

ANALYZING THE VARIATION IN RESIDENTIAL PROPERTY RENTAL VALUES IN MINNA AND ENVIRONS, NIGER STATE, NIGERIA.

Maimuna, B. K

Department of Estate Management and Valuation,
Federal University of Technology, Minna,
Niger State, Nigeria

Kemiki, O.A

Department of Estate Management and Valuation,
Federal University of Technology, Minna,
Niger State, Nigeria

ABSTRACT

This study analysed variations in residential property rental values in Minna and environs, Nigeria. The target population and sample for the study comprised of rented residential properties and tenants who are the household heads occupying the residential properties in Minna as well as registered Estate Surveyors and Valuers firms in Minna. Purposive Sampling technique was used in the sampling procedure to pick the tenants and twelve registered Estate Surveyors and valuers firms. A total of 250 questionnaires were administered on the occupants of tenanted residential properties using the neighbourhood approach. Geometric mean was used to obtain the rental growth rate for the period of study for two bedroom and three bedroom flats. Standard Deviation and Coefficient of Variation, Relative importance index (RII), Simple Descriptive Statistics were adopted in achieving the set objectives. The results indicates that rental trend for three bedroom flat within the study period changed from 1.59% in 2011 to 8.36% in 2017 and in 2020 dropped to 4.61%. For two bedroom flat within the study period changed from 1.51% in 2012 to 7.92% in 2017 and dropped to 5.59% in 2020. This indicates that the variation was more in 2017 across the neighbourhoods as the average rental value of two bedroom flats within the study period was 24.4% for Bosso town and 13.03% for Chanchaga. For three bedroom, Shango has the highest with 18.9% while Fadikpe has the lowest with 9.9% level of variation. A number of factors such as physical, location and neighbourhood characteristics of residential property determined the rental values of residential property in the study area as they played significant role in influencing tenants' choice of accommodation in the various neighbourhoods across the study area. The result also identified dominant factors such as condition of the building, size of the building, number of bedrooms, number of toilets and bathrooms, quality of the neighbourhood, direct access to tarred road and presence of tertiary institution, banks and public offices influencing tenants' choice of accommodation in each neighbourhood. In conclusion, the research indicates that there is variation in residential property rental values in Minna, Nigeria. Conclusively, variations are attributed primarily to factors that determine residential property rental values and therefore it is recommended that landlords seeking optimum return from their residential property investment should focus on improving the physical and structural characteristics of the property like the condition and size of the building, number of toilets and bathrooms and also number of bedrooms.

Keywords: Estate, Value, property, residential and neighbourhood.

Introduction

Many cities of the world in developed and developing countries in particular were not planned initially while only few of them started as planned developments. These human settlements began to develop as villages or trade centres but they increased in sizes to what are big cities and urban centres today [1]. Residential dwelling symbolizes one of the most basic needs of human being and it has a profound impact on the health, welfare, and productivity of individuals [2]. More so, not only is house an essential need of human being but it is also an object of investment as well as a means of storing wealth. This has resulted to people buying houses and those that cannot afford to buy do rent in order to satisfy their needs hence, the creation of residential property market. Unlike every other commodity market, property market is not centralized as the market for a particular property is located where the property is situated. As a result of the lack of centralized market for real properties, property values usually vary irrespective of the level of similarity of such properties [3].

Rent is the economic return to land resources. It is also the value of land on annual basis as stated [4] believed that rent is differential and caused mainly by distance and cost of transportation and attributed differences in rent-earning capacity of land to differences in location and transport cost. Findings from contemporary empirical studies also reveal that rental growth factors vary from locality to locality. Also, academics, practitioners, researchers and decision makers have developed strong interest in the subject of property market and related issues in recent times [4].

The determination of property value is usually the responsibility of qualified Estate Surveyors and Valuers as provided by the Estate Surveyors and Valuers Decree No. 24 of 1975 now CAP E. 13 LFN 2007. However, despite the various standards, methods and regulations guiding the process of determining property value, the heterogeneous nature of real property would not allow for equality of value even for properties in the same location. However, as Estate Surveyors and Valuers our opinions should be close. Property is a multi-dimensional product and different factors influence its value [5].

The rate of variation in residential property rental values in Minna is visible which may be due to so many reasons depending on the choice for accommodation of an individual, selection of neighbourhood, change in location, change in fashion and taste change in level of income and many more determinants which this study would assess. Using Minna as a case study will, therefore, reveal or help to establish the relationship between property values and the determinants that result in variation of rental values. Residential property rental values vary within and across the various neighbourhoods of Minna metropolis. A typical example of the variation in residential property rental value in Minna can be observed in properties located within the neighbourhood of the various tertiary institutions in the city. It is against this background that this work analysed various determinants of variation in residential property rental values in Minna and environs.

