

Assessment of the Variations in Residential Rental Values in Rantya-Gyel Jos, Plateau State, Nigeria

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Abstract

This study has investigated the changing residential rental values in Rantya-Gyel from 2009 to 2019. The main objective was to determine the extent and trend of changes in residential rental values of different categories of accommodation. The study hypothesised that residential rental values have witnessed significant increases, that the increases were demand-driven; and that the type of accommodation demanded by tenants was influenced by their demographic and socio-economic status. Questionnaire-based interviews and direct field observation were used to elicit information from landlords, property agents and tenants. The Statistical Package for Social Sciences (SPSS 17) software package was employed in analysing rent values, socio-demographic characteristics of tenants and types of accommodation. The chi-square and analysis of variance (F-ratio) techniques were employed in testing the hypotheses. The study found that the rent of different categories of accommodation had gone up by more than three-fold and most of the tenants (Christians) came from Jos north. Rental values doubled during the said period of investigation, housing types were mostly 2-bedroom flats and occupation/income was significantly related to accommodation. Demand and supply factors, as well as market forces, were identified as reasons why rental values in Rantya-Gyel tended to appreciate from 2009 to 2019. The study therefore recommends that the government should formulate policies and put in place strategies that increase the supply of housing in Rantya-Gyel and enhance integration.

Keywords: Urbanisation, Residential, Rental-Values, Housing, Landlords, Agents.

Introduction

Urbanisation is the process through which cities and towns develop and grow. Viewed as a process it is concerned not just with individual cities but also with systems of cities, with linkages between urban places, and with interactions between them and the countryside (Kuddus, Tynan & McBryde, 2020). Urbanisation results in the physical growth of urban areas; be it horizontal growth, also called outward growth/urban sprawl including the uncontrolled and disproportionate expansion of an urban area into the surrounding countryside forming low-density and poorly planned development patterns and/or vertical growth. The United Nations projected that one-half of the world's population would live in urban areas at the end of 2008 (Kuddus, Tynan & McBryde, 2020). This new influx of people moving into the urban areas will naturally require a place to reside and this is where the

issue of shelter comes to light. Shelter is an indispensable essentiality in life. An individual can satisfy this need by either occupying his own (owner's occupier) property or renting another person's property. In our traditional society, the need for shelter is mainly met through the first alternative, which is owner occupation (Sikiru & Abdulrazaq, 2013). Many urban dwellers do not own houses and must opt for renting as a means of getting accommodation. Rent forms a substantial part of the income of urban dwellers and it has been reported that 85 per cent of Nigeria's urban population lived in rented accommodation in 2010, devoting more than 40 per cent of their income to rent (Nnamatu & Emoh).

Rantya-Gyel, which is the focus of this research, is one of the several outlying suburbs of Jos metropolis. It is a sub-district of the larger Gyel district and is inhabited by the indigenous population and several tribes from other parts of Nigeria. Its importance in urban terms began to grow when the government cited both the State and the Federal Low-Cost Housing Estates in this area in the early 1980s. Since then, the recurring ethnic/ religious crises and growing demands for the use of urban space and the choice of its location for small-scale businesses, have made it even more important resulting in changes in residential rental values.

The changes in residential rental values which form the foundation for this research are of special significance. An appraisal of rental values and their determinants, a study to classify and determine the different types of residential buildings, an assessment of the rent each category of houses attracts and an evaluation of the means to acquiring properties in Rantya-Gyel are cardinal in pursuing the goal of this study.

Literature Review

Urban Land Use

According to Burdett (2018) the theories of urban land use have been subject to several criticisms, amplification, and modification since the 1920s. It is a crude attempt to compartmentalize urban systems into structures that we can easily understand and explain. Though the proponents and many authors that had worked on these theories recognized the fact that every city has a unique experience and history and thus it is difficult to box into a unified theory or concept the changed process and pattern of any urban area, it is however undeniable that theorizing and modelling urban land use greatly helps in simplifying complex urban systems for easy understanding, interpretation, comprehension and therefore management.

