

Housing Affordability as a Factor in the Creation of Sustainable Environment in Developing World: The Example of Akure, Nigeria

Afolabi Aribigbola

Department of Geography and Planning Sciences, Adekunle Ajasin University, P. M. B. 001, Akungba Akoko, Ondo State, Nigeria
GSM No.: 234 (0) 8060407079; E-mail: faribs1@yahoo.com

KEYWORDS Affordability. Householders. Sustainable Environment

ABSTRACT Housing affordability has been widely recognized as an essential issue in creating sustainable built environment especially in the context of developing world cities. Consequently, global efforts at meeting human needs for shelter found expression in its inclusion among the objectives of sustainable development programme and the Habitat Agenda agreed to by the International Community at Istanbul, Turkey in 1996. This paper discusses the growing problems of housing affordability in cities of developing world using Akure in Nigeria as a case study with a view to ascertaining extent of the problem as well as challenges it poses to creating sustainable built environment. The data utilized in the paper was generated through a systematic survey of 1,266 householders in the nine political wards into which the city was stratified. Findings of the study revealed the problems associated with urban housing in the area of which affordability is a major one. The paper argues that this poses a great challenge to sustainable development of the built environment. Thus, it was suggested that the institutional framework to promote, enhance and encourage affordable housing provision should be created in the city.

INTRODUCTION

Housing is very fundamental to the welfare, survival and health of individuals. This is why international concern has been growing over the deteriorating housing conditions in urban areas of developing nations, Central and Eastern Europe (UN 1996). This issue was highlighted at the United Nations Habitat I Conference held in Vancouver in 1976; during the International Year of Shelter for the Homeless in 1987; and at the Habitat II Conference held in Istanbul in 1996. Consequently, great attention has been paid in most developing countries by academics, professionals and decision makers alike to the "housing problems and to the design of housing policies to combat that problem" (Dewar 1979). Despite this, housing shortages still persist in most parts of the world especially in developing world nations among which is Nigeria. Thus, housing shortage is the main basis for developing national housing policies (UN 1996).

Globally, in order to meet the enormous housing challenges particularly in developing countries including Nigeria, the international community established the Habitat Agenda on housing in Istanbul to provide adequate shelter for all, achieve sustainable human settlements as well as the recognition of the primary responsibility for implementing the Habitat Agenda.

Nigeria is one of the most rapidly urbanizing

countries in Africa and the challenges that come with this, especially in the provision of adequate housing and basic services are major challenges that government faces (FMH and UD 2003). Therefore, in an attempt to meet the housing challenges facing the built environment in the country, a number of programmes and recently policies have been articulated and introduced. The first explicitly formulated National policy on housing was launched with fanfare in 1991 with a set goal of providing housing accommodation for all Nigerians by the year 2000. As the set goal failed, the reinvigorated policy by government in 2002 was aimed at providing necessary solution to the hitherto intractable housing crisis in Nigeria (Okewole and Aribigbola 2006)

The federal government in 2002 revised the National Urban Development and National Housing policies in line with the new democratic dispensation which requires that in promoting sustainable urban development and social order in the country, great attention has to be paid to citizen's participation in decision making and programme implementation, monitoring and evaluation. The 2002 National Housing Policy sought to ensure that all Nigerians own or have access to decent, safe and sanitary housing accommodation at affordable cost with secure tenure through private sector initiative with government encouragement and involvement.

Despite the various efforts of government,

individuals and agencies both locally and internationally to improve housing provision in Nigeria, housing problems particularly shortages and affordability still persist. The question that needs to be addressed is why does housing affordability still persist in the country and what are the challenges it constitutes to the built environment especially in context of developing world urban setting.

In the course of this paper, we will explore the growing problem of affordable housing supply as it affects householders with a brief review of efforts made to address it in Nigeria. We will evaluate the quality of affordable housing especially with reference to the low-income households. In particular, we will examine the availability of decent quality, affordable housing and its effects on the built environment in Nigeria using the data generated from a study of housing in Akure, Nigeria. The paper also identifies and suggests how housing delivery can be improved to create sustainable urban environment in developing countries.

Conceptual Issues and Relevant Literature

Sustainable development is a major concern to the world and it formed the basic theme of the report "Our Common Future" produced by Brundtland Commission for the United Nations (World Commission on Environment and Development 1987). The report described sustainable development as development that meets the needs of the present generation without compromising the ability of the future generations to meet their own needs. The report also recognized that the environment is where we live and development is what we all do in attempting to improve our lot within that abode, and as a result the two are inseparable. The built and natural environment has a huge impact on the quality of life (Akintoye 2006). The main ideal behind this notion is to create an effective system of resource distribution and utilization with a long-term perspective in mind. The achievement of sustainable development depends on meeting the following inter-dependent objectives: maintaining ecological integrity, attaining social self-sufficiency, establishing social equity and meeting human needs for food, shelter and health (UN 1996).

In housing provision, sustainable development explicitly relates to discussion of affordability, housing quality and issues of social eq-

uity and justice in terms of accessibility. This perspective requires the enumeration of provision over the life cycle of housing. Therefore, to be able to determine the challenges of affordable housing vis-a-vis sustainable urban development, three basic concepts require clarification and elaboration. These are housing affordability, housing quality and equity with regards to accessibility to housing.

