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**ABSTRACT**

The magnitude of housing need in Nigeria is daily soaring whereas the ability of the populace, in particular low-income government workers, to make effective housing demand has not appreciated over the years. Research has shown that adequate housing is largely out of the economic reach of most workers. The inadequacy in housing experienced by workers is indicative of the depression of the economy. This paper appraises the strategies involved in adequately meeting the housing need of low-income government workers. It focuses attention on an emergent state capital Ado-Ekiti, the capital city of Ekiti State, Nigeria where there is quantitative and qualitative deficiency in housing. It examines the roles of the public and private sectors in housing provision which it asserts are intricately intertwined and complementary. The paper characterizes the relationship between some explanatory variables and an outcome variable of housing provision employing the Categorical Regression Analysis, which it uses to explain strategies pivotal in addressing the housing need of low-income government workers in Ado-Ekiti, Nigeria

**KEYWORDS:** housing, low-income, provision, strategies, workers.

**1. INTRODUCTION**

The Nigerian National Policy on Housing identifies a number of problems militating against the provision of adequate housing in Nigeria, significant amongst which is the paucity of research into the extent and magnitude of housing inadequacy in the country [1]. The consequence of this is that the perception of the problem is often wrong or at best myopic, and thus policies and programmes on housing tend to result from political expediency rather than a rational and informed analysis of the situation [2].

In Less Developed Countries (LDCs) the major housing problem is the shortage of affordable accommodation for the low-income majority, a large proportion of who live in housing at densities and environmental conditions, that constitute an affront to human dignity, and which present a serious hazard to health and safety. Because adequate housing is often priced beyond their economic reach low-income earners have to put up with sub-standard living conditions. They have far less comfortable living conditions than other households [3]. Many low-income households live in overcrowded accommodations often in single rooms in central city rented housing. Other low-income households have either, found rented rooms in squatter settlements on pirated land, or built houses in such settlements [4]. These are people who do not have the resources to obtain decent housing and consequently have nowhere else to go. The outcome is the growth of slums [5, 6]. Large numbers of slum dwellers and squatter communities live illegally on government and private lands, and their dwellings are often built haphazardly out of all manners of refuse materials. Slums areas have the highest concentrations of poor people and the worst shelter and physical environmental conditions. In least developed countries 78.2 per cent of the urban population are slum dwellers, with Africa accounting for about 187million which is 20 percent of the global total [7].

In Less Developed Countries housing is a majority problem which is consequential of the rapid rate of population growth experienced there, as well as the socio-economically handicapped urbanisation taking place [8]. The visible and most obvious consequence of urbanisation in these countries is the rapid deterioration of urban housing and living conditions [9, 10]. The rapid rate of urbanisation occurring in the countries, especially in West Africa, is due chiefly to rural-urban migration [11-16]. There is a large influx of migrants into the cities despite appalling urban conditions apparently because of the urban bias of government policies which manifest

in the location of industries, and the provision of infrastructure, and social amenities. This apart, other factors especially education and employment opportunities, are instrumental to rural-urban migration.

A rapid increase in population, in urban centres in particular, results in shortages in adequate housing and subsequently in a rise in the price of housing. It is on low-income earners that the heaviest burden of the situation is placed, and they are thus forced to live in poor and overcrowded housing devoid of sanitary facilities, adequate lighting and air, and the buildings are constructed of materials of poor quality and hardly maintained [17, 18]. The buildings are often constructed with poor quality materials. In these circumstances public sector intervention is expedient if only to prevent the outbreak of epidemics and other illnesses occasioned by insanitary and overcrowded conditions.

The intervention of the public sector in housing especially for the benefit of low-income workers has often been a colossal failure. The reasons for the failure of government housing are well documented in the literature [19-22]. Such public housing has widely been occupied by higher income groups. Furthermore, governments have failed to stimulate the private sector to build more which makes the housing market on the decline.

