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EDITORS:

**Asimiyu M. JUNAID
Olatunde F. ADEDAYO
Richard A. JIMOH
Luqman O. OYEWABI**

SPATIAL VARIATION OF FACTORS INFLUENCING NEIGHBOURHOOD CHANGE IN THE PERI-URBAN AREAS OF MINNA, NIGER STATE

^aIdowu, O. O., ^aShaibu, S. I.; ^bBako, A. I. ^bRaheem, W. A. and ^aMartins, V. I.
^aDepartment of Urban and Regional Planning, Federal University of Technology, Minna, Niger State
^bDepartment of Urban and Regional Planning, University of Ilorin, Ilorin, Kwara State.

As residential location choices are dependent on a wide range of housing and location attributes, the search for residential location has been a recurring challenge to urban dwellers. This study examined the spatial variation of factors that influenced neighbourhood change in fourteen peri-urban neighbourhoods of Minna. The data for this study were collected from both primary and secondary sources. Primary data were generated from the peri-urban residents through questionnaire administration. The systematic random sampling technique was employed in the selection of 825 respondents. For the secondary data, the neighbourhood demarcation map was used to determine the variation of factors influencing residents' change of neighbourhoods in the peri-urban areas. The study revealed eight important factors that influenced residents' decision to change the place where they lived and these vary across the entire neighbourhoods. These factors are availability of community facilities (roads and electricity and water supply) (0.68); security of the neighbourhood (0.67); proximity to place of work (0.65); proximity to the city centre (0.63); shift in rental tenure to home ownership (0.62); low housing rent (0.62); reduction in the value and/or price of land (0.59); and availability of private and/or personal means of transportation (0.58). The study concluded that: proximity to places of work and availability of community facilities are two major factors influencing residents' mobility Minna peri-urban neighbourhoods. The study recommended rehabilitation of dilapidated infrastructure and provision of new one to ensure sustainable peri-urban development.

Keywords: Spatial variation, neighbourhood change, peri-urban, residential location

INTRODUCTION

Cities are products of many forces and are engines of economic development, centres of cultural innovation, social transformation and political change (Knox & McCarthy, 2005). A report on world of cities by UN-Habitat (2001) explained the collective implications of the growing population during the two hundred years of global economic expansions, in the 19th and 20th century. This implies that as the world moves into the realm of urban age, the dynamism and intense vitality of cities become prominent (UN-Habitat, 2013). Consequently, the dominant urban form and spatial planning challenge facing cities in the 21st century is found in peri-urban areas. Often times, this is consciously referred to as urban sprawl, which simply interpreted as an unplanned and uncontrolled development (Cillier, 2010). Much attention has been drawn to the concept of peri-urban interface and the factors influencing peri-urban development, as well as residential location decision in peri-urban areas across major cities in the world. The search for residential location has been a source of recurring problem to urban dwellers (Olatubara, 1995). With regard to a study of Idowu (2017) notable factors influencing the decision taken by urban dwellers to live in their neighbourhood were identified and these necessitated the adjustment or change of residential locations.

olu.idowu@futminna.edu.ng

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Related studies show that households in urban areas compete for spaces by bidding for housing and land in any area that befits their social and economic status (Arthur, 2001; Kim *et.al.* 2003). Besides, other several researches have focused on residential location choice with emphasis on the effect of transport related attributes on residential location choice (Florez, 2002; Kim *et.al.* 2003); implication of social and economic class (Sanni and Akinyemi, 2009); and effect on rental value and price of land (Acheampong & Anokye, 2013; Popoola, 2015). Expectedly, these studies revealed different reasons why individuals in the peri-urban areas change their neighbourhood or choose to live in a particular location.

The trend of peri-urban transformation across Nigerian cities has gained the attention of several scholars, including Jinadu (2004); Sanni and Akinyemi (2009); Aguda & Adegboyega (2013); and Popoola (2015). The focus of their studies emphasized on the factors influencing resident's locational preference and the challenges of peri-urban areas across Nigeria cities. Hence, their contributions are worthy of commendation as it provides the base to study the variation of factors influencing neighbourhood change in the peri-urban areas of Minna, Niger State, Nigeria.

Minna, the administrative capital of Niger State is experiencing growth that is unplanned and uncontrolled. The most visible evidence of this development is that of large and rapid development of slums and squatter settlements. As noted, Sanusi (2006) admitted that Minna has grown beyond its traditional boundary, creating an informal growth in the areas that are ecologically and physically unstable. It is in the light of this foregoing that this study investigates the factors influencing neighbourhood change and presented the spatial variation of these factors across the peri-urban areas of Minna.

The Study Area

Minna lies between Latitudes $9^{\circ} 33'$ and $9^{\circ} 40'$ North of the Equator and Longitudes $6^{\circ} 29'$ and $6^{\circ} 35'$ East of the Greenwich Meridian (Figure 1). The town spanned along the main spine road that separates the city into West and East. This road is from Chanchaga in the South to Maikunkele in the North, covering a distance of about 20km. The West - East pattern, spanned from Gidan-Kwano along Bida axis in the West, to Maitumbi to Gwada axis, in the East, over a distance of 15km (Figure 2). The delineated areas that are referred to as the peri-urban neighbourhoods of Minna (Figure 3) comprises of Barkin-sale, Bosso Town, Bosso Estate, Chanchaga, Dutsen Kura Gwari, Fadikpe, Jikpan, Kpakungun, Maitumbi, Sauke-Kahuta, Shango, Tayi-Village, Tundun-Fulani and Nyikangbe/Gbaganu.

