

HOUSING THE URBAN POOR IN NIGERIA THROUGH LOW-COST HOUSING SCHEMES

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ABSTRACT: *This paper discusses a strategy and functional approach for the provision of low-cost housing for the urban poor in Nigeria. It notes the rapid rate of urbanization occurring in Nigeria, which is due mainly to massive rural-urban drift, and explosive urban population growth. A major consequence of this occurrence has been the deterioration of housing situation in the urban centres, manifested in severe shortages of housing units, and overcrowding in poor quality buildings that are situated in degraded environment. The urban poor constitute the vast majority of urban dwellers and they are in a disadvantaged economic position to build for themselves and are generally unable to make effective demand of existing housing. Housing this urban population is a major thrust of sustainable urban development. This paper asserts that a strategy for achieving the goal of adequately housing the urban poor is extensive mass housing development employing indigenous materials and methods, and involving the target population from policy making through programme execution. This is a bottom-up, participatory approach that will ensure the sustainability of the housing development. A case study, State Housing Estate, Oke-Ila, Ado-Ekiti, Nigeria in which indigenous materials were used in some buildings, was examined in the paper. The paper also looks at experiments with indigenous materials in the construction of model low-cost houses, and these include the Pampomani Housing Estate in Maiduguri, Borno state, Nigeria, and Yakatsari resettlement scheme in Kano, Nigeria. The paper examines earth architecture as a relevant indigenous technology and recommends its use in housing the teeming poor majority in Nigerian urban centres.*

KEYWORDS: Approach, Housing, Poor, Strategies, Urbanization.

INTRODUCTION

Housing shortages have been recorded in both rural and urban communities of all African countries with the latter being more critical as asserted by Arayela and Taiwo (2010). Housing shortages are a worldwide phenomenon though, in most developing and some developed countries. It was against this background that the delegates at the 1976 United Nations Conference on Human Settlements (Habitat) in Vancouver, Canada, demanded a completely new and radical approach to housing policy. The policy was expected to have a strong political and financial commitment by governments especially in helping the poorest citizens of the world.

The rapid rate of urbanization in Nigeria is noted to account for the depreciating quality of housing in the country's urban centres. The urban centres suffer deterioration of infrastructure and urban services (Oladapo and Olotuah, 2007). The rate of provision of new housing stock has lagged severely behind the rate of population growth. The rapid increase in the population of the urban centres has resulted in an increase in the cost of living, because of higher demand on urban commodities that are becoming scarce in supply by the day. Thus, there is a dearth of , and high cost of urban land and high cost of housing that is often in short supply and out of the economic reach of the majority of urban households.

The urban poor constitute the vast majority of urban dwellers and they are in a disadvantaged economic position to build for themselves and are generally unable to make effective demand of existing housing. Housing this urban population is a major thrust of sustainable urban development. Sustainable development can be described as that which meets the needs of the present, without compromising the ability of future generations to meet their own needs. This definition may not be immediately applicable to the urban centres in Nigeria against the background of the level of housing provision for the urban poor. But it is a pointer that concerned efforts should be made by various governments to adopt policies for achieving the goal of adequately housing the urban poor. This paper focuses attention on a strategy for achieving the goal of adequately housing the urban poor which is extensive mass housing development employing indigenous materials and methods, and involving the target population from policy making through programme execution. This approach involves the participation of the grassroots user population and will ensure the sustainability of the housing development.

Housing Situation in Nigeria

As in most Less Developed Countries (L.D.C.s), the situation of housing in Nigeria is deplorable. Nigeria is a rapidly urbanizing nation in which there is the incidence of massive rural-urban drift and rapid increase in the points of concentration in the urban centres. The proportion of the Nigerian population living in urban centres has increased phenomenally over the years. While only 7% of Nigerians lived in urban centres in the 1930s, and 10% in 1950, by 1970, 1980 and 1990, 20%, 27% and 35% lived in the cities respectively (Okupe, 2002). Over 40% of Nigerians now live in urban centres of varying sizes.