Housing Affordability

The rationale for housing assistance is to improve housing affordability for those receiving the assistance (AHURI 2004). Therefore, since the concept is an essential component of sustainable development, it is germane and central to the present discussion. Andrews (1998) defined the term "affordable housing" as that which costs no more than 30 percent of the income of the occupant household. This is the generally accepted definition of housing affordability. She also described severe housing burdens as 50 percent or more of household income. Families who pay more than 30 percent of their income on housing are considered cost burdened and may have difficulty affording necessities such as food, clothing, transportation and medical care (HUD 2005). 'Affordability' is concerned with securing some given standards of housing or different standards at a price or rent which does not impose an unreasonable burden on household incomes. In broad terms, affordability is assessed by the ratio of a chosen definition of household costs to a selected measure of household income in a given period (MacLennan and Williams 1990). In sum, 'housing affordability' refers to the capacity of households to meet housing costs while maintaining the ability to meet other basic costs of living (AHURI 2004). According to Malpezzi et al. (1985), housing affordability describes the extent to which households are able to pay for housing. In summary, affordable housing is usually defined by income of the populations served. According to HUD standards, the population is divided into "very low income" (below 50 % of the median income), "low income" (below 80 %) and "moderate income" (81 – 120 %). "Affordable housing" generally therefore, means housing priced to cost not more than 30 percent of the income at each income level.

The Chartered Institute of Housing (1992) identified four key variables or items which will

determine whether accommodation is affordable or not. These variables are:

- (a). Rent levels which will have an impact on the ability of a tenant to afford accommodation.
- (b). Household income.
- (c). The type of household (that is Family make-up, whether couple, single parent, elderly, etc.)
- (d). Whether the household is eligible for housing benefits.

From the above, affordable housing may therefore be described as housing in which the occupant is not paying more than 30 percent of his or her income on.

Bichi (2002) differentiated between housing affordability and housing finance affordability. Housing affordability according to him is generally an issue of absolute poverty. That is, it embraced those households that cannot afford even the minimum standard available and thus requires initiatives to rental housing services assistance and other forms of assistance. On the other hand, the housing finance affordability describes essentially the problem of the low and moderate-income groups with regard to the high cost of financing housing. In other words, it relates the issue or problem of accessing or raising adequate finance to build or rent housing by the low and medium income households.

The 30 percent threshold has been criticized in the literature as deceptive, for low income families, spending 30 percent on housing costs leave very little for all other necessities, whereas for middle-income families, it is an appropriate expenditure level (Andrews 1998). Mayo et al. (1990), contend that such rule of thumb is inconsistent with what people actually spend on housing. While Malpass (1993) argues that the important determinant of what consumers regard as affordable housing is the scope for trade-offs between different forms of expenditure and their relative attraction. He concluded that affordability "is virtually undefined concept and certainly cannot be neatly or simply understood in terms of a fixed percentage of income". Whereas, Jiminez and Kieare (1993), opined that housing affordability is a behavioural concept and it changes with time. It is also individualized as the relationship between incomes and how much the household is ready to put into housing is not a direct one. Despite these problems, the 30 percent threshold is currently the most widely used and widely accepted indicator of housing af-

fordability (Andrews 1998). Consequently, it is adopted in this study.

Housing Quality: The literature on housing quality revealed the commonly used indicators of housing quality to include structural adequacy, neighbourhood quality, residents' perception of neighbourhood safety, level of public services provided, access to work and other amenities, room density and housing affordability (Okewole and Aribigbola 2006). In other words, the definition of the housing quality embraces many factors including the physical condition of the building and other facilities and services that make living in a particular area conducive. The quality of housing within any neighbourhood should be such that satisfies minimum health standards and good living standard, but should also be affordable to all categories of households.

Social Equity: Social view of housing relates to a situation in which all citizens have access to housing without limitations as to one's socio economic background or status in society. The relevance of this view to housing accessibility is in ensuring that housing provision is not focused on some 'chosen' segments of the society but all members of the community have equal opportunity to choose their own accommodation according to their means or affordability level (Okewole and Aribigbola 2006).

Housing Provision and Policy in Nigeria

Public intervention in housing in Nigeria began in the colonial period following the outbreak of bubonic plague in Lagos in the 1920s. During the period 1900 to 1960, government involvement was centered essentially on the provision of quarters for expatriate staff and for selected indigenous staff. In this period, conscious effort was not made to construct houses for the general public by the government. Thereafter, successive governments in Nigeria sought to confront the nagging problem of accommodating an increasing number of Nigerians. According to CASSAD (1993), the Federal Government of Nigeria has been involved in housing delivery in two areas, namely,

- (1) The Federal Low-Cost Housing Project (1972-1979, and 1975-1983); and
- (2) The Site – and – Services Programme (1984 – 1988).

The state governments have also been in-

volved in housing provision with similar programmes to that of the federal government in the form of direct housing construction, staff housing loans, site development and services schemes, and mortgage lending to individuals.