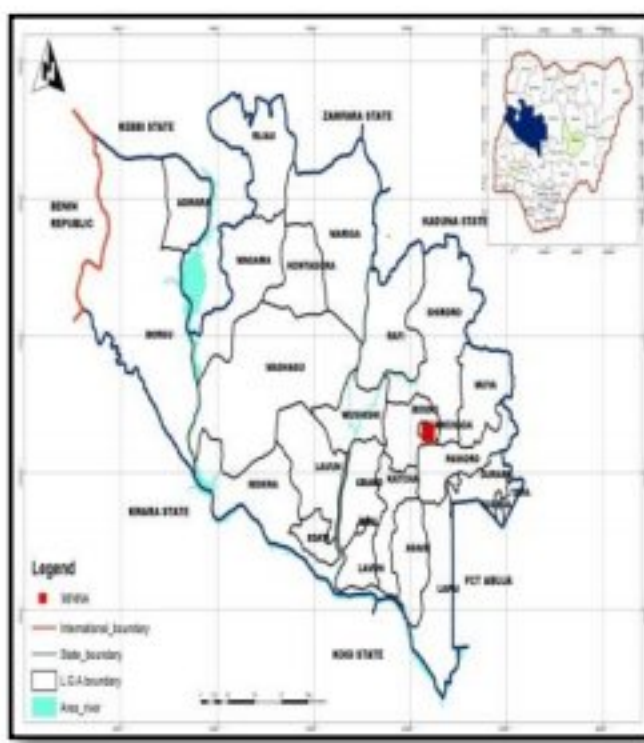


Figure 1: Map of Niger State insert is the Map of Nigeria

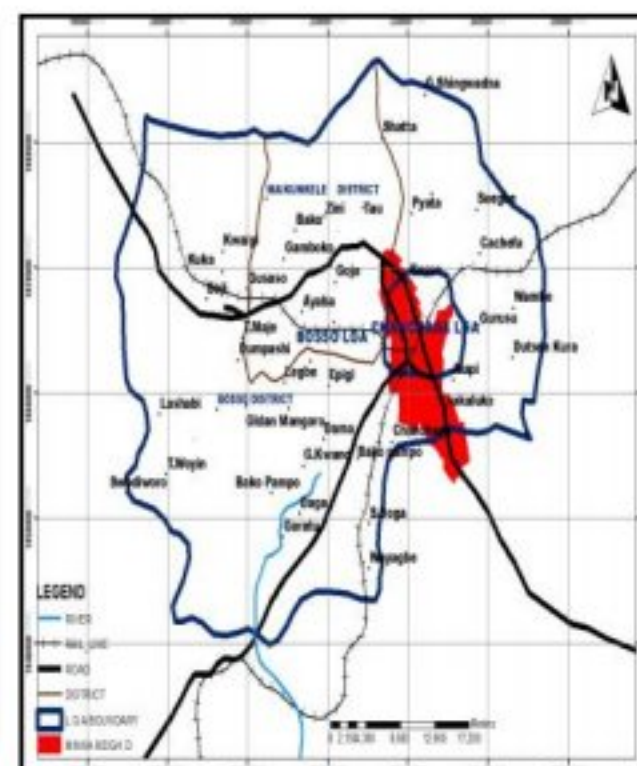


Figure 2: Minna in the context of Local Government Areas

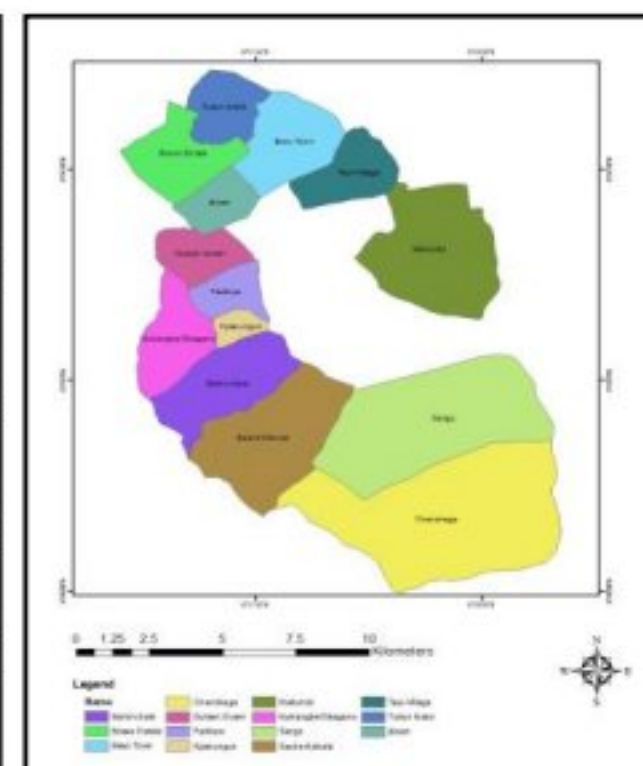


Figure 3: The Peri-urban Neighbourhoods of Minna

METHODOLOGY

The primary source of data was employed in this study with the aid of questionnaire administration. A systematic random sampling technique was employed in the selection of 825 respondents across the fourteen peri-urban neighbourhoods of Minna. The data from questionnaire administration were subjected to Likert Scale and rating method and the aggregate mean score of the factors influencing neighbourhood change was computed. The variations of the factors influencing neighbourhoods change in the peri-urban areas of Minna were determined by cross-tabulating the core factors of the aggregate factors influencing neighbourhood change against the variety of the core factors in each of the neighbourhoods and mapped using GIS technique.

DISCUSSION OF RESULTS

Factors influencing Neighbourhoods Change in the Peri-urban Areas

In this study, sixteen (16) variables were considered in examining the factors that influence change of neighbourhoods in the peri-urban areas of Minna. The aggregate mean score of the factors influencing residents' decision to change their neighbourhoods in the peri-urban area of Minna is presented in Table 2. This represents the summary of the factors that influenced the respondents' decisions to change their neighbourhood.

Table 1: Sixteen Variables used in Determining Residents' Change of Neighbourhood

S/No	Factor	S/No	Factor
1	Ethnic /religion	9	Redevelopment of the former neighbourhood of residence
2	Reduction in the price of land	10	Informal economy
3	Low housing rent	11	Voluntary change in neighbourhood
4	Proximity to place of work	12	Proximity to city centre
5	Availability of community facilities	13	Interesting architecture and building design
6	Security of the Neighbourhood	14	Shift from rental tenure to homeownership
7	Avoidance of the influence of government policy	15	Change in profession or employment
8	Availability of personal/private means of transportation	16	Tenure composition

Source: Author's Survey, 2016.

The aggregate mean score was derived from the mean of scores of the entire neighbourhoods and the computed index value of it. The average aggregate mean score and relative index value of respondents in the peri-urban area of Minna are 2.86 and 0.57, respectively.

Eight variables as indicated in Table 2 were identified as the core factors influencing the respondents' decision to change their location. The core factors were determined based on if the mean score is greater than or equal to average mean score. These factors were ranked in their order of importance, with relative index value in parentheses. These factors are availability of community facilities (roads and electricity and water supply) (0.68); security of the neighbourhood (0.67); proximity to place of work (0.65); proximity to the city centre (0.63); shift in rental tenure to home ownership (0.62); low housing rent (0.62); reduction in the value and/or price of land (0.59); and availability of private and/or personal means of transportation (0.58). The auxiliary factor is determined when particular mean score is less than the average mean score, such include: voluntary change of neighbourhood (0.56); informal economy (0.54); avoidance of the influence of government policy (0.53); ethnicity/religion (0.53); composition of land tenure (0.49); redevelopment of former neighbourhood of residence (0.48); and the architectural/building design (0.47).