Ankeli & Bello, (2020) defines residential land use as that in which housing predominates and is a place where people live but housing may vary significantly between, and through, residential areas. These include single-family housing, multi-family residential to huge apartment towers; it takes about 40% of developed land in many cities (Beca, McNanery & Shuetz, 2019). Population and residential density are two measures of density which have important characteristics. While population density refers to the number of people per unit area of land, residential density measures the concentration of dwellings in each land area. Zoning for residential use may permit some services or work opportunities or may exclude

business and industry (Ma et.al, 2022). It may permit high-density land use or only permit low-density uses. Residential zoning usually includes a smaller FAR (floor Area Ratio) than business, commercial or industrial/manufacturing zoning (Somers, 2022). The area may be large or small. There are three categories of residential density, low density, medium density, and high density.

- Low density: These are detached houses on relatively large lots. They are made up of single-family homes, semi-detached homes, and duplexes, which have less than 30 homes per hectare.
- Medium density: These are low-rise apartment buildings and townhouses and have between 30 to 100 homes per hectare.
- High density: These have more than are high-rise apartment buildings and 100 units per hectare.

Residential Rent Value Determinants

Residential property values are psychological factors which are extrinsic to the commodity (Tan & Goh, 2018; Ankeli, & Bello 2020). the precursors of value are complex they argue, and a change in any of these precursors affects value. Olayinka *et al* (2013) further classify these into demand and supply factors namely, utility, scarcity, desire and purchasing power.

Kettunen & Ruonvaara (2020) took a contrary view relating this complexity to the property rather than to the psychological factors. He points out its uniqueness as a multifaceted commodity with features that vary in quantity and quality. Olayinka *et al* (2013) however threw light on their classifications by pointing out locational, infrastructural and neighbourhood characteristics as affecting value. Olayinka *et al.*, (2013) see this value within the context of an existing property market and that they respond to market forces to make it appreciate or depreciate. Olayinka *et al* (2013) further went on to classify these values into age, location, size, economic activity, etc. Guo, et.al, (2016) narrow these into variables of environment, neighbourhood, location, property, and accessibility.

Shin, Shin & Lee (2019) maintains this outline but embarks on a detailed sub-classification of these variables. He points out for instance, that locational and environmental attributes have negative and positive factors affecting them while Neighbourhood attributes have socio-economic characteristics of residents, quality of structures, ownership/rental, ethnic composition, and others as sub-classifications. He also introduces the variables of Community and Time. Amenyah & Fletcher (2013) attempt a resolution of the classifications, which may look like a simplification of the variables saying that they can fall under the broad categories of economic and non-economic factors,

Kettunen & Ruonvaara (2020) further splits the economic and non-economic factors into interest rate and income level as economic factors and population and age as non-economic factors for rent while age and location account for the difference between rural and urban rents.

It is obvious from the foregoing presentations to see that some or all the variables discussed by various writers should apply whole or in part to the area under study. In the Nigerian context, previous studies have tried to explain the determinants, structures, and effects of residential land use in Nigerian urban areas. These studies, especially those available for this research and others after it, will need to examine in more detail, the changing residential rental values to untangle the peculiarity of our situation.

Rent Control

Rent control is part of a system of rent regulation, administered by a court or a public authority, which limits the changes that can be made in the price of renting a house or other real property, (Baum-Snow, 2007). The objective of controlling the prices of rent is usually to counteract the inequality of bargaining power between landlords and tenants, as part of a minimum set of rights to make the market fair (Kholodilin & Kohl 2021).

Controls on the price of rents are used in residential housing, agricultural tenancies, and business tenancies. It may function as a price ceiling. Rent control laws are used in approximately 40 countries, although they often vary from one country to another, and may vary from one jurisdiction to another within some countries Kettunen & Ruonvaara (2020).

Statement of the Problem

Residential land use is one of the most important land use types in most settlements as observed by Chen et.al, (2022). The need to bring about an in-depth understanding of prices and values attributed to residences or houses has been very important. Broxterman & Zhou (2022) argued that a continuous gradual rise responding to market values (sales and rental) of residential properties increasing over time and to forces of demand and supply is evident in the increase in cost of construction and difficulty in the acquisition of land. It is against this backdrop that this study seeks to assess the rising residential rental values in Rantya-Gyel in the last ten years.

From the number of residential buildings dotting the landscape, many people appear to have moved into Jos the administrative headquarters and seat of the state government. They have come in search of jobs in the commercial sector, government employment and light manufacturing industry, leading to an upsurge in the demand for accommodation. The proximity of Rantya-Gyel to Jos compels many to move to this area and since most of them cannot acquire land, renting becomes an accommodation option (Amenyah & Fletcher, 2013). Broxterman & Zhou (2022) revealed a sustained demand for land in all locations in Jos and a corresponding increase in peri-urban areas.