The post-independence government in the country did not fare better than the colonial government in terms of housing for the public. The concepts of Government Residential Areas (GRAs) were not only retained but were embraced and promoted with greater zeal. Those who took over government saw in them (GRA) a mark of distinction to stay in the GRA (Aribigbola 2000). After independence, aside from the creation of Federal Mortgage Bank of Nigeria (FMBN), the Federal Government did little in the area of housing intervention until 1980 when it embarked on an elaborate National Housing Programme based on the concept of affordability and citizen participation.

In order to address the growing housing shortages and affordability problems in Nigeria, a number of policy initiatives have been articulated and introduced. Thus, the components of the main policy packages are briefly highlighted in this section of the article. The National Housing Policy launched in 1991 had as its ultimate goal, ensuring that all Nigerians owned or had access to decent housing accommodation at affordable cost by the year 2000 AD. The main objective of the policy was to make the private sector the main vehicle for the organization and delivery of housing products and services (Yakubu 2004).

Towards the achievement of the goal of the policy, a two-tier institutional financial structure, with Primary Mortgage Institutions (PMIs) as primary lenders and Federal Mortgage Bank of Nigeria (FMBN), as the apex institution with a supervisory role over a network of the PMIs was established. The FMBN later ceded the supervisory function over PMIs to the Central Bank of Nigeria (CBN) in 1997 (Yakubu 2004). The FMBN as deconsolidated by Decree No. 82 of 1993 was empowered, among other functions, to collect, manage and administer contributions to the National Housing Fund (N.H.F) from registered individuals and companies. The FMBN is, however, a wholesale mortgage institution and only disburses the proceeds of the N.H.F through PMIs licensed to do so. Prospective borrowers who must be contributors to the fund thus make application to the PMIs who in turn

resort to the NHF through the FMBN. Funds on lent by the PMIs must be underwritten by them while they must be participants in the loan making to the tune of 20 percent. Under the programme, workers earning above ₦3,000 per annum, are compelled to save 2.5 percent of their monthly income into the NHF as contributions. Commercial as well as Merchant Banks were expected to offer to FMBN 10 per cent of its non-life funds and 40 percent of its life funds in real property development out of which not less than 50 per cent must be paid to the FMBN.

The recognition of the growing housing problems in both the rural and urban areas of Nigeria and the acceptance of the failure of the expired 1991 National Housing Policy prompted the federal government of Nigeria to set up a 15- Man Committee to review existing housing policy and articulate the New National Housing Policy (NNHP) of 2002. The 2002 NNHP has as its primary goal of ensuring that all Nigerians own or have access to decent, safe and sanitary housing accommodation at affordable cost with secure tenure through private initiative, that is Real Estate Developers on the basis of mortgage financing.

The most significant innovations or change is the transition from government-built to privately developed housing (Mabogunje 2003). As a consequence, many of the estates built in the 1950s and 1960s are now being sold to private individuals and organizations through competitive bidding. In sum, there is disengagement of public sector in housing provision to that of private. Another major innovation introduced by the NNHP is the emergence of Real Estate Developers Association of Nigeria whose formation was initiated by the Presidential Technical Committee on Housing and Urban Development. Beside the above, the new NNHP introduced a range of measures to ensure easier accessibility to mortgage loans by contributors to NHF, PMIs and Real Estate Developers

Under the new policy, amortization period for NHF loan repayment has been increased from 25 to 30 years, while the loan repayment period for developers is 24 months. Interest rates charged on NHF loans to PMIs has also been brought down to 4 percent from 5 percent while loan lending rates to contributors is now reduced to 6 percent from the previous 9 percent it used to attract in the 1991 housing policy. The policy permits a graduated withdrawal of contributors

who may not obtain loan under the scheme. Such contributors may withdraw 30 percent of contributions after 10 years of contribution; 50 percent after 15 years; 70 percent after 20 years and the balance at 60 years of age. The policy also makes contribution to the scheme optional for persons earning less than the national minimum wage. The reason for this is that such a person is not likely to be able to bear the burden of loan (Yakubu 2004)

In addition to the above, and in recognition of the acute shortage of residential accommodation in some major cities in the country such as Lagos and Abuja, and in order to facilitate actualization of the policy, the federal government introduced some intervention measures commencing with a pilot project that involve the construction of new forty thousand (40,000) housing units per annum nationwide with at least 1,000 units in each state of the federation, 1,500 units in Kano and River states, 2,000 units in Lagos State and 3,000 units in Abuja.