Table 2: Aggregate Mean Score of Factors Influencing Neighbourhoods Change in the Peri-Urban Areas

S/No	Influencing Factors	Tundun-fulani	Bosso Town	Bosso Estate	Chanchaga	Dutsen Kura	Barinkin-Sale	Maitumbi	Jikpan	Tayi-Village	Kpakungun	Fadikpe	Nyikangbe/Gbagamu	Sango	Sauke-Kabuta	Aggregate Mean Score	Relative Index	Rank	*C/A
1	Ethnic /religion	2.32	2.61	2.43	3.97	3.19	2.52	2.67	2.57	2.39	1.85	2.07	2.47	2.53	1.69	2.52	0.50	13	A
2	Reduction in the price of land	2.83	2.58	3.45	3.50	3.51	3.15	2.83	2.76	3.06	2.58	2.50	3.17	2.51	3.20	2.97	0.59	7	C
3	Low housing rent	2.54	2.82	3.57	3.38	3.51	3.16	3.32	2.46	3.23	3.05	2.51	3.15	3.05	3.32	3.08	0.62	6	C
4	Proximity to their place of work	2.67	3.60	3.94	3.72	3.96	3.77	3.44	2.71	2.96	2.93	2.70	3.25	3.18	2.58	3.24	0.65	3	C
5	Availability of community facilities	2.58	3.50	4.11	4.68	4.08	2.83	3.02	3.52	4.26	2.93	2.68	3.30	3.53	2.60	3.40	0.68	1	C
6	Security of the Neighbourhood	3.43	3.10	3.63	4.53	4.06	2.91	3.41	2.93	3.70	2.97	2.65	3.17	3.34	2.80	3.33	0.67	2	C
7	Avoidance of the influence of government policy	2.45	2.36	3.02	4.05	3.46	2.47	2.77	2.64	2.31	2.39	2.07	2.55	2.65	2.24	2.67	0.53	11	A
8	Availability of personal/private means of transportation	2.53	2.93	3.52	4.02	3.43	2.83	3.07	3.10	2.73	2.58	2.29	2.74	2.71	2.39	2.92	0.58	8	C
9	Redevelopment of the former neighbourhood of residence	2.02	2.62	3.33	3.20	2.69	2.19	2.52	2.15	2.14	2.08	2.07	2.41	2.56	1.89	2.42	0.48	15	A
10	Informal economy	2.38	2.52	3.26	3.14	3.19	2.34	2.95	2.55	3.13	2.75	2.19	2.42	2.49	2.51	2.70	0.54	10	A
11	Voluntary change in neighbourhood	2.08	2.87	3.59	2.95	3.41	2.64	3.09	2.75	2.57	3.08	2.37	2.44	3.12	2.28	2.80	0.56	9	A
12	Proximity to city centre/transportation network	2.19	3.39	3.82	3.84	3.88	3.47	2.90	2.98	2.82	3.33	2.63	2.92	3.59	2.58	3.17	0.63	4	C
13	Interesting architecture and building design	2.08	2.06	2.87	3.21	2.51	2.29	2.38	1.92	3.16	1.86	2.17	2.51	2.37	1.80	2.37	0.47	16	A
14	Shift from rental tenure to homeownership	2.74	2.98	3.24	3.78	3.24	2.98	3.10	2.80	3.37	3.60	2.64	3.32	2.43	2.93	3.08	0.62	5	C
15	Change in profession or employment	1.98	2.87	3.52	3.16	2.82	2.29	2.50	2.62	2.98	2.44	2.17	2.53	2.86	2.04	2.63	0.53	12	A
16	Tenure composition	2.53	2.13	2.67	3.00	2.80	2.27	2.49	2.88	2.08	2.20	2.41	2.53	2.37	1.91	2.45	0.49	14	A
Average Neighbourhood Index Value																2.86	0.57		

Note: * The influencing factors are group either as Core (C) or Auxiliary (A) factors.

Source: Author, 2016.

Figure 4 shows the respondents' preferred neighbourhood in Minna. Based on the analysis, Chanchaga (0.73) appeared as the most preferred neighbourhood in the peri-urban area of Minna, while the least preferred neighbourhood is Sauke-Kahuta. Next to Chanchaga in rank are Bosso Estate (0.67) and Dutsen Kura Gwari (0.67).

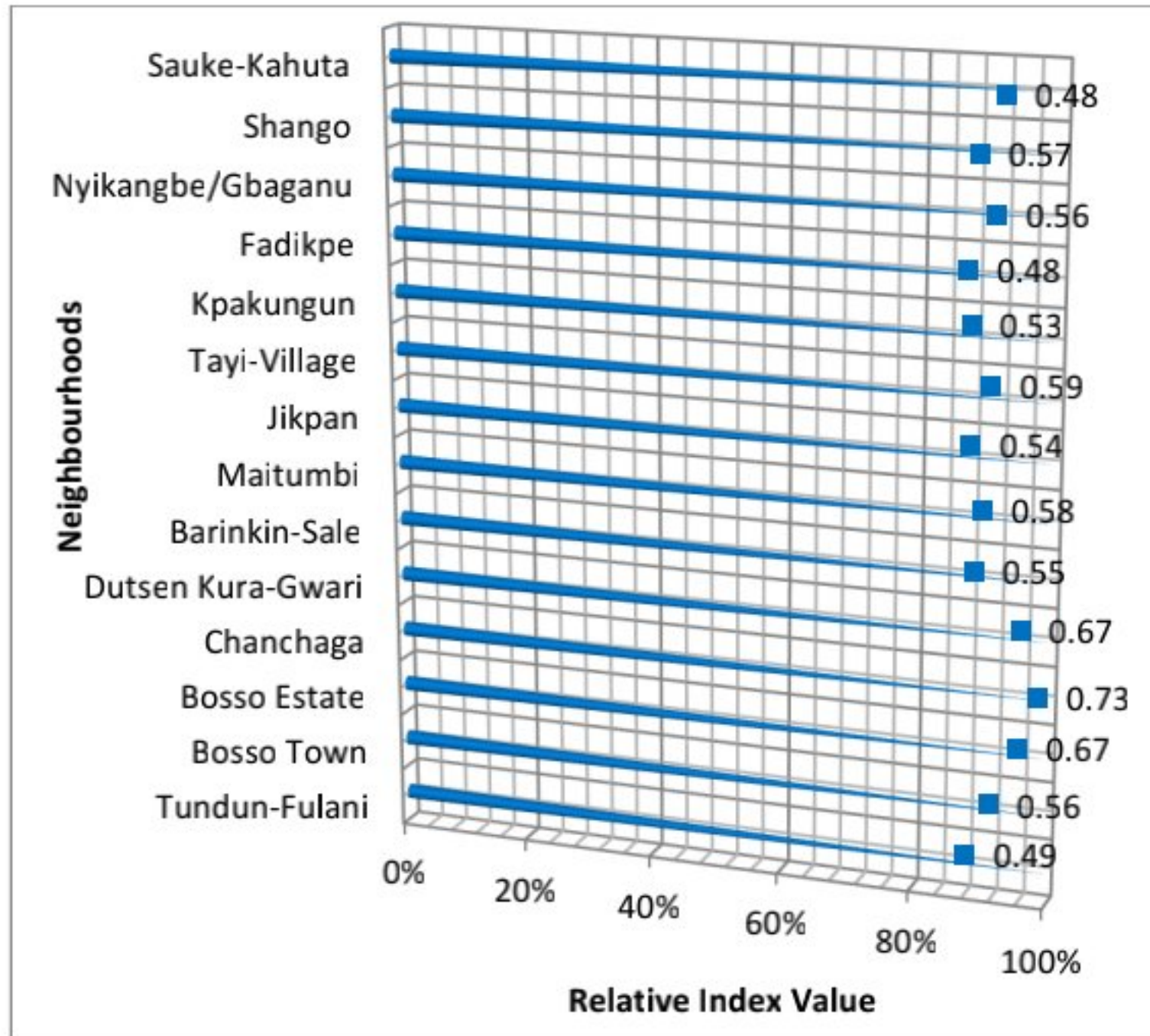


Figure 4: Residents Preferred Neighbourhoods in Minna Peri-urban Area
Source: Authors' 2016.