Research Questions

A summary of the research questions consists of the following:

- i. What are the different types of residential buildings in Rantya-Gyel?

- ii. What are the level and trends of changes in rental values from 2009 to 2019 within Rantya-Gyel?
- iii. What are the major determinants of these rental values?

Aim and Objectives of Study

This research aims to assess the changing residential rental values in Rantya-Gyel from 2009 to 2019.

To achieve this aim, the following specific objectives were pursued.

- i. To categorize the different types of residential buildings in Rantya-Gyel.
- ii. To assess the level and trends of changes in rental values from 2009 to 2019 within Rantya-Gyel.
- iii. To assess the major determinants of these rental values.

Research Hypothesis

The following hypothesis stated in the null form guided the study:

Ho: There is no significant variation in rental values in Rantya-Gyel from 2009 to 2019.

Ho: There is no significant relationship between housing types and rental values.

Materials and Methods

Study Area

Rantya-Gyel is located between latitude [9°48'N](#) and [9°80'N](#) and longitudes [8°52'E](#) and [8°87'E](#). Rantya-Gyel is located in Jos South Local Government Area of Plateau state, in the North Central geo-political region of Nigeria. It is one of the many geographical (physiographic) regions recognised in Nigeria (Ikhile, 2016). It's bounded by Dadin Kowa, Federal Low Cost, Dong, Nyango-Gyel, Kufang and Wildlife Park; Rantya-Gyel is a growing and sprawling residential area. It is inhabited by the indigenous population (Berom) and several tribes from other parts of Nigeria are also found in this area. The climate of the region is determined by two important factors which are its latitude and its position across the part of the seasonal migration for the inter-tropical convergence zone (ITCZ). As a result, the region experiences lower temperature than the surrounding areas, with mean monthly temperature lower by about 5°C to 6°C i.e. ranging between 20°C – 24°C (Abaje & Oladipo 2019). The average annual rainfall on the Jos Plateau is about 1,400mm; on the hilly side with orographic effects rainfall may be up to 2000mm. Three types of rocks are present within the region. They include basement complex rocks which are divided into the older granite and metamorphic rocks (gneiss and magnetite) (Akinsunmade, Dinh & Wojas 2020). It has a population of 3,382 people with the males accounting for 1,713 (51%) and the females accounting for 1,669 (49%) according to the National Population Commission (N.P.C., 1996). The economic activities of the region can be classified under the following, poultry farming, bakeries, block industries and agriculture.

