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**| RESEARCH ARTICLE**

## **Comparative Analysis Of Rental Values Of Residential Properties On Aker Road, Rumuolumeni**

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**| ABSTRACT**

Over the past two decades, the Rumuolumeni community in Obio/Akpor Local Government Area of Rivers State has experienced significant urbanization, driven by the establishment of industries, a tertiary institution, and business hubs. This rapid development has increased the demand for residential accommodation of various sizes and typologies to meet the housing needs of the growing population. Consequently, this study examines the trends of 1 bedroom and 2 bedroom flats on Aker Road Rumuolumeni from 2019 to 2023 providing insights to guide investors in making informed decisions. Data for this study were collected from estate surveying and valuation firms, landlords, and tenants using well-structured questionnaires. The collected data were analyzed using trend analysis, one-way analysis of variance (ANOVA), and relative importance index (RII). These analytical techniques were employed to examine rental value trends, assess the statistical significance of differences in rental values between one-bedroom and two- bedroom flats in the study area, and rank the factors influencing rental values based on their relative importance. The findings revealed that both flat types experienced slight growth between 2019 and 2020, and the growth spiked up the following year 2021. It was observed that the one bedroom flat recorded the highest growth at 61.03% while 2 bedroom flat recorded highest growth at 59.32%. Analyzing the rental values of the two property types to establish if there is a statistically significant difference in the mean rent paid on 1 bedroom and 2 bedroom flats within the study area from 2019 to 2023, it was observed that there was a statistically significant difference between the mean rents of the two residential property types. The finding further revealed the top 3 factors that impact rental value in the study area as cost of building material (RII 0.86), siting of Ignatius Ajuru University of Education (RII 0.82), and good roads (RII 0.80), while the least 2 factors impacting on rental values from the list of 16 identified factors were: green building practice (RII 0.45), income level of tenants (RII 0.49). It was recommended that investors consider the development of more 1 bedroom flats than 2 bedroom flats because the former attracts higher rental growth annually.

**| KEYWORDS**

Rental Growth, Rental value, Residential Properties, Trend, Comparative Analysis

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### **1.0 Introduction**

According to Maslow's theory of "hierarchy of needs", shelter sits as one of the psychological needs that forms the biological component of human survival, others being air, water, food, heat, clothes, urination, excretion, and sleep. Humans are compelled to satisfy these basic needs first, before pursuing higher levels of intrinsic satisfaction. The way to get shelter for most humans is by the creation or availability of residential buildings in the form of owners' occupier or through rent/lease. According to Oni-Jimoh & Liyanage (2018), decent accommodation is not always adequate to cater for urbanization and its attendant overpopulation problem. This also implies that as demand increases without a corresponding increase in supply rental value of residential houses

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will definitely increase. In a study conducted by Nwaogu, Esiovwa, & Esiovwa (2021) in Port Harcourt, increase in rental value was found to be due to; rise in inflation, population pressure on available housing stock, and shortage of accommodation for the low-income earners.

With urbanization and high cost associated with acquiring land, and constructing a building for owner occupation, more people now rely on renting residential buildings erected by others to satisfy their shelter needs. Rental housing is a crucial component of the urban real estate market, providing accommodation for various income groups and contributing to economic and social development. Rental value dynamics are influenced by factors such as location, demand and supply, infrastructure, facilities and economic conditions. Understanding these dynamics is essential for investors, property developers, and policy makers to make informed decisions regarding housing development and investment strategies.

Rumuolumeni, particularly along Aker Road, has witnessed significant urbanization due to the establishment of industries, a tertiary institution, and business hubs. This rapid development has increased the demand for rental housing particularly one-bedroom and two-bedroom flats, which cater to students, young professionals, and small families. However, variations in rental values between these housing typologies remain a subject of interest, as they reflect differences in demand, affordability, and investment attractiveness.

This study conducts a comparative analysis of rental values for one-bedroom and two-bedroom flats along Aker Road Rumuolumeni in Obio Akpor local government area of Rivers State from 2019 to 2023. The research aims to identify rental trends, evaluate the statistical significance of differences in rental values, and determine key factors influencing these variations.

By providing empirical insights, the study seeks to guide investors, real estate professionals, and policy makers in making data-driven decisions regarding housing development and investment in the study area.

### **1.1 Statement of Problem**

The Rumuolumeni community axis of Obio-Akpor Local Government Area of Rivers State which was once known for arable lands for agricultural practices have since experienced quite a surge in population with increased educational, commercial, and industrial activities. This increase came with its attendant increase in the demand for accommodation especially one-bedroom and two-bedroom flats.

