminate alterations to the existing housing and overcrowding brought about by population growth. The production of newer houses has not kept pace with the teeming urban population. This posits a great challenge to planning and urban management, especially in the developing countries like Nigeria. Globally urban centres are known for breakthrough in science and technology, culture and innovation, individual and collective creativity (UN, 2010). However, urban centres' problems and solutions remain dynamics (Hahn, 2011). There are some good aspects of urban centres; these are the magnets that attract more people to urban centres and consequently result in mass unemployment, homelessness, crime and many other poverty related problems in developing countries.

Housing is made of several components which include lands, the physical structure and the infrastructure like road, water, and other supporting facilities that are required to serve the houses (Otubu, 2010). Land accessibility is a pre-requisite for housing development (Okeyinka, 2014). Land issues for housing development are interpreted as land accessibility for housing development, as well as the nature of government intervention in the use and control of land (Olayiwola *et al.*, 2006). Land accessibility therefore entails the process of land possession for the sole purpose of immediate or future use and control (Olayiwola *et al.*, 2006). Several factors have been identified from literature to be responsible for the acute urban housing problem. These include the dilapidated conditions of the existing housing units, especially those in the organic setting of the core urban areas, demand and supply differential in housing, access to finance, cost of building materials, uncontrolled urbanization, natural increase in urban population, and high cost of land (UN, 2012; Jiboye, 2014). A study conducted on housing quality in Nigeria by Amao (2012) shows that the poor housing condition has serious consequential effects on the urban environment.

Urbanisation has been a global phenomenon; it is more and rapid in developing countries than the developed countries (UN, 2004). Populations in many developed countries are slowly declining. For instance, between 2011 and 2030, it is expected that the urban growth of Ukraine will decline by 2 million and that of Bulgaria by 0.2 (UN, 2012). It is estimated that around 70% of the EU population – approximately 350 million people – live in urban agglomerations of more than 5000 inhabitants (UN, 2012). Although the speed of transformation has slowed down, the share of the urban population continues to grow (UN, 2010). Population growth at an alarming rate is on the increase in Nigeria (UN, 2012). The population of Nigeria in 2015 was estimated at 190.9 million and is expected to be 238.4 million by 2025 (Aluko, 2010). Although available data on

urbanisation trends in Nigeria has been described as conflicting (Aluko, 2010; Potts, 2012). There are different figures about the population size of Nigeria. On all the population size recorded in the country, it is clear that urbanisation is growing at an alarming rate in Nigeria. The demand for more housing does not depend on the overall population but also on the average size of a household (Pettinger, 2017). Certain social and demographic factors are causing a rise in the number of households faster than the population increase. These demographic changes include age, increase in life expectancy, divorce rates and the rate of unemployment. All these increase the size of single-parent families among the urban dwellers.

Another impact of urbanisation is an inevitable change in urban compositions. The phenomenon of urbanisation impacts greatly on existing urban infrastructures including housing stock and create changes in the form of modifications in the urban built environment. The rate of urbanisation is far and above the quantity of housing supply. The pressure on the existing stocks therefore leads to the spontaneous physical changes in the urban housing and transformed the urban housing to hybrid built environment. Housing transformation is an indication of housing deficit. Housing affordability is the ability of housing consumers to conveniently pay for the standard of housing they occupied. The capacity of housing consumers has been suggested at 25 percent of household income (Timmer *et al.*, 1994). The idea of affordable housing recognises the needs of households whose incomes are not sufficient to allow them to access appropriate housing in the housing market without assistance (Milligan *et al.*, 2004). Critical to urban housing affordability is that it determines where to live within an urban centre based on the household income (Timmer *et al.*, 1994). Housing affordability is influenced by the market conditions, and prevailing policy, among other social and economic factors (Chowdhury, 2013). Improving the standard of living and eradicating poverty requires more than attention to incomes but also to household expenditures on the basic necessities of life in the urban centres. Standard of living and extend of poverty are determined by discretionary incomes, the amount of that household has left after paying taxes and for basic necessities, such as housing, food, clothing and transport (Meier and Rauch, 2000). There is the general believe that the individual housing sector provides low-cost and low-quality shelter to the poor urban residents.

A study conducted by Demographia International Housing affordability survey in 2015 shows that housing has become severely unaffordable in most of the developed countries like USA, Canada, UK, and Australia. Housing affordability is not peculiar to developing countries alone. There is a total disconnect between household income and house price in the market even in developed countries. The house price increases relative to incomes as a method of basic economics (Olayiwola *et al.*, 2006). Spontaneous Physical housing change is a societal response to economic threats (Wrona, 2009). Urban threat is caused by in-situ urbanisation (Tipple,

2000). In-situ urbanisation involves technological innovations and ease of doing the same things in different ways. The processes of innovations always originate from urban centres and spread to other peri-urban areas (Hills, 2007). The time to time discoveries constitute threats which attract response from the urban residents.

Another factor of physical housing changes is Time. Time change functions, forms and even the material composition of a building (Asquith, 2006). The way the space is put to use may change over a time period. Space and Time have a dialectical relationship with housing (Lo, 2010). There are also generational changes brought about by technological discoveries in which new discoveries are much better, reliable and efficient than the existing ones for achieving the same objective (Khan, 2014). The urban centres due to cultural diffusion get transformed into a heterogeneous community where innovations due to technological discoveries change the patterns of the urban built environment over time. The building materials and techniques of installations of building fabrics keep involving over time and these pave way for changes in the use of space for human activities.