Spatial Variation of the Factors Influencing Neighbourhood Change across Minna Peri-urban Area

The illustrations of the variation of the factors that influenced residents' change across the peri-urban areas of Minna are thus presented in Table 3. The variation based on the eight factors is presented in Figures 5 – 12. Two out of the eight factors appeared in all the neighbourhoods (Figures 3 and 4). These factors are proximity to place of work and availability of community facilities. In other words, these two factors are the most important factors influencing the decisions taken by respondents to live in the peri-urban area. The variations of these eight factors across the peri-urban neighbourhoods with their relative index values in parenthesis are further discussed in detail.

Table 3: Pattern of Factors Influencing Neighbourhoods Change in Peri-urban Areas of Minna

S/No	Influencing Factors	Aggregate Factors	Chanchaga	Bosso Estate	Dutsen Kura Gwari	Tayi-Village	Maitumbi	Shango	Bosso Town	Nyikangbe/Gbaganu	Barinkin-Sale	Jikpan	Kpakungun	Tundun-fulani	Fadikpe	Sauke-Kahuta
1	Ethnic /religion															
2	Reduction in the price of land	Green		Green	Green	Green				Green	Green	Green		Green		Green
3	Low housing rent	Grey		Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey	Grey
4	Proximity to place of work	Purple	Purple	Purple	Purple	Purple	Purple	Purple	Purple	Purple	Purple	Purple	Purple	Purple	Purple	Purple
5	Availability of community facilities	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
6	Security of the Neighbourhood	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue	Blue
7	Avoidance of the influence of government policy															
8	Availability of personal/private means of transportation	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red	Red
9	Redevelopment of the former neighbourhood of residence															
10	Informal economy															
11	Voluntary change in neighbourhood															
12	Proximity to city centre	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue	Dark Blue
13	Interesting architecture and building design															
14	Shift from rental tenure to homeownership	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black	Black
15	Change in profession or employment															
16	Tenure composition															

Source: Authors' Analysis 2016.

Proximity to Place of Work

Figure 5 shows that proximity to place of work influenced the decision taken to live where respondents reside in the peri-urban neighbourhood of Minna. For instance, Bosso Estate (0.79); Dutsen Kura Gwari (0.79); Barkin-Sale (0.75), Chanchaga (0.74); Bosso Town (0.72); Maitumbi (0.69); Nyikangbe/Gbaganu (0.65); Shango (0.64); Tayi village (0.59); Kpakungun (0.59); Jikpan (0.54); Fadikpe (0.54); Tudun-Fulani (0.53) and Sauke-Kahuta (0.52).

Availability of Community Facilities

The variation of availability of community facilities in the peri-urban area of Minna shown in Figure 6, influenced neighbourhood change in Chanchaga, Tayi village, Bosso Estate, Dutsen Kura Gwari, Shango, Bosso Town, Jikpan, Nyikangbe/Gbaganu, Maitumbi, Kpakungun, Barkin-Sale, Fadikpe, Tudun-Fulani, Sauke-Kahuta. The relative index for this factor in all the neighbourhoods ranges between 0.94 - 0.52.

Security of the Neighbourhood

The pattern of security of the neighbourhood varies in just ten neighbourhoods (Figure 7). The neighbourhoods that were mostly influenced by security are Chanchaga (0.91); Dutsen Kura-Gwari (0.81); Bosso Estate (0.73); Tudun-Fulani (0.69); Maitumbi (0.68); Shango (0.67); Kpakungun (0.59); Jikpan (0.59); Barkin-Sale (0.58) and Sauke-Kahuta (0.56).

Proximity to City Centre

The spatial pattern of proximity to the city centre is a major factor influencing the decision taken by respondents in eleven out of the fourteen neighbourhoods (Figure 8). These neighbourhoods are Dutsen Kura Gwari (0.78), Chanchaga (0.77); Bosso Estate (0.76); Barkin-Sale (0.69); Bosso Town (0.68); Kpakungun (0.67); Jikpan (0.60); Maitumbi (0.58); Nyikangbe/Gbaganu (0.58); Fadikpe (0.53) and Sauke-Kahuta (0.52).

Shift from Rental Tenure to Home ownership

The shift from rental tenure to home ownership is shown in Figure 9 mostly influenced the neighbourhoods of Chanchaga, Kpakungun, Tayi village, Nyikangbe/Gbaganu, Maitumbi, Bosso Town, Barkin-Sale, Sauke-Kahuta, Jikpan, Tudun-Fulani, and Fadikpe. The index value for this factor in these neighbourhoods ranged between 0.76 - 0.53.

Reduction in the Price of Land

Reduction in the cost of acquiring land (Figure 10) majorly influenced the decision of respondents to locate in their neighbourhood. The neighbourhoods that were affected by this factor are those of Dutsen Kura Gwari (0.70); Bosso Estate (0.69); Sauke-Kahuta (0.64); Nyikangbe/Gbaganu (0.63); Barkin-Sale (0.63); Tayi village (0.61); Turin-Fulani (0.57) and Jikpan (0.55).

Availability of Personal/Private Means of Transportation

The availability of personal/private means of transportation was also considered important by many people. The neighbourhoods of Chanchaga, Dutsen Kura Gwari, Maitumbi, Bosso Town, Barkin-Sale, Jikpan, Tudun-Fulani and Sauke-Kahuta rated the availability of personal means of mobility very important (Figure 11).

Low House Rent

These neighbourhoods of Bosso Estate (0.71); Dutsen Kura Gwari (0.70); Maitumbi (0.66); Sauke-Kahuta (0.66); Tayi Village (0.65); Nyikangbe/Gbaganu (0.63); Barkin-Sale (0.63); Kpakungun (0.61); Shango (0.61); Bosso Town (0.56); Tudun-Fulani (0.51) and Fadikpe (0.50) considered the low cost of renting an apartment as a major factor in their decision to reside where they live. This is perhaps not surprising because Kpakungun which is the least preferred neighbourhood in Minna falls within this category (Figure 12).