In the Nigerian Public Service workers who are within the income brackets of Grade Level, GL 01 and GL 06 are commonly referred to as low-income earners. The use of salary structure is the most appropriate way to designate them since the minimum salaries paid to public servants change from time to time, which makes specific income figures unrealistic to use for classification. The low-income workers are of course, the junior workers in all government establishments and are at the rung of the ladder which makes them always prone to the brunt of government actions. In effect, the workers are affected the most by the ineffective intervention of the public sector in housing. The cause of this is evidently the poor economic position of the workers who are largely unable to cater for their housing need, and have to be dependent on the intervention of the public sector and the participation of the private sector which is hardly adequate in both instances. The workers live at a subsistence level and can hardly afford decent housing available on the open market. The consequence of this is that quality housing has been driven out of their economic reach. Studies have established a correlation between income and quality of housing, and low-income earners have been found to be largely accommodated in sub-standard housing and degraded environment [23]. Adequate housing is observed, therefore, to have become a scarce societal resource in Nigeria which the low-income worker does not have the wherewithal to command.

Housing plays a dominating role in man's physical existence and has been defined as an indispensable element of it [24, 25]. This is in spite of the poor accessibility of low-income government workers to adequate housing. It is an important factor in people's life, and this is reflected in its social and political significance. Housing plays significant roles in the health and well-being of people and has an overwhelming impact on their productivity. The productivity of workers is usually impaired in situations of poor housing which is why workers have to be adequately housed for them to discharge their duties effectively, and thus contribute meaningfully to the society in which they live. Thus, housing provision is better conceptualized as a means of contributing positively to the development of human potential rather than the mere provision of shelter. Housing is important to development in welfare terms and has a particularly significant impact on health. A situation where a large proportion of the population is inadequately housed could lead to a decline not only in health but also in productivity.

This paper examines the housing situation of low-income government workers in Ado-Ekiti the capital city of Ekiti State, Nigeria. Ado-Ekiti lies on Latitude 7.6124° N (of the Equator), and Longitude 5.2371° E (of the Greenwich Meridian) (Figures 1, 2 & 3). It became a state capital in October 1996 following the bifurcation of the old Ondo State and thus came the emergence of Ekiti State. The city is located 48 kilometers North of Akure, the Ondo State capital, and 344 kilometers North East of Lagos, the former capital city of Nigeria. It was a Local Government Headquarter prior to its designation as a state capital and thus has had some presence of



**Fig 1. Map of Nigeria showing all states including Ekiti**

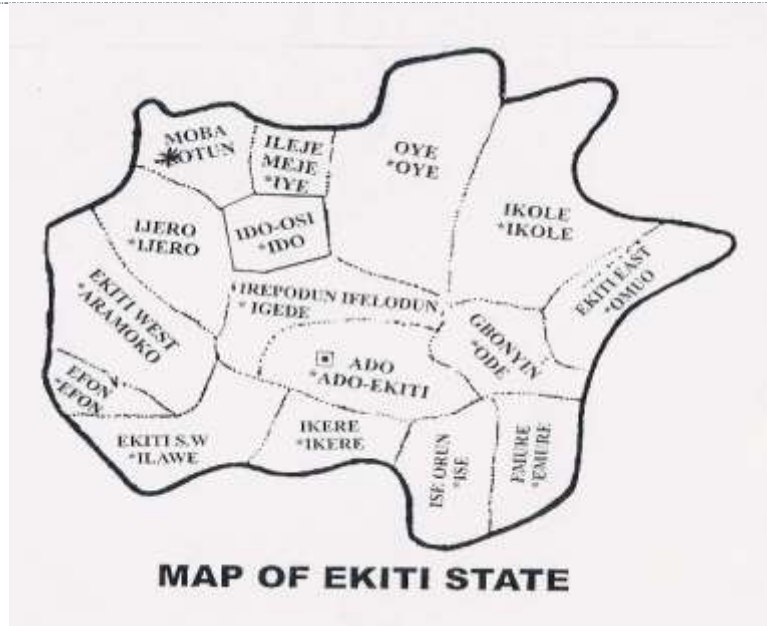
Source: <http://www.nigerianmuse.com/20100527092749zg/sections/pictures-maps-cartoons/maps-of-various-states-and-their-local-governments-in-nigeria/> (retrieved 18 March 2018)



**Fig 2. Map of Nigeria showing all states and Ekiti in red**

Source: <http://www.ngex.com/nigeria/places/states/ekiti.htm> (retrieved 18 March 2018)