The Study Area

The study area is Minna and environs which lies between latitude $9^{\circ} 33' N$ and $9^{\circ} 45' N$ and longitude $6^{\circ} 34' E$ and $6^{\circ} 42' E$. Minna covers some 885 hectares that can be divided into the following land use categories: Residential, Government Institutions, Educational Institutions, Law and Order Institutions, Commercial and Industrial, Public Utilities and Controlled Open Space [6].

Minna is a town of extremes as far as room occupancy is concerned. Over one quarter of the households are living in comparative ease at one person or less per room and almost a fifth of the households are

living in this comfort at over three persons per room (Minna master plan chapter 1, no 44). The survey revealed an appalling state of poor sanitary facilities throughout the main town and villages [6]. Minna is a town of rented accommodation excluding G.R.A., which consists almost entirely of rented accommodation owned by governments, almost half the compounds in the rest of the town are occupied by tenants.

A policy of housing improvement based on dealing with the most overcrowded compounds containing ten or more households and reducing the occupancy rate in each of those compounds to a maximum of four households only would require a replacement need of new accommodation for about 1300 households [6].

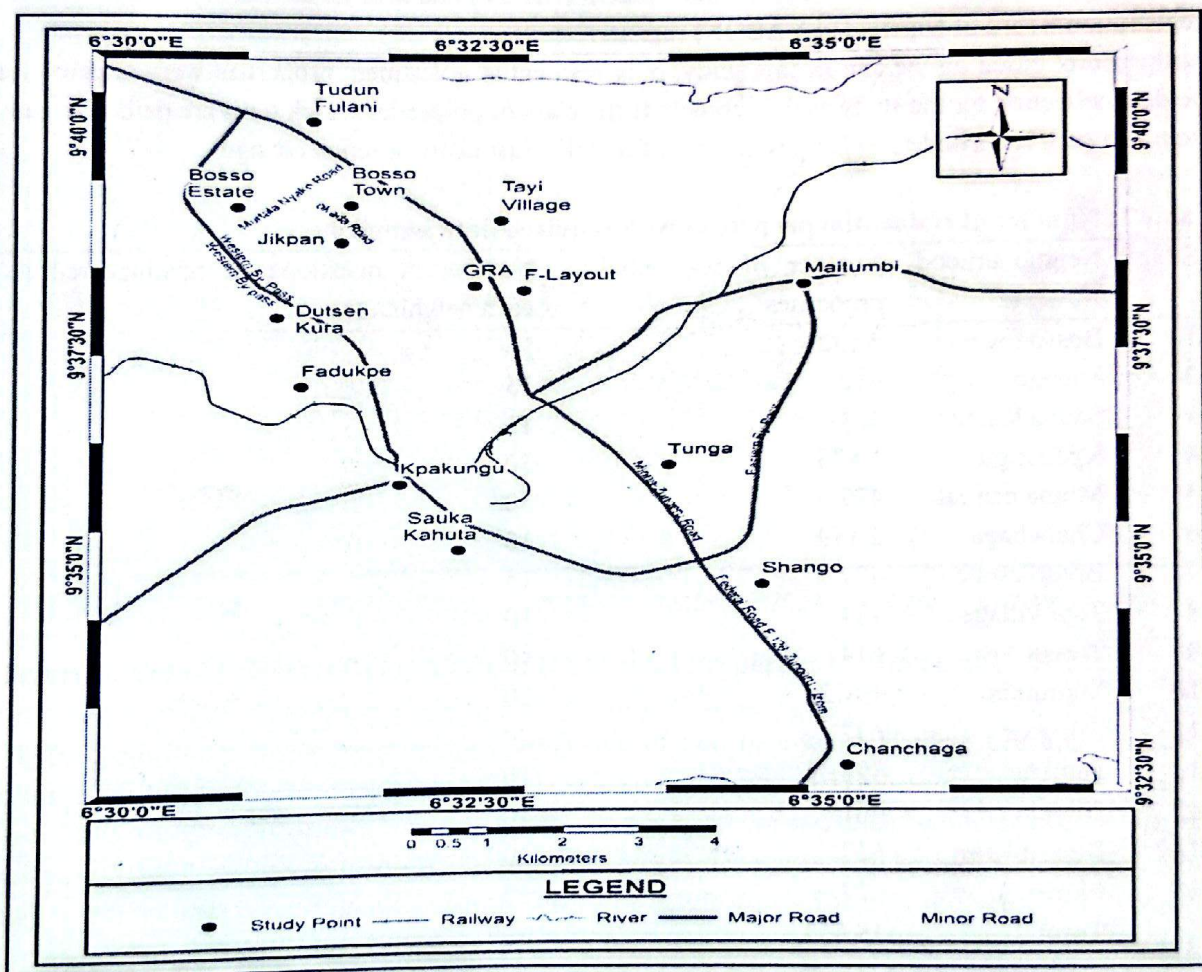


Figure 1: The Study Area (Minna and environs and the selected neighbourhoods).
Source: Authors Field Survey, (2022).