Despite this growth in demand for these residential property types, there is limited empirical research on the rental value trends of these housing typologies, creating uncertainty for investors, property developers, and other stake holders in the real estate market. Anecdotal evidence suggests fluctuation in rental values over time, yet there is a lack of systematic analysis to determine whether these changes are statistically significant or what factors drive the variations. The lack of a clear understanding of the rental value dynamics in the study area, investors may struggle to make informed decisions, potentially leading to misallocation of resources, underinvestment, or overvaluation of properties.

This study therefore seeks to bridge this gap by conducting a comparative analysis of rental values of one-bedroom and two-bedroom flats in Aker Road, Rumuolumeni, between 2019 and 2023. By identifying trends, assessing statistical differences, and ranking key influencing factors, the study aims to provide evaluable insights that will enhance decision making in the real estate sector.

### **2.0 Literature Review**

The size of the Nigerian real estate market is promising because of the population and changing lifestyles. Key market segments in the real estate market involve residential, office, retail, industrial, hospitality, and infrastructure. Residential property transactions are probably more frequent than others in the real estate market. The key drivers of the residential property market include population and real income growth, which, in turn, may lead to the demand for improved living standards.

Residential properties are properties that are suitable for living, and they consist of tenement houses, blocks of flats, detached bungalows, semidetached bungalows, detached houses, semi-detached houses, and maissonnettes (Ekenta, 2014).

A.

#### **2.1 Residential Properties**

Residential properties are properties zoned specifically for living or dwellings for individuals or households; it may include standalone single-family dwellings to large, multi-unit apartment buildings (Chen, 2022). Residential properties are one of the most common forms of properties. It is the properties in building form that are suitable for human occupation and living. There are various types of residential properties in Nigeria, and they are identified based primarily on the size and layout of the house.

Residential properties are occupied by people of different income classes, with some being self-built and others being constructed by companies with mortgage financing. (Makinde, 2022; Okoye & Ngwu, 2021; Okpalike, Okeke, Ezema, Oforji & Igwe, 2022).

## **2.2 Rental Values of Residential Properties**

According to Ekenta (2014), rental value is the monetary return which may reasonably be expected to be obtained from letting a property in the open market at a point in time. He further explained that by open market, it means that all the parties must be aware of the rent the property will command in the market.

## **2.3 Factors Affecting Rental Value of Residential Properties**

The rental value of properties is influenced by various factors that adhere to standard principles of property valuation. Generally, these determinants can be categorized into external factors, which are outside the property in question, and property-specific factors, which are internal to the property itself.

Real property has no value if it has no utility, nor scarce or effectively demanded neither is the utility derived from the brick and mortar alone, but in some unique characteristics packaged in its location, neighbourhood and infrastructure which are equally desired by the consumers (Oloke, Simon, & Adesulu, 2023). According to Ge & Du (2007), property value is an essential aspect of property markets worldwide and determined by a variety of factors and the determination of those factors is a significant part of valuing properties.

The factors that determine rental value can also be broadly classified into economic and non-economic factors (Amenyah & Fletcher, 2013).

### **2.3.1 Economic Factors**

Economic factors are very important in the determination of rental value. Output or economic activity itself represents a major determinant of the demand for residential accommodation. Macroeconomic variables such as income levels, industrial sector, credit, and the population all determine the overall demand for accommodation. Hence, it is obvious that an increase in the level of economic activities, such as an increase in government revenue, can both improve the quality and quantity of physical shelter; the result is bound to be an increase in rental prices (Musarat, Alaloul, & Liew, 2021; Rahmawati, Rahadi, Putri & Bandung, 2021). The Economic factors include Inflation, Interest Rates, GDP Growth (Rahmawati et al.2021), (Musarat et al., 2021). The study by Ekenta, (2015) in Port Harcourt examined the rental values of residential properties in D/Line, Port Harcourt, Rivers State between 2007 and 2014. It revealed that economic reasons are the major contributing factors for the upward movement of rental values of residential properties. The study analyzed the trend in rental vales of tenement rooms, 1, 2, and 3 bedroom flats.

### **2.3.2 Location-Specific Factors**

This may refer to the market location, neighborhood quality, or the related services that provide locational advantages to preferred sites. The degree to which some dwellers are willing to pay more rent than others for similar shelters is due to differences in a variety of characteristics or locations, including distances from strategic service points of business, banks, post offices, and public buildings of importance, the kind of street, and lastly, the type of immediate area in which the property is situated (Chiwuzie et. al., 2021).

