Factors Influencing Intra- Urban Households Residential Choices in Makurdi Metropolis in Central Nigeria

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Abstract

This study sets out to investigate factors that are influencing location of intra-urban residential choices in Makurdi metropolis. Data were collected from 328 household heads (respondents) across the 20 major neighbourhoods of Makurdi metropolis, using questionnaires on various push and pull reasons making households to change their place of residence in the city. The data were analysed using factor analysis. The result of study revealed that 5 major factors altogether accounted for 75.76% of the total variance in the original data set. These factors are Factor 1 (Socio-economic and cultural Factor) which accounted for 32.85% of the total variance and is the most important factor influencing intra-urban choice of residence in Makurdi metropolis. Factor 2 (Housing and Infrastructural Factor) accounted for 15.20% of the total variance. This factor loaded positively and significantly on four variables with the dominance of housing characteristics and schools. Factor 3 (Income Level Factor) was predominantly dominated by income level which accounted for 12.84% of the total variation in the data matrix. Factor 4 (Proximity to Market and healthcare Factor) accounted for 8.46% of the total variance in the original data matrix and loaded positively on three variables. Factor 5 (Environmental Factor) was found to account for 6.40% which has to do with the absence of natural disasters. The relative importance of the factors that determine the choice people make of first residence in Makurdi is shown by their eigenvalues, which indicated that factor one (F1) is more important followed by F2, F3, F4 and F5 respectively. Interpreting the matrix of factor scores, a total of three neighbourhoods were recognized out of 20 that had strong positive scores. These neighbourhoods included Old GRA, Kwararafa and Lobi Quarters. This shows that the choice of these neighbourhoods as first place of residence was based on strong socio-economic reasons and cultural affinity which is the desire of the people to stay close to their kin and family. The study therefore recommends an integrated urban development approach based on the factors of residential choices that have been identified here in order to promote a better and healthier residential and urban environmental quality and enhance the capacity to predict intra-urban residential choices and neighbourhood preferences.

Key words: Intra-urban, residential, choices, factors, Makurdi Metropolis, Nigeria

Introduction

Residential location choice has been studied within the context of residential mobility and urban land use. Residential mobility has been defined as the movement of residents from one house to another or from one neighbourhood or part of a town or city to another (Gbakeji, 2006). Within the context of residential mobility, location choices are seen as a manifestation of the decision making process made by a household when it decides to change residences (Habib and Miller 2009). While a long distance move may involve total disruption for example rural-urban migration, residential mobility is a short distance move within an urban area that, however, results in changes in the activity spaces of the household such as work, school and shopping for members of the household. Many studies on residential mobility are concerned with the moving process, the reasons that trigger movement, who is likely to move and the resultant choice of a particular dwelling. One of the classic and most cited works on residential mobility is Rossi's (1980) 'Why Families Move' which suggested lifecycle changes of families as the primary reason why they moved.

On the other hand, urban economists study residential location choice as an explanation for urban land use particularly residential use; the development patterns are viewed as the function of income and micro level individual location choices, which result in changing land prices. Sociologists are interested in the outcomes of the social structure whereby residential location choices result in the distribution of social groups within the urban area in a concentric zone around the Central Business District (CBD), patterned according to the income status or social classes. Individuals compete for favourable locations within the city depending on the willingness to pay for different sites and locations (Knox and Pinch, 2000). This study focuses on residential location choice as a manifestation or outcome of the decision-making process of individuals or a household move and stay in a new place. When a household decides to settle at a location in space, it acquires the amenities that go with the location for example services and the social environment so these aspects will be important in understanding location choices; it has proximity to the physical environment for example nature, climate; it acquires the house or room and the amenities that go with it; the process is an individual or household based and therefore there are impacts, sentiments or experiences that are inherent. These are aspects that the study has taken into account in reviewing the concepts of Residential Mobility and Choices.