Materials and Methods

This study utilized both primary and the secondary sources of data. The primary data for the study comprise of rental data of residential properties in the study area across the neighbourhoods. These include annual data on rental trends for residential properties under study for the period 2011-2020 and their specific characteristics, the rental growth rate and factors that causes variations in rental values

and tenants' choice of residential accommodation. Secondary data for the study are mainly data on population figures from National Population Census (NPC), household figures from Niger State Bureau of Statistics (NSBS), published journals, textbooks, seminar papers and unpublished research works such as student's project and thesis.

The target population for this study consists of residential properties in Minna and environs which are strictly for the purpose of investment and can generate income to the property owner in form of rent and are said to have income-earning potential or rent, tenants of residential properties and all firms of registered Estate Surveyors and Valuers in Minna that manages residential properties.

The number of registered Estate Surveyors and Valuers firm was obtained from the directory of Nigerian Institution of Estate Surveyors and Valuers (NIESV) and also Estate Surveyors and Valuers Registration Board of Nigeria (ESVABON) register.

Furthermore, based on the aim of this study, only residential investment properties were selected for the data collection for the study as they constitute the class of properties which rents are paid to occupy them and such rents undergo changes in form of rental adjustments or rental change.

Table 1: Number of residential properties with required data sampled

S/No	Neighbourhood	Number of residential properties	Number of questionnaire administered in each neighbourhood
1	Bosso town	4,132	30
2	Shango	612	15
3	Sauka Kahuta	403	15
4	Kpakungu	1,675	30
5	Minna central	479	30
6	Chanchaga	2,189	10
7	Bosso estate	477	15
8	Tayi village	134	10
9	Tunga	614	10
10	Maitumbi	1,673	20
11	F-layout	622	20
12	Fadikpe	398	10
13	GRA	401	10
14	Dutsen Kura	622	10
15	Jikpan	622	15
	Total	15,053	250

The sample size comprises 250 rented residential properties selected from the 15 neighbourhoods of the study area. This is arrived at by adopting the Smith and Strattek (2010) Sample size formula.

$$n = \frac{z^2 \times \delta^2 \times \left(\frac{N}{N-1}\right)}{ME^2 + \left(\frac{z^2 \times \delta^2}{N-1}\right)} \quad (1)$$

Where:

n = sample size

- δ = Standard Deviation put at 0.5 (depicting a safe decision enhancing large enough samples)
- Z = standardized normal value for 95% confidence level which is 1.96
- ME = Margin of error put at $\pm 5\%$
- N = Number of residential properties in the study area estimated at 15,053.

Therefore, the sample size for the study is 250 rented residential properties.