The rapid rate of urbanization in Nigeria is however not matched by a corresponding development in technological, industrial and economic growth which is why there is enormous urban housing poverty in the country. The result of this is the rapid deterioration of housing in the urban centres and phenomenal increase in quantitative housing needs arising from shortages in housing units. The rate of expansion of public infrastructure and services is low compared to the increase in the population of the urban centres which results in great strain on the facilities and near collapse in many places. Increase in the quantity of dwelling units too does not match the population explosion resulting in severe overcrowding in existing units, the growth of squatter settlements in the cities, and the emergence of slums. Olotuah (2010) affirmed that the housing environments in the urban centres are severely degraded owing to poor public services and the decay of the building structures themselves. Urban planning hasn't been properly coordinated in the circumstance which has given rise to illegal structures sprouting up in the cities. This has resulted in a situation in which 60% of Nigerians can be said to be 'houseless persons' (FGN, 2004).

Research has confirmed the profound inadequacy in the housing circumstances of Nigerians, in particular the low-income population (Olotuah and Aiyetan, 2006). The housing circumstances of low-income earners, who incidentally constitute the vast majority of the population in Nigeria, have not shown any significant improvement over the years. Research has shown that an estimated 2.3 million urban dwelling units are substandard, only 33% of houses can be considered to be physically sound, and 44% and 19% require minor and major repairs respectively to bring them to normative and structural quality. Sanitary facilities in most urban dwellings and public services (especially water and electricity supply) are grossly inadequate. As asserted by Kamete (2006) urban facilities, especially housing has failed the growing demand of the rural poor.

Earth Architecture and the Nigerian Experience

Building earth is the indigenous material for house construction in Nigeria (Olotuah, 2002). Historically building earth has been the most widely used and known material in construction (Heathcote and Moor, 2004; Al-Sakkaf, 2009). It has been used for centuries in Nigeria and is, however, being developed upon to improve its strength and durability while ensuring that it is still affordable by the general populace. It has been proved to be cost effective in housing construction in comparison with conventional building materials such as sandcrete blocks and concrete. The earth material with the widest extended use is clay. Clay materials are soil parts of less than 0.002mm in size. Clay is found in large quantities in Nigeria. It is a lateritic soil, reddish and viscous in nature. It is found in a mixture of other soil materials such as sand, silt and gravel. Various types of building earth abound therefore depending on the composition of the soil.

Good quality building earth needs to be plastic, coherent and cementatous. While sand gives earth strength, clay is the binding material providing plasticity and cohesion of the mixture. Silt, on the other hand causes poor drainage and actually impedes proper functioning of building earth. Silt is therefore undesirable in earth required for construction. It is however difficult to find a silt-less soil since its particle size lies between that of sand and clay. The choice of good quality building earth lies in selection of earth with ideal proportion of clay and sand, with as low silt content as possible. A good type of building earth with low silt content and which is mainly a mixture of sand and clay in good proportion is mud. Mud is an extremely versatile and strong material with which practically all basic shapes can be expressed with the possibilities of a wide variety of roofing solutions. Interesting architectural forms exhibiting technical possibilities and aesthetics of mud as a building material include the mousgum shell houses and the mud vaults of the Hausas of the Northern Nigeria.

Mud is particularly suitable for building in the tropics because of its thermal properties. It absorbs heat slowly in the afternoon thus providing cool interiors on hot days, while it dissipates the heat equally slowly in the night resulting in warm interiors in cold nights. This is the major functional merit in its favour.

Houses of earthen walls and roofs are found dominantly in villages and towns, while a few can be found in the suburbs of cities. In Nigerian traditional architecture earth construction takes three basic forms, which are swish puddling is mainly used in construction in the southern states where argillaceous clay, which is very grainy, is most common. Sun-dried mud bricks are used for construction in the north. Additives such as straw, hay and cow dung are mixed with the material to ensure that it is sufficiently cohesive. The third form is the use of fired or baked clay bricks. Improved forms of earthen materials are used extensively in urban areas, and these include stabilized blocks from laterite soils. The properties of building earth can be substantially improved by the addition of certain materials such as cement, lime and bitumen. This is earth stabilization which serves to improve the properties of the materials for building purpose and eliminate its deficiencies (Struebur et al, 2004). The use of these materials has arisen out of extensive applied research and development notably by the Nigerian Building and Road Research Institute (NBRI). Since clay is found in a mixture of other materials, earth stabilization is directed at the different components of the earth in dependence on the stabilizer used. Zami and Lee (2011) affirmed that stabilized earth is comparatively cheaper than conventional building material for low-cost housing.