THE STUDY AREA

Akure is a traditional Nigeria city and like other traditional Yoruba towns in the country, it existed long before the advent of British colonial rule in Nigeria. The city is located within Ondo State in the south-western part of Nigeria (see Fig. 1). It lies approximately on latitude $70^{\circ}15'$ North of the Equator and longitude $50^{\circ}15'$ East of the Greenwich Meridian. Akure is a medium-sized urban centre and became the provincial headquarter of Ondo province in 1939. It also became the capital city of Ondo State and a Local Government headquarters in 1976 (Fig. 1a). Consequently, there was heterogeneous massing of people and activities in the city (M.W and H, 1980). The city's morphology has changed over time to assume its present status with its attendant housing problems, as experienced in similar medium sized urban centres in Nigeria. Akure is located approximately 700 kilometers South West of Abuja, the Federal Capital of Nigeria and about 350 kilometers to Lagos the former capital of Nigeria. It is located within the tropical rain forest region of Nigeria where rainfall is high through the year. The increased relative political influence of Akure as a state capital since 1976 has greatly promoted its rapid growth and increased socio-economic activities. The

population of the city grew from 38,852 in 1952 to 71,106 in 1963. Its population was estimated to be 144,544 in 1987, 148,880 in 1988, 153,347 in 1989 and 157,947 in 1990 (Ondo State of Nigeria 1990). The 1991 national population census however, put the population of Akure at 239,124 and its estimated population in 1996 was 269,207 (NPC 1996). At present the city is estimated to have over 385,000 people.

DATA AND METHODS

The scope of this article requires a comprehensive data set containing variables on the economic, social and demographic variables of households as well as indicators of housing characteristics including costs, rents, size and quality.

The basic data set utilized in this paper was therefore collected using a structured questionnaire administered to selected residents of Akure between July and August 2004. Systematic sampling technique was used to select buildings at intervals of every twentieth building in the nine wards into which the city was stratified. In all, a total of 1,266 questionnaires were administered on households' head in the city. Data were collected by face-to-face interview. In addition, other relevant materials and data were sourced from published sources such as the report of the survey of housing units in selected urban towns in Ondo State by Ondo State Ministry of Finance and Economic Planning, Akure, journal articles, newspaper, textbooks and internet among others. Appropriate statistical techniques including frequency tables and percentages were used to explain the results of the study. The Chi-square test of independence was used to ascertain the association between monthly income and rents paid on housing by respondents of the study area.

RESULTS AND DISCUSSION

The issues of affordable housing, housing quality and equity in terms of access to housing by all social groups in society were identified earlier in the conceptual framework as germane to sustainable development of the built environment. In the next section, efforts are made to examine them using a data obtained from the study of Akure.

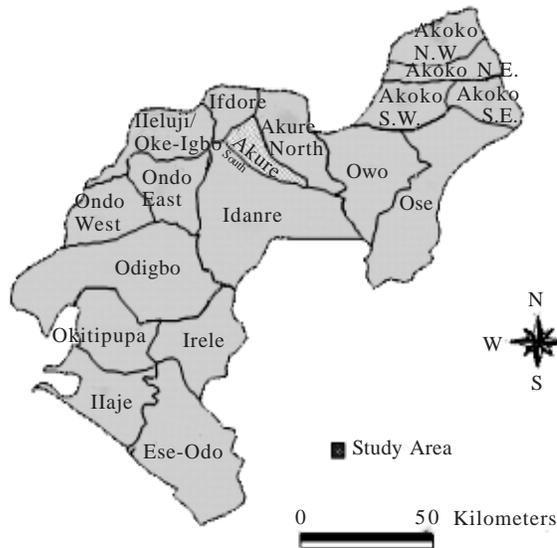


Fig. 1. Map of Ondo State showing the study area

a. Householders Income in Akure

Table 1 depicts the pattern of the income structure of the respondents as obtained from the field investigation. Analysis of Table 1 shows that a high proportion of the respondents (75%) earn below ₦15,000 monthly. In other words, majority of respondents (75.6%) can be classified as low-income earners, while about 2 percent can be classified as middle-income earners. The remaining householders (6.4 percentage of the sampled population) fall under the high-income group. This result shows that majority of householders or residents of the study area are low and medium income earners. The implication is that they will not be able to pay high rents or build their own housing and equally be able to meet other necessities of life when faced with the problem of high rents.

b. Housing Cost (Rent) in Akure

The rent paid on housing unit occupied or equivalent if owner occupied is the cost of housing in the study area. Table 2 shows the monthly rent paid by respondents on housing units occupied by them. Analysis of the table shows that the highest number of respondents pays between ₦500 and ₦1,000 on housing. This group accounted for 36.7 per cent of the sampled population. Those that paid between ₦1,000 and ₦2,000



Fig. 1a. Map of Nigeria showing Ondo State

come next (21%). Others are those that pay below ₦500, (19.7%); ₦5,000 to ₦10,000 (5.6%). A very small proportion of the respondents (0.7%) pay above ₦10,000 monthly for their housing. Investigation shows that apart from paying for rents, householders also pay other charges like electricity bills, water, sanitation and in some areas, night guard, cost of cleaning common areas, and refuse disposal bills. All these add up (plus rents) to the total housing cost to householders in the city.

c. Housing Affordability

Beside the examination of the income profile of householders and monthly rents on housing units occupied by the householders in Akure, the percentages of monthly income expended on housing units occupied by them was also examined to ascertain their affordability and the challenges it poses to the environment. Table 3 shows the percentage income of householders spent on housing. A closer examination of the Table shows that 18.58 percent of the sampled respondents spent less than 20 percent of their monthly income on housing. 25.04 percent of householders spent between 20 and 30 percent of their monthly incomes on housing, while the majority (36.98 per cent) spent between 30 and 60 percent. In addition 17.67 percent of householders spent between 60 and 90 percent of their