**Fig 3. Map of Ekiti state showing local government areas including Ado-Ekiti**

Source: <http://www.nigerianmuse.com/cartoons/EkitiStateMap.jpg> (retrieved 18 March 2018)

infrastructure of government machinery. It experienced an upsurge in its population in October 1996 with the change in its socio-political status. This was due to the influx of government workers and officials, businessmen, politicians, and rural migrants into the city. The incidence of the sudden population increase heightened the strained housing situation on ground which created untold hardship on government workers re-deployed to the new state. At the inception of the state creation the workers were commuting to work daily at Ado-Ekiti from Akure. This created a lot of stress on their lean resources, and the low-income earners amongst them who were most often living in strained circumstances did not have any choice other than to accept whatever housing they could afford at Ado-Ekiti.

Low-income government workers are accommodated in the public housing at Ado-Ekiti and the private sector housing available. The latter however houses the vast majority of them. These are houses in the core area of the city, the peripheral neighbourhoods to the core, as well as in the suburbs of the city.

## 2. HOUSING SITUATION OF LOW-INCOME GOVERNMENT WORKERS

The housing situation of the general populace at Ado-Ekiti, Nigeria and in particular the low-income government workers, is of poor quality [26]. The core area of Ado-Ekiti, which is the most traditional part of the city, is crowded with buildings most of which hardly have any vehicular access to them. The buildings are, in the main, in insanitary conditions with many of them completely devoid of toilet facilities. The environment is thus prone to the discharge of human waste as the call of nature is inevitable.

Modern tenement buildings of sandcrete blocks constitute only 20% of the housing stock in the core area where 40% of them has been built for over 50 years. The rental cost of the buildings in the core area of Ado-Ekiti is low and this is an attraction to the low-income workers, aside from the fact of the central location of the area. Locational factor in housing is of prime concern to low-income earners in view of the affordability in gaining access to work places. In situations of differential abilities to pay, low-income workers have the propensity to occupy cheaper and smaller low-quality dwellings which are situated in city centres and close to major centres of employment [27, 28].

The vast majority of low-income government workers in Ado-Ekiti reside in private sector housing. This comprises mainly rooming houses having face-to-face rooms. Only a few of the buildings are physically sound, while most require varying magnitudes of repairs. The soundness of a building implies soundness of the roof structure, walls, floors, and foundation. It is the absence of cracks and surface wear on walls and floors, and damages to the roof structure [29]. In some of the buildings the state of repair is so poor that the buildings are rather unsafe for habitation. Mud is the walling material in one-fifth of the buildings. The mud walls are

rendered in some cases with cement mortar, but this is often so thin that they are exposed within a short while thus permitting moisture penetration into the walls which eventually results in cracks. Sun-dried and burnt bricks are also used but in very few cases. These have better resistance to water penetration.

The buildings generally lack hygienic sanitary facilities. The pit latrines which are common features of the buildings are mostly infected with flies which transmit various diseases. They constitute a very serious health risk to occupants of such buildings. The air is often polluted with odours oozing from the toilets as these are often poorly constructed and improperly located. Water closets (WCs) which are available in only a few of the buildings have a high rate of use in view of the high occupancy rate (number of persons per building) of the buildings. Inadequacy in water supply in the buildings further makes efficient and healthy use of the WCs difficult. This compels the occupants of such buildings to find alternatives in refuse dumps, surrounding bushes, and sidewalks, and this is a source of the degradation of the environment and a manifestation of the poor quality of the housing of the low-income workers.

### 3. MATERIALS AND METHODS

The research investigated the housing situation of low-income government workers in Ado-Ekiti, the capital city of Ekiti State, Nigeria. The workers reside in both the public sector housing and private sector housing in the capital city. The public sector housing is as listed below:

- i. The Federal Low-Cost Housing Estate, Oke-Ila,
- ii. The State Housing Estate, Oke Ila,
- iii. Junior staff quarters, Iworoko road,
- iv. Staff quarters, Iworoko road, and
- v. Obasanjo Housing Estate, Ikere road.

A sample size of 354 was derived for the research population (the low-income government workers) taking into consideration four principal factors [30] thus;

- i. The standard variate,  $z$ , of 95% level of confidence desired in estimating the sample size,
- ii. The error  $e$ , that could be permitted, in avoiding type 1 error (0.05) from 5% level of significance;
- iii. The true proportion of success,  $p$  (0.5) and  $q$  (0.5) which estimates variability of the sample; and
- iv. The finite population correction factor for sampling exercise done without replacement from the population.