Cement is the most common material for earth stabilization. It improves the cohesive nature of the soil. Heathcote and Moor (2004) have shown that the durability of earth blocks can be improved

upon by stabilizing with cement from 5 to 12% with 8% being generally suitable for most soils. Research by NBRRI has shown that addition of 4% cement to earth can result in quality blocks if produced using a machine operating with not less than 3 N/mm² compaction pressure. Agbede and Joel (2002) have shown that the use of cement stabilized bricks made from 45% sand and 5% cement resulted in a saving of 30 to 47%. Lime is another very common material for stabilization, the addition of which improves the workability of soils. Lime stabilization reduces the maximum dry density of clay soils while it increases their optimum moisture content at a given compactive energy. The addition of bitumen to building earth increases the pressure resistance and water-proofing properties of earthen walls. The low heat conductivity of the blocks is further enhanced and extreme internal dryness is conferred on the blocks.

Mass Housing Development

Since the late 1960s, the intervention of government in housing in Nigeria has covered provision of staff quarters, staff housing loans to government workers, direct house construction in public schemes, and site-and-services schemes. Direct house construction emerged as the leading strategy of public sector intervention in the 1970s and the early 1980s in 1973, government proposed the construction of 15,000 housing units at different locations throughout Nigeria (FGN, 2004). The Federal Housing Authority, which was established that year, had the responsibility to oversee the programme. During the second civilian government, 1979-1983, government planned to build 40,000 houses annually in Nigeria, for its 4-year tenure. In each of the then nineteen states and Abuja, the Federal Capital Territory, 2000 units were to be constructed annually. This was the first phase of the programme. The programme was largely designed for low-income earners as 80 per cent of the houses were earmarked for them. The 1-bedroom core houses, which could be expanded to accommodate two more rooms, were designed for them. For the other income groups 3-bedroom semi-detached bungalows, 20,000 of which were to be built throughout the federation. The second phase hardly took off in many states of the federation while the percentage of success of the first phase was just 20 (FGN, 2004).

The housing strategy of government changed in 1984 from direct house construction to site-and-schemes. This was in the realization of the failure of past programmes in meeting the housing needs of the Nigerian populace. The Federal Ministry of Works and Housing, which handled the programme, developed 20 estates in 12 states, between 1984 and 1988, in which were 11,393 serviced residential plots.

The decline in the economy of the nation and the seeming inability of government to make a success of direct house construction reinforced in government the idea of being just a facilitator of the enabling environment for housing provision rather than the actual key player. In this connection government has taken the initiative in sensitizing the private sector to be the major financier of housing. It is in this regard that the National Housing Fund (N.H.F.) was established in 1992 to nurture and maintain a stable base for affordable housing finance (FMBN, 1998). The NHF is an offshoot of the National Housing Policy which was launched a year earlier in 1991. The NHF is thus the financial component of strategic initiatives adopted in the policy. Mandatory regular contributions are to be made by every Nigerian earning an income of £12 (₦3,000) or more per year. The Federal Mortgage Bank of Nigeria has the responsibility to collect, manage and administer all contributions to the Fund. The Fund is administered through giving wholesale mortgage loans to Primary Mortgage Institutions (P.M.I.s) for on-lending to individuals (who are

contributors), as long-term loans for housing purposes only. The performance of the NHF has been hampered by the lack of adequate capitalization by government and inadequacy in operational soundness and viability of many of the PMIs.

The quantitative housing needs of the populace, though staggering, have to be met for all Nigerians to have access to adequate housing. The proper roles of the public sector have access to adequate housing. The proper roles of the public sector have to be defined for this not to remain a mirage forever. The public sector will have to take a more definite position in ensuring massive housing development rather than remaining a facilitator or promoter of the enabling environment for housing delivery. This is premised on the fact that:

- i. There is a very high incidence of poverty in the country which makes complete reliance on the private sector as the sole financier of housing unrealistic. The National Housing Fund which is supposed to be the source of housing finance is itself, faced with the difficulty of mobilizing contributions from the informal private sector compromising self-employed workers. The formal private sector has not been forthcoming, either, in its contribution to the Fund as the financial institutions (notably the Commercial Banks and Insurance Companies) have not been participating in the scheme;
- ii. The housing market has distinct peculiarities (for instance its heterogeneous nature, high cost relative to income, high transaction costs) which make it particularly difficult for the private sector to produce a socially optimal output. The private sector, which is essentially profit-oriented, cannot as well ensure an equitable distribution of housing resources. This is inevitable in a country with high unequal income distribution. The poor majority will, thus, be subjected to unending housing poverty in the absence of decisive intervention with respect to direct house construction of low-cost houses;
- iii. Massive housing intervention stimulates the economy of a nation, generating employment opportunities for the building industry and the various components of the housing market. This can only be initiated by the public sector in a nation with a high incidence of general poverty.