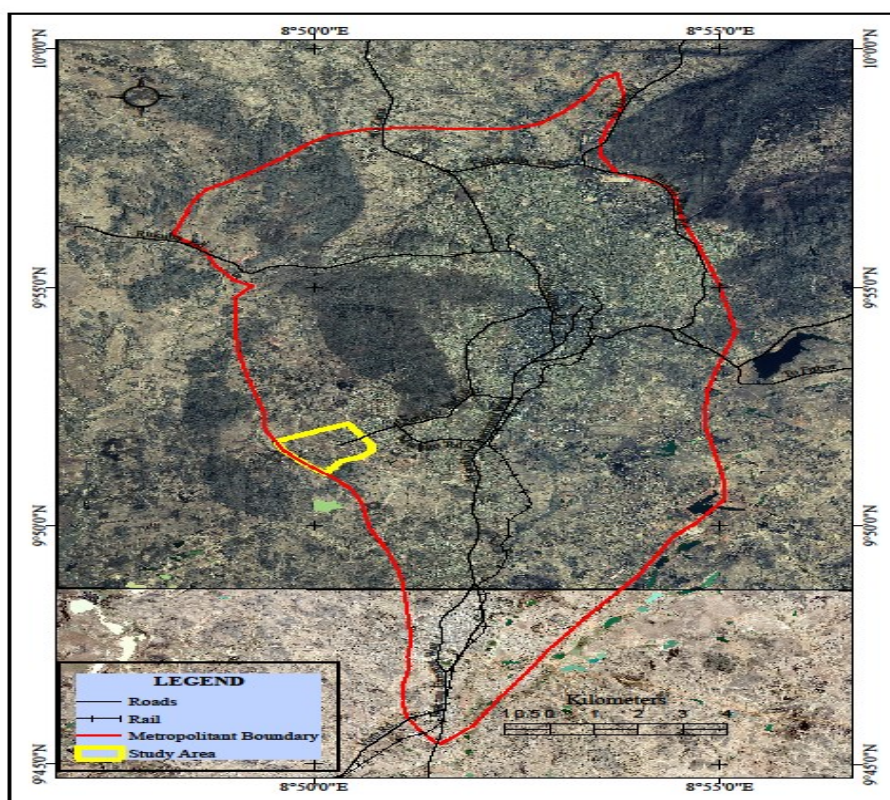


Fig. 1: Rantya-Gyel in Jos Metropolis

Source: GIS Lab, Department of Geography and Planning, University of Jos (2020)

Relevant Materials and Methods Used for Data Collection

Data for the research were obtained from two major sources. These include primary and secondary sources. Primary data were collected directly from the field through reconnaissance surveys, field observations and measurements, questionnaires, and oral interviews. The secondary data for this research were obtained from library research, internet surfing, information obtained from previous publications.

Sampling Method

To achieve a manageable sample size (n) (Andrade, 2020) formula was employed. Thus:

$$n \geq \frac{N\delta^2}{(N-1)D + \delta^2}$$

Where;

$$D = \frac{(\text{marginal error})^2}{Z_{\frac{\alpha}{2}}^2}, \text{ the chosen margin of error.}$$

$Z_{\frac{\alpha}{2}}$ = the z value of the normal curve that cuts off the area $\frac{\alpha}{2}$ at the tail squared

For the five per cent margin of error (i.e. $\alpha = 5\%$) the z-value was obtained as 1.96.

Therefore:

$$n = \frac{14650(484)}{[(14650-1) 1.96 + 484]}$$

$$n = \frac{7090600}{14649 \times 1.96 + 484}$$

$$n = \frac{7090600}{29196.04}$$

$$n = 243 \text{ (minimum sample size)}$$

The purpose of analysing the data is to achieve the aim and objectives of the research, test hypotheses and draw conclusions or inferences.

Method(s) of Data Analysis

The data for this study was analysed using simple percentages (%) with the aid of the Statistical Package for Social Sciences (SPSS 17); the hypotheses were tested using the chi-square statistical techniques in the data analysis. The chi-square was used to test the statistical significance of the hypothesis by showing the difference or relationship between observed and expected frequency.

Results and Discussion

Socio-Demographic Characteristics of Tenants

Tenants: Tenants were predominantly young; the mean age was 33 years and the 20-39 age group constituted nearly four-fifths of the total population. 16.7% were between 40-49 years and 4.1% of the respondents were between 50 and 59 years. The majority (54%) of the tenants were females and almost (91.1%) of all the tenants were Christians. Also, the majority (55.7%) of the respondents were married. The highest educational attainment of the tenants was generally high with over four-fifths (82.4%) having tertiary education. More than half (56.5%) were self-employed and were in various forms of occupation such as artisanship and farming.

Table 1: Socio-economic and Demographic Characteristics of Tenant Respondents

	Frequency	Percentage (%)
Age (Mean±SD)	33.21±7.83	
Age group		
20-29	89	40.3
30-39	86	38.9
40-49	37	16.7
50-59	9	4.1
Total	221	100.0

Gender		
Male	102	46.2
Female	119	53.8
Total	221	100.0
Religion		
Christianity	203	91.9
Others	18	8.1
Total	221	100.0
Marital status		
Single	82	37.1
Married	123	55.7
Widowed	16	7.2
Total	221	100.0
Highest Educational Attainment		
Secondary	39	17.6
Tertiary	182	82.4
Total	221	100.0
Occupation		
Unemployed (Applicants)	43	19.5
Unemployed (Students)	42	19.0
Self-employed	125	56.5
Civil servants	11	5.0
Total	221	100.0

Source: Authors' fieldwork 2020

Monthly Income of Tenants

Income has been identified by several authors as a critical factor that affects individuals' ability to afford rent (Dong, 2018; Kemiki, 2018). The higher the income of an individual, the larger savings he/she could make for payment of rent. From the study, it is seen that Rantya-Gyel is inhabited by mostly low-income earners with about 50% earning less than N 50,000 monthly.

