Migration of Housing from Traditional/Cultural Architecture to the Modern Style and its Significance in the Urban Development of Mubi Town in Adamawa State, Nigeria

***Hashim, A.**
****Waziri, H. I.**
*****Rabiu, M. U.**
Suleman, A.
*Department of Urban and Regional Planning, Federal Polytechnic Mubi, Adamawa State Nigeria. E-mail: *hashimabdullahi46@yahoo.com, **wazirihi42@gmail.com ***rabiuusman25@yahoo.com*

ABSTRACT

This survey aims at assessing migration of housing from traditional/cultural architecture and style to the modern style in Mubi Town of Adamawa State, Nigeria. Mubi Town is the second largest town in Adamawa State after Yola the State Capital. Fifty copies of questionnaires were distributed to the seven wards in the study area to collect data for the study. Physical observations, oral interview as well as photographs were employed during the data collection. E-VIEWS 3.1 software was used for its precision for the data analysis and interpretation. Descriptive statistics, regression analysis and linear probability were used for data analyses. The regression analysis indicates that there is positive relationship between age of buildings, education level, income level and modern houses. This means that there is a positive relationship between modern houses and other explanatory variables. The coefficient of determination (R^2) (0.933333) shows that about 93% of the changes in the dependent variables (Modern Houses) was accommodated for the changes in the explanatory variables (Age of Buildings, Education level, income level, Number of household per compound and occupation of the respondents). Based on this, it is recommended among others that departments of Urban and Regional Planning, Estate Management and Building Technology as well as Architectural department and other related discipline should jointly form research network in all Nigerian universities, Polytechnics and Colleges of Education in conjunction with the Federal Ministry of works and Housing to improve the existing housing supply to in relation to the low income levels in an affordable manner.

Keywords: *Traditional houses, modern houses, traditional architecture*

INTRODUCTION

The significant contribution of housing to man cannot be over emphasized. The advancement of technology plays vital role in the crossbreeding of building style and knowledge between one culture and another across the World especially in African continent and Nigeria in particular. Hashim, Waziri, and Suleman (2014) in their work entitled: Preservation and conservation of traditional housing and local industries in Mubi Town Adamawa State comment that, traditional housing in Mubi Town is one of the historic item still in existence for the next generations to use and appreciate the historic and cultural values of their past

generations. Ejinaka (1987) points out that, Nigerian urban housing types considerably had spatial variations in its existence and it differs with the traditional housing types seen and found in the rural areas. Housing, physically involves the erection of building structures in the environment that will assist man to his socio-cultural, economic and recreational needs. Housing also should provide good and sanitary environment that is very conducive for both lower and higher income earners to carry out their daily and routine activities (Hiraskar, 2011). Bomefoy (2007) says that housing is seen in a very complex manner. According to him, the World Health Organization (WHO) sees the term housing in four major layers: (i) housing in an immediate environment, (ii) community, (iii) dwelling and (iv) a home. Housing is one of the basic needs of human beings. Housing is expected to fulfill or meets biological, psychological, social, cultural and economic needs of the community.

It is the most important aspect of national development. Jiboye (2010) in his work evaluating the pattern of residential quality in Nigeria: The case of Osogbo township define the term housing as it covers units of the natural environment which has profound influence on the health of man, also his efficiency and social behaviour as well as satisfaction and general welfare of the community is determine by quality housing. According to Hashim (2014), the significant contribution of housing to man's life cannot be over emphasized in all ramifications. This is because statues of man is obtained, prestige among others, good health and environmental quality are all determined by the housing situation. To sum it all, at the global level, housing is very good indicator for assessing the development level.

Housing as a Human Right (1997) Common Wealth Australia comments that, adequate housing is significant for man's survival with much dignity. In addition to that, absence of housing will lead to the compromise of other fundamental human rights such as the right to family life and privacy and the right to freedom of movement. Others rights are the rights to assembly and associations, right to health and the right to development. Olaniniyi, Adeleyi and Ogunshakin (2005), Jiboye and Ogunshakin (2010) point out that housing is one of the fundamental and basic needs of man.