Many reasons have been put forward in literature on what influences residential location choices and much of the research has primarily focussed on three variables, namely travel, housing characteristics and land use. Generally the theories focussing on travel, housing characteristics and land use were economic based theories offering explanations in the United States that suggested that low-income households tend to locate in inner city with low standard or derelict housing, on high-priced urban land close to the CBD, while higher-income households choose suburban locations where land was cheaper but commuting costs were higher. The implication was that high-income households preferred large residential lots in the suburbs and were willing to pay more for transportation costs over long distances to and from work. But the model has been criticised and modified over time. Furthermore a common thread in many studies was the use of empirical models of what motivates a household to choose a particular residential location. Since this research is on an explanation and understanding of factors that influence choice in a developing world, important issues from the theories that are pertinent to this work are underscored in subsequent sections. Theories that recurrently appear in the literature on residential location choice can be clustered into three main themes namely: Accessibility (to the CBD) and Workplace; Life-Cycle or Life-stage and Neighbourhood, Environment and the Community.

A wide variety of dwelling unit attributes and neighbourhood attributes have been empirically shown to influence residential choice behaviour. Some of these attributes are found to have different effect on households of different characteristics. Some attributes are found to have significant influences in certain studies, but insignificant in others. A hypothesis often tested, and proven to be true over and over again, is that, all things being equal, households prefer residence resulting in lower commuting time/cost. In addition to commuting, which indicates

the ease of access to employment, previous studies provide results about how access to other types of opportunities, or land-use, affects residential choice behavior. Moreso, housing affordability, measured by housing price (Myung-Jin, 2013) or by price-to-income ratio, is generally found to be an attractive feature for a residential zone (Murphy and Sanford, 2001; Peter, 2009; 2011; 2013). However, housing price does not seem to constitute a barrier to the residential decisions of high-income households (Amao, and Ilesanmi, 2013).

The preference for housing structure type has been examined in a couple of studies. Preference for single detached housing is found for families with three or more members and families of higher incomes (Brown and Robinson 2006). The propensity for single-family, detached housing is also found of households with children (Ajala and Olayiwola, 2011). Furthermore, Brown and Robinson (2006) found that, while single detached dwellings are preferred to duplexes, both are preferred to apartment dwellings. Other housing attributes identified to have positive effect on residential choice behaviour include the presence of large kitchen, central heating and garden and architecture styles other than Cape Cod, colonial and ranch-style (Jiboye, 2012). Age of housing structures, on the other hand, does not appear to be a significant factor (Murphy and Sanford, 2001). Many cities and towns in Nigeria including Makurdi metropolis has been experiencing growth that is functional and physical expansion (Dam, Hundu, Kwanga, & Anule, 2021; Dam, Ortserga, Kwanga & Gyuse, 2021; Dam, Iorliam, Kwaghsende, Anule, Mngutyo, Atser, Adaaku, Alaci, Ujoh & Gyuse, 2020), and changing intra-urban residential locations. It has established that many households in Makurdi metropolis have change location of residence from one neighbourhood to another (Kwanga, Dam, 2024). The question is why are they changing residential locations and what are the drivers of these change? These questions presents an urgent need to be properly investigated in order to unveil the major drivers of the individual residential choices that produce the observed patterns in Makurdi metropolis, Nigeria. This study therefore, set out to determine the factors that account for urban residential choices in Makurdi metropolis, Nigeria.

Materials And Methods The Study Area

Makurdi town is located between latitudes 7° 30′ and 7° 45′N and longitudes 8° 30′ and 8° 35′E situated on the plains of the River Benue (Fig.1). The river divides the town broadly into North and South Banks.

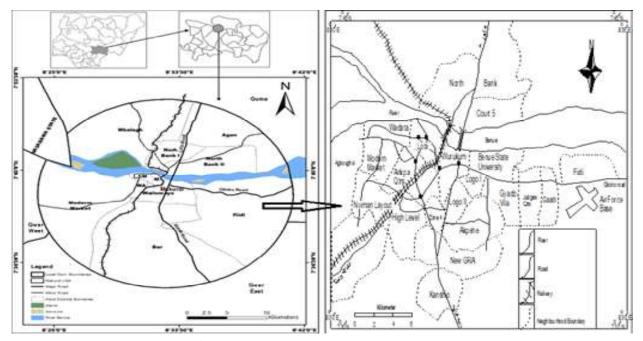


Fig. 1. Makurdi town showing neighbourhoods

Source: Benue State Ministry of Lands and Survey, 2020

The south bank forms significant part of the town because this is where the provincial headquarters was located and later state headquarters in 1976 (Nyagba, 1995). Makurdi is drained by the river Benue and its tributaries which form the main artery of drainage in the whole of the trough.