Based on the above literature reviewed the factors that influence urban housing alterations are numerous complex and interrelated in nature. The indices of these factors: demography, social, economic, culture, time and environmental as reviewed would be used to determine the predominant factors responsible for the physical housing changes in the study area. This study intends to fill this gap by identifying the causal factors of large scale spontaneous physical housing changes that is specific to urban centres of southwest Nigeria and to suggest measures to improve the applicability of planned housing transformations in southwest Nigeria urban centres.

3. Methodology

The study is designed as a survey research using quantitative method by administering questionnaire to elicit relevant information from the house owners who have physically changed their houses. The questionnaire

comprises of two major parts: respondents demographic information in section A, and section B consists of questions on factors as established in the literatures responsible for physical housing changes. A five point Likert scale (1 to 5) was employed where house-owners who have transformed their houses were asked to identify factors responsible for housing changes. On the Likert scale, 1 represents strongly disagree and 5 represents strongly agree. Except Ibadan urban centre that has eleven local governments, Abeokuta and Akure urban centres have two local governments each. Two local governments were randomly selected from Ibadan – one from the north and the other from the south. The two local governments in Abeokuta and Akure were selected. A total of 784 questionnaires were distributed proportionally to the household's population in each of the selected local governments with the help of five research assistants who had previous experience in research field work. This eliminates the dominant tendency of the most populated areas above the less populated areas. The sample size of 784 households is adequate as Israel (1992) states that a sample size of 400 at 95% significance level of confidence is adequate for a social research where the population of the study exceed 100,000.

The sampling technique for the household selection was systematic random sampling technique. An estimated population was employed to determine the households' population sampling frame. The 2018 estimated population of the three selected urban centres based on 2006 census at 3 percent growth rate for the study was 1,967,162 (Table 1). This represents 313,606 households using a minimum of 6 persons per household (NPC, 2006). Table 1 is the distribution of the sample size according to the population of the local government for proportional representations and to avoid dominance by the most populated urban centre within the three selected urban centres.

The data obtained through the questionnaire were analysed with the aids of SPSS version 20 and the results are presented in both descriptive and factor analysis. The demographic information was analysed using descriptive analysis. The factor analysis was used to determine the underlying factors responsible for spontaneous physical housing changes in southwest Nigeria.

Table 1. Population and Households Covered in each of the Local Governments

Urban Centre	Local Govt	2006 Census	2018 Estimated Population	Calculated Houses@6 Persons per household	No. of Households Covered	Percentage (%)
Ibadan	Ibadan North	306,795	437,416	72,902	182	23.21
	Ibadan South East	266,046	379,318	63,219	158	20.15
Abeokuta	Abeokuta North	201,329	287,047	45,220	113	14.41
	Abeokuta South	250,278	356,836	47,841	120	15.31
Akure	Akure North	195,200	278,308	46,384	116	14.80
	Akure south	160,081	228,237	38,040	95	12.12
Total		1,379,729	1,967,162	313,606	784	100%

Source: NPC, 2006 & Author's Projection to 2018

4. Results and Discussion

A total of 557 questionnaires were retrieved representing 71% of 784 sampled houses and this was considered reasonable. The sampled houses show five typologies of houses in the area. These are traditional compound houses, rooming houses, storey buildings, detached and semi-detached house type, the distribution of the house types is shown in Table 2.

Table 2. House Types in the Study Area

Building Typology	Frequency	% Respondents
Compound houses	17	3.0
Rooming Houses	284	51.0
Storey Building	129	23.2
Semi-detached	96	17.2
Single Detached	31	5.6
Total	557	100

Author's Field work, 2017

The study categorised the inner core area as the unplanned zone while the intermediate and the peripheral are the planned zones of the urban centres investigated. The traditional compound houses are far diminishing in the area as most of the structures are in a serious dilapidated situation and in some cases the compounds are inhabitable with poor accessibility. A similar observation was made by Jiboye, (2014).

4.1. Analysis of Demographical Background

Prior to the analysis, The 27 constructs of the questionnaire were subjected to reliability test to ascertain the consistency of the constructs. The valid questionnaire analysed was 557 out of 784 questionnaires distributed. The Cronbach's Alpha coefficient of the constructs is 0.804 (Table 3) and this is greater than the acceptable value of 0.7 Pallant (2013). The result indicates that the constructs are good and measured the research intents.