The research instrument used for the field investigation was a questionnaire in which a data matrix of 81 variables was utilized. The questions were written in English Language, structured to elicit data on housing situation of the research population, and sufficiently succinct to avoid ambiguities. The questionnaire was randomly administered on low-income government workers (workers on GL01 to 06) at Ado-Ekiti Nigeria, the study area. The data obtained was subjected to descriptive and inferential statistical analysis with the use of the SPSS (Statistical Package for Social Sciences) computer program.

### 4. RESULTS AND DISCUSSION

The Categorical Regression Analysis was carried out on the data obtained from the field survey to determine predictive variables, and the order of their importance in meeting workers housing need in public sector housing. This was because of the high magnitude of housing need of government workers, and the inadequacy of public sector intervention in this regard. The following independent variables were introduced by forced entry into the regression model against the dependent variable *HNLE* (Low-income earners housing need) i.e.

1. *DANS* - Single-family design approach,
2. *DDHC* - Direct house construction,
3. *DLCH* - Provision of low-cost houses,
4. *HFN* - Housing mortgage,
5. *HLN* - Housing loan,
6. *PSHM* - Private sector housing market
7. *FPN* - Success rate of public housing, and
8. *HFPPN* - Availability of housing funds.

The independent variables were all measured on the Lickert scale with questions unambiguously addressing the subject matter. The Lickert scale stipulated the gap or distance between the various categories which gave the variables (which were mainly categorical) a seemingly interval calibration. In order to characterize their

relationship with the dependent variable (*HNLE* - Low-income earners housing need) the Categorical Regression Analysis was the most appropriate statistical tool to use as it could analyze data on categorical (nominal and ordinal) variables. In the Categorical Regression Analysis nominal and ordinal independent variables are effectively transformed into interval variables and are regressed against an interval dependent variable.

The Sig T statistics showed that only four of the independent variables significantly explained residual variations in the dependent variable. These were *PSHM*, *HLN*, *DANS*, and *HFN* (Table 1). The four predictive variables were then introduced step-wise into the model to obtain the equation of best regression. With the entry of the fourth variable the F-statistic was 883.604 which was more significant than that for all eight variables considered earlier. The variables were entered step-wise into the model in the order of their contributions to the model. Thus the variable with the highest beta value (standardized regression coefficient), which was *HFN*, was entered first, and *DANS*, *HLN*, and *PSHM* entered subsequently one after the other (Table 2).

The Partial-F statistic for each successive entry of the variables was highly significant depicting that each one improved the prediction of the dependent variable holding the effect of other variables in the model constant. Similarly, the coefficients of multiple correlation (MultiR) and determination ( $R^2$ ) improved progressively with successive entry of the explanatory variables, indicating stronger linear relationship, and increasing proportion of explained variation in the dependent variable. The coefficient of determination ( $R^2$ ) at the last entry of the independent variable is 0.7369 which is an indication that 74% of the residual variation in the dependent variable was explained by the four independent (explanatory) variables (Table 3). This was a good indication that the resulting model could adequately characterize the relationship between the explanatory and outcome variables.

The regression coefficient of the independent variable *HFN* (Housing mortgage) was 0.55279, and it indicated that an increase of 100 percent in it would induce 55.279 percent increase in the dependent variable (Low-income earners housing need), in the same direction, holding the effect of the other variables in the model constant. Housing mortgage is thus cogent in meeting the housing need of the low-income workers. The most important factor militating against mortgage borrowing by the workers is the absence of a Primary Mortgage Institution (PMI) in the state (Ekiti). The constraint has to be addressed through appropriate governmental measures and private entrepreneurship. The establishment of a state-owned PMI would go a long way in ensuring access to housing finance through mortgage borrowing. Conceivable constraints in mortgage such as inadequate collateral and high interest rates would also not feature in such a situation since the workers are in the Public Service of the state. The state housing corporation requires adequate logistic support for it to be able to meet its statutory functions, an important part of which is the provision of low cost buildings for low-income government workers which they could purchase through mortgage.