Table 1: Income profile of households' heads in Akure

Income (Naira)	Frequency	Percent	Cumulative percent
Below 6,000	325	29.6	29.6
6001 - 10000	247	22.5	52.1
10001 - 15000	258	23.5	75.6
15001 - 20000	122	11.1	86.7
20001 - 25000	61	5.6	92.3
25001 - 30000	34	3.1	95.4
30001 - 35000	10	.9	96.3
35001 - 40000	17	1.5	97.8
Above 40000	24	2.2	100.0
Total	1098	100.0	

Source: Field Survey 2004

Table 2: Monthly rents on housing units by householders in Akure

Monthly rent (₦)	Frequency	Percentage	Cumulative percentage
Below 500	138	19.7	19.7
501-1000	257	36.7	56.4
1001-2000	147	21.0	77.4
2001-5000	114	16.3	93.7
5001-10000	39	5.6	99.3
Above 10000	5	0.7	100
Total	700	100.0	

Source: Field Survey 2004

monthly income on housing. The remaining 1.73 percent spent above 90 percent on housing. Applying the 25 to 30 percent rule of thumb, then about 57 percent of the residents of the city have housing affordability problem. This is because they pay above the 30 percent maximum benchmark on housing units occupied by them. This is, however, lower than that of other major cities in Nigeria where various random surveys indicate that affordability is a major problems of housing demand among about 85 percent of urban households in Nigeria (Bichi 2003). In Lagos, Nigeria, it has been reported that average monthly rents is about 60 percent of the national Minimum wage as against the 20 percent set by the United Nations and National Policy on Housing (FRN 1997 and Fawehinmi 2000).

d. Number of Rooms Occupied by Respondents

The number of rooms occupied was used to measure the size of housing unit occupied by respondents in the study area. The result is as depicted in Table 4. Analysis of Table 4 shows that majority of respondents (29.8 percent) are occupying a 2-room apartment. 3-room and 1-

Table 3: Percentage of income spent on housing in Akure

S. No.	Income spent (%)	Frequency	Percent
1	Below 20	204	18.58
2	20-30	275	25.04
3	30-60	406	36.98
4	60-90	194	17.67
5	Above 90	19	1.73
	Total	1098	100.00

Source: Field Survey 2004

room apartments were occupied by 23.9% and 23.25 percent of the respondents respectively. 5. 19 percent of the respondents are occupying five rooms. While householders occupying six rooms and above recorded the least number of respondents (1.16 percent). The implication of this result when compared with the findings of Aribigbola (2005) that majority of householders prefer flat apart and previous studies that revealed household size in Nigeria to be six, then the current housing of people in the area is inadequate to meet their needs.

Table 4: Number of rooms occupied by respondents

No. of rooms	Frequency	Percentage	Cumulative %
One room	270	24.19	24.19
Two rooms	346	31.00	55.19
Three rooms	278	24.91	80.10
Four rooms	151	13.53	93.63
Five rooms	58	5.19	98.82
Six rooms and above	13	1.16	100.00
Total	1116	100.00	

Source: Field Survey 2004

e. Condition of Housing Units in Akure

The overall physical soundness of the sampled dwellings was assessed. The assessment consists of buildings which were considered to be physically sound and need no repairs, to those that needed minor or major repairs to make them sound as well those which were regarded as poor/dilapidated. The last category was reserved for units which were so defective that the cost of putting them back into service would be greater than the cost of replacing such units altogether (Wahab et al. 1990). Table 5 shows that majority (60%) of buildings investigated were in good physical condition. The fair buildings ac-

counted for 34.2 percent while the poor/bad ones only accounted for 5.8 percent of the sampled buildings.

Table 5: Building conditions in the study area

<i>Condition of building</i>	<i>Total</i>	<i>Percentage</i>
Good	585	60.0
Fair	333	34.2
Poor	57	5.8
Total	975	100.0

Source: Field Survey 2004

However, since the physical attributes of housing is just one of the variables or bundle of services that made up housing, other parameters of housing condition such as water supply, availability and type of toilet facilities and refuse disposal system among others were also examined. Table 6 shows the major sources of water supply in Akure. Analysis of the Table shows that majority of residents of the city depend on wells for their water supply. This constitutes 65.7 percent of all residents in all the houses in Akure. This is followed by those categorized as others (19.5 percent) which include springs, brooks, rain, streams and in some cases public tap. Boreholes and pipe-borne water accounted for 6.0 and 8.3 percents of water supply in Akure respectively. The implication of this is that majority of residents of the city depends on water supply from unsafe sources thereby lowering the quality of housing in the city.