Table 3. Reliability Results of the Research Instrument

Reliability Statistics	
Cronbach's Alpha	N of Items
.804	27

Source: Author's Fieldwork, 2017

The age characteristics of the respondents show that 58.3% of the respondents were between 25 and 35 years, 20.6% were between 36 and 45 years, 7.5% of the respondents were between 46 and 55 years, 4.2% of the respondents are between 56 and 65 years, and 2.8% of the respondents were between 66 and 75 years. The result shows that there are more youthful household heads than the age group. This pattern of age distribution could influence some kinds of physical housing change. The gender characteristics of the respondents result show that 75% of the household heads were male and 25% were female. The education

characteristics of the respondent's show 89% have tertiary education, 9% secondary education and about 2% have primary education. About 54.9% of the residents were single, 32.9% were married, 8.8% were divorced, the widow (er) and separated accounted for 2.7% and 0.7% respectively. The number of room's characteristics of the houses shows that houses with 14 rooms were 17.1%, houses with 5-9 rooms were 43.1%, 10-15 room houses were 31.2% and houses with more than 15 rooms were 8.6%. The result revealed that houses with 5-15 rooms were more among the houses surveyed. The income characteristics of the respondents show that that 64.5% of the respondents were earning between ₦50,000 -100,000, 16% were respondents earning between ₦101, 000 – ₦250, 000; 7.4% were respondents earnings between ₦251, 000 – ₦500, 000; 7% were respondents earning between ₦501, 000 – ₦1000, 000 and 5.2% were respondents earning between ₦1000, 000 and above per annum.

4.2. Factors Responsible for Spontaneous Physical Housing Changes

Factor analysis was adopted for factor reduction due to a number of variables involved to establish which of these variables directly accounts for most of the spontaneous physical housing changes in the study area. The 27 items of the spontaneous physical housing changes were subjected to principal component analysis (PCA) using SPSS version 20. The suitability of the constructs for Factor Analysis was assessed. The correlation matrix revealed strong loadings of the item variables at 0.3 coefficients and above. The Table 4 shows the Kaiser-Meyer-Okin (KMO) value was 0.655. This is greater than greater than the recommended value of 0.6. (Pallant, 2013). The Bartlett's Test of Sphericity has the value of chi-squares 1470.832, df = 55, P = .000 (P < 0.001). All these support the factorability of the correlation matrix.

Table 4. Suitability Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.655
Bartlett's Test of Sphericity	Approx. Chi-Square 1470.832
	df 55
	Sig. .000

The principal component analysis shows that only 27 factors were significant. The twenty-seven components were reduced to seven major components by principal components analysis, PCA with Eigen values exceeding 1. The seven-component solutions explaining 34.9%, 14.8%, 10.0%, 8.4%, 5.3%, 4.3% and 4.0% of the variance respectively. The seven-component solutions accounts for a total of 81.6% of the variation. These are shown in Table 4.1. The Oblimin Rotation was performed to further confirm the adoption of the grouping of these seven-component solutions as the major spontaneous physical housing change factors in the study area. The rotated solution in the Oblimin Rotation in Table 4.1 revealed the presence of simple structure with the seven components showing a number of strong loadings

indicating that the seven-component solutions are good for adoption. Figure 2 gives the pattern of the Scree plot diagram.

The break in the screeplot that signifies the most important

factors was not used. This is because of the contributions of each of the factors that have been given in the Oblimin Rotation in Table 4.1 also contribute significantly to the spread of this housing phenomenon.