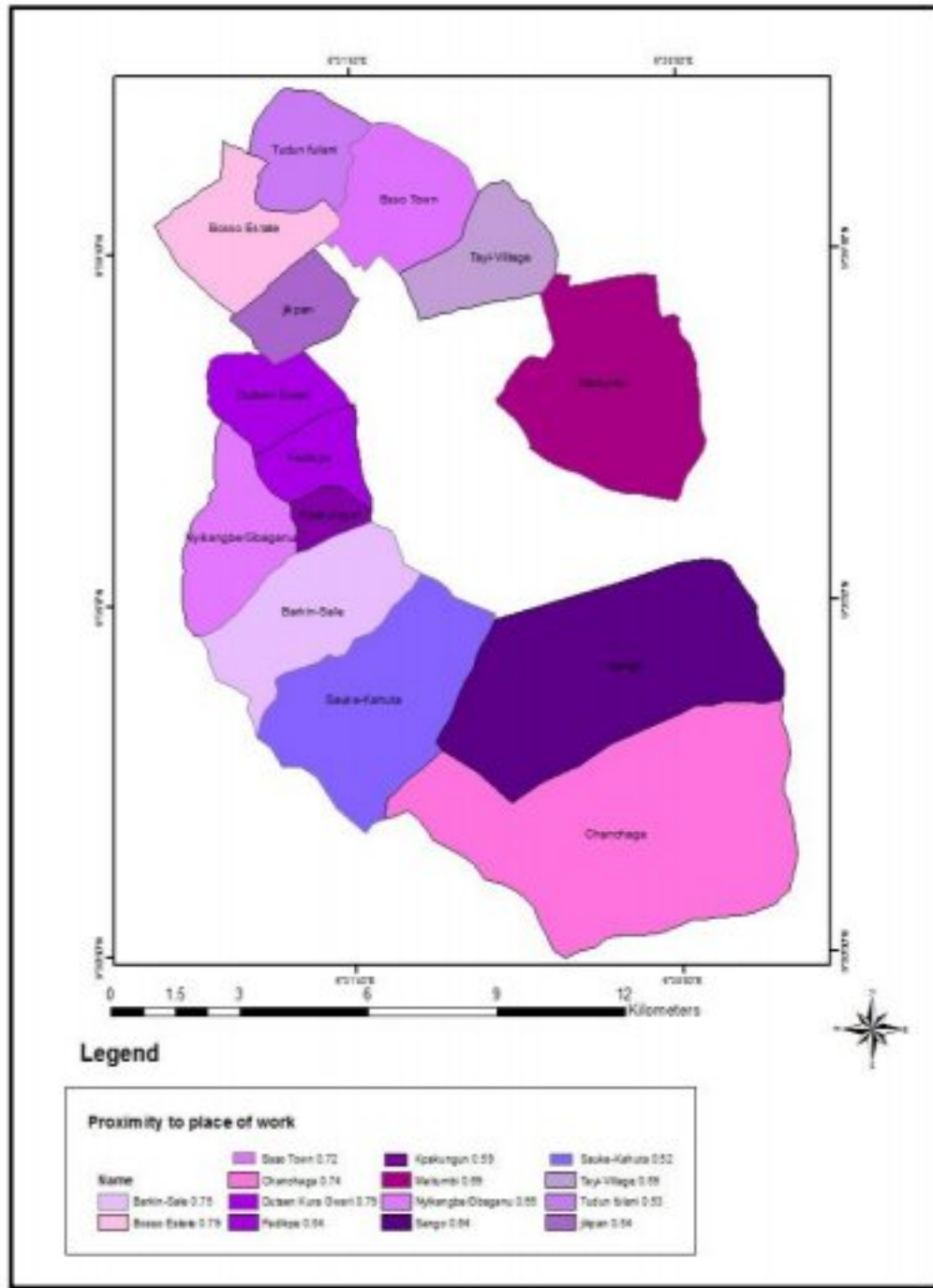


Figure 5: Pattern of Proximity to Place of Work

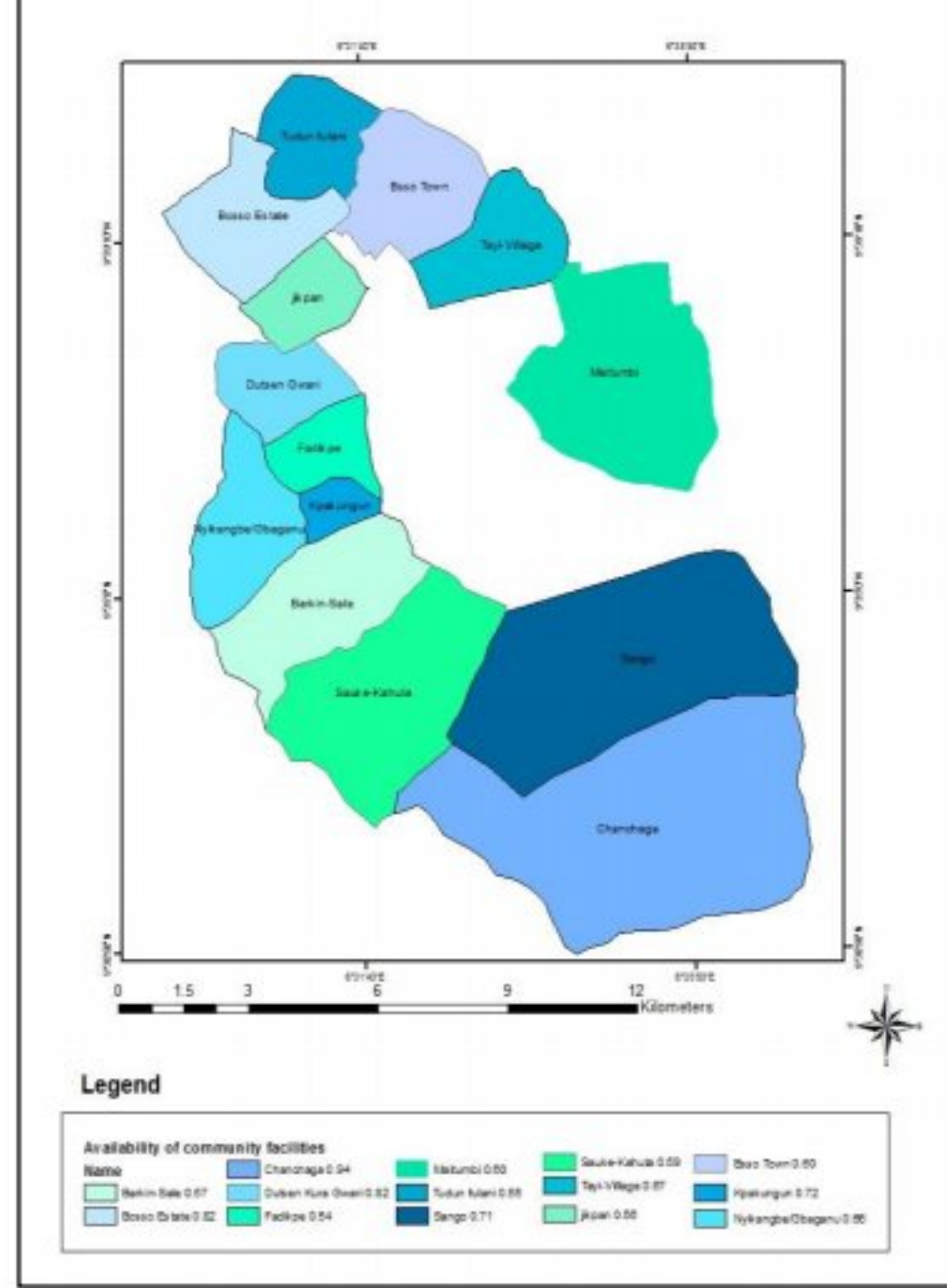


Figure 6: Pattern of Availability of Community Facilities

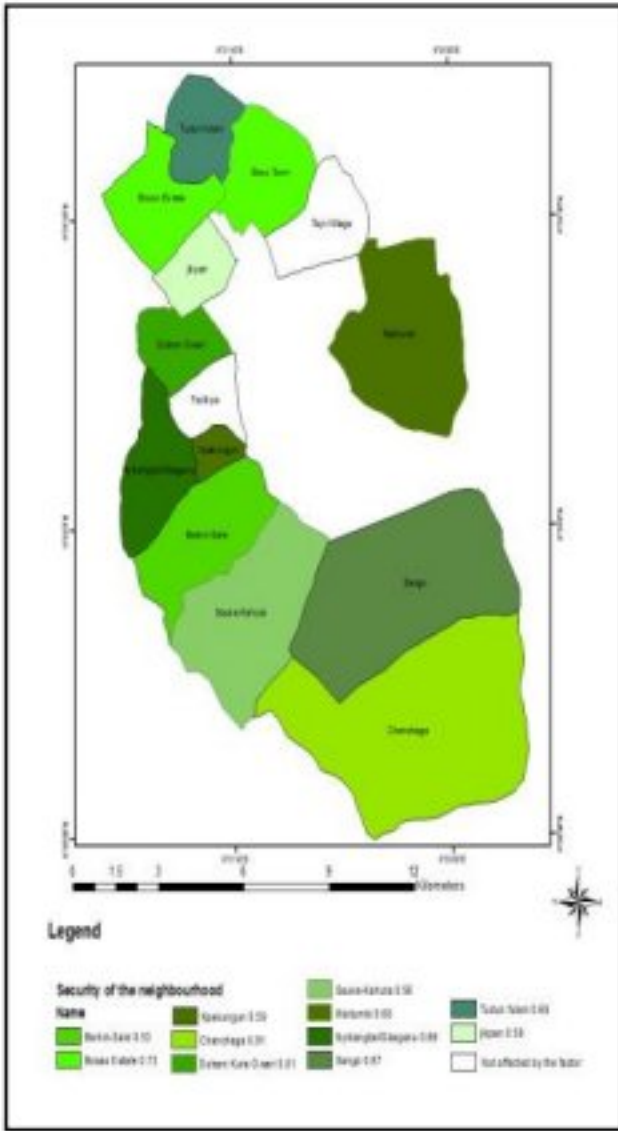


Figure 7: Pattern of Security of the Neighbourhoods

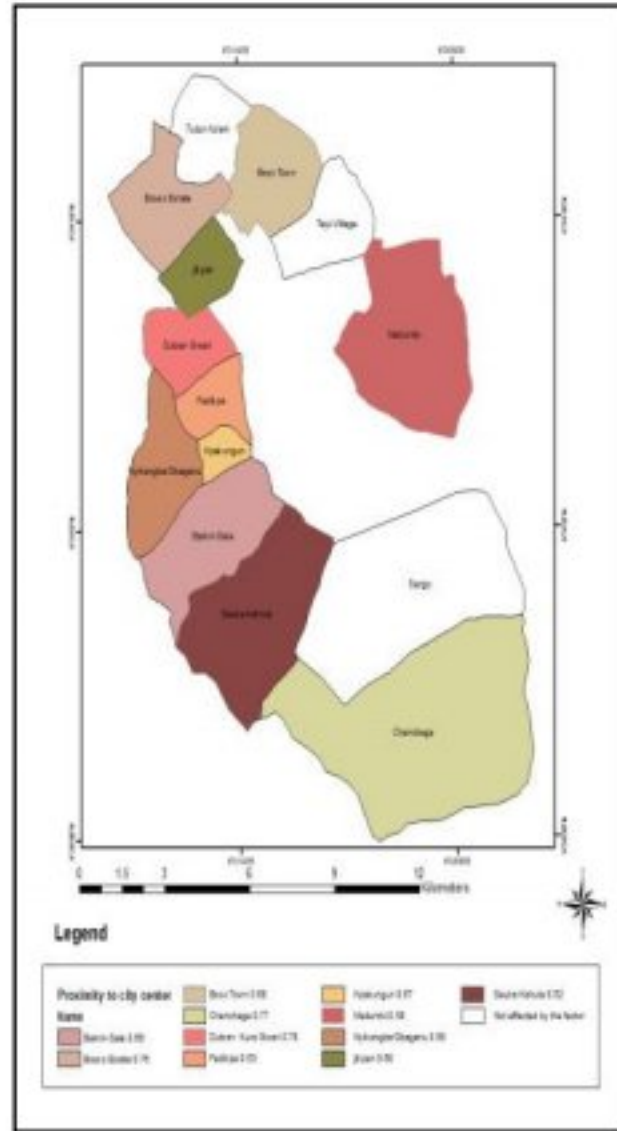


Figure 8: Pattern of Proximity to City Centre

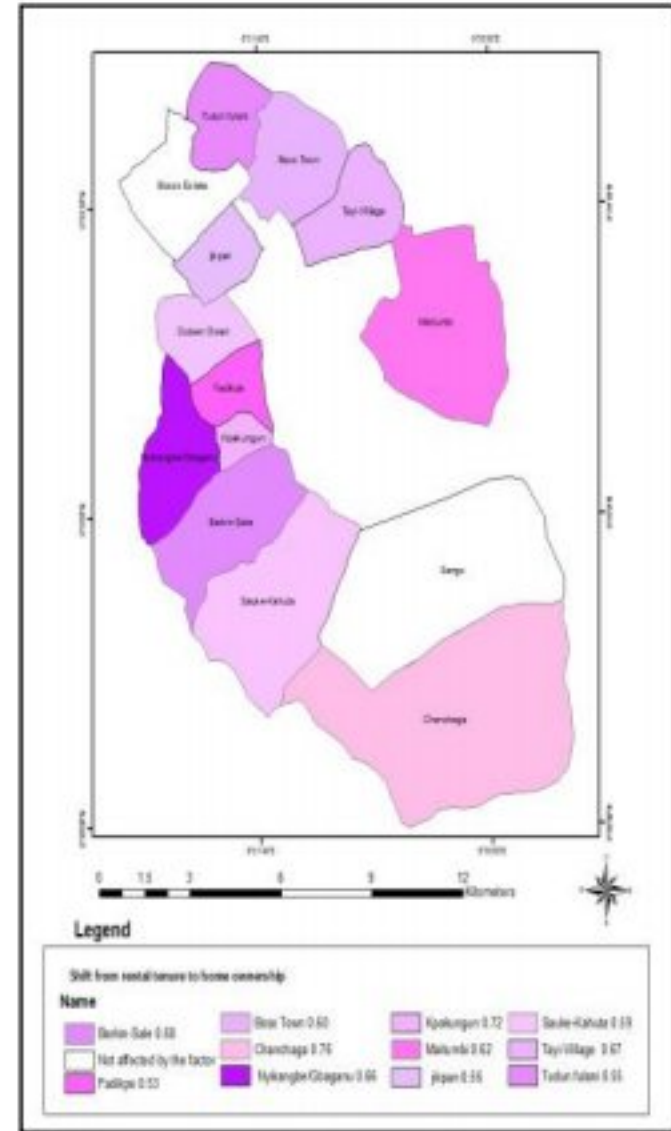


Figure 9: Pattern of Shift in Rental Tenure to Home-ownership Occupier

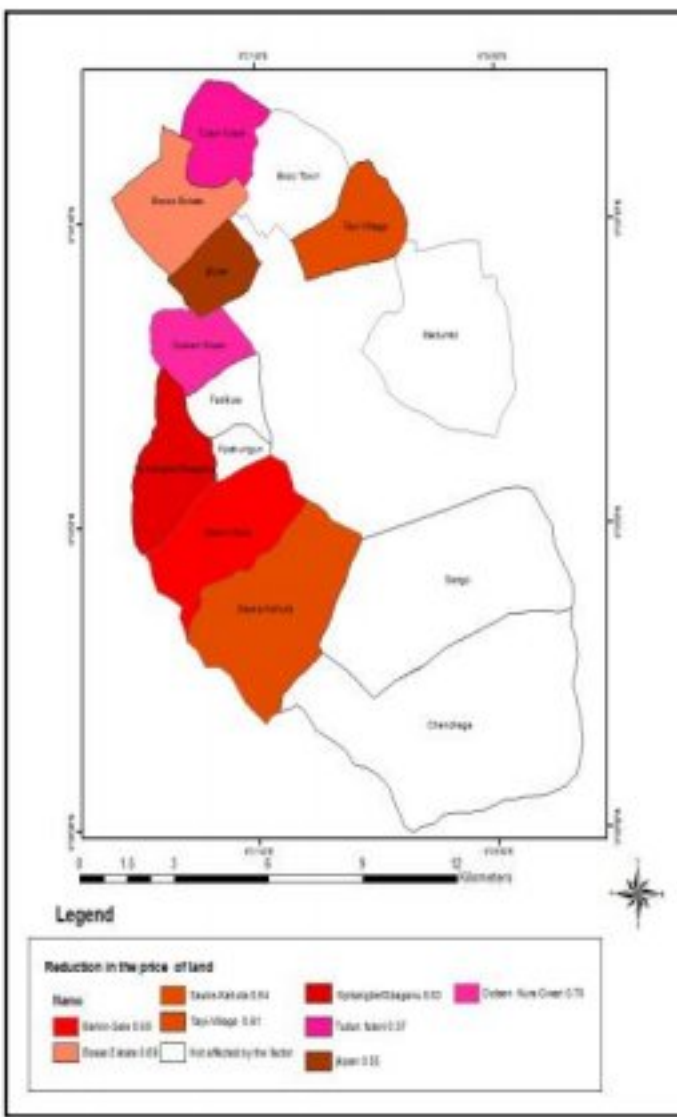


Figure 10: Pattern of Reduction in the Price of Land

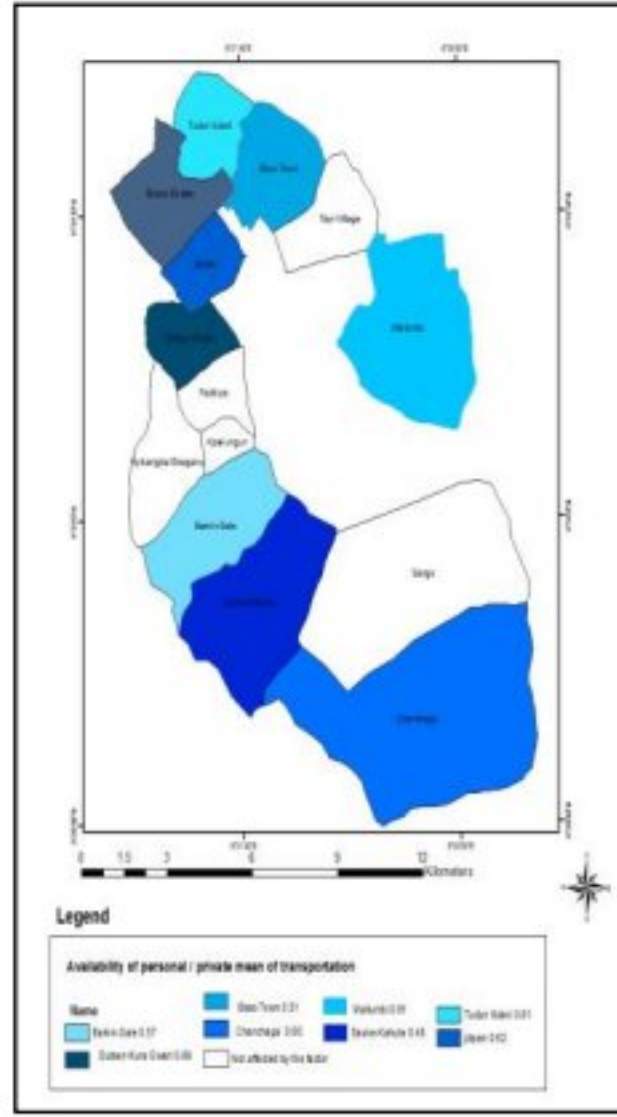


Figure 11: Pattern of Availability of Personal/ Private Means of Transportation

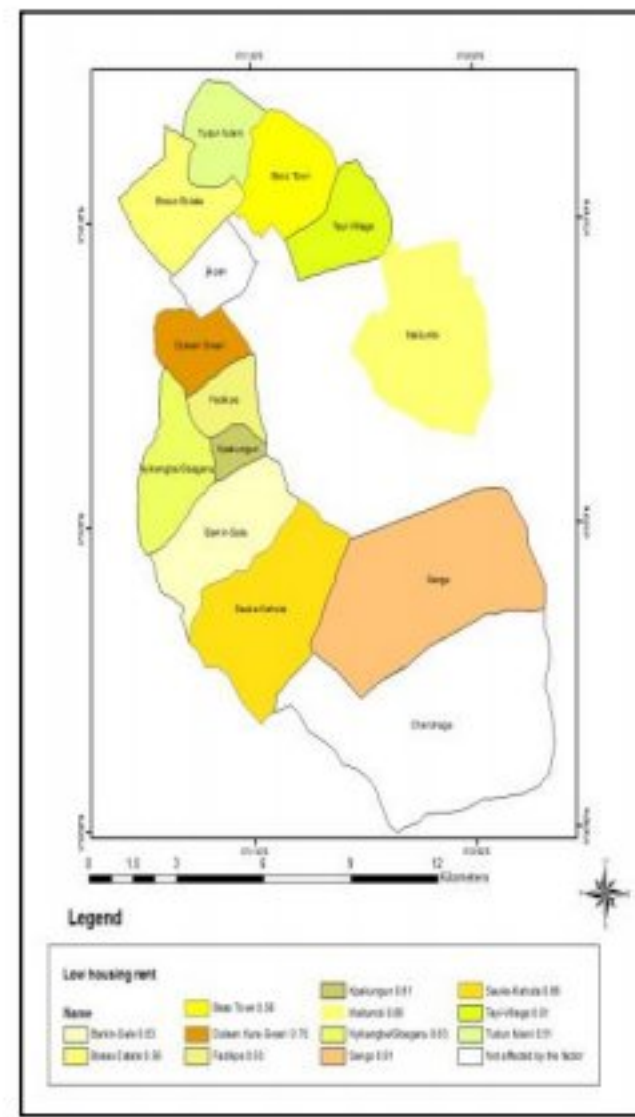


Figure 12: Pattern of Low House Rent

CONCLUSION AND RECOMMENDATIONS

The study documented notable factors influencing the decision of peri-urban residents to change their neighbourhoods in Minna and the variation of these factors across fourteen neighbourhoods. Eight (8) major factors identified are availability of community and infrastructural facilities; security of the neighbourhood; proximity to place of work; proximity to city centre; shift from rental tenure to home ownership; low rent; and reduction in the price of land. This study revealed that two of these factors (proximity to places of work and availability of community facilities) appeared in all the neighbourhoods, while the remaining factors vary within the neighbourhoods. Based on this fact, the Government should embark on rehabilitation of dilapidated infrastructure and provision of new basic infrastructure and also should develop a Strategic Development Plan to ensuring sustainable peri-urban development.

REFERENCES

- Acheampong, R. A. & Anokye, P. A. (2013). Understanding Households' Residential Location Choice in Kumasi's Peri-urban Settlements and the Implications for Sustainable Urban Growth. *Research Humanities and Social Sciences*. 3(9): 60-70.
- Aguda, A. S. & Adegboyega, S. A. (2013). Evaluation of Spatio-Temporal Dynamics of Urban Sprawl in Osogbo, Nigeria Using Satellite Imagery and GIS Techniques. *International Journal of Multidisciplinary and Current Research*. Sept/Oct 2013 issue. Accessed online at <http://ijmcr.com>.
- Arthur, O' Sullivan (2009). *Urban Economics*. McGraw Company. New York.
- Amoateng, P. Cobbinah, P. B. & Owusu-Adade, K. (2013). Managing Physical Development in Peri-Urban Areas of Kumasi, Ghana: A Case of Abuakwa. *Journal of Urban and Environmental Engineering*. 7 (1): 96 – 109.