The population of Makurdi town is projected from 2006 census figure to be 391,924 people as at 2016 (Tser, 2013). Makurdi town has many neighbourhoods. Some of these neighbourhoods are as old as the town itself, while others are relatively new. The very old neighbourhoods in the town include Wadata, Wurukum, Old GRA and North bank. The moderately old neighbourhoods include High level, Ankpa Quarters, Kwararafa Quarters, Lobi Quarters, Court Five Area and New GRA, and the new neighbourhoods include Agboughul, Gyado Villa, Judges Quarters, Kanshio, Logo I, Naka Road, Nyiman Layout and Police Zone 4. The town is served by two Federal High ways; the Lafia - Makurdi - Otukpo and the Makurdi - Gboko highways. The portion of the Makurdi - Gboko highway that traverses the town has been dualized and it connects neighbourhoods along its path such as Wurukum, Gyado Villa, Judges Quarters and Gaadi. The Lafia - Makurdi - Otukpo highway on the other hand has not been dualized (except on top of the new bridge) and it connects neighbourhoods such as North bank, Court 5, Wurukum, New GRA and Kanshio. Other major roads within the study area include the Iyorchia Ayu way and Old Otukpo road that connects Wurukum roundabout to High Level Roundabout and further connects High Level roundabout with the New otukpo road at New GRA, the newly completed Makurdi International market Road, the Makurdi - Naka road, the Old Bridge road and Abu King Shuluwa road. These roads are in various usable conditions and they connect all the neighbourhoods in the town. They are complimented by numerous streets which altogether give form and structure to the city layout. Most of these roads have a number of road infrastructures such as street lights, directional signs, gutters and pedestrian walkways. There exists five operational markets within the town namely; Makurdi Modern market, Wurukum, North Bank, High Level and Fiidi markets.

Other important facilities include Security, Schools, Health Care Centres, and Worship centres, Fire Services, Restaurants and Banks. In terms of security, there is a high concentration of public security formations within the vicinity of the town. Public safety is generally maintained by the various police divisions whose presence has been established as well as the Security and Civil Defence Corps. There is also the presence of various military formations such as the Nigerian Army School of Military Engineering, NASME, 72 Army Para Battalion, Tactical Air Command Headquarters and the Nigerian Navy Provost School. In terms of education, the town is host to two public Universities and other tertiary institutions. There are also lots of public and private primary and secondary schools spread across the various neighbourhoods. Health wise, the town also has a Teaching hospital and several primary and secondary health care centres. For fire service, there is a single unit of Fire Bridgade which is the Headquarters of the Benue State Fire service stationed near Lobi quarters in Makurdi. All the registered banks in Nigeria have atleast one branch in Makurdi, most of which are found along the Makurdi-Otukpo road with a few others located in Makurdi Modern Market, High Level, Kwararafa Quarter and North bank. There is also the currency centre of the Central Bank of Nigeria which confers higher status to the branches of all the banks operating in Makurdi town. Public water supply is erratic and has limited coverage in parts of Old GRA, high Level, Kwararafa Quarters, Lobi Quarters, Wurukum, Judges Quarters, North Bank and Court 5. All of the aforementioned socio-economic activities have effects on intra-urban migration and residential choices in the study area.

Methodology

There was the need to examine the characteristics of neighbourhoods which have tended to influence the choices of the households in question. Information needed to achieve this was obtained from the following variables: environmental condition of the neighbourhood (eroded

or floodable, noise, polluted), location characteristics (near shops, schools, post office, medical facilities), local services/facilities (supermarket, post office, medical, public transport, water, power), privacy and spaciousness of the neighbourhood (quietness, serenity, less commercial), socio-cultural environment (affinity to ethnic groups for example Angwan jukum), cleanliness of the neighbourhood, quality of neighbourhood facilities (schools, public transport, street lighting), safety and security in the neighbourhood (measured in terms of reduced crime rate), fire protection in the neighbourhood, access to neighbourhood facilities (shops, water, power, post office, medical facilities), adequate water supply (regular supply of water), nearness to recreation centres, neighbourhood prestige housing price, satisfaction and quality (good, poor, low, high), socio-economic composition of the neighbourhood presence of friends, transportation and commuting (measured in time/cost)