STUDY AREA

Adamawa State was created on the 27th of August, 1991. It was carved out from former Gongola State by the General Ibrahim Babangida led Military administration. It is located between latitudes 7^0 and 11^0 N and on the Latitudes 11^0 and 14^0E equator and covers 36,917km^2 as its land area. It is bounded by Borno, Gombe and Taraba States to the Northwest, West and South West respectively (Ilesanmi, 2013). The State also has international boundary with the Cameroon Republic in its Eastern part. The State has 21 local governments. Nigeria Environmental Society (2013) Adamawa State Chapter has it that Adamawa State is highly blessed with many tertiary institutions which include Modibbo Adama University of Technology (MAUTECH) located in Yola the State Capital, Adamawa State University (ADSU) found in Mubi Town, Federal Polytechnic Mubi. Federal college of Education Yola and State Polytechnic also found in the State capital.

METHOD

This work adopts the survey research design. The population of the study comprises all the inhabitants of Mubi Town in Adamawa State. The town, the second largest town in Adamawa State is made up of seven political wards comprising Nasarawo, Gude, Sabon Layi, Lamurde, Digil, Lokuwa and Yelwa. Based on this original stratification, purposive random sampling was used to select fifty participants altogether from the seven strata. Fifty copies of structured questionnaire were administered on the participants. Also, Field observation, oral interview, photographing as well as interaction with the local community during the data collections were carried out. Basically, descriptive statistics, correlation analysis and OLS linear probability model (LPM) were used for data analysis all with the aid of E-views 3.1 software.

RESULTS AND DISCUSSION

Table 1 depicts the descriptive statistics. The variables used in the table are Age of buildings (AGEB), Education level (EDL), Income level (INCL), Marital Statues (MST), Number of household per compound (NHC), Number of Children (NOC), Occupation of the respondents (OCC) and Sex of the interviewed selected sample (SEX). The sample size consists of 50 participants. Age of buildings has the minimum value of 0.000000 while the maximum value was 1.000000. Its mean value is 0.220000 and the standard deviation recorded exactly 0.418452. In addition, Education level recorded 0.000000 and 1.00000 as its minimum and maximum while the standard deviation of 0.498569. Income level was 0.000000 as minimum while the maximum of 1.000000 respectively with a mean and standard deviation of 0.320000 and 0.471212. Furthermore, Marital Status revealed 0.000000, 1.000000, 0.760000 and 0.431419 as its minimum and maximum values, mean and standard deviation. The minimum and maximum values of Number of Household per compound were 0.00000 and 1.000000 respectively while the Mean and Standard deviation were 0.840000 and 0.370328. Number of children depicted 0.000000, 1.000000 for minimum and maximum values and mean and standard deviation of 0.680000 and 0.471212.

Table 2 gives the correlation of modern houses. Age of building revealed positively relationship with educational level, income level, modern houses, marital status, number of household per compound, number of children and number of people per compound , occupation and sex. Also, educational level, portrayed positive relationship with age of buildings, income level, modern houses, marital status, number of household per compound, number of children and number of people per compound, occupation and sex. In addition income level depicted significant positive relationship with age of building of building, Education level, modern houses, marital status, number of household per compound, number of children and number of people per compound , occupation and sex modern houses indicated positive relationship with age of building of building, Education level, income, marital status, number of household per compound, number of children

and number of people per compound, occupation and sex. Marital status showed positive relationship with age of building, Education level, income level, Modern houses, number of household per compound, number of children and number of people per compound, occupation and sex of the respondents. Furthermore, these variables; Number of Household per Compound, Number of Children and Number of People per Compound, Occupation and Sex of the respondents recorded positive relationship with the explained variables mentioned above. The regression analysis indicated that, there is positive relationship of each variable to other variable such as age of buildings, education level, income and Modern houses. This means that there is positive relationship between modern houses and other explanatory variables. Table 3 represents OLS, Linear Probability Model (LPM) estimation of modern houses determinants.