Since the urban poor hardly have the wherewithal to provide adequately for themselves, government needs to initiate public housing schemes of low-cost, that will take into consideration the needs of the users (social, protective and physiological). Flexibility must be entrenched into the design of the houses since human needs are essentially dynamic in nature. As housing is only a part of a total demand package such facilities as schools and markets should form a part of the housing programmes.

Because local communities are in the best position to identify their needs, and order their priorities reference need to be made to the perceptions and capabilities of local people for housing programmes not to fail (Olotauh and Bobadoye, 2009). Cultural traditions often inform attitudes towards space, and use and organization of space, and these are often best understood by the local people themselves. At the level of planning and decision-making local participation is indispensable to sustainable massive housing development for the urban-poor, which is the bottom-up approach.

CASE STUDIES

Obasanjo Housing Estate, Ado-Ekiti, Nigeria

The Obasanjo Housing Estate, Ado-Ekiti, Nigeria was conceived by the Federal Government of Nigeria as a part of the Presidential mandate to construct 500 housing units in each state of the federation and the Federal Capital Territory. The president of the country had given the mandate to the Association of Housing Corporation of Nigeria to collaborate with the Nigerian Building and

Road Research Institute (NBRRI) to construct at least 18,500 housing units across the country using local building materials. The Federal Mortgage Bank of Nigeria was to provide the funds required for the exercise. The flagging off ceremony for the construction of the housing estate in Ado-Ekiti took place in April 2005.

The Ekiti State Housing Corporation was responsible for the execution of the project. The buildings were constructed with local building materials (red bricks) using NBRRI fabricated interlocking block-making machine. The housing estate has been completed and the buildings have been allocated mainly to civil servants, especially in the low-income category. In the design of the buildings the Ekiti State Housing Corporation took into consideration the user needs and socio-cultural circumstances of low-income civil servants in the state. Local participation was actively encouraged in the project. Production of building materials of indigenous origin by NBRRI was given logistic and material support by government (see Figure 1).

Yakatsari Resettlement Scheme in Kano, Nigeria and Pampomani Housing Estate, Maiduguri

The Yakatsari resettlement project in which model buildings were constructed with cement-stabilized bricks and fibre-reinforced cement roofing sheets had tremendous cost savings (Olotuah, 2002). The cost of the project was borne by the Kano State Government while NBRRI provided the technical expertise on the building materials technology. In a similar vein, the Borno State Government, through its Housing Corporation collaborated with NBRRI in the construction of 50 units of terraced bungalows in the Pampomani Housing Estate, Maiduguri in 1991 and appreciable savings were also made with the use of alternative building materials.

POLICY IMPLICATIONS AND RECOMMENDATIONS

In sustainable housing people at the grassroots level must be given the opportunity to participate (Olotuah and Aiyetan, 2006). Housing programmes should be based on genuine local participation order to ensure sustainability. Nigeria is a multi-ethnic nation with over 250 tribal groups with visible uniformity and sameness in their various house forms. Despite this each tribal group has created its own unique mode of housing, which is sympathetic to its environment, and mode of life of the people. This is why decisions reached in the top-down approach to propose prototype-housing design for the entire Nigerian population have never really succeeded.

The development of indigenous building materials technology is indispensable in meeting the needs of the urban poor. Research efforts in the development of middle-level technology should be encouraged and funded by government and the research findings should be widely publicized to encourage their usage.

The cost of low-cost houses built by the government in previous programmes was so outrageously high that the poor could not afford them. The affluent in the society ended up acquiring the buildings and in a good number of cases let them out to the poor. In order to achieve adequate housing for the poor, government needs to devise a means to bring the cost of housing within the economic reach of the poor. Accountability must be entrenched in government contracts for the public housing schemes to ensure that the unit costs of the buildings do not end up being unreasonably high.

CONCLUSION

Housing programmes should be based on involvement of the user population from policy making through programme execution in order to ensure sustainability. With due considerations given to the input of the local communities, government should initiate massive housing development programmes to cater for the needs of the urban poor. The development of indigenous building materials technology is indispensable in meeting the needs of the poor. Therefore, the production of building materials of indigenous origin by private investors should be given all necessary support by government. Nigeria is richly blessed with local building materials to develop and sustain housing provision for all, particularly the urban poor through low-cost housing schemes.

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