The second independent variable *DANS* (*single-family design approach in public housing*) has a regression coefficient of 0.21377 which is the change observable in the dependent variable in the same direction, if there is a unit change in *DANS*, controlling for the effect of the other variables in the model. The variable suggests the desegregation of buildings into separate dwelling units for single families. The findings indicate that single-family design approach is more socio-culturally acceptable to the low-income government workers irrespective of the size of the dwelling units. It would serve to meet their social and emotional need of self-actualization, and give a sense of belonging since such dwellings could lay claim to a measure of external space (own house grounds), and the responsibility in maintenance of such spaces could be ascertained. Multi-family accommodation especially in multi-storey buildings has been found to have significant impact on human behaviour and social relations, neighbourhood social structure, as well as negative effects on the emotional health of individuals [31-33]. The independent variable *DANS* gives an understanding of design specifications for buildings to be offered to low-income government workers to meet their housing need.

The independent variable *HLN* (Housing loan) has a regression coefficient of 0.17568 which indicates that 17.568 percent positive change would be exerted on the dependent variable if the value of *HLN* was doubled, given that the effect of the other variables remain constant. This is indicative of the fact that the programme of issuance of housing loans to government workers is of utmost importance in meeting their housing need. Such loans would enable them to procure houses built by the government with minimal duress. The loans could also be given in kind through bulk purchase of building materials and acquisition of serviced land for those wishing to construct their own buildings by themselves. The loans should normally be deductible from the salaries of

workers as low-cost loans with a long-term amortization period. In the event that a worker does not fully repay his loan before disengagement from service, his retirement benefits would be used for the purpose.

The last independent variable in the model *PSHM* (Private sector housing market), has a regression coefficient of 0.1237 which indicates that if it undergoes 100% change, a positive change of 12.37% would be induced in the dependent variable while the effect of the other three independent variables are held constant. The variable suggests the engagement of mobilization of the private sector in greater investment in the housing market. Entrepreneurs have to be given adequate encouragement through viable economic and political policies of government to enable them invest in the housing market. A virile private sector housing market would complement public sector housing provision for low-income workers.

**TABLE 1 T-Statistics of Independent Variables at Forced Entry**

S/No	Variable \Code	Sig-T
1	<i>HFPPN</i>	0.2822
2	<i>PSHM</i>	0.0163*
3	<i>DDHC</i>	0.545
4	<i>DLCH</i>	0.6841
5	<i>HLN</i>	0.0345*
6	<i>DANS</i>	0.0089*
7	<i>FPN</i>	0.7245
8	<i>HFN</i>	0.0000***

Source: Data Analysis (2009)

\* Significant at  $\alpha = 0.05$  (5% significance level)

\*\* Significant at  $\alpha = 0.01$  (1% significance level)

\*\*\* Significant at  $\alpha = 0.000$  (absolute significance)

**Table 2 Coefficients of Explanatory Variables at Step Wise Regression**

Variables S/No	Variable Code	Regression Coefficient	Beta Coefficient
V14	<i>HFN</i>	.55279	.56897
V10	<i>DANS</i>	.21377	.19836
V15	<i>HLN</i>	.17568	.15161
V18	<i>PSHM</i>	.12370	.08012

Source: Data Analysis (2009)

**Table 3 Correlation Coefficients**

Step	Variable Code	Multi R	R <sup>2</sup>
1	<i>HFN</i>	0.8523	0.7264
2	<i>DANS</i>	0.8560	0.7327
3	<i>HLN</i>	0.8573	0.7350
4	<i>PSHM</i>	0.8584	0.7369

Source: Data Analysis (2009)

## 5. CONCLUSION

The provision of adequate housing for the low-income government workers in Ekiti State Public Service, Nigeria is the focus of this paper. The workers constitute the majority of the work force in the state and are largely accommodated in the private sector housing in the capital city of the state. The state of housing of the workers is pathetic and has retrogressive effects on the productivity of the workers. The paper places the situation in the context of the global challenge faced by every society in producing adequate housing in sufficient quantity and obtaining the kind and quality required at prices within the reach of low-income workers.



It asserts the fact that the public and private sectors have definite roles to play in housing provision for the workers. The public sector has a role to play in sensitizing the private sector to improving its participation in housing provision.

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