Results and Discussion

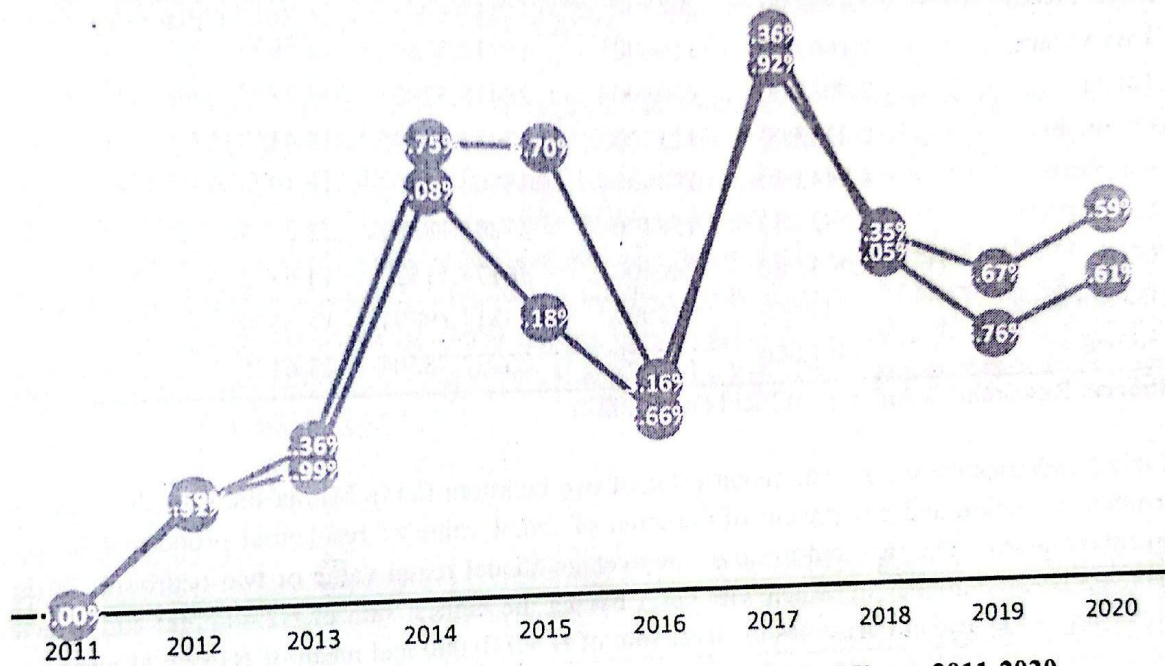


Figure 2: Trend in Rental Growth rate of Residential Properties in Minna, 2011-2020

Figure 2 illustrates the trend in rental growth rate of two bedroom and three bedroom residential property in Minna for the study period (2011-2020). For the year 2011, there was no growth. For the year 2012, the growth rate was 1.5% and 1.59% for two bedroom and three bedrooms respectively. For the year 2014, there was an increase in rent which indicated the growth to be 6.75% and 6.08% for the two bedroom and three bedrooms respectively. The result showed that in the year 2020, the rental growth is put at 5.59% and 4.61% for the two bedroom and three bedroom flats. The study area witnessed a high rental growth rate in 2017 at 7.92% and 8.36% for two bedroom and three bedroom flats respectively. This growth rate was due to high demand for residential accommodation across the neighbourhood and low supply of residential accommodation within the period of study.

Analysis of rental variation in residential property values in Minna

The analysis of rental variation implies that there is a significant change in the rental value of residential property across the neighbourhood within the study area. The level of variation is therefore analysed using standard deviation to obtain the level of variation for two bedroom and three bedroom flats.

Table 2: Variation in Annual Rental Value of Two-Bedroom Flat in Minna

Location	Sum	Mean	Std. Dev.	Co-efficient of Variation.
Bosso Town	1,181,000	118100	28823.21595	24.4058
Shango	1,189,000	118900	17912.59644	15.0653
Sauka Kahuta	1,163,000	116300	17467.82757	15.0196
Kpakungu	1,211,000	121100	18003.08616	14.8663
Tudun Fulani	1,110,000	111000	16924.6697	23.2475
Chanchaga	1,133,000	113300	14773.2867	13.0391
Bosso Estate	2,085,000	208500	27171.2675	13.0318
Tayi Village	1,166,000	116600	15817.53598	13.5656
Tunga	2,006,000	200600	28438.5302	14.1767
Maitumbi	1,213,000	121300	17485.70845	14.4153
F-Layout	1,944,000	194400	35365.94407	18.1924
Fadikpe	1,583,000	158300	35295.18381	22.2964
GRA	2,404,000	240400	36178.1182	14.6332
Dutsen Kura	1,720,000	172000	23311.89491	13.5534
Jikpan	1,861,000	186100	25332.78508	13.6125

Source: Researcher's Analysis of Field Data (2022)

Table 2 indicates the variation in rental value of two-bedroom flat in Minna showing the sum, mean, standard deviation and co-efficient of variation of rental value of residential properties across the neighbourhoods. The sum and mean of the average annual rental value of two-bedroom flat in the sampled neighbourhoods in Minna with GRA having the highest sum of ₦2,404,000 and a mean of ₦204,400 while Tudun Fulani has the least sum of ₦ 1,110,000 and mean of ₦111,000 respectively. This implies that GRA is the most expensive neighbourhood for two-bedroom flat in Minna while Tudun Fulani is the least. The table also revealed that GRA has the highest standard deviation of ₦36,178.1182 while Tudun Fulani has the highest co-efficient of variation of 23.24% which implies that rents for two-bedroom flat in GRA more volatile and change rapidly than any other neighbourhood in Minna but Tudun Fulani has the highest risk on rental income of two-bedroom flats in Minna.