Data for this study was also sought from heads of households resident in the various neighbourhoods in Makurdi town. The heads of households provided the data for this study because they are decision takers when it comes to critical issues involving the households like the choice of residences. This survey was carried out using respondent's questionnaire. The study population is made up of all household units within Makurdi town. Households constituted the basic units of study across the various neighbourhoods that make up Makurdi town. There are 38,777 households estimated to be living in Makurdi (projected from 1991 NPC census figures). Data obtained was analysed using Factor Analysis. The model is expressed mathematically thus;

$$Y_k = \lambda_{k1}Z_1 + \ldots + \lambda_{kr}Z_r + \psi_k \varepsilon_k$$

Where;

 Y_1, \ldots, Y_k are the k observed variables.

 Z_1, \ldots, Z_r are the r common factors, where r < k.

 $\lambda_{j1}, \ldots, \lambda_{jr}$, $j = \{1, \ldots, k\}$ are the factor pattern coefficients (loadings) that characterize the nature of the linear relationship between the common factors and intra-urban mobility.

 $\varepsilon_1, \ldots, \varepsilon_k$ are the unique factors, such that each intra-urban mobility has its own associated unique factor.

 ψ_1, \ldots, ψ_k are the coefficients relating the unique factors to intra-urban mobility.

The principal component method was used to extract the components based on the Kaiser criterion which suggests retaining those factors with eigenvalues equal or higher than 1.0 and dropping the least important factors with eigenvalues under 1.0 from the analysis. This was followed by a varimax (orthogonal) rotation. According to Kaiser (1995), the rationale is that an eigenvalue of 1.0 represents the maximum possible variance from an original variable, so that a component with an egienvalue of less than 1.0 account for less of the total variance than that of one original variable and so has not offered any useful variation in explaining change.

A Scree test was carried out to determine the factors that were most meaningful. Rotation serves to make the output more understandable and is usually necessary to facilitate the interpretation of factors. A varimax rotation solution yields results which make it easy as possible to identify each variable with a single factor. For each factor, defining characteristics have been spelt out to reveal the structure of such a factor and the construct the factor points to. In this way, it has been possible to show how each factor explains the choice of first neighbourhood of residence in Makurdi town. The rotated matrix here offers a clearer picture of the relevance of each variable in the factor in explaining the choice of residence in Makurdi town. On the whole, factor analysis as used in this study is to uncover the underlying structure (dimensions) of a set of variables by reducing attribute space from a larger number of variables to a smaller number of factors. The Factor Analysis was run on a Desktop PC, of the Benue State University Computer Room, using Statistical Product for Service Solutions (SPSS) Version 15.

Results and Discussions

It is obvious that not all the factors are important in explaining the reason why the people prefer some neighbourhoods as their first choice of residence to the others. As such Confirmatory Factor Analysis (CFA) was used to filter those factors that were redundant and retain those that can be adequately used in explaining the residence choice preference among the people in Makurdi town. Factor analysis is used mostly for data compression purposes in order to get a small set of variables (preferably uncorrelated) from a large set of variables (most of which are correlated to each other) and also to create indexes with variables that measure similar things (conceptually). Factor analysis is confirmatory when a researcher wants to test specific hypothesis about the structure or the number of dimensions underlying a set of variables (Table 1).

