Short communication

Assessment of physical environmental factors influencing residential area preference in Otukpo town, Benue state- Nigeria.

Christopher Owoicho[1]*, Ogwuche Jonathan[2] and Ann Oche Audu[2]

[1]47 Alu Gundu Street Gboko Road Makurdi Benue State Nigeria; Tel: 234- 703-130-9732
[2]Dept of Geography, Benue State University, Makurdi, Nigeria

The study assessed the social factors that influence residential area preference in Otukpo town of Benue State, Nigeria. Variables considered based on households' characteristics and used for the study include: sex, age, marital status, household size, educational level, the safety of neighborhoods, and availability of school, power supply, water supply and public transport. Three sampling techniques were employed for the study. First stratified sampling technique was used to stratify the study area into eleven (11) residential areas; secondly, systematic random sampling was used in which one household head was selected based on the skipping ratio of four (4) per interval. A total of 400 households were selected and administered questionnaire, but 386 households returned their questionnaire. The data collected for this study were analyzed using factor analysis because of its ability to reduce large variables to manageable factors. Using factor analysis based on Kaiser Principle, two factors were extracted using the variable maximization method with Eigen -values of 8.76, and percentage contributory variance of 79.614%. These social factors include sex (.947), educational level (.947), marital status (.919), occupation (.906), safety of neighborhood (.942), power supply (.829), availability of school (.918), water supply (.940) and public transport (.685). The study revealed a positive relationship between the factors and shows the extent to which these factors strongly influence residential area preference in Otukpo town some significant parameters that define the factors which explain the social variation in residential area preference in Otukpo town. The study therefore concludes that residents' locate in the study area where urban infrastructures are accessible, available and functional. The study therefore, recommends that basic residential infrastructures such as pipe-borne water, electricity, shopping centers and schools are either not available or are in a state of disrepair. The relevant authorities are, therefore, urged to build new ones and rehabilitate existing residential infrastructures to make the residential areas more attractive and conducive to healthy living. State and local government authorities should intensify the security network of their residential areas since individual efforts have proved less effective by positioning security personnel in strategic locations in the study area

Keywords: Residential Residential Area Preference, Social Factors, Otukpo town, Benue State.

INTRODUCTION

The preference of where to live would appear to be determined by a combination of economic constraints and personal preferences. It is not possible for everyone to live where they would prefer, as competition for the most desired residential locations means that price limits the options available. Fortunately, this competition and the resulting restricted preference may be mitigated by variation between people in their residence and the way of life which they prefer. Some may prefer an inner-city location, others remote one, and for many the intermediate area which offers the best reconciliation of competing benefits. In practice, the reasons for preference of residential location are probably mixed.

*Corresponding Author E- mail: **owychris@yahoo.com**

They may include access to employment, business, educational, cultural or recreational opportunities, affordability, familiarity with one residential neighbourhood as a result of growing up there or emotional attachment to a place or a life style.

The preference for certain neighborhoods over others in a city depends on the location of the area in relationship to where the office or business and friends are found (Michelson; 1966). Other factors that influence residential preferences include assessment of housing costs, family sizes, qualitative housing units and environment. Furthermore, preference could also be influenced by the crime rate in an area, economic, social, professional or educational background of residents. A households' decision to choose a particular residential district could be due to socio-economic, cultural, administrative or purely psychological factors (Ogunjumo and Olatubara; 1997). Urban residential location models indicate that the determinants of households' choice of residence include income of the household making a choice, family size, population density, rent, and transport cost (Alonso, 1964;). The general tendency of the poor people to live near the Central Business District (C.B.D) while the rich stay at the out skirts of the city has also been well documented. Also well documented in the literature is the general tendency of people to segregate based on income Urban residential location models indicate that the determinants of households' choice of residence include income of the household making a choice, family size, population density, rent, and transport cost (Alonso, 1964;). The spatial segregation based on income has been shown not to be very significant in Africa. For instance, findings of Abiodun (1990) have shown that some particular or ethnic groups concentrate in certain parts of Nigerian cities.

This present study attempts to access the social factors that influence of residential area preference in Otukpo town of Benue State.

Study Area

Otukpo town in Otukpo Local Government is the head quarter of Otukpo Local Government and is the third largest town in the state after Makurdi and Gboko. The town lies between latitudes 7o0 and 7o 30N and longitudes 7o 30 and 8o 10E.

The area has marked wet and dry seasons, an indication of the kop pen's Aw tropical humid climate type. Rainfall is expected in April-May and lasts till November with peaks in June – July and September – October. Surface drainage of the area is poor as cases of a flood are experienced during heavy down pour. The geology of the study area- complex marine sediments made up of shale, sand stones and silt stones under lay, which offers poor infiltration and ground water storage

encourages profuse surface runoff during rains. The fractures in the shale are not inter-connected. There is no clearly defined ground water level and even where found, the water table fluctuates between the wet and dry seasons. Based on this there are few or no exploitable ground water reserves in the area. The major rivers in the area are Okokoro, Edikwu, Otada and Ukplo. These rivers are highly seasonal and dry up in the dry season with some stagnant pools in their channels during the dry season. This seasonality of the drainage system creates untold hardship for inhabitants of the study area, since most of the residents depend on natural sources for their water needs. The projected population of the study area is estimated at 38,880 persons. The pattern of settlement is a predominantly nucleated with concentrated structures (See Figure 1.)