Table 3: Variation in Annual Rental Value of Three-Bedroom flat in Minna

Location	Sum	Mean	Std. Deviation	Co-efficient of Variation.
Bosso Town	1,791,000	179100	28823.21595	16.0934
Shango	1,622,000	162200	30659.41943	18.9022
Sauka Kahuta	1,645,000	164500	25590.25422	15.5564
Kpakungu	1,730,000	173000	25458.02646	14.7156
Tudun Fulani	1,637,000	163700	28607.01157	17.4753
Chanchaga	1,428,000	142800	19988.19096	13.9973
Bosso Estate	2,692,000	269200	30495.90136	11.3283

Tayi Village	1,629,000	162900	18111.53715	11.1182
Tunga	2,601,000	260100	36883.0735	14.1803
Maitumbi	1,639,000	163900	18934.09623	11.5522
F-Layout	2,515,000	251500	26016.55456	10.3446
Fadikpe	1,801,000	180100	17860.5711	9.91703
GRA	3,216,000	321600	42519.92997	13.2214
Dutsen Kura	2,188,000	218800	22519.12767	10.2921
Jikpan	2,618,000	261800	29870.55406	11.4097

Source: Researcher's Analysis of Field Data (2022)

Table 3 shows the variation in rental value of three-bedroom flat in Minna showing the sum, mean, standard deviation and co-efficient of variation of rental value of residential properties. The table shows the sum and mean of the average annual rental value of two-bedroom flat in the sampled neighbourhoods in Minna with GRA having the highest sum of ₦3,216,000 and a mean of ₦321,600 while Chanchaga has the least sum of ₦ 1,428,000 and mean of ₦142,800 respectively. This implies that GRA is the most expensive neighbourhood for three-bedroom flat in Minna while Chanchaga is the least. The table also revealed that GRA has the highest standard deviation of ₦42,519.9299 while Bosso Town has the highest co-efficient of variation of 16.09% which implies that rents for three-bedroom flat in GRA change rapidly.