Table 6: Source of water supply in Akure

<i>S. No.</i>	<i>Source of water supply</i>	<i>No. of houses</i>	<i>%</i>
1	Pipe Borne Water	2,391	8.3
2	Boreholes	1,733	6.0
3	Wells	18,959	65.7
4	None	5,637	19.5
5	Others	126	0.4

Source: Ondo State of Nigeria 2003

On toilet facilities, Table 7 shows that the highest percentage (41.31) of buildings in Akure is provided with pit latrine. This is closely followed by water closet (35.38 percent). The Table also shows that 23.25 percent of all buildings in Akure lack any form of toilet facilities. The fact that 35.38 percent of buildings in the city and another 23.25 percent of all buildings do not have any form of toilet facilities indicate that majority of

buildings in the city is substandard and that many residents of the city will defecate any where and cause environmental problems.

Table 7: Type of toilet facilities in Akure

<i>S. No.</i>	<i>Type of toilet</i>	<i>No of houses</i>	<i>%</i>
1	Water closet	10,204	35.38
2	Pit latrine	11,914	41.31
3	None	6,707	23.25
4	Others	21	0.07
Total		28,846	100.00

Source: Ondo State of Nigeria 2003

Another indicator of housing quality is refuse collection and disposal system. On method of refuse collection and disposal in the city, the Waste Management Authority is responsible for collection and disposal of waste from 31.2 percent of all the buildings in the city (see Table 8).55.1 and 11.8 percents of waste generated in the city are disposed off by dumping them on dump site and by burning respectively. These methods are not only unhealthy but destroy and pollute the environment.

Table 8: Solid waste disposal method in Akure

<i>S. No.</i>	<i>Method of disposal</i>	<i>No. of houses</i>	<i>%</i>
1	Waste management van/Point	9,013	31.2
2	Dump site	15,903	55.1
3	Burning/Incineration	3,400	11.8
4	Others	531	1.8
Total		28,846	100.0

Source: Ondo State of Nigeria 2003

Rent Profile of Respondents by Income Category in Akure

In order to determine the relationship between income and rents paid by householder on housing unit occupied by them, the income level of householders was cross-tabulated with rents as depicted in Table 9. From Table 9, the highest proportion of the respondents (30.5%) earn below N 6,000 monthly. Out of this figure 52 (7.9%) pay below N500 on their housing while majority pays between N501 and N1000 monthly on their housing. Another 25 (3.8%) pay between N1,000 and N 2,000 monthly on rent while the rest 12 (1.8%) pays between N 2,000 and N 5,000 monthly on rent. The same table also shows that an insig-

nificant proportion of the respondent (0.6%) pays above N 10,000 as rent monthly. Respondents in this category are found in the income levels of N 35,001 and N 40,000 monthly and N 10,001 and N 20,000 respectively. On further inquiry on the latter group, one of them is living in government quarters and the other is staying in an inherited house therefore they are actually not paying economic rents.

To further ascertain the relationship between income of respondents and rents paid on housing unit occupied, the chi-square methods was utilized. A Chi-square calculation of the relationship between the level of income of the respondents and monthly rents on housing revealed a significant relationship between monthly income and rents paid on housing by householders as indicated by the Chi-square computed values of 543.032 at $\alpha = 0.05$. This therefore, suggests that there is a significant relationship between level of income of respondents and the amount of rents paid on dwelling unit occupied. In other words, as income increases, the amount paid on rents also increases.

Sustainability of Housing in Akure

The conceptual framework discussed earlier indicated in housing provision, sustainable development explicitly relates to discussion of affordability and housing quality and incorporates issues of social equity and justice (UN 1996). Since these concepts are germane to sustainable development of housing, they are therefore, utilized to examine the sustainability of housing in Akure, Ondo State.

Housing Affordability: The literature in-

dicates that affordable housing is that which costs the occupant household (householder) not more than 30 percent of their annual income. However, since the Nigerian housing policy does not want any Nigerian to spend more than 20 percent of his/ her income on housing expenditure, this is thus used as the basis for determining affordability of housing in the city. The analysis above indicates that over 30 percent of residents of Akure pay over 30 percent of their income on housing and majority lacks basic facilities. In addition, an examination of the minimum wage in Ondo State shows that the least paid public sector worker earns #78,000 per annum (#6,500 per month) (It is less than this amount in most of the private establishments in the state). 20 percent of this #15,600; 25 percent is #19,500 and 30 percent is #23,400. This level of income is inadequate to rent and furnish adequate and standard housing accommodation in the city as reflected in Table 3. Similarly, this will be inadequate to meet the cost of loan repayment for this category of contributors to the National Housing Fund scheme established under the National Housing Policy as the principal means of financing housing in the country. This corroborated the argument of Agbola (2003) that the salary and income profile of Nigerians may not be enough to be partakers of the houses provided by private investors. The Chairman of the technical committee on the implementation of the policy argued that the policy is targeted at those on grade levels 13 and above. Focusing a national policy on a segment of the public sector workers excludes the others and in this situation, these other segments are in the majority. In addition, focusing the policy on contributors to

Table 9: Level of respondents' monthly rents by income in Akure

Level of monthly income (₦)	Monthly rent (₦)						Total
	Below 500	501-1000	1001-2000	2001-5000	5001-10000	Above 10000	
Below 6000	52	113	25	12	-	-	202.0(30.5)
6001 - 10000	34.0	63	52	16	7	-	172.0(26.0)
10001 - 15000	24	38	34	43	6	2	147.0(22.2)
15001 - 20000	14	8	12	26	8	-	68.0(10.3)
20001 - 25000	2	7	14	6	6	-	38.0(5.7)
25001 - 30000	4	5	6	1	6	-	22.0(3.3)
30001 - 35000	1	2	-	4	-	-	7.0(1.1)
35001 - 40000	-	-	-	-	-	2	2.0(0.3)
Above 40000	-	-	-	2	2	-	4.0(0.6)
Total	131.0(19.8)	236(35.6)	143.0(21.6)	110.0(16.6)	38.0(5.7)	4.0(0.6)	662.0(100%)

Source: Field Survey 2004

the scheme alone that are mainly public sector workers excludes majority of Nigerians who are outside paid employment.