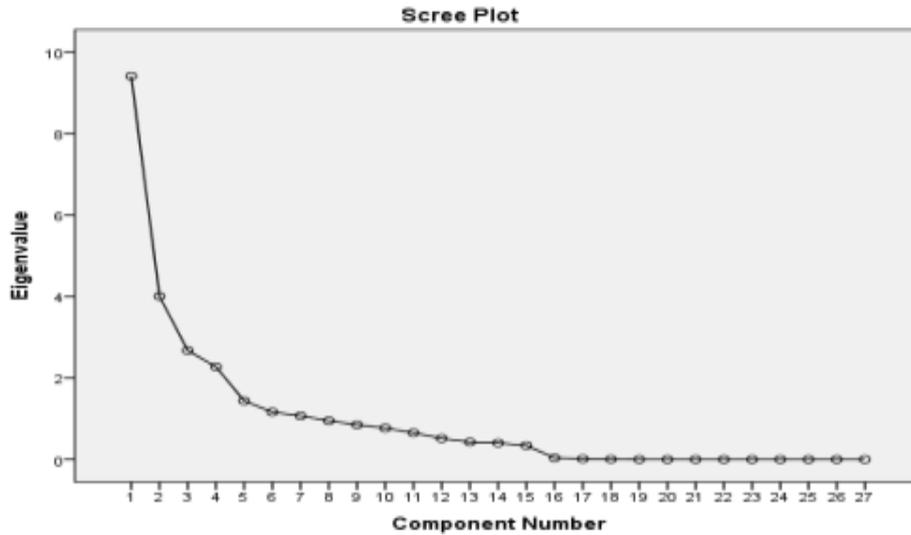


Figure 2. Scree Plot of Principal Component Analysis

Table 4.1. Oblimin Rotation for Factor Analysis

Component	Total Variance Explained							Rotation Sums of Squared Loadings ^a
	Initial Eigenvalues			Extraction Sums of Squared Loadings			Total	
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %		
1	9.415	34.872	34.872	9.415	34.872	34.872	7.395	
2	4.005	14.832	49.703	4.005	14.832	49.703	4.077	
3	2.675	9.908	59.611	2.675	9.908	59.611	2.576	
4	2.274	8.423	68.034	2.274	8.423	68.034	6.124	
5	1.438	5.327	73.361	1.438	5.327	73.361	7.343	
6	1.162	4.304	77.665	1.162	4.304	77.665	1.219	
7	1.070	3.963	81.629	1.070	3.963	81.629	1.206	
8	.949	3.516	85.145					
9	.849	3.144	88.289					
10	.770	2.850	91.139					
11	.652	2.414	93.554					
12	.516	1.910	95.464					
13	.426	1.578	97.041					
14	.404	1.497	98.539					
15	.342	1.266	99.805					
16	.036	.132	99.936					
17	.013	.047	99.983					
18	.005	.017	100.000					
19	.000	.000	100.000					
20	.000	.000	100.000					
21	.000	.000	100.000					
22	.000	.000	100.000					
23	.000	.000	100.000					
24	.000	.000	100.000					
25	.000	.000	100.000					
26	.000	.000	100.000					
27	.000	.000	100.000					

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

Furthermore, there was a moderately strong positive correlation of 34.87% between Component 1 and 2; 2 and 3 and a weak positive correlation between Components 3 and 4 and a strong positive correction between 4 and 5 (correlation

of 8.42% and 5.32%) respectively. There is a weak positive correlation between a component 5 and 6 and 6 and 7 in the Component Correlation Matrix result.

Table 4.2. Pattern Matrix for Factor Analysis

	Component						
	1	2	3	4	5	6	7
Do you agree that Additional structures in front of the house should be removed.	.942						
Do you agree that spontaneous Physical housing changes create encroachment into the adjacent property space	.942						
Do you agree that spontaneous physical housing activities create irritating air pollution in the neighbourhood	.942						
Do you agree that Congestions due to spontaneous physical housing changes generate poor hygiene	.942						
Do you agree that Poor hygiene generates Diseases in the neighbourhood?	.511						
Do you agree that Encourages noise in the neighbourhood of the residential areas of urban centres	.371				.527		
Do you agree that spontaneous physical housing changes increases green house effect in housing environment	.502						
Do you agree that Improve in status can bring about spontaneous physical housing changes in a house		1.000					
Do you agree that Spontaneous Physical Housing changes prevent ventilation of the inner spaces of a building		1.000					
Do you agree that spontaneous physical housing change provide space for home based enterprises among the urban dwellers		1.000					
Do you agree that Planning authority are not informed before carrying out spontaneous physical housing alterations		1.000					
Do you agree that spontaneous Physical Housing changes enable different activities to live together			.782				
Do you agree that spontaneous Physical Housing change creates jobs for skilled and unskilled labours			.803				
Do you agree that Spontaneous Physical Housing changes enable infrastructure like electricity, & road to expand			.823				
Do you agree that Spontaneous Physical Housing changes create ugly Appearance of a house			.636				
Do you agree that spontaneous Physical housing activities generate additional heat to the neighbourhood			-.356				-.411
Do you agree that spontaneous housing alterations used for a additional income purposes				.989			
Do you agree that Spontaneous Physical Housing changes prevent lightning of the inner spaces of a building				.989			
Do you agree that spontaneous physical housing changes should be monitored in residential neighbourhood?				.977			
Do you agree that Spontaneous physical housing alterations cause visual pollution to the neighbourhood				.984			
Do you agree to Conversion for shops in the house					.985		
Do you agree that Spontaneous Physical housing changes create congestions in the neighbourhood					.985		
Do you agree that spontaneous Physical housing activities create disturbing noise in the neighbourhood					.990		
Do you agree that spontaneous Physical housing changes are not to specified standard?					.985		
Do you agree that Increase in household size can lead to extension works in the house						.677	
Do you agree that Demand for rental accommodations can lead to extension works in a house						.752	.439
Do you agree that Availability of open space in between around the buildings can be use for extension works in a house?							-.739

Extraction Method: Principal Component Analysis.
 Rotation Method: Oblimin with Kaiser Normalization.
 a. Rotation converged in 16 iterations.

The seven factors extracted were in order of factors loading under each group. The extracted factors as shown in the pattern matrix in Table 4.2 are: ineffective urban housing administration in the region, the level of awareness of the urban residents to changes in the neighbourhoods, support for socioeconomic enterprise, behaviour and attitude of the residents, inconvenience factor, population growth and science and technology advancement over time.

The first principal component is ineffective urban housing administration in the region. This component accounts for 34.9% of the total variance. This factor encourages the indiscriminate addition of structures in front of the houses, encroaching into the adjacent property space, generation of air pollutant in the neighbourhood, and general poor hygiene due to the use of the spontaneous space created. The second principal component is the level of awareness of the urban residents to changes in the neighbourhoods, which accounts for 14.8% of the total variance. It comprises of variables like; improve in status, blockage of ventilation opening, provision of space for home base enterprises, and planning authorities that are not informed prior to housing changes. The support for socioeconomic enterprise is the third principal component factor. This accounts for 10 % of the total variance. The constructs used to measure it are; spontaneous physical housing enables different activities to live together,

creation job for both skilled and unskilled labours, brought about expansion of Infrastructure like electricity and roads. The forth principal component is the behaviour and attitude of the urban residents. This component accounts for 8.4% of the total variance. It contains the following variables; spontaneous physical housing change use to generate additional income, spontaneous physical housing change prevents lightning of the inner space, the need to monitor physical housing changes, and physical housing changes cause visual pollution in the neighbourhood.