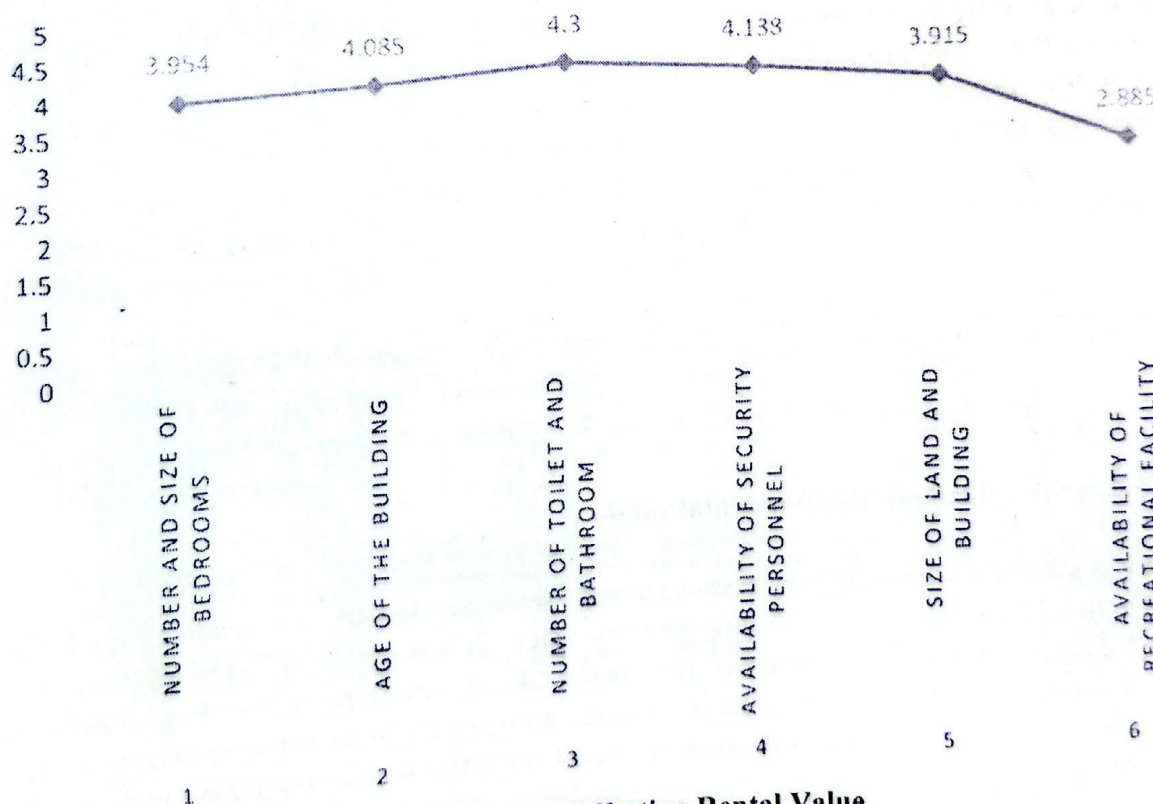


Figure 4: Physical and Structural Factors Affecting Rental Value

Physical and structural factors affecting residential property rental values showed that the number of toilets and bathroom indicated by a relative importance index of 4.300 on the RII scale is the most important factor affecting value. This is closely followed by the Age of the building a RII of 4.085 as well as the size of land and building with a RII of 3.954. Moreover, availability of security personnel and recreational facility has the minimum RII of 3.915 and 2.885 respectively meaning they have less influence on residential property value in the study area.

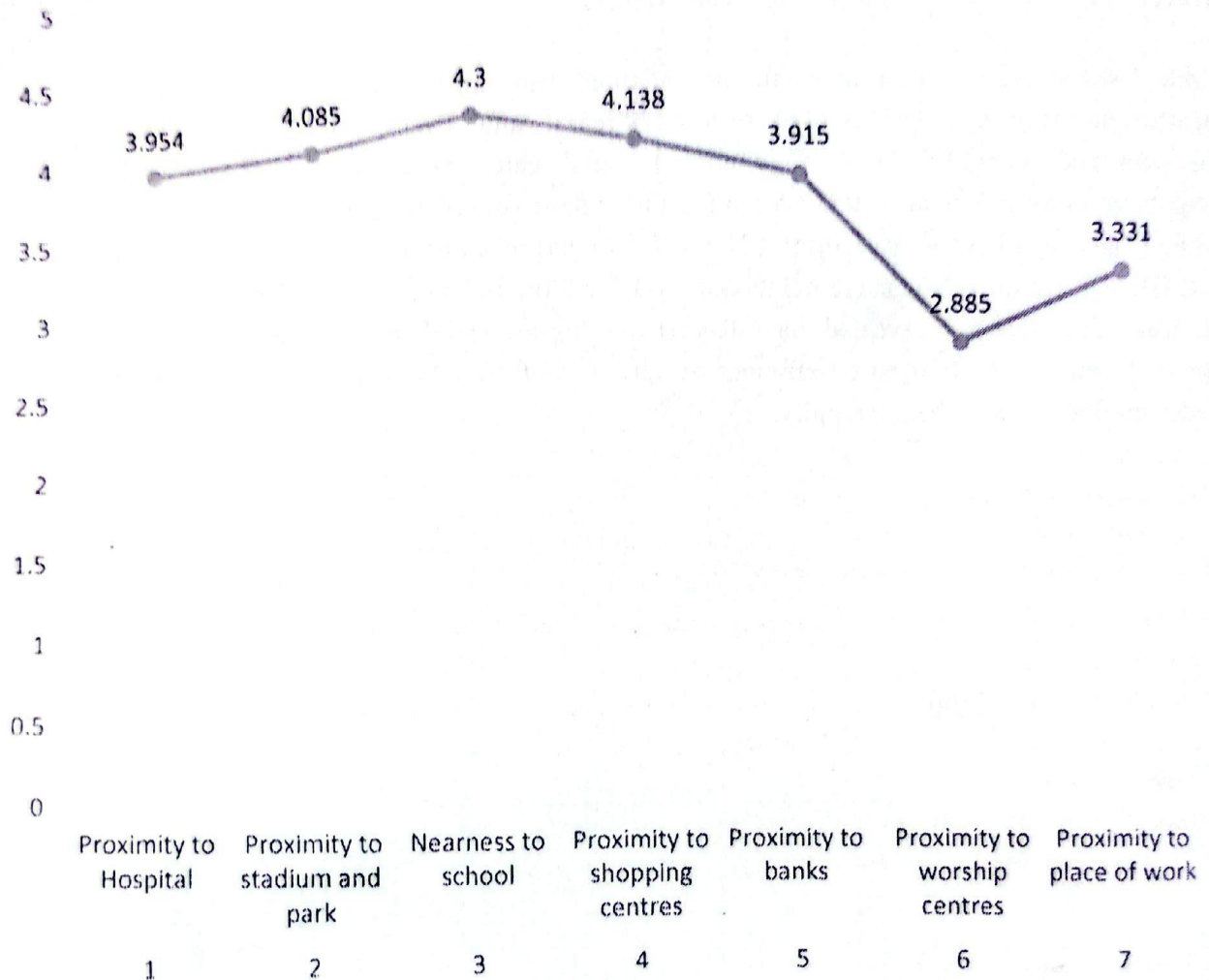


Figure 5: Locational factors affecting rental values

The analysis showed that proximity or nearness to school whether tertiary or secondary rank highest among the listed locational factors affecting property value. This is closely followed by nearness to shopping centres and markets while nearness to the banks raked lowest on the relative importance index scale. It would be noted that nearness to place of work is ranked higher in RII scale than nearness to worship centres and this is because there are a lot of civil servants within or around the study area that reside in the neighbourhood.