Housing Quality: Like affordability, sustainable housing delivery is expected to improve and enhance housing quality. The analysis undertaken above and result of other urban housing study shows that the quality of dwelling units is severely inadequate compared to her population. This is manifested in growing levels of overcrowding, increasing and deteriorating environment (Bello and Bello 2006). In 1976 and 1979, the average number of persons per room in urban areas was estimated to be 2.34 and 2.38 respectively, the percentage of urban household occupying single room was estimated to be 85.7 percent in 1980/81 rising to 89.3 percent in 1984 (FOS 1985). In a recent study of six selected cities in Nigeria, the proportion of households staying in single rooms ranges from 39.8 percent in Yola to 49.5 percent in Port Harcourt (Olokesusi et al. (2003). In an attempt to solve the problem of housing quality the 1991 policy specified government desires to encourage and promote the use of local building materials to reduce cost of housing. This seems to be a good idea, but the problem with this is that the policy did not state how housing quality would be improved and enhanced under the policy. This is important because the 1991 housing policy indicated that about 3 million housing units would need to be upgraded. The 2002 housing policy did not specify how to achieve this. Yet for sustainable housing delivery, the existing stock must be maintained and improved, otherwise it will deteriorate due to usage and the effects of climatic elements thereby reducing available stock of housing.

Equity and Social Justice in Access to Housing: For a housing policy to be sustainable, it must take on board the interest of all householders. In other words, all citizens must be provided for or have equal access. However, as explained above, under the policy, only contributors to the scheme can benefit from its loans facility. Others who are not contributors on the account of not being a public sector worker and being low-income earners are excluded from the mass housing proposed under the policy.

Implications for Sustainable Development of the Built Environment

The results of this study indicate serious housing affordability problems in the study area.

It also revealed that the majority of householders in the city lack basic facilities that make housing conducive and by extension promote the development of the built environment. This paper also revealed that the general movement towards a market oriented real estate sector with inflation, economic recession, escalating building costs and declining house-building activity has a lot of implications for sustainable housing delivery and the built environment in Nigeria. In the first instance, the analyses above indicate that the level of income profile of majority of Nigerian cannot support mortgage financing as proposed by the policy. Added to this is the absence of PMIs in most of the states in Nigeria including Ondo State where Akure is located. The above analysis and findings show that the NNHP may not achieve its desired goal of ensuring that all Nigerians own or have access to decent, safe and sanitary housing accommodation at affordable cost with secure tenure. It also exposes the fact that the policy does to fully embrace sustainable housing principles of affordability, community participation and equity and social justice that are the hallmark of sustainable development. There is, therefore, an urgent need to make housing available at affordable cost. The present tendency on relying on market forces of demand and supply and leaving housing to private initiatives will not solve the problems of housing shortages and quality in the country. Government efforts should be directed at social housing. Incorporating such a concept to housing delivery in Nigeria will force all the three tiers of government to develop housing for special people such as the disabled persons, aged people, single mothers and the very poor people who could not meet their own housing needs.

CONCLUSION

The growing problems of affordability in Nigeria over the last two decades has brought into focus the need for housing researchers and decision makers to develop a better understanding of the structure, operation and dynamics of urban housing market. The paper, therefore, examined the issue of affordable housing and found that a significant proportion of householders in the city are facing housing affordability problem particularly with reference to quality of housing to the quality of the built environment. The paper demonstrated serious housing affordability with particular reference to quality and accessi-

bility to good quality housing. The paper reasoned and suggested that if affordability in housing is to be properly and adequately addressed in cities of developing countries, there is need for policy initiatives and interventions to assist the low income earners. The present approach or policy that over-emphasized unfettered market forces in determining housing consumption will not achieve the desired results of making all Nigerians accessible to decent, safe and affordable housing. There is the need to incorporate social housing into developing world housing and urban development policy.