### **2.3.3 Property-Specific Factors**

Residential properties in Nigeria exhibit various attributes, which play major roles in determining their rental values. Between two similar properties, the one with better facilities should attract a greater rental value. House-specific factors include building structure, age of building, condition of building, number of bedrooms, and number of bathrooms. The age of the building was found to have more effect among the house-specific factors, while water quality was ranked first among the facilities-specific factors (Femi, Khan, Ahmad, & Udin, 2015) evaluated the effect of having a tertiary institution – Ladoke Akintola University of Technology (LAUTECH) in Ogbomoso, Nigeria. The study revealed short supply of housing and Landlord's decisions as the two major factors that contributed to the increase in residential rental value within the city.

### **2.3.4 Environmental Factors**

The rental value of a residential property, which determines the normal rent that a landlord can expect to receive, depends on certain environmental factors that can be categorized into two groups: the advantages of the area or neighborhood and the disadvantages of the area or neighborhood. The rental value of a residential property in an advantaged area or neighborhood is expected to be higher than that in a disadvantaged area or neighborhood, whereas a property in a disadvantaged area or neighborhood will experience lower rent than that of a property located in an advantaged neighborhood (Bockarjova, Botzen, Van Schie, & Koetse 2020; Hussain, Abbas, Wei, Ahmad, Xuehao & Gaoli, 2021).

### 2.3.5 Amenities and facilities

Amenities and facilities in and around a property have an elevating effect on its rental values. Properties with better facilities such as parking spots, gardens, swimming pools, gyms, and perimeter fences are preferred compared to similar properties without the aforementioned facilities. Proximity to amenities such as markets, schools, churches, banks, and hospitals is also a premium causing an upward increase in rental values. This is due to the demand for convenience and ease of access to social and economic services (Hussain et al., 2021).

### 2.4 Empirical Review

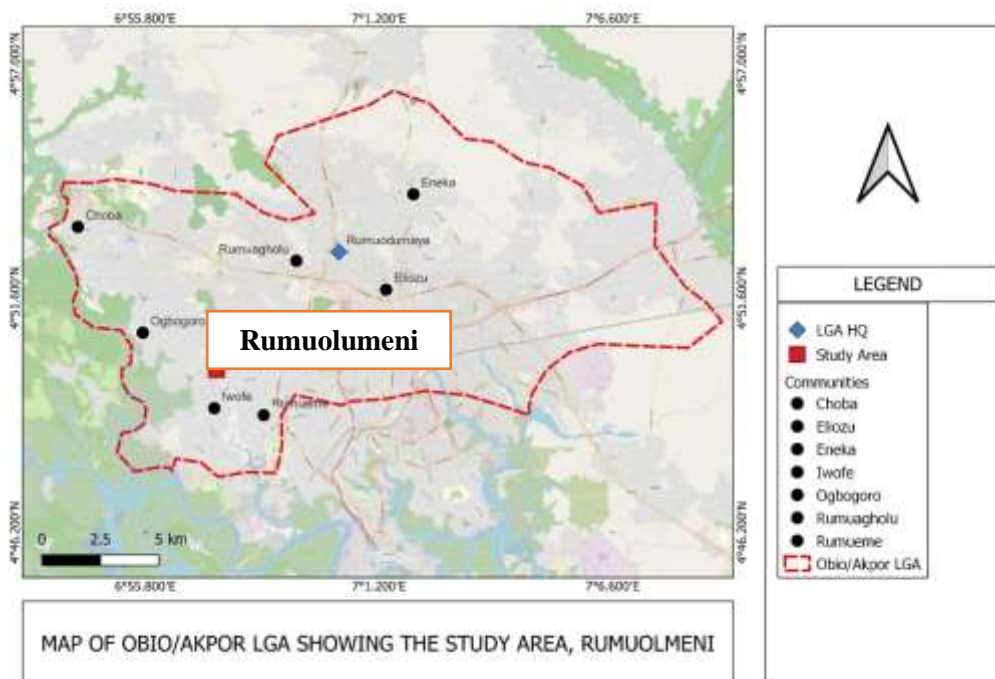
In the study "comparative trends in rental values of residential properties in New Haven and Achara Layouts in Enugu, Nigeria", Chukwu, Aniagolu, & Obodo (2016), compared the trend in rental values of residential properties between New Haven and Achara layouts of Enugu State, by using the range, mean, standard deviation and ANOVA. The study revealed a steady increase in rental value of residential properties in Enugu between 2005 and 2014. The rate of increase in New-Haven was higher than that of Achara Layout between 2005 and 2009. The study also revealed that there is a significant difference in rental values of residential accommodations in New Haven and Layouts.