- Cillier, D. P. (2010). *The Development and Use of Land Use Suitability Model in Spatial Planning in South Africa*. Being an M.sc Thesis Submitted to Potchefstroom Campus of the North West University, South Africa.
- Florez, J. (2002). Effects of Accessibility on Residential Land Pattern. Unpublished PhD Thesis, University of Politcnica de Catalufia, Departamento de Infraestructura del Transportey Territorio (Esp-a). Support of CO1, IICIT (Venezuela).
- Idowu, O. O. (2017). *Spatio-temporal Analysis of Peri-urban Development in Minna, Niger State*. A Ph.D. Thesis, Department of Geography and Environmental Management, University of Ilorin, Ilorin Kwara State.
- Jinadu, A. M. (2004). Urban Expansion and Physical Development Problems in Abuja: Implications of the National Urban Development Policy. *Journal of the Nigerian Institute of Town Planners*. 17(1): 15 – 29.
- Kim, J. Pagliara, F. & Preston, J. (2003). Analysis of Residential Location Choice Behaviour in Oxfordshire. UK: A Combine Stated Preference Approach. *International Review of Public Administration*. 8(1).
- Knox, P. L. & McCarthy, L. (2005). *Urbanization: An Introduction to Urban Geography*. Pearson Education Inc. London. 2nd Edition.
- Max Lock Nigeria Limited (1980). Minna Master Plan 1979 – 2000: Final Report. Town Planning Division, Ministry of Housing and Environment, Niger State. Max Lock Group Nigeria Limited.