MATERIALS AND METHODS

Data on social factors that influence residential area preference were collected from 386 heads of households using questionnaire, interview and observation. In carrying out this study, residential areas of Otukpo town were stratified into eleven residential areas using stratified sampling technique. Systematic random sampling was used to select houses that questionnaires were administered, in a situation where a house selected happen to be a compound (yard), convenience sampling technique was used an administered questionnaire to the first head of household met in such compound. The parameters used for the study were defined as follows:

- X1= Sex
- X2= Age
- X3= Marital Status
- X4= Occupation
- X5= Household Size
- X6= Educational Level
- X7= Safety of Neighbourhoods
- X8= Availability of School
- X9= Power Supply
- X10= Water Supply
- X11= Public Transport

Variables X1, X2, X3, X4, X5, X6, X7, X8, X9, X10, X11, were determined through the use of questionnaire. Factor analysis was used in summarizing and analyzing the data, as well as identifies the principal dimensions of the selected variables responsible for social residential area preference in the study area to identify their relative contributions in influencing residential area preference in Otukpo town. The factor analysis generated both the correlation matrix and the rotated factors matrix, in which only factors with Eigen- values above unity with 5% or more explanatory powers considered as separate orthogonal dimensions or factor components (Anyadike, 2009).
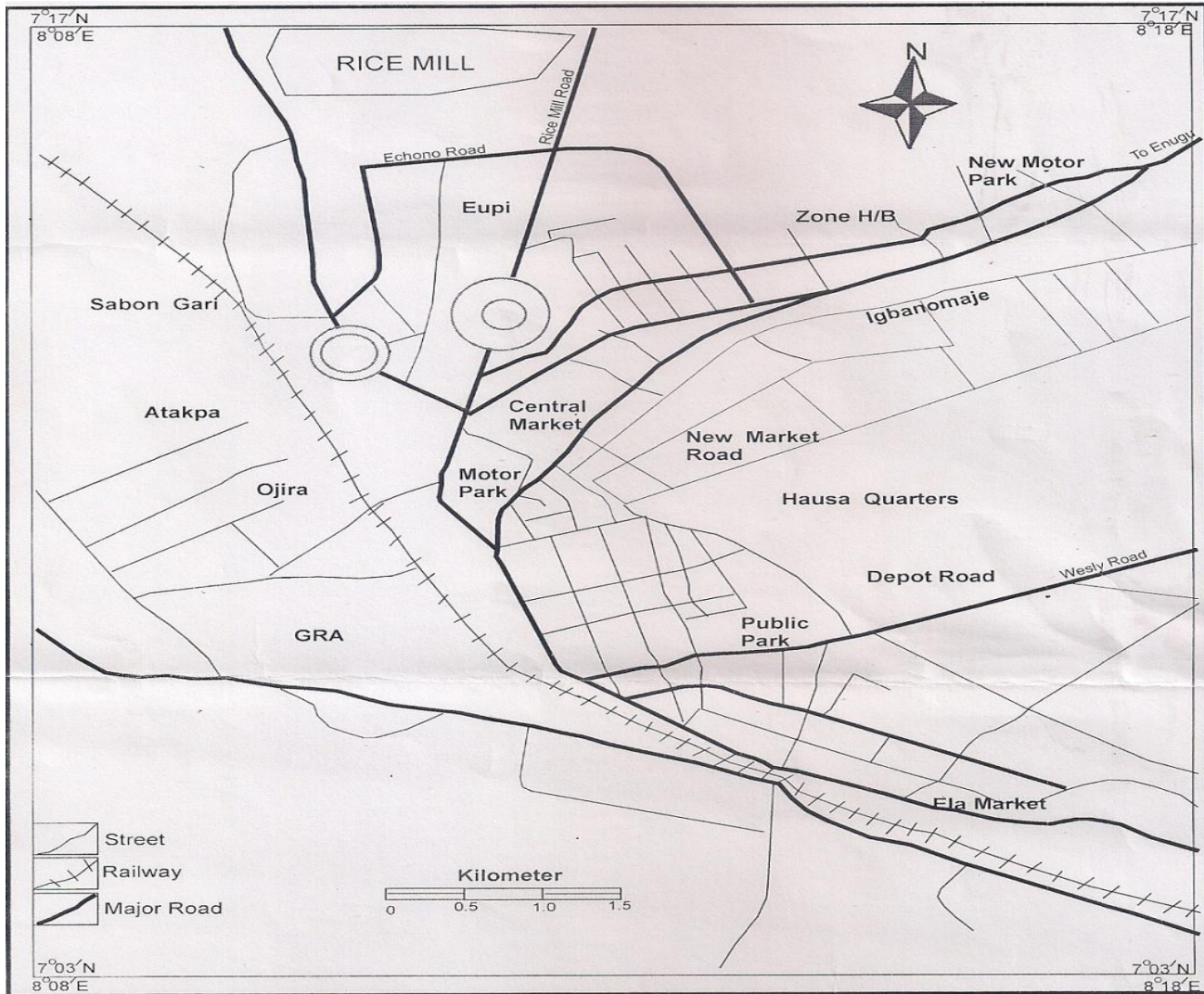
Figure 1. Map of Otukpo town showing residential areas (Source: Ministry of Lands and Survey, Makurdi)