Additionally, looking at the findings of this study, it can be observed that, each of the Slope Coefficient gives the rate of change in the probability of the modern houses occurring for a given unit change in the value of the explanatory variables. The estimated parameters associated with the variables influencing modern houses had a positive sign (age of buildings, education level, and income level, number of household per compound) and it shows negative sign in (occupation). In the estimated regression above, the constant coefficient of -5.02E-16 implies that, holding all variables constant, the probability of modern houses increase is lower by -5.02E-16. The regression coefficient of the variable Age of building is 6.06E which implies that, holding all other variables constant, a one increase in age of building on an average, the probability of modern houses will increase higher by about 6.06E. The regression coefficient of the variable, Education level is 0.800000, this implies that holding all other variables constant, a one increase in education level on an average, the probability of modern houses will increase higher with about 0.800000(80%). The regression coefficient of the variable income level is 0.2000, this implies that, holding all other variables constant, a one thousand naira (₦1000) increase in income level on an average, the probability of modern houses will increase higher by about (20%). The regression coefficient of the variable, Number of people per compound is 1.06E. This implies that, holding all other variables constant, a person increase of household on an average, the probability of modern houses will increase higher with about (1.06E-15). The regression coefficient of the variable occupation is -7.17E-16. This implies that holding all other variables constant, a unit increase in occupation on an average, the probability of modern houses will increase higher with about 1.06E-15. The variables Education Level and Income level are statistically significance at 5% level. This shows that a strong relationship is influencing modern houses by the variable. The coefficient of determination shows that about 93% of the changes in the dependent variables (Modern Houses) was accommodated for the changes in the explanatory variables (age of buildings, education level, income level, number of household per compound and occupation of respondents). The Durbin-Watson Statistics is 2.10000 which implies that, there is positive serial correlation among the variables included in the observation. This is because; the value ranges between 2 and 4.

Table 1: Descriptive Statistics For Modern Houses
Date: 04/01/14
Time: 14:19
Sample: 1 50

	AGEB	EDL	INCL	MH	MST	NHC	NOC	NPC	OCC	SEX
Mean	0.220000	0.420000	0.320000	0.400000	0.760000	0.840000	0.680000	0.820000	0.680000	0.760000
Median	0.000000	0.000000	0.000000	0.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Maximum	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000	1.000000
Minimum	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Std. Dev.	0.418452	0.498569	0.471212	0.494872	0.431419	0.370328	0.471212	0.388088	0.471212	0.431419
Skewness	1.351853	0.324176	0.771744	0.408248	-1.217562	-1.854852	-0.771744	-1.665853	-0.771744	-1.217562
Kurtosis	2.827506	1.105090	1.595588	1.166667	2.482456	4.440476	1.595588	3.775068	1.595588	2.482456
Jarque-Bera	15.29120	8.356342	9.072344	8.391204	12.91183	32.99349	9.072344	24.37709	9.072344	12.91183
Probability	0.000478	0.015327	0.010714	0.015062	0.001571	0.000000	0.010714	0.000005	0.010714	0.001571
Observations	50	50	50	50	50	50	50	50	50	50

Source: Field Survey Computation Using E-views 3.1 (2014)

Table 2: Correlation Matrix For Modern Houses

	AGEB	EDL	INCL	MH	MST	NHC	NOC	NPC	OCC	SEX
AGEB	1.000000	0.624099	0.774183	0.650444	0.298444	0.231784	0.364321	0.248825	0.364321	0.298444
EDL	0.624099	1.000000	0.806139	0.959497	0.478200	0.371391	0.583756	0.398694	0.583756	0.478200
INCL	0.774183	0.806139	1.000000	0.840168	0.385496	0.299392	0.470588	0.321403	0.470588	0.385496
MH	0.650444	0.959497	0.840168	1.000000	0.458831	0.356348	0.560112	0.382546	0.560112	0.458831
MST	0.298444	0.478200	0.385496	0.458831	1.000000	0.776643	0.819178	0.833740	0.819178	1.000000
NHC	0.231784	0.371391	0.299392	0.356348	0.776643	1.000000	0.636209	0.931518	0.636209	0.776643
NOC	0.364321	0.583756	0.470588	0.560112	0.819178	0.636209	1.000000	0.682981	1.000000	0.819178
NPC	0.248825	0.398694	0.321403	0.382546	0.833740	0.931518	0.682981	1.000000	0.682981	0.833740
OCC	0.364321	0.583756	0.470588	0.560112	0.819178	0.636209	1.000000	0.682981	1.000000	0.819178
SEX	0.298444	0.478200	0.385496	0.458831	1.000000	0.776643	0.819178	0.833740	0.819178	1.000000

Source: Field Survey Computation Using E-views 3.1 (2014)

Table 3: Linear Probabilty Model (LPM) Determinants for Modern Houses

Dependent Variable: MH Method: Least Squares
Date: 04/04/14 Time: 15:53
Sample: 150 Included observations: 50