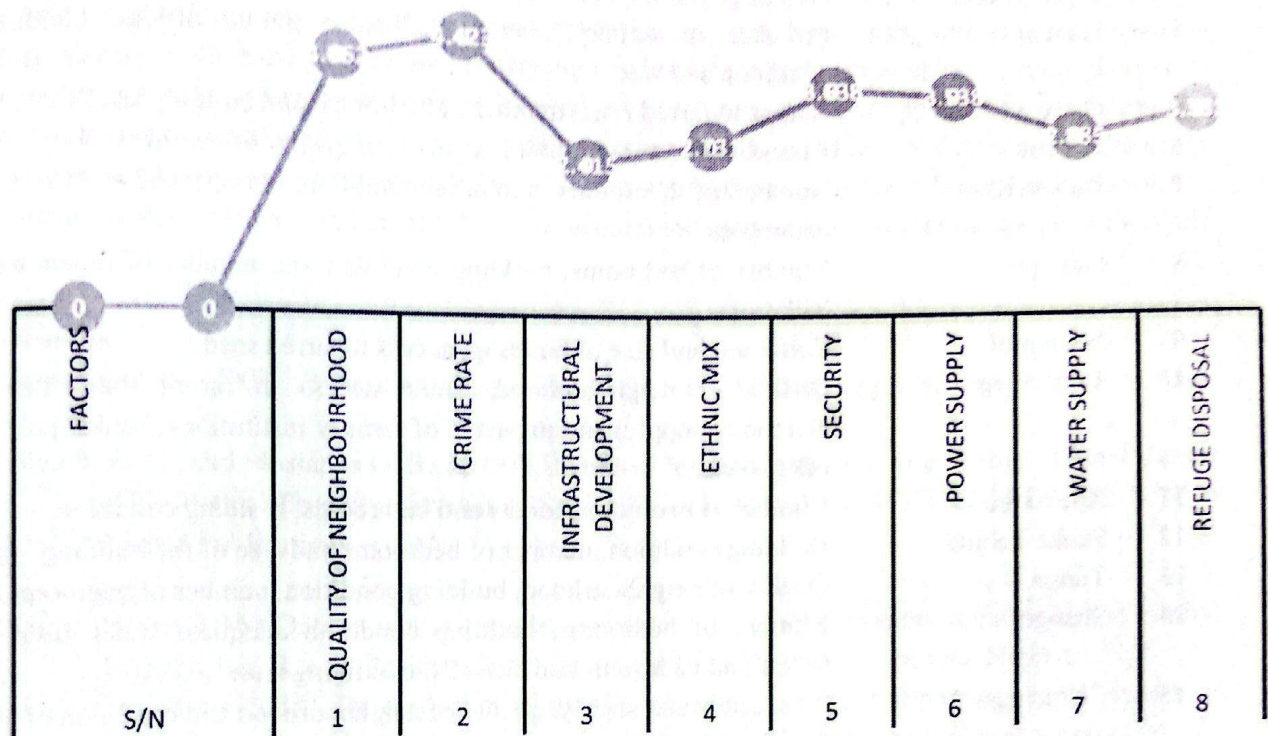


Figure 6: Neighbourhood factors affecting rental values

Analysis of responses about neighbourhood factors affecting residential property value revealed that the crime rate with a RII of 4.423 is the most important neighbourhood factor influencing property values followed by quality of the neighbourhood (Estate plan and quality designs) with RII of 4.062. Ethnic mix and owners/renters mix, infrastructural development are of less influence on property values when compared to others in this category. Most residents of the Estate are attracted to the security of the area not only because of the level of infrastructure development with RII of 2.415 such as road and drainages as well as good estate plan and quality designs.

Assessing factors Influencing Accommodation choice of tenants across the Neighbourhood.

Some factors influencing tenants' choice of accommodation were used to indicate the level of influence on their decision to occupy the present accommodation. Their choices were analysed using the Relative Importance Index (RII).