Type of Accommodation for Rent

Figure 2 presents the type of accommodation of tenants in Rantya-Gyel. The figure revealed that the majority of the respondents (35%) were residing in 2-bedroom flats. This was followed by 24% staying in 2 rooms; 12% staying in 1-bedroom self-contained flats; 10% of the tenants staying in 3-bedroom flats; 7% in single rooms; 6% in bungalows and 4% the least staying in 3 rooms.

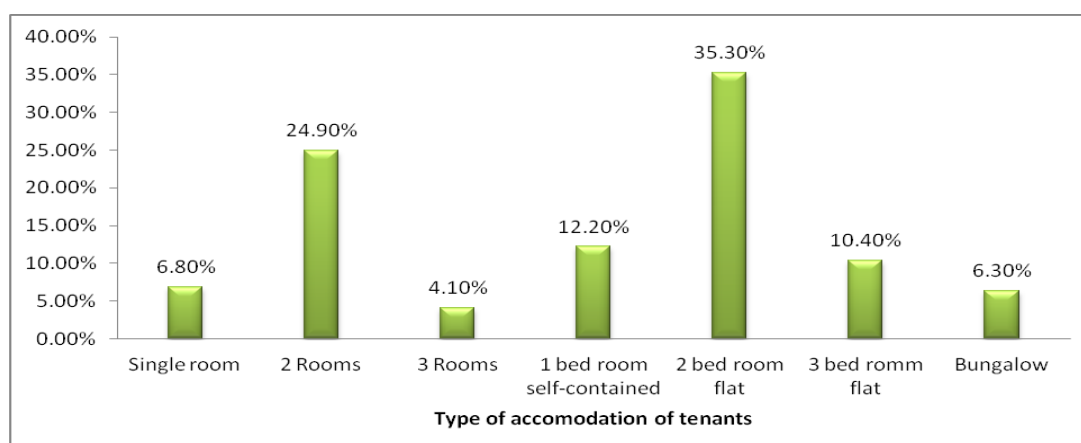


Figure 2: Type of Accommodation of Tenants

Source: Authors' fieldwork 2020

Amount Paid by Tenants for Accommodation from 2009 to 2019

Figure 3 presents the amount paid as rent for accommodation from 2009 to 2019 in Rantya-Gyel. The figure shows that in 2009 the highest rent paid by respondents was N120,000.00; in 2010 the highest amount for accommodation was N150,000.00, in 2011 the highest rent recorded was N180,000.00 by respondents, in 2012 the rent was the same as in 2011; while in 2013 the highest rent paid by respondents was N200,000.00, this did not change in 2014. In 2015, the highest amount paid for accommodation was N220,000.00 which was the same in 2016 while in 2017 tenants paid N250,000.00 as rent. In 2018, there was a record of N300,000.00 paid as rent by tenants, and in 2019 several tenants paid N250,000.00 as rent. The data in Figure 3 shows an increase in the rent paid by tenants across the years from 2009 to 2019.

Rental Values from 2009 to 2019

Between 2009 and 2010 the rent increased by N30,000.00 and between 2010 and 2011 it increased by N30,000.00; between 2011 and 2012 the rent did not increase while it increased by N20,000.00 from 2012 to 2013. The rent remained the same from 2013 to 2014 and increased by N20,000.00 from 2014 to 2015 but remained the same from 2015 to 2016. It increased by N30,000.00 from 2016 to 2017 and increased by N50,000.00 from 2017 to 2018 but dipped by N50,000.00 from 2018 to 2019 which came about as a result of a consensus between the landlords and tenants that the rent was too exorbitant and needed to be reduced to make it more affordable.