The inconvenience factor of spontaneous physical housing changes is the fifth principal component. This component accounts for 5.3% of the total variance. This component has a conversion for shops, congestions in the neighbourhoods, and disturbing noise in the neighbourhoods, and the space created has no specific standard as the constructs measured. The sixth principal component is population factor. This accounts for 4.3% of the total variance. It contains the following variables namely; demand for accommodation and increase in household size. The science and technology discovery over time is the seventh principal component factor. This accounts for 4.0% of the total variance. The only variable under this factor is the availability of open space around the building. These kinds of space are usually left in the form of setback for lightning and general circulation.

4.3. Discussion

Findings from the study revealed that there is the need to strengthen the housing administration in order to manage and maintain the inconveniences of spontaneous physical housing changes in the urban centres of southwest Nigeria. The attitude of the house owners to spontaneously change their houses is a response to socioeconomic needs of the urban residents which kept unfolding with time. The contribution of individuals' housing sector towards urban housing supply has been earlier observed to be enormous and its impacts are far reaching than the even the public housing (Ikejiofor, 2006). The physical changes have significance impact on the urban residents. The findings also show that the spontaneous physical changes are largely in support of socioeconomic pursuits of the urban residents. These changes in form of erection of shops on an open space attract little attention of the urban management agencies. Unlike new buildings that attract attention of the urban administration on a site. The sizes of the transformed space are not more than what could be used to accommodate home based enterprises for the urban residents. This finding is in line with Aduwo and Ibem (2017) who discovered that public housing transformations are used predominantly for home based activities. The privately owned housing unlike the public housing was conceived and designed to the basic needs of the users. The transformation factors did not reflect absence of input by the house owners. However, the attitude of house owners for spontaneous physical changes in the form of conversion of room, garage and corridor to shops without the formal consent of the planning authorities that have the statutory right to monitor and control both physical developments and housing administration in the urban centres is preventing the affected building fabrics from performing their primary functions. The fabrics such as window and door openings are usually affected by physical housing changes. There is the need for planned transformation rather than spontaneous changes on urban housing which will allow housing fabrics to perform their primary functions even after the transformations had been carried out. The need for policy on physical housing changes is imperative to serve as a guide on how to achieve alterations at a minimum inconvenience to the building fabrics and the neighbourhood environment. This is possible through careful planning and monitoring of the urban lands and housing activities. There is the need for more collaborative planning of urban lands where all the stakeholders will be involve for effective implementation. This would ensure effective urban housing management and administration for routine checking of the physical developments in the neighbourhoods to ensure that all additional physical developments meet the planning requirements and are also implemented in the manner so approved. The attitude of seat-at-office by the urban administrators for clients to come forward for physical development approval is not allowing many alterations works to be properly captured at inception of the

construction works. In addition, there is the need to have supplementary physical housing documents for carrying out any form of housing alterations in the region. The document would define in clear terms the kind of alterations that requires planning permission from those that can be embarked upon without notifying the statutory body. The document will protect and preserve other housing infrastructure like road, drainage and Trees.

The research revealed that about 89% of the respondents have tertiary education. There is a high degree of literacy in the region. This enables people of different background to learn and copy from each other. The level of people awareness to the little changes in socioeconomic activity in the housing environment enable people to copy one form of surviving strategy or the other among the urban residents. This level of awareness significantly influence the way and manner physical housing changes spread spontaneously among the households. There is a high degree of home based commercial activities in the studied area. The spaces generated through alterations provide accommodation for this kind of commercial activities among the urban residents. Besides, the home based enterprises provide self employment for the youths most of whom are graduates in various trades. The government policy on how to carry out alterations will define the limits and protect the primary function of other housing fabrics from being annihilated by the activities of spontaneous housing changes.

The behaviour and attitude of the urban residents' influences housing changes in a manner that has no regard for annihilating the functions of other building fabrics like window openings, corridor and housing facilities like soak way, trees and drainages. Furthermore, the housing infrastructure is also affected by housing alterations as encroachment into public right of ways, roads and even adjacent property are not left out. The urban streetscapes thereby look busy and congested with sign post and noise from different activities accommodated in the transformed spaces. This is in line with finding by Oladumiye (2013) that indiscriminate erection of sign post, billboards and other forms of visual graphics along the streets are visual pollutants to the urban landscape of Nigerian cities. The congestion is a source of stress due to the degree of pollutants in form of heat, noise, and carbon monoxide generated into the environment in addition to solid waste generated. This is making the maintenance of urban neighbourhoods difficult to for the urban administrators due to human and traffic congestions as the roads and pedestrian walkways are being encroached by all forms of housing modifications and this is a great source of inconvenience for urban residents. The inconveniences annihilate the primary functions of the urban housing as a living accommodation for comfort and tranquillity for the urban dwellers.