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-5.02E-16	0.047673	-1.05E-14	1.0000
AGEB	6.06E-16	0.072727	8.34E-15	1.0000
EDL	0.800000	0.070957	11.27436	0.0000
INCL	0.200000	0.085280	2.345208	0.0236
NHC	1.06E-15	0.067420	1.57E-14	1.0000
OCC	-7.17E-16	0.060591	-1.18E-14	1.0000

R-squared	0.933333	Mean dependent var	0.400000
Adjusted R-squared	0.925758	S.D. dependent var	0.494872
S.E. of regression	0.134840	Akaike info criterion	-1.057290
Sum squared resid	0.800000	Schwarz criterion	-0.827847
Log likelihood	32.43224	F-statistic	123.2000
Durbin-Watson stat	2.100000	Prob(F-statistic)	0.000000

Estimation Equation

MH = -5.02E-16+6.06E-16AGEB+0.800000EDL+0.200000INCL+1.06E-15 NHC-7.17E-16OCC,
SE = (0.047673) (0.072727) (0.070957) (0.085280) (0.067420) (0.060591),
R^2 = 0.933333,
Durbin Watson Statistics = 2.100000

Source: Field Survey Computation Using E-views 3.1 (2014)

CONCLUSION AND RECOMMENDATIONS

This work indeed depicted a strong correlation that exist between modern houses as a dependent variable and other various independent elements such as educational level, income level and so. The regression analysis indicated that, there is positive relationship of each variable to other variables as in age of buildings, education level, income and Modern houses. This means that, there is positive relationship between modern houses and other explanatory variables. The coefficient of determination (R^2) (0.933333) shows that about 93% of the changes in the dependent variables (Modern Houses) was accommodated for the changes in the explanatory variables (Age of Buildings, Education level, Income level, Number of household per compound and Occupation of respondents).

Based on these, Public Private Partnership is a very important strategy to be used in mass modern housing delivery in Mubi Town. Taiwo and Adegun (2011) in their work entitled Public Private Participation in Nigeria and the Case of Community Participation, comment that joint efforts in relation to housing delivery, particularly to the low income earners is considered as a new policy between the public and private sectors. Bolaji (2011) points out that, public private partnership can be effective method for mass housing delivery. Proper urban and regional planning if effectively carried out, will assist in achieving environmental friendliness between man and the environment, consciousness in the use of resources will be achieved , economy will be created as well as convenience will be promoted (Hashim, Zainab and Jibri, 2013). For cities to be successful economically and socially, they must be dynamics. This is because; cities must response to the dramatic changing demand and conditions. For example, cities must accommodate new transportation nodes(ports, railways, roads and air ports), utilities (water , sewer, gas and electricity, telephones lines, cellular phones, wireless), accommodation of population and business by growth and expansion, development opportunities and public services and positive response to housing needs by supporting/developing housing types that satisfy unmet demand (Litman, 2011). Proper education to the local mesons or bricklayers will promote effective, functional, and habitable housing in the town.

Mubi Town is highly blessed with local Mesons and Brick Layers and other allied building construction team that required modern techniques with regard to environmental planning and building constructions services (Hashim, Zainab and Jibir, 2013). It is recommended that departments of Urban and Regional Planning, Estate Management and Building Technology as well as Architectural department and other related disciplines should form joint research network in all Nigerian universities, Polytechnics and Colleges of Educations in conjunction with the Federal Ministry of works and Housing to improve the housing supply to the entire populace in relation to the all income levels in an affordable manner. In his opinion, Nubi (2000) has it that one of the suggestible approaches in housing delivery in Nigeria is the housing education. Regeneration of Mubi burn brick industry will also assist in the utilization of local building materials. Re-generation of Mubi burn brick industries so as to aid in utilizing the available late rites building materials, this can be cheaply used by the community and can be exported for revenue generation (Hashim , Waziri and Suleman, 2014). Ajanlekoko (2001) in his work, made the following

recommendable proposal with regard to the problems attached to the existing housing funds in Nigeria:

1. Establishment of commercial banks
2. The use of local building materials
3. Evolution of simple design
4. Review of land use decree

Fig. 1: Dilapidated Traditional House

Fig. 2: Traditional House with Fence

Fig. 3: Good Traditional House

Fig. 4: Construction of Wall

Fig. 5: Circular Rooms

Fig. 6: Traditional and Modern Houses

REFERENCES

Ajanlekoko, J. S. (2001). *Sustainable Housing Development in Nigeria- The Financial and Infrastructural Implications;* International Conference on Spatial Information for Sustainable Development, Nairobi Kenya 2-5 October, 2001

Bomefoy. X. (2007). In adequate Housing and Health and Overview. International Journal of Environmental Pollution, 30, 3/4.