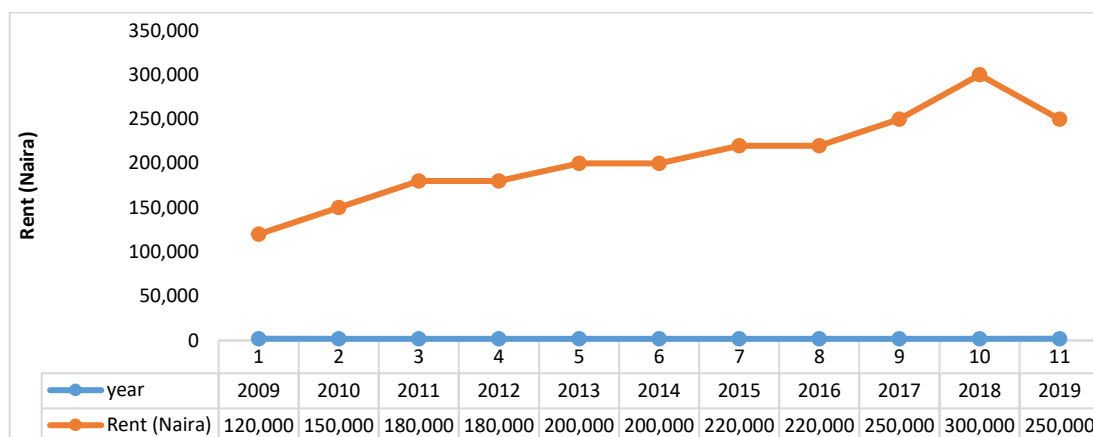


Figure 3: Rental Values from 2009 to 2019

Source: Authors' fieldwork 2019

Figure 3 reveals that the rent rose from N120, 000.00 in 2009 to N250, 000.00 in 2019. While the mean percentage increase across all accommodation types from 2009 to 2019 was over 200%. Demand and supply factors (Olayinka et al., 2013) as well as market forces (Howard & Liebersohn, 2021) were identified as reasons why rental values in Rantya-Gyel tended to appreciate from 2009 to 2019. In Rantya-Gyel since the number of potential tenants is higher than the accommodation available this has led to landlords charging exploitative rents and this is facilitated by the absence of any rent regulating agency. The study showed that rent values rose and more than doubled from 2009 to 2019.

Relationship between the Types of Accommodation Desired and Tenants Socio-Economic Variables

Table 2 presents the types of accommodation and socio-economic variables of tenants. The Table reveals that 3-4 member households (81 out of 187) 43.3% was the largest household size under this category. There was a significant positive relationship between the household size and type of accommodation ($\chi^2 = 182.419$, $p = 0.0005$), this implies that a larger household is correlated with a larger accommodation type for example 3-bedroom flat or a bungalow. Two-thirds of the tenants (182 out of the total 221 respondents) 82.3% had tertiary education and educational qualification was significantly related to type of accommodation ($\chi^2 = 30.556$, $p = 0.0005$), this implies that a higher level of tenant education is correlated with a better accommodation type. Furthermore, there was a significant relationship between tenants' monthly income and type of accommodation with 87 out of 172 (50.6%) of the respondents earning less than N50,000.00 ($\chi^2 = 119.270$, $p = 0.0005$) this implies that the higher the income of the tenant the higher the correlation with better accommodation type. The occupation of tenants was significantly related to the type of accommodation ($\chi^2 = 221.533$, $p = 0.0005$); the majority of the tenants staying in 2-bedroom flats were self-employed. This implies that being self-employed was correlated with the type of accommodation tenants live in.

(χ^2) means chi-square statistics.

(p-value) means Level of significance chosen = 0.05

Table 2: Types of Accommodation Desired and Tenants Socio-Economic Variables

Socio-economic Variables	Types of Accommodation							Total	χ^2	p-value
	Single room	2 Rooms	3 Rooms	1 BSC	2 BRF	3 BRF	Bungalow			
Household Size	8	18	0	10	19	1	2	58	182.419	0.0005
1-2	0	1	0	16	52	12	0	81		
3-4	0	18	14	0	0	12	2	46		
5-6	0	2	0	0	0	0	0	2		
7-10										
Educational Qualification	8	7	0	1	14	9	0	39	30.556	0.0005
Secondary	7	48	9	26	64	14	14	182		
Tertiary										
Monthly Income	3	38	0	25	19	2	0	87	119.270	0.0005
< N50,000	0	8	1	1	23	3	1	37		
N50,000-	0	0	0	8	13	5	3	29		
N100,000	0	0	0	1	9	2	1	13		
N100,001-	0	0	0	0	3	2	1	6		
N150,000										
N150,001-										
N200,000										
N200,001-										
N250,000										
Occupation									221..533	0.0005
Applicant	0	11	0	0	9	9	14	43		
Student	15	0	9	1	16	1	0	42		
Self-employed	0	44	0	26	45	10	0	125		
Civil servant	0	0	0	0	8	3	0	11		

*BSC: Bedroom Self Contained

*BRF: Bedroom Flat

Source: Authors' fieldwork 2020

Landlords

Socio-demographic characteristics of landlords in Rantya-Gyel: Research revealed that the mean age of the landlords was 60.95 years. The majority (87.2%) were males, all the landlords were Christians, and the majority (71.8%) were married. Regarding occupation, the majority (41%) were self-employed and the majority (89.7%) of the landlords had tertiary education.