Table 4: Dominant Factors influencing tenants' choice of accommodation in the Study Area

S/N	Name of Neighbourhood	Factors Influencing Tenants Choice of Accommodation
1	Tudun-Fulani	Number of toilets and bathrooms, bedrooms, building condition, access to tarred road, quality of neighbourhood.
2	Bosso Town	Presence of tertiary institution, banks, public offices, building condition and size.

3	Bosso Estate	Neighbourhood quality, number of bedrooms and building size.
4	Jikpan	Presence of tertiary institution, banks, public offices, building condition and size.
5	GRA	Access to tarred road, number of bedrooms and building size.
6	F-layout	Access to tarred road, building size and quality of neighbourhood.
7	Dutsen Kura	Number of bedrooms, building condition, number of toilets and bathrooms.
8	Fadikpe	Number of bedrooms, building condition and number of toilets and bathrooms.
9	Maitumbi	Condition and size of building, access to tarred road.
10	Tayi village	Quality of neighbourhood, direct access to tarred road, stable electricity supply, and presence of tertiary institutions, banks, public offices, etc.
11	Kpakungu	Number of bedrooms, toilets and bathrooms, building condition.
12	Sauka-kahuta	Building condition, number of bedrooms and size of the building.
13	Tunga	Quality of neighbourhood, building condition, number of bedrooms.
14	Shango	Number of bedrooms, building condition adequate water supply, toilets and bedrooms and size of the building size.
15	Chanchaga	Adequate water supply, quality of neighbourhood and condition of the building.

Table 4 indicates the dominant factors common to all the fifteen(15) locations studied and these factors are: number of bedrooms, number of toilets and bathrooms, size of the buildings, condition of the buildings, quality of neighbourhood and direct access to tarred roads were found to be ranked uppermost while other factors such as proximity to recreational facilities, availability of day and night watch security, stable electricity among others played a significant role in the choice of residential accommodation but not as much as the other factors identified as the uppermost.

Conclusion and Recommendations

In conclusion, the work indicates that there is variation in residential property rental values in Minna, Nigeria. This variations are attributed primarily to factors that determine residential property rental values of which the condition of the building, size of the building, number of bedrooms, number of toilets and bathrooms, quality of the neighbourhood, presence of tertiary institutions, banks and public offices proved to be the dominants factors. Also these factors influence tenants' choice of accommodation in the study area. Also, it indicates the various factors relating to the physical, location and neighbourhood characteristics of residential property which determine the rental values of residential property influence tenants' choice of accommodation in the various neighbourhoods across the study area and consequently determines variation in residential property rental values in the study area. It was further discovered that proximity to direct access to tarred road that connect various facilities to the residential areas, number and size of bedrooms, conveniences, proximity to shopping centres and markets as well as security and crime rate are the leading factors affecting property values in the study area.

It is therefore recommended that existing investors seeking to diversify their residential property investment portfolio are advised to avoid investing in neighbourhoods with similar locational characteristics with respect to factors influencing residential property rental values, Landlords seeking to secure optimum return from their residential property investment are advised to concentrate on improving the physical characteristics of their properties like the condition of the building, size of the building, number of bedrooms and number of toilets and bathrooms as these factors proved to be the dominant factors influencing tenants choice of accommodation in many neighbourhoods of the study area.

References

- Oyebanji, O. A. (2003). *Principles of Land Use Economics*, Mushin, Lagos Sam otu Nigeria co.
- Julius A. B. O., and Mustapha O. B., (2009). Effects of Infrastructural Facilities on the Rental Values of Residential Property. *Journal of Social Sciences* 5(4): 332-341, ISSN 1549-3652 © 2009 Science Publications
- Olalere, W.A. (2016). Determinants of spatial variation in residential property rental values in minna. (Unpublished B.tech. Project), Federal University of Technology, Minna. Nigeria.
- Udoekanem, B.A. (2015). Determinants of spatial variation in residential property rental values in minna. (Unpublished PhD thesis), Federal University of Technology, Minna. Nigeria.
- Olayinka C. O., Funsho R. S., Ayotunde F. A., (2013). An Examination of the Factors Affecting Residential Property Values in Magodo Neighbourhood, Lagos State. *International Journal of Economy, Management and Social Sciences*. 2(8) August Edition, Pages: 639-643
- DAP (2007). *Development Action Plan of Niger State 2007-2011*. Niger state
- National Bureau of Statistics (NBS). (2016). *Nigeria-General Housing Survey-Panel Wave (Post Planting) 2015-2016, Third Round*. Nigeria. Retrieved From: <http://www.nigerianstat.gov.ng/nada/index.php>