REFERENCES

- Agbola T, Alabi M 2000. Sustainable Housing Delivery: Lesson from International Experience. *A Paper Presented at the National Workshop on Sustainable Housing Delivery in Nigeria: Challenges for Public/Partnership*, Sheraton Hotel, Abuja, 31st July – 1st August, 2000.
- Agbola T 2003. Assessing Private Sector Participation in Housing Delivery in Nigeria. *A Paper Presented at a One Day Continuing Professional Development Workshop of the Ogun State Chapter of the Nigerian Institution of Estate Surveyors and Valuers*, Held at the Gateway Hotel, Abeokuta on the 28th of October, 2003.
- Akintoye A 2006. Public partnerships for sustainable development of infrastructure in developing countries. In: IA Okewole, A Ajayi, A Daramola, K Odusanmi, O Ogunba (Eds.): *The Built Environment: Innovation Policy and Sustainable Development*. Ota, Ogun State, Nigeria: Covenant University, pp. 433 – 442.
- Andrews ON 1998. *Trends in the Supply of Affordable Housing*. Meeting America's Housing Needs (MAHD): A Habitat 11 Follow-up Project.
- Aribigbola A 2000. Conceptual issues in housing and housing provision in Nigeria. In: OB Akinbami, AS Fawehinmi, DR Ogunsemi, A Olotual (Eds.): *Effective Housing in the 21st Century Nigeria*. Akure: The Environmental Forum, Federal University of Technology, pp. 1-8.
- Australian Housing and Research Institute (AHURI) 2004. Measuring housing affordability. *AHURI Research and Policy Bulletin*, Issue 45.
- Bichi KM 2002. Housing the Nigerian Population: Problems and Prospect. *A Paper Printed to Senior Executive Course No. 24* Participants at the Nigerian Institute of Policy and Strategic Studies, Kuru, Jos, Nigeria.
- Chartered Institute of Housing 1992. *Rent Levels, Rent Structures and Affordability: A Guide for Local Authorities and Housing Associations*. Chartered Institute of Housing, Coventry.
- Devar D 1979. Towards a synoptic framework for the development of low income urban housing. In: Oktay Ural (Ed.): *Housing: Planning, Financing, Construction*. Vol.2. New York Pergamon Press, pp. 28- 42
- Fawehinmi SA 2000. Government search for affordable rental housing in Nigeria: The mis-step of rent controls. In: OB Akinbami, AS Fawehinmi, DR Ogunsemi, A Olotual (Eds.): *Effective Housing in the 21st Century Nigeria*. Akure: The Environmental Forum, Federal University of Technology, pp. 40 – 45.
- Federal Republic of Nigeria 2002. *Government White Paper on the Report of the Presidential Committee on Urban Development and Housing*, Abuja, Nigeria: Federal Republic of Nigeria
- Federal Ministry of Housing and Urban Development (FMH&UD) 2003. *Sustainable Human Settlements Development: National Urban Strategies*. Petral Digital Press, Abuja.
- Federal Mortgage Bank of Nigeria (FMBN) 1998. Five Years of the National Housing Fund NHF (1992-1997). *A Report on the Implementation of the Scheme over the Period since its Establishment*. Abuja FMBN
- FMB News 1998. #25 Million Approved for 63 NHF Contributors. FMB News. An in-house *Journal of FMB*, 1(1): Abuja. P. 25
- Mabogunje AL 2003. The New Mass Housing and Urban Development Policy: Social and Economic Impact. *Being Text of a Public Service Lecture delivered to the Top Echelons of the Federal Civil Service on September 30, 2003*, Abuja, Nigeria.
- MacLennan D, Williams R (Eds.) 1990. *Affordable Housing in Britain and America*. New York: Joseph Rowntree Foundation.
- Malpass P 1993. Housing tenure and affordability: The British disease. In: G Hallet (Ed.): *The New Housing Shortage: Housing Affordability in Europe and USA*. London, Routledge, pp. 87- 88.
- Malpezzi S, Mayo S, Gross D 1985. Housing Demand in Developing Countries. *World Bank Staff Working Paper, No 733*. Washington D. C.: The World Bank.
- National Population Commission (NPC) 1996. *Census '91 Final Results*. Ondo State.
- Okewole IA, Aribigbola A 2006. Innovations and sustainability in housing policy conception and implementation in Nigeria. In: IA Okewole, A Ajayi, A Daramola, K Odusanmi, O Ogunba (Eds.): *The Built Environment: Innovation Policy and Sustainable Development*. Ota, Ogun State, Nigeria: Covenant University, pp. 414 – 420.
- Olokesusi F, Agunbiade B, Ogbulozobe JE, Adeagbo A 2003. Housing perspective of poverty in Nigeria. In: Ajakaiye Olu, S Olomola (Eds.): *Poverty in Nigeria: A Multidimensional Perspective*. Ibadan: NISER, pp. 287 – 344.
- Ondo State Government 1990. *Digest of Demographic Statistics of Ondo State*. Ministry of Finance, Budget and Planning, Akure.
- Ondo State 2003. *Report on the Survey of Housing Units in Selected Urban Towns in Ondo State*. Akure, Ondo State, Nigeria: Ministry of Finance and Economic Planning.
- United Nations 1996. *Strategies to Implement Human Settlement Policies on Urban Renewal and Housing Modernization*. Geneva Economic Commission for Europe.
- Yakubu T 2004. *Federal Mortgage Bank of Nigeria in Perspective, Homes and Property Guide*. Vol.1 No.2. Isolo, Lagos: B Gold Communications, pp. 36- 39.
- World Commission on Environment and Development 1987. *Our Common Future*. Oxford: Oxford University Press.