Number of houses rented out by landlords in Rantya-Gyel: Research revealed that the majority (76.9%) of the landlords in the study stated that they rented out one house to tenants; 15% stated that they rented out two houses; 5.1% stated that they rented out three houses, and 2.6% of the landlords stated that they rented out four houses to tenants.

Major determinants of rental values: Based on findings rents are determined by landlords. Table 3 showed that 15.4% of the landlords stated that they determine the rent of their houses based on the infrastructure in the neighborhood; 38.5% stated that facilities in the house determined the rent; and 46.2% of the landlords in the study area stated that other reasons such as the location of the area where the house is built, and economic status of the residents were determining factors for rent charged.

Table 3: Major determinants of Rental Values Charged (Landlord's perspective)

	Frequency	Per cent %
Infrastructure in the neighbourhood	6	15.4
Facilities in the house	15	38.5
Other reasons	18	46.2
Total	39	100.0

Source: Authors' fieldwork 2020

Responses on economic value of rent and eviction of tenants: Research show that rents were economical and also that there has not been any incidence of eviction of tenants in the area.

Number of tenants that did not pay rent in a year: Responses from 4 (10.3%) landlords show that one of their tenants failed to pay their rent in a year.

Types of houses rented out by Landlords in Rantya-Gyel: Table 4 presents the types of houses rented out by landlords.

Table 4: Types of Houses Rented out by Landlords in Rantya-Gyel

Type of House	Frequency	Per cent %
1-bedroom self-contained	11	28.2
2-bedroom flat	15	38.5
3-bedroom flat	5	12.8
Bungalow	6	15.4
Duplex	2	5.1
Total	39	100.0

Source: Authors' fieldwork 2020

Reasons for the increase in rent: Table 5 presents the reasons for rent increases by landlords. The table shows that the majority (61.5%) of the landlords stated that inflation was a reason for the rent increase. In comparison, 38.5% of the landlords stated that other reasons such as undersupply of accommodation, increase in the cost of maintenance of the property, provision of other facilities and increase in government taxes/levies were responsible for the rent increases.

Table 5: Reason for Increase in Rent

	Frequency	Per cent %
Inflation	24	61.5
Others	15	38.5
Total	39	100.0

Source: Authors' fieldwork 2020

Estate Agents

Socio-demographic characteristics of agents: Socio-demographic characteristics of estate agents in Rantya-Gyel. The Table shows that the mean age of the property agents was 36.13 years. The majority 13 (86.7%) of the agents were males, and 9(60%) of them were married. All the agents were Christian and the majority 7 (46.7%) of the agents were Igbos. Also, all the agents in the study area had tertiary education.

How rent charged is determined: Table 6 presents information on how rental value is determined.

Table 6: How Rent is Determined

	Frequency	Percentage %
Location of the house	15	100.0
Infrastructure in the neighbourhood	14	93.3
Facilities in the house	14	93.3
Economic status of the residents	5	33.3

Source: Authors' fieldwork 2020

From the study, Table 5 showed that agents agreed that the location of the house (Guo, et.al. 2016) infrastructure in the neighbourhood (Olayinka et al. 2013), facilities in the house Kettunen & Ruonavaara, 2020; Amenya & Fletcher, 20213), and economic status of the residents (Amenya & Fletcher, 20213) were other factors that determined rental values.

Table 7: ANOVA Source Table for Percentage Rent Increase for Accommodation Types (2009-2019)

	Sum of Squares	Df	Mean Square	F	p-value
Between Groups	133.283	5	26.657	.615	.689
Within Groups	2339.300	54	43.320		
Total	2472.583	59			

Source: Authors' fieldwork 2020

Results showed that there was no significant percentage rent increase between the different accommodation types between 2009 and 2019, $F(5, 54) = 0.615$, $p = 0.689$ ($p > .05$); with a mean percentage rent increase of 15.4% for a single room, 13.3% for 1 bedroom self-contained, 11.9% for 2-bedroom flat, 11.1% for 3-bedroom flat, 12.7% for Bungalow, and 11.1% for Duplex.