- Olatubara, C. O. (1995). *Activity Pattern and Urban Residential Location Decision in Ibadan, Oyo State*. A Ph.D. Thesis, Department of Geography Obafemi Awolowo University, Ile-Ife, Osun State, Nigeria.
- Popoola, N. I. (2015). Analysis of Impact of Peri-Urban Residential Development on Real Property Value in Minna, Niger State, Nigeria, Unpublished PhD Thesis, Urban and Regional Planning Department, Federal University of Technology Minna.
- Torres, H. (2008). Social and Environmental Aspects of Peri-urban Growth in Latin American Megacities. United Nations Expert Group Meeting on Population Distribution, Urbanization, Internal Migration and Development. Department of Economic and Social Affairs United Nations Secretariat New York.
- Sanni, L. & Akinyemi, F. O. (2009). Determinants of Household's Residential Districts Preferences within Metropolitan City of Ibadan, Nigeria. *The Journal of Human Ecology*, 25(2): 137 – 141.
- Sanusi, Y. A. (2006). Pattern of Urban Land Development Control in Nigeria: A Case Study of Minna, Niger State. *Journal of the Nigerian Institute of Town Planners*. 19(1): 125-145.
- UN-Habitat (2001). *The State of the World's Cities 2001: A World of Cities*. UN-Habitat Publications Unit, Nairobi Kenya.
- UN-Habitat (2013). *The State of the World's Cities 2012/2013: Prosperity of Cities*. Earthscan. Routledge, Taylor and Francis Group.