The study of Oloke, Ezema, Fayomi, Emetere, Omeje & Jesusegun (2021) on a comparative study of rental value of residential properties in border communities of Lagos and Ogun States, Nigeria revealed that there are significant statistical differences in rents of the two communities despite their proximity. The study further observed that the factors that influenced rental value growths were neighbourhood density, and the amount of infrastructural development.

In a recent study necessitated by the need for investors in real estate in Port Harcourt metropolis to make informed decisions on residential property investments, Elenwo & Akujuru (2023) examined the rental trends and sale prices of 1, 2, and 3 bedroom flats in Ogunabali and Rumueprikom towns, both in Port Harcourt, from 2010 to 2019. The study conducted revealed that in Ogunabali town, 3 bedroom flats recorded the highest growth rate of 100% within the period covered, whereas the 1 and 2 bedroom flats recorded their highest trends in the Rumueprikom town, recording an average growth rate of 108% and 150% respectively.

### 3.0 Study Area

The study area is Rumuolumeni, in Obio/Akpor Local Government Area, of Rivers states, Nigeria. Rumuolumeni people are of the Ikwerre extraction, and they are bordered on the Western flank by the Ogbakiris and Kalabaris, Southern flank by the Rivers State University Nkpolu Oroworukwo / Eagle Island creek.



**Figure 1:** Map of Obio/Akpor LGA Showing the Study Area, Rumuolumeni.

Rumuolumeni people were mainly farmers while few of them were into fishing before development and urbanization came in. The elites and educated amongst them work in some of the numerous companies that operate within and outside the community.

With the establishment of major companies and institutions in Rumuolumeni community, like, Saipem Contracting Nigeria Limited in 1999, The Rivers States College of Education in 1977 now known as Ignatius Ajuru University of Education in January 2009 (Wikipedia, 2022), and many other industries like Masters Energy City in 2006. The community has experienced rapid urbanization, which has influenced increase in the demand for residential apartments and the resultant supply.

**4.0 Methodology**

The study adopted positivism research philosophy. It used the survey research design in collecting data on the rental values of 1 and 2 bedroom flats in the study area, between 2019 and 2023 and on factors that influenced rental value growth. This study adopted the quantitative research approach. The population of the study was drawn from registered Estate Surveying and Valuation firms registered with Nigerian Institute of Estate Surveyors and Valuers (NIESV) Rivers State Branch is 155 firms. Landlords and tenants of 1 and 2 bedroom flats were also part of the population. Since there are no records of the number of 1 and 2 bedroom flats in the study area, the properties under the study area were counted to be a total of 195 one-bedroom and two-bedroom flats within the study area from whence 87 Landlords and 108 Tenants were identified. Simple random sampling technique was used in administering the well-structured questionnaires to the landlords and tenants while the estate surveyors and valuers were purposively sampled. Firms were selected if they manage properties in the study area, whereby 62 firms were selected. A total number of 257 respondents were administered the questionnaire and 219 questionnaires were returned giving an 85.2% response rate which according to Fincham (2008) observed that a response rate higher than 50% of the target sample size is considered excellent in most circumstances.

The data collected were analysed using trend analysis and one-way Analysis of Variance (ANOVA) to assess the mean annual rental values and to determine the statistical significance amongst the 2 sets of rental values of 1 bedroom and 2 bedroom flats derived from the questionnaires administered. The Tukey’s Honestly Significant Difference (HSD) test was used to compare the means of rental values of the two property types after the one-way ANOVA. Relative Importance Index (RII) tool was used to determine the impact of the identified factors on the rental values of 1 and 2 bedroom flats within the study area from 2019 to 2023. These findings were presented in tables.