Decision about rent to charge: On the issue of who decides how much rent to charge, 26.7% of the agents indicated it was the landlord's directive to the property agent, while 73.3% said it was a joint decision by the landlord and property agents.

Reasons for rent increases: The most common reasons given by property agents for continuing increases in rent are high demand for housing, the building being capital intensive, security, inflation, increasing cost of maintenance of buildings, type of finishing, location of the property, the falling value of the naira, and rise in the cost of building materials.

From the study, the rents by category of accommodation and the rent each category of house attracts respectively showed that the overall mean percentage increase in all the types of accommodation was 203% and that there was a steady/progressive increase in the requests by tenants and the number that successfully obtained the type of accommodation they were looking for in the different categories of buildings in Rantya-Gyel.

Hypothesis Testing 1

H₀: There was no significant variation in rental values in Rantya-Gyel between 2009 and 2019.

H₁: There was a significant variation in rental values in Rantya-Gyel between 2009 and 2019.

Table 8 shows that the result of the Chi-square statistic indicated that there was a significant variation in rental values in Rantya-Gyel between 2009 and 2019, $\chi^2 = 14.923$, $df = 2$, $p = 0.001$ ($p < .05$). The null hypothesis was rejected and the alternate accepted.

Table 8: Chi-Square Table Variation in Rental Value

	Observed N	Expected N	Chi-square χ^2	p-value
Increased Fairly	5	13.0		
Increased Considerably	10	13.0	14.923	0.001
Increased Highly	24	13.0		
Total	39			

Source: Authors' fieldwork 2020

Hypothesis Testing 2

H₀: There were no significant variations in the rental values of different house types.

H₁: There were significant variations in the rental values of different house types.

The hypothesis was tested with the Chi-square statistical tool. Table 9 shows the results which revealed that rental values varied significantly between the housing types, $\chi^2 = 17.680$, $df = 4$, $p = 0.024$ ($p < .05$). The null hypothesis was rejected, and the alternate was accepted.

Table 9: Chi-square Table for Housing Type and Rental Value

Housing types	Rental Value			Total		p-value
	Increased fairly	Increased considerably	Increased highly			
1 bedroom self-contained	1	3	7	11		
2-bed room flat	1	1	13	15		
3-bed room flat	0	4	1	5	17.680	0.024
Bungalow	2	1	3	6		
Duplex	1	1	0	2		
Total	5	10	24	39		

Source: Authors' fieldwork 2020

The study set out to analyse the factors that determine rental values. Based on the analysis of the data collected and analysed, it was revealed that most of the tenants are young with a mean age of 33.21 years, while many of the landlords who are elderly were over 60 years of age. Also, Rantya-Gyel is inhabited by mostly low-income earners (constituting about 50.6%) earning less than N50,000 monthly. The educational attainment of all the respondents is high as most of them had tertiary education. Most of the residents were Christian and into various forms of business. The Berom are the dominant ethnic group. The rent values of the various categories of accommodation have witnessed a consistent progressive increase between 2009 and 2019 and risen more than three-fold. The major determinants of rental values as claimed/stated by the landlords and property agents are in

order of importance, location of the house, infrastructure in the neighbourhood, facilities in the house and the economic status of the residents.

Conclusion

This study investigated the changing residential rental values in Rantya-Gyel between 2009 and 2019 and the study showed that virtually all the people who moved to Rantya-Gyel from other parts of Jos were Christian and this further indicated ethno-religious residential segregation. If the current trend continues the pattern of population distribution between Jos North and Jos South both in size and structure may alter. The demand for accommodation was higher than the supply which resulted in a substantial increase in the rental values between 2009 and 2019.

Recommendations

- There tends to be a gap between demand and supply and to bridge that gap individuals should be empowered and facilitated to own their own houses.
- Government strengthening, expanding, and liberalizing the process of home ownership, housing provision schemes and increasing existing housing stock, can achieve this.
- This can be done through existing housing provision schemes of both the state and federal governments.

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