The spread of spontaneous physical housing changes activities is reordering the demand for housing accommodation in the urban centres studied. The centres of the cities are usually the most affected areas where accommodations for various kinds of businesses are the

predominant accommodation focus of the urban dwellers. The result of the survey indicates a high degree of low-income earners (64.5%) and large group of single individuals (54.9%) in the region investigated. This category of single individuals requires accommodations that would serve dual purposes: living and business purposes. The spontaneous physical housing changes could be meant for housing improvement in the science and technology era for urban residents. The seventh component factor with a negative sign (-.739) suggests that spontaneous physical housing changes tends to decrease with increase in application of science and technology solutions to the housing transformations in the study area. The extent of spontaneous physical housing changes is inversely proportional to the level of technological advancement of the urban residents. In this regard the more the urban norms comply with science and technology development the less the possibility of spontaneous physical housing changes that would be carryout. The present practice where every available open space around the building is being converted to one form of accommodation or the other as time progresses can be regulated through projected planning and strict adhere to building regulations. It is obvious that the urban dwellers have no projected plan for most of the housing transformation activities in the neighbourhoods investigated. The governments on the other hand have not been keen in the area of all inclusive developmental plans for most of the urban lands. The spontaneous physical changes requires reordering through policies that will encourage planning for future developments among the houses in the urban centres of the region.

5. Conclusions and Recommendations

The study investigated factors responsible for spontaneous physical housing changes in Ibadan, Abeokuta and Akure urban Centres in southwest Nigeria. These urban centres have transformed from homogeneous agrarian communities to heterogeneous urban centres with complex and diversified housing compositions. The physical housing change is rapid and spontaneous without recourse to building regulations requirements in these urban centres. This is evidenced in the increasing hybrid housing compositions across the houses studied in the urban centres of southwest Nigeria. Therefore the need for urban policy on physical housing changes is imperative and inevitable. Presently strict adherence to planning regulations and housing transformation policy is imminent as housing transformation has become a common attitude among the urban residents. The enormous transformations in these houses can be better organised rather than left at the discretion of the individuals' urban residents with a good policy guide. Consequently the inconveniences created by the use of the transformed spaces like congestions, noise, heat and sound could be control to acceptable level. These pollutants affect the health and wellbeing of the urban residents. There is the need for better

urban policy toward guarantee functional urban housing transformations for sustainable built environment in a way that will standardise the practice of housing transformations in the urban centres of southwest Nigeria.

In view of these findings the study therefore suggests the need for Supplementary Planning and Development Document, SPDD, as necessary. This is an urban policy document that defines the housing transformation activities in the best practice manners. The SPDD is transformation guidance for residential extensions and alterations in the urban centres in line with the general patterns of housing transformations in the urban centres over time and technological development. based on the identified factors responsible for spontaneous physical housing changes specific to southwest zone The documents specifies all kind of alterations that require permission and those that will not require planning permission taking into consideration the diversity in the urban housing compositions as well as the dynamic nature of housing transformation patterns over time. This ensures orderliness in transformation patterns of the houses and minimise the negative impacts of housing transformations on the urban residents.

In addition the governments should remove the dichotomy between the formal and informal urban housing policy. All urban physical developments should be made to develop according to national building code. The classifications of urban physical developments into formal and informal housing which allow some lands to be developed without statutory approval for the built up houses should be eliminated. Community lands should be prepared into a well defined layout and formalised the layout with the relevant planning authority before disposing it to prospective developers in the urban centres of the southwest Nigeria. Communal lands owners must be carried along in the physical planning and development of urban lands in the region.

The pedestrian and urban parking open spaces should not be allowed to accommodate any kind of physical structure. This is to allow for the open space to be use to accommodate infrastructure like trees and drainages needed for housing sustainability. The statutory urban agencies can then play a supervisory role using the SPDD document in the monitoring of all physical development of the urban centres without subjecting individual developers to too many statutory requirements other than those specified in the documents. By this practice every physical development in the urban centres will not only be monitored but also be documented for research and development in urban housing purposes.

REFERENCES

- [1] Adedayo, O. F., Ayuba, P., and Audu, H.I. (2013). User Perception of Location of Facilities In Public Building Design in Selected Cities in Nigeria. *Architectural Research Journal* 3(4). Online at <http://journal.sapub.org/arch>.