The relative importance index formular applied on a 5-point Likert scale of; very low impact, low impact, moderate impact, high impact, and very high impact. This likert scale was assigned 1 – 5, 1 being the very low impact and 5 the very high impact. The Relative Importance Index (RII) is computed using the formula below:

**RII** =  $\sum W / (A \times N)$ , where:

**W:** The weight assigned to each factor by the respondent. (i.e., the range from 1 to 5 on the 5-point Likert Scale)

**A:** The highest Weight (i.e., 5 on the 5 point Likert scale with range set at 1 – 5)

**N:** The total number of respondents (i.e., 219 respondents)

**5.0 Results/Findings**

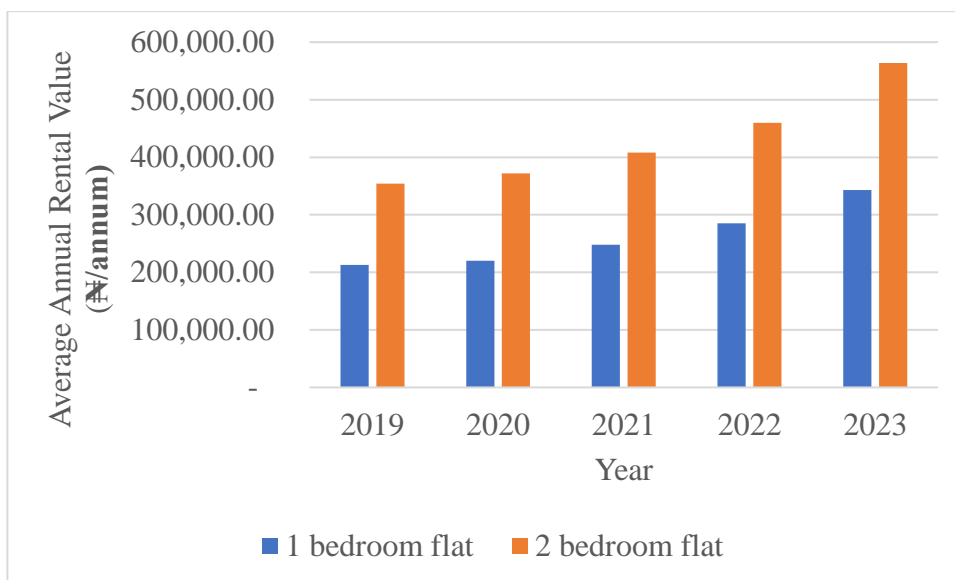
5.1 Trends in rental values

The table 1 shows the annual rental values of the properties and fig 1 graphically depicts the trend of rental values of 1 and 2 bedroom flats in the study area.

**Table 1: Annual trend in rental values of 1 and 2 bedroom flats in Rumuolumeni, from 2019 to 2023**

Year	1 bedroom flat		2 bedroom flat	
	Average Annual Rental Value (₦/annum)	Annual Growth on 1 bedroom flat (%)	Average Annual Rental Value (₦/annum)	Annual Growth on 2 bedroom flat
<b>2019</b>	213,000.00		354,000.00	
<b>2020</b>	220,000.00	3.29%	372,000.00	5.08%
<b>2021</b>	248,000.00	12.73%	408,000.00	9.68%
<b>2022</b>	285,000.00	14.92%	460,000.00	12.75%
<b>2023</b>	343,000.00	20.35%	564,000.00	22.61%
<b>Growth</b> (from 2019 to 2023)		<b>61.03%</b>		<b>59.32%</b>

Source: Researcher’s field survey (2024).



Source: Researcher's field survey (2024).

Figure 1. Graph showing the trend of rental values of 1 and 2 bedroom flats in the study areas.

The study revealed that the average yearly growth rates of both one and two bedroom flats started off slowly from 2019 to 2020 where it recorded very small increase and then spiked in the years afterwards. The slow increase in the average yearly rent of the flats could be attributed to the outbreak of Covid-19, in December 2019 where tenants and landlord were faced with a pandemic. The trend showed a steady but slow rise in rental values of the two property types, and this corroborates the study of Elenwo & Akujuru in their study on comparing the rental values of residential property types in Rumuepirikom where it was revealed that the property types noticed a slow but steady rise in rental values.

### 5.2 Comparative study of one bedroom and two bedroom flats

The one-way ANOVA test was employed to test if there is a statistically significant difference in the mean rent paid amongst the 2 sets of rental values of 1 bedroom and 2 bedroom flats derived from the questionnaire administered. The results from the Microsoft Excel data analysis produced the results shown on tables 2 to 4.

Table 2: ANOVA (Single Factor) Summary

Groups	Count	Sum	Average	Variance
1 bedroom	5	1309000	261800	2.86E+09
2 bedroom	5	2158000	431600	7.12E+09

Table 3: ANOVA (rent)

Source of Variation	SS	Df	MS	F	P-value	F crit
Between Groups	72080100000	1	7.21E+10	14.44563	0.005231	5.317655
Within Groups	39918000000	8	4.99E+09			
Total	1.11998E+11	9				

**Where:**

- SS: Sum of square
- df: Degree of freedom
- MS: Mean Square
- F: F-Statistics
- P-Value: Probability Value

The study revealed that there is a statistically significant difference in the mean rent paid on 1 bedroom and 2 bedroom flats within the study area from 2019 to 2023.