Table 1: Variables used in Confirmatory Factor Analysis

| Variable | Description | Mean |
|----------|--|--------|
| X1 | Presence of Kin | 2.3804 |
| X2 | Presence of Friends | 2.1716 |
| X3 | Closer to Office | 2.2157 |
| X4 | Nearness to Market | 3.1231 |
| X5 | Family size | 2.5900 |
| X6 | Income level | 2.7355 |
| X7 | Size of house needed | 2.7917 |
| X8 | Cost of Rent | 2.5273 |
| X9 | Presence of desired house | 1.9375 |
| X10 | Adequate water supply | 2.3722 |
| X11 | Availability of electricity | 3.2454 |
| X12 | Availability of school of choice | 1.7375 |
| X13 | Easy means of transport | 2.0406 |
| X14 | Presence of healthcare Centre | 2.1500 |
| X15 | Nearness to recreational centres | 2.1750 |
| X16 | Cleanliness of the residential environment | 1.8350 |
| X17 | Absence of natural disaster | 1.7917 |
| X18 | Security in the house | 2.4185 |
| X19 | Presence of a family house | 3.1000 |
| X20 | Presence of a personal house | 1.6500 |

Source: Field survey, 2020

On the whole, factor analysis is used in this study is to uncover the latent structure (dimensions) of a set of variables by reducing attribute space from a larger number of variables to a smaller number of factors. Using SPSS Version 15, Factor analysis was applied on 20 variables which correlated with each other to create matrix of factors (Table 3).

Based on the Kaiser criterion which suggests retaining those factors with eigenvalues equal or higher than 1.0 and dropping the least important factors with eigenvalues under 1.0 from the analysis, five (5) factors were extracted. This was followed by rotation of the factor loads to get a clearer pattern of the factors using varimax method yielding rotated factor matrix.

Table 2: Summary of the total variance explanation

| | Initial Eigenv | ralues | |
|---------|----------------|---------------|--------------|
| Factors | Total | % of Variance | Cumulative % |
| 1 | 6.571 | 32.854 | 32.854 |
| 2 | 3.041 | 15.207 | 48.061 |
| 3 | 2.567 | 12.837 | 60.898 |
| 4 | 1.691 | 8.455 | 69.352 |
| 5 | 1.281 | 6.403 | 75.756 |
| 6 | .965 | 4.825 | 80.581 |
| 7 | .876 | 4.382 | 84.963 |
| 8 | .710 | 3.550 | 88.513 |
| 9 | .540 | 2.701 | 91.214 |
| 10 | .426 | 2.128 | 93.342 |
| 11 | .365 | 1.827 | 95.169 |
| 12 | .281 | 1.406 | 96.574 |
| 13 | .256 | 1.281 | 97.856 |
| 14 | .186 | .932 | 98.788 |
| 15 | .112 | .562 | 99.350 |
| 16 | .083 | .416 | 99.766 |
| 17 | .041 | .204 | 99.969 |
| 18 | .005 | .024 | 99.993 |
| 19 | .001 | .007 | 100.000 |
| 20 | 4.60E-017 | 2.30E-016 | 100.000 |

Source: Field survey, 2020

In this study the desired size of significant loading is put at .500. The five factors which altogether accounted for 75.76% of the total variance in the 20 original variables are regarded as composite factors explaining the choice people make of first residence in Makurdi town (see Table 1). Factor 1 which accounted for 32.85% of the total variance is without any doubt the most important factor for making choice of residence.

Out of the 20 variables in the analysis, 10 of them including presence of friends, the cost of rent, security in the neighbourhood, and presence of kin, office location, adequate water supply, family size easy means of transport, nearness to recreational centres and the presence of desired house loaded positively and significantly on this factor. These include variables usually associated with social, cultural and economic considerations in Makurdi town. Hence, it was termed "Socio-economic and cultural Factor".

Table 3: Rotated Factor Matrix for the choice indicators of residence in Makurdi town