- [2] Adegbehingbe, V. (2011). Analysis of Physical Transformation of Residential Buildings in Selected Government Estate in South Western Nigeria. Unpublished PhD Thesis Submitted to Department of Architecture, F.U.T Akure.
- [3] Alagbe, A. & Aduwo, E.B. (2014). The Impact of Housing Transformation on Residents Quality of Life: A Case Study of Low-Income Housing Estate, Ipaja, Lagos. *Covenant Journal of Research in the Built Environment, (CJRBE), 2(2), 134-147.*
- [4] Aduwo, E.B. & Ibem, E.O. (2017). Housing Transformation in Government Constructed Residential Estates in Lagos, Nigeria. *International Journal of Humanities and Social Science Invention, 6(8), 13-22.*
- [5] Aluko, O. E. (2010). The Impact of Urbanization on Housing Development: The Lagos Experience, Nigeria. *Ethiopian Journal of Environmental Studies and Management, 3 (3), 109-121.*
- [6] Amao, F.L. (2012). Urbanisation, Housing Quality and Environmental Degeneration in Nigeria. *Journal of Geography and Planning. 5(16), 422-429.*
- [7] Amerigo, M. & Aragones, J.I. (1997). A Theoretical and Methodological Approach to the Study of Residential Satisfaction. *Journal of Environmental Psychology 17, 45-57.*
- [8] Aremo, B. (2009). *How Yoruba and Igbo became different Languages.* Ibadan: Scribe Publication Ltd.
- [9] Asquith, L. (2006). Evaluating and Illustrating Domestic Space Use/ Collecting. Retrieved December 10, 2012, from Space Bartlett: <http://www.space.bartlett.ucl.ac.uk/events/sc06/proceedings/asquith-sssc.pdf>.
- [10] Bakare-Yusuf, B. (2011). Yoruba's don'y do Gender: A Critical Review of Oyeronke Oyewumi's the Invention of Women; Making an African sense of Western Gender Discourses. www.codesria.org/IMG/pdf/BAKARE-YUSUF.pdf accessed 11/05/2012.
- [11] Bello, M.O. (2003). A Comparative Analysis of the Performance of Residential Property in Lagos Metropolis. *Journal of Nigerian Institute of estate Surveyors and Valuers. 21(2). 9-19.*
- [12] Building Nigeria's Response to Climate Change, BNRCC, (2011). Climate Change Scenarios for Nigeria: Understanding Biophysical Impacts. A report Published by BNRCC, project.
- [13] Carney. (1998). *Sustainable Rural Livelihoods: What contribution can we make?* London: Department for international Development.
- [14] Chowdhury, M. Z. (2013). The Housing Affordability Problems of the Middle-Income Groups in Dhaka. A Policy Environment Analysis. Unpublished PhD Thesis of the University of Hong Kong.
- [15] Doling, J., Vandenberg, P., and Tolentino, J. (2013). Housing and Housing Finance -A Review of the Links to Economic Development and Poverty Reduction. Asian Development Bank Economics Working Paper Series No. 362.
- [16] Ford Foundation. (2004). *Building Assets to Reduce Poverty and Injustice.* New York: Ford Foundation.
- [17] Hahn, J. (2011). *Cities of Tomorrow Challenges, Visions, Ways Forward.* European Commission, Directorate General for Regional Policy, 'Urban Development, Territorial Cohesion' Unit.
- [18] Hills, J. (2007). *Ends and Means: The Future Roles of Social Housing in England.* London: Economic and Social Research Council.
- [19] Ikejiofor, C.U. (2006). Spatial Patterns of Housing in the Outskirts of Abuja, Nigeria. *Journal of Development Studies. 2(1), 244-266.*
- [20] Jiboye, A.D. (2014). Significance of house-type as a determinant of Residential Quality in Osogbo, Southwest Nigeria. *Frontier of Architectural Research 3, 20-27.*
- [21] Johnson, S. (2001). *The History of Yoruba.* Lagos: CSS (Nig) Ltd.
- [22] Jones, C. (1979). Housing: the element of choice. *Urban Studies 1(2) 179-204.*
- [23] Habitat III. (2015). Issue Paper on Housing. United Nations Conference on Housing and Sustainable Urban Development held on 31st May, New York.
- [24] Israel, G. (1992). *Determining Sample Size.* Florida: University of Florida: Cooperative Extension Service.
- [25] Kalamu, F and Balaane, B. (2014). Rapid Urbanization and Housing Transformations Tlokweng, Bostswana. Conference on Sustainable Built Environment held between October 28th -30th 2014 in University of Botswana, Gaborone, Botswana.
- [26] Kalu, I., Agbarakwe, H. U., & Anowor, O. F. (2014). National Housing Policies and the Realisation of Improved Housing For All In Nigeria: An Alternative Approach. *Asian Development Policy Review, 2 (3), 47-60.*
- [27] Khan, T. (2014). *Housing in Transformation.* London: Springer Briefs in Geography.
- [28] Lemanski, C. (2009). *Augmented Informality: South Africa's backyard dwellings as a by-Product of Formal Housing Policies.* Habitat International.
- [29] Lo, A. W. (2010). A Complete Theory of Human Behaviour. Retrieved September 08, 2012, from Creative Commons: <http://creativecommons.org/licences/by-ne-as/3.0/>.
- [30] Lowry, S. (1990). Housing and Health: Getting Things Done. *British Medical Journal, 300, 390-392.*
- [31] Murray, J, M. and Ferguson, M (2001). *Women in Transition Out of Poverty.* Toronto: Women and Economic Development Consortium. <http://www.cdnwomen.org/eng/3/3h.asp>.
- [32] Meier, G. & Ranch, A. (2000). *Leading issues in Economic Development* (7th ed.). Oxford University Press.
- [33] Milligan V, (2004). A Practical Framework for Expanding Affordable Housing Services in Australia: Learning from Experience. Final Report No. 65, Australian Housing and Urban Research Institute.
- [34] Mohammad, A. and Mohamed. A. (2012). Assessment of Residential Satisfaction with Public Housing in Hulhumale', Maldives. *Procedia-Social and Behavioural Sciences, 50, 756-770.*