Table 1. Social Factor Matrix of Residential Area Preference in Otukpo Town

VARIABLES	RESIDENTIAL PREFERENCE FACTORS	
	I	II
Sex	(.947)	-.165
Age	.154	-.014
Marital Status	(.919)	.138
Occupation	(.906)	-.235
Household Size	(.685)	(.505)
Educational Level	(.947)	.173
Safety of Neighbourhood	.193	(.942)
Availability of School	.225	(.918)
Power Supply	-.088	(.829)
Water Supply	-.158	(.940)
Public Transport	(.685)	(.505)
Eigen-value	4.82	3.94
% Variance	43.780	35.834
% Cumulative explained	43.780	79.614

Source: field work, 2015.

Table 1 shows the rotated social factor matrix of residential area preference in Otukpo town. Factor one (1) which has an Eigen- value of 4.82 accounts for 43.780 percent of the total variance. It has very high positive loadings on variables 1(sex), 3(marital status) 4(occupation), 5(household size), 6(educational level), and 11(public transport),. All these positive loadings touch on all aspects of the socio-demographic characteristics of households. Therefore, the positive loadings can be regarded as socio-demographic factor. Whereas the negative loadings on 9(power supply) and 10(water supply). The absence of these negative loadings in any residential area could influence the preference for such residential area. Factor two (2), which has an Eigen-value of 3.94 explains 35.884 percent of the total variance, has high positive loadings on variables 5(household size), 7(safety of neighbourhood), 8(availability of school), 9(power supply), 10(water supply) and 11(public transport). All these positive loadings touch on all aspects of urban infrastructures, therefore, the positive loadings can be regarded as access to urban infrastructures factor whereas, the negative loadings on 1(sex), 2(age) and 4(occupation). The absence of these negative loading variables in any residential area could influence the absolute neglect of such residential area. This is obvious in the slum areas of Ogwonu-Igbahapa, Zone H.B, Atakpa, Ojira and Sabon-Gari. Further interaction and observation during the field study revealed that availability, accessibility and functionality of social services influence residential preference in the study area. factor. Factor two can therefore be referred to as access of infrastructure and town planning factor. This is discernable in the slum areas of Sabon- Gari, Ojira, Zone H.B, Atakpa, Ogwonu-Igbahapa and Eupi. Further interaction with the respondents during the field study reveal that residents consider access road, layout of surroundings, quietness and presence of school in all the residential areas when taking decision on residential area to locate in the study area. Observation also reveal that majority of streets in the slum areas don't have drainage channels leading to flooding of the areas after down pours.

CONCLUSION

This study has assessed the social factors that residential area preference in Otukpo town. The study has revealed that much of the social residential preference decisions in the study area owe much to availability, accessibility, and functionality of urban infrastructures such as safety of neighborhoods, power supply, availability of school, water supply, educational level household size and occupation. This is more obvious since the study has revealed that residents locate in the study areas according to accessible and functional infrastructures. The study therefore recommends that basic residential infrastructures such as pipe-borne water, electricity, shopping centres and schools are either not available or are in a state of disrepair. The relevant authorities are however, urged to build new ones and rehabilitate existing residential infrastructures to make the residential areas more attractive and conducive for healthy living. State and local government authorities should intensify the security network of their residential areas since individual efforts have proved less effective by positioning security personnel in strategic locations in the study area.

REFERENCES

Abiodun JO (1990). Issues in Urban and Regional Development in Nigeria. Nigeria: John West Publishers, pp. 25 - 42.

Alonso W (1964). Location and Use, Towards a General Theory of Land Rent. Harvard University Press, Massachusetts, USA

Anyadike RNC (2009). Statistical Methods for Social and Environmental Sciences. Ibadan: Spectrum Books, (Chapter 7).

Michelson W (1966). An Empirical Analysis of Urban Environmental Preferences. J. Am. Inst.Plan. 37(6): 355-360.

Ogunjumo A, Olatubara M (1997). 'The Myth of City Centre Pivotal Influence in Urban Residential Location Decision: A study of Ibadan, Oyo State' Ife Research Publications in Geography, 6 (1&2): 26-35