| | | | Loadings | | | | |
|-----------------------------------|-----------|-----------|-----------|---------------|------------|-------------|--|
| Variables | F1 | F2 | F3 | F4 | F 5 | Communality | |
| Presence of kin | .776* | 015 | .192 | .222 | .263 | .758 | |
| Presence of friends | .930* | .089 | .086 | - .123 | .081 | .902 | |
| Office location | .756* | 202 | .111 | 246 | .327 | .793 | |
| Nearness to market | .128 | 138 | .101 | .806* | 059 | .700 | |
| Family size | .604* | .449 | 105 | .294 | .114 | .677 | |
| Income level | .205 | .135 | .868* | .014 | 004 | .815 | |
| Size of house needed | .121 | .754* | 136 | .119 | .260 | .683 | |
| Cost of rent | .862* | 127 | 193 | .061 | 236 | .855 | |
| Presence of desired house | .541* | .211 | 646 | 064 | .133 | .776 | |
| Adequate water supply | .677* | .189 | 108 | 012 | .372 | .644 | |
| Availability of electricity | .402 | 564 | .427 | .288 | .189 | .780 | |
| Availability of schools of choice | .277 | .684* | .284 | 342 | .149 | .764 | |
| Easy means of transport | .571* | .510* | 139 | 023 | .346 | .726 | |
| Presence of healthcare centres | .181 | .379 | .404 | .586* | .332 | .793 | |
| Nearness to recreational centres | .567* | .374 | .388 | .417 | 187 | .820 | |
| Clean of the environment | .039 | .492 | 343 | .166 | .596 | .744 | |
| Absence of natural disasters | .183 | .038 | .062 | 138 | .826* | .739 | |
| Security in the neighbourhood | .849* | .089 | .316 | 064 | .038 | .834 | |
| Presence of a family house | 307 | .161 | 133 | .648* | 097 | .566 | |
| Presence of a personal house | 163 | .768* | .324 | .203 | 143 | .783 | |
| Eigenvalue | 6.571 | 3.041 | 2.567 | 1.691 | 1.281 | | |
| Percentage variance | 32.854 | 15.207 | 12.837 | 8.455 | 6.403 | | |
| Cumulative % | 32.854 | 48.061 | 60.898 | 69.352 | 75.75 6 | | |

Source: Field survey, 2020

Factor 2 accounted for 15.20% of the total variance. Associated with this factor are four variables which loaded positively and significantly. These variables associated with this factor include the presence of a personal house, size of house needed, availability of schools of choice and easy means of transport. Because of the dominance of housing characteristics and schools among the four variables, this factor was named "Housing and Infrastructural Factor".

Factor 3 was predominantly dominated by income level which accounted for 12.84% of the total variation in the data matrix. This variable addresses the issue of the income level of the people in Makurdi town as it relates to the decision making process of choosing a first residence in the town. Since this variable loaded positive on this factor of the income level, it was therefore named "Income Level Factor"

Factor 4 accounted for 8.46 percent of the total variance in the original data matrix. Nearness to the market and presence of a family house as well as presence of healthcare centres were the variables that loaded positively high on this factor. This factor was named "*Proximity to Market*"

and healthcare Factor" because of the high positive loading of the nearness to the market and the presence of healthcare facilities.

Finally, Factor 5 was found to account for 6.40% which has to do with the absence of natural disasters. It was named an "*Environmental Factor*" and had a low eigenvalue of 1.28 indicating that this factor does not receive adequate consideration by the people when making choice of first residence in Makurdi town. The relative importance of the factors that determine the choice people make of first residence in Makurdi town is shown by their eigenvalues, which indicated that factor one **(F1)** is more important followed by **F2, F3, F4** and **F5** respectively.

The factor matrix presents the loadings, by which the existence of a pattern for the variables can be ascertained. The factor score matrix gives a score for each neighbourhood on these patterns. As presented on Table 4 factor scores were used to explain pattern of the choice the people make of first place of residence across the 20 neighbourhoods in Makurdi town on the 5 factors extracted. This was also interpreted so as to assess the chances of the 20 neighbourhoods chosen on the five factors extracted by the people.

Interpreting the matrix of factor scores, a total of three neighbourhoods were recognized out of 20 that had strong positive scores indicating above average explanation of 1.0 and above by Factor 1. These neighbourhoods included Old GRA, Kwararafa and Lobi Quarters. This shows that the choice of these neighbourhoods as first place of residence was based on strong socio-economic reasons and cultural affinity which is the desire of the people to stay close to their kin and family.