Bolaji, S. (2011). *Public Private Partnership (PPP) in Housing Delivery in Niger State* In Laryea,S. Leiringer, R. T. F., Hughes, W., Eds Proceedings of Westv Africa Built Environment Research (WABER) Accra Ghana, PP991, ISBN 9780956606013 (In Press) Available at http://Centaur Reading.ac.UK/20829/S .www.reading.ac.uk/centaur

Ejinaka, F. C. (1987). *Affordable Housing: Enugu Nigeria Urban Human Settlement: A design project that Deals with the Issue of Housing Problems in Enugu.* Bachelor Degree Thesis Winter, 1987, College of Architecture and Planning Ball State University.

Jiboye, A. D. (2010). Evaluating the Pattern of Residential Quality in Nigeria: The case of Osogbo Township, FACTA UNIVERSITATIS Services: Architectural and Civil Engineering Vol. 8, No. 3 2010, pp 307-316, DOI: 10.2298/FUACE/ 1003307J, UDC 728.1:711, 4112(669A/ Z)(045)=111

Jiboye, A. D. and **Ogunshakin, L.** (2010). *The place of the Family in Contemporary Oyo Town Nigeria. Journal of Sustainable Development*, 3, 2.

Hashim A (2014) : *Unpublished Housing Material* ; Federal PolytechnicMubi , Adamawa State, Nigeria

Hashim A., Waziri I. and **Suleman A.** (2014). *Preservation and Conservation of Traditional Housing and Local Industries in Mubi Town Adamawa State.* Journal Paper Submitted for Publication in Journal of Management, Art and Technology (JOMAT) Federal Polytechnic Mubi.

Hashim A., Zainab M. Z. and **Jibri A.** (2013). *Urban Planning Development Control and Housing for Environmental Friendliness in Nigeria;* A Workshop Paper Presented at an Annual Workshop Organized by Institute of Certified Geographer Abuja , December, 201

Hirskar, G. K. (2011). *Fundamental of Town Planning*; Dhampat Rai Publications (p) Ltd. India

Housing as a Human Right© (1997). **Common Wealth Australia/Human Right Equal** opportunity Commission Sydney September, 1996: National Conference on Homelessness Persons Address by Chris sidoti, Human Right Commissioner 4th September, 1996.

Ilesanmi, F. A. (2013). *An Overview Of Some Environmental Challenges In Adamawa State*; Being An Inaugural Lecture of Nigerian Environmental Society (NES), Adamawa State University Mubi Adamawa State,Nigeria , June ,2013.

Litman, T. (2011). *Affordable – Accessible Housing Inn Dynamic City .Why and How to increase Affordable Housing Development in Accessible Location;* Victoria T.P Policy Institutes, Efficiency, Equity, Clarity, www.vtpi.org, info@vtpi.org. 250-360-1560

Nigeria Environmental Society (2013). Adamawa State Chapter Inauguration and Book Launching; programmed of event.

Nubi T. O. (2000). *Housing Finance in Nigeria Need for Re-Engineering*: Department of Estate Management University of Lagos, Accessed on the June,2012, Available at http:// www.housingfinance.org/pdf Storage/Africa.

Olayiwola I. M., Adeleye O. and **Ogunshakan L.** (2005). *Public Housing Delivery in Nigeria: Problems and Challenges*: World Congress on Housing Transforming Housing Environment Through The Design. September 27-30, Pretoria South Africa

Taiwo A. A. and **Adegun A. B.** (2011). *Public Private Participation in Nigeria and the Case of Community.* In Laryea,S. Leiringer, R.T.F, Hughes, W., Eds Proceedings of Westv Africa Built Environment Research (WABER) Accra Ghana, PP991, ISBN 9780956606013 (In Press) Available at Http://Centaur Reading.ac.UK/20829/S.www.reading.ac.uk/centaur