- [35] Muhit, M.A., Ibrahim, M. and Rashid, Y.R. (2010). Assessment of Residential Satisfaction in newly Designed Public Low-cost Housing in Kuala Lumpur, Malaysia. *Habitat International*, 34(1). 18-27.
- [36] Morenikeji, O., Umaru, E., Pai, H., Jiya, S., Idowu, O & Adeleye, B.M. (2017). Spatial Analysis of housing Quality in Nigeria. *International Journal of Sustainable Built Environment xxx*, 1-8. Available at <http://dx.doi.org/10.1016/j.ijbsbe.2017.03.008> accessed 16/06/2017.
- [37] Murray, J. M. and Ferguson, M. (2001). *Women in Transition Out of Poverty*. Toronto: Women and Economic Development Consortium. <http://www.cdnwomen.org/eng/3/3h.asp>.
- [38] National Population Commission, NPC, (2010). City Population. Retrieved April 01, 2011, from National Population Commission. <http://www.citypopulation.de/Nigeria.html>.
- [39] Ndayako, F.M. and Kawu, A.M. (2011). Beneficiaries' Assessment of Public-Private-Partnership in housing Delivery in Minna, Nigeria. *Centre for Human Settlements and Urban Development Journal*, 2(1), 41-54.
- [40] Njoh, A.H. (2003). Urbanisation and development in Sub-Saharan Africa. *Cities* 20(3), 167-174.
- [41] Oladumiye, E.B. (2013). Urban Environmental Graphics: Impact, problems and Visual pollution of signs and Billboards in Nigerian Cities. *International Journal of Education and Research* 1(6), 1-12.
- [42] Olatubara, C.O (2007). Fundamentals of Housing in Agbola, T., Egunjobi, L. & Olatubara, C.O. (2007). Housing and Management: A book of Reading. Ibadan: U.I. Press Ltd.
- [43] Olayiwola, L.M., Adeleye, O., & Popoola, K.O. (2012). Demystifying the Land Question in Housing Development: the Nigeria Example. The 8th FIG Regional Conference on Surveying towards Sustainable Development, Montevideo, Uruguay, 26-29 November.
- [44] Olotuah, A.O. (2005). *Urbanisation, Urban Poverty and Housing Inadequacy*. Proceedings of African Union of Architects Congress, 23rd – 28th May, Abuja, Nigeria.
- [45] Olotuah, A. O. & Bobadoye, S. A. (2009). Sustainable Housing Provision for the Urban Poor: A Review of Public Sector Intervention in Nigeria. *The Built & Human Environment Review*, 2, 51-63.
- [46] Otubu, A. (2010). *Land Use Policy Administration and Problem of Adequate Housing in Nigeria*. Unpublished M.Phil Thesis submitted to the Faculty of Law. Obafemi Awolowo University, Ile-Ife.
- [47] Oyeyinka, Y. (2014). Multi-habitation: A form of Housing in African Urban Environments. *Journal of Environmental Science, Toxicology and Food Technology*. 8(4). 21-25.
- [48] Pallant, J. (2013). *PSS Survival Manual: A Step By Step Guide to Data Analysis Using SPSS*. Crows Nest NSW 2065. (4th Ed.). Australia: Allen & Unwin.
- [49] Pettinger, T. (2017). Housing. <https://www.economicshelp.org/blog/15390/housing/factors-afecting-supply-and-demand-of-housing/> [assessed 16th march 2018].
- [50] Potts, D. (2012). *Whatever Happened to Africa's rapid Urbanisation?* African Institute, Nairobi.
- [51] Rikko, L. S., & Gwatau, D. (2011). The Nigerian architecture: The trend in housing development. *Journal of Geography and Regional Planning*, 4(5), 273-278.
- [52] Timmer, D. A. (1994). *Paths to Homelessness: Extreme Poverty and the Urban Housing Crisis*. Bolder: West view Press.
- [53] Tipple, A. (2000). *Extending Themselves: User Initiated Transformation of Government Built Housing in Developing Countries*. Liverpool: Liver Pool University.
- [54] Tipple, A.G., Owusu, S., & Pritchard, C. (2004). User-Initiated extensions in Government Built Estate in Ghana and Zimbabwe: Unconventional but Effective Housing Supply. *African Today*, 51(2).
- [55] Tse, R. (2001). Environment Policy and Management in Asia: A learning experience. *Journal of Environment Assessment Policy and Management*, 10 (1), 88-108.
- [56] United Nations. (2004). *World Population to 2300*. New York: United Nations.
- [57] United Nations. (2010). *World Urbanisation Prospects. The 2009 revision*. New York: Department of Economic and Social Affairs, Population Division, New York.
- [58] UN (2012). *From Transition to Transformation Sustainable and Inclusive Development in Europe and Central Asia*. New York: United Nations.
- [59] Schylter, A. (2003). *Multi-habitation:urban housing and everyday life in Chitungwiza*. Zimbabwe: Nordic Africa institute, Uppsala.
- [60] Vandievere, S; Hair, E.C; Theokes, C; Cleveland, K; McNamara, M. and Atienza, A. (2006). *How Housing Affects Child Well-Being*. Coral Gables, FL, 33146: Founders' Networks.
- [61] Wrona, D. J. (2009). Beyond all Doubt: The Explanatory of Human Behaviour. Retrieved May 14, 2012, from www.humanbehaviorexplained.ning.com.