Table 4: Factor scores for the 20 Neighbourhoods in Makurdi town

| - | Dimension of first choice of residence | | | | | | |
|------|--|-----------|---------------|-------|-----------|-------|--|
| S/No | Neighbourhoods | F1 | F2 | F3 | F4 | F5 | |
| 1 | Wadata | -0.78 | 2.93* | -0.62 | -0.38 | 0.36 | |
| 2 | High Level | -1.82 | -0.18 | -0.19 | 0.97 | 0.41 | |
| 3 | Wurukum | -0.17 | 0.75 | 1.59* | 1.59* | -1.25 | |
| 4 | Logo I | -0.87 | -0.50 | -0.23 | 0.20 | -0.12 | |
| 5 | Logo II | 0.32 | -0.15 | -1.11 | -1.14 | 1.53* | |
| 6 | Old GRA | 1.08* | 0.15 | -2.93 | -0.54 | -0.49 | |
| 7 | New GRA | 0.79 | 0.30 | -0.52 | -1.51 | -0.22 | |
| 8 | Kanshio | 0.15 | -0.97 | -0.01 | 0.23 | -1.22 | |
| 9 | Nyiman Layout | 0.99 | 0.44 | -0.25 | -0.71 | -0.20 | |
| | Kwararafa | | | | | | |
| 10 | Quarters | 1.57* | -0.35 | 0.30 | 0.65 | -0.57 | |
| 11 | Lobi Quarters | 1.13* | 0.18 | 1.02* | 0.91 | -0.95 | |
| 12 | Police Zone Four | -0.48 | -1.06 | 0.13 | -0.64 | -0.17 | |
| 13 | Gyado Villa | 0.52 | -0.36 | 0.49 | -0.12 | -1.23 | |
| 14 | Modern Market | 0.03 | -0.60 | 1.32* | 1.37* | 0.29 | |
| 15 | Ankpa Quarters | -1.95 | -1.36 | -1.02 | 0.02 | -0.99 | |
| 16 | Agboughul | 0.64 | -1.32 | -0.02 | -0.00 | 1.87* | |
| 17 | Naka Road | -0.51 | -0.53 | 0.97 | -0.10 | 1.87* | |
| 18 | North Bank | 0.99 | 0.51 | 0.34 | 1.62* | 1.07* | |
| 19 | Court Five | -1.24 | 0.87 | -0.02 | -2.17 | -0.69 | |
| 20 | Judges Quarters | -0.39 | 1.27 * | 0.77 | -0.23 | 0.69 | |

Source: Field survey, 2020

Under Housing facility and Infrastructural factor, Wadata and Judges Quarters were identified as the neighbourhoods chosen because of the size of the housing and availability of schools of choices. This shows that these neighbourhoods are strong in the housing and other infrastructural facilities such as schools.

A total of three neighbourhoods which include Wurukum, Lobi Quarters and Modern Market were recognized as been selected as first place of residence based on the income level of the people. This is clearly shown in the type and quality of the residence that are common in these neighbourhoods. The characteristics nature of housing type in most of these neighbourhoods especially Wurukum is more of slums than what is expected of an urban area. Because the income level of the people in these neighbourhoods is quite low, the living environments are also relatively poor when compared to people whose income are high.

Under Proximity to Market and Health care Factor, the matrix revealed that 3 neighbourhoods had high positive scores on this composite index. These neighbourhoods are Wurukum, Modern Market and North Bank. This means many of the people choose these neighbourhoods because they are closer to the markets and health care services.

Under Environmental Factor, the matrix shows that neighbourhoods differed markedly in response to environmental issues as a deciding factor. Under this factor, Logo II, Agboughul, Naka Road and North Bank were strongly chosen based on the absence of natural disasters. Thus, using factor analysis it became clearer to appreciate the actual factors that determine the choice people made of first place of residence in Makurdi town.

Conclusion and Recommendations

This study examined factors that have contributed to urban residential choices in Makurdi town. The factor analysis performed in this study sorted out the various factors of residential choice which include; socio-economic and cultural, housing and infrastructural, income level, proximity to market and healthcare and environmental factors as the major factors that have contributed to urban residential choices in Makurdi town. The study therefore recommends that government should involve in massive housing construction especially for its workers and low income groups in the metropolis, just as it is creating the right atmosphere for individual developers and corporate organizations to participate more actively in solving the housing question. This may be achieved by the enactment of relevant by laws to make the acquisition of land for housing and property development less cumbersome.

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