If p-value is less than the significant level which is the probability of rejecting the null hypothesis when it is true (i.e.,  $p\text{-value} < \alpha$ ), it means that the difference between two groups is big enough to be statistically significant. Since the foregoing ANOVA analysis reveals that the significant value (p) is 0.005231, which is below 0.05, therefore, there is a statistically significant difference in the mean rent paid on 1 bedroom and 2 bedroom flats within the study area from 2019 to 2023. This study corroborates the study of Oloke, et al. (2021) who in a similar study on comparing rental values of residential properties in border communities of Lagos and Ogun States, Nigeria revealed that there are significant statistical differences in rents of the two communities despite their proximity. This revelation could be due to the fact that students and people with smaller families may be predominant in the study area, so demand is more hence increase in rent is eminent.

The data was further subjected to the Tukey HSD test to verify the result obtained from the ANOVA test, and the outcome is represented below:

**Table 4.** Tukey HSD

Pair	Mean Difference	SE	Q	Lower CI	Upper CI	Critical Mean	p-value
x1-x2	169800	31590.3466	5.3751	66778.12	272821.8803	103021.8803	0.00523

Where x1 represents 1 bedroom flat,  
x2 represents 2 bedroom flat.

The Tukey HSD Test also revealed that the means of the rental values of 1 bedroom and 2 bedroom flats within Rumuolumeni from 2019 to 2023 are significantly different.

### 5.3 Factors influencing trends in rental values of one and two bedroom flats

The study went further to ascertain the factors that influences the trend in rental values of the property types under study in the study area and the findings are presented in table 5 below.

**Table 5:** Factors influencing the trend of rental values of 1 and 2 bedroom flats in Rumuolumeni

Factors	Weighting	Responses					RII	Position
		1	2	3	4	5		
Cost of building materials	5	19	9	55	131	0.86	1 <sup>st</sup>	
Siting of Ignatius Ajuru University of Education	5	6	35	93	80	0.82	2 <sup>nd</sup>	
Good road within Rumuolumeni	0	0	78	59	82	0.80	3 <sup>rd</sup>	
Siting of industries like Saipem, Master Energies, Aveon offshore, etc.	13	14	48	93	51	0.74	4 <sup>th</sup>	
Location of the property	0	13	95	96	15	0.70	5 <sup>th</sup>	
Security (siting of the police station within the area)	0	21	99	67	32	0.70	6 <sup>th</sup>	
Facilities inside the residential property	6	25	100	85	3	0.65	7 <sup>th</sup>	
Accessibility to the property	0	61	82	58	18	0.63	8 <sup>th</sup>	

Condition of repairs	15	45	96	37	26	0.61	9 <sup>th</sup>
Age of the property	23	66	56	37	37	0.60	10 <sup>th</sup>
Power Supply by PHEDC	14	53	110	25	17	0.58	11 <sup>th</sup>
Size of the rooms	13	54	114	30	8	0.57	12 <sup>th</sup>
Close proximity to markets, supermarkets etc.	11	55	117	36	0	0.56	13 <sup>th</sup>
The Environment (drainage, sanitation, pollution; refuse)	43	57	65	34	20	0.54	14 <sup>th</sup>
Income level of tenants	35	78	73	33	0	0.49	16 <sup>th</sup>
Green building practice (trees, vegetation, low carbon emission)	44	105	45	19	6	0.45	17 <sup>th</sup>

Source: Researcher's field survey (2024).

Table 5 is the ranking of identified factors that determined the rental values of 1 and 2 bedroom flats in Rumuolumeni between 2019 and 2023 as opined by the respondents.

The survey revealed that the top 10 factors influencing on the rental value of 1 and 2 bedroom flats in Rumuolumeni are cost of construction, presence of the Ignatius Ajuru University of Education and good road networks. The cost of construction truly influence rental values especially if the property is newly developed. Cost of construction is also an economic factor as reasons why construction costs are high is due to inflation which affects all other economic indexes. Ekenta, (2015) observed that rental values in residential properties in D/line were influenced by economic factors which cost of construction is inclusive.

## 6.0 Conclusion

This study assessed the trend rental values of 1 and 2 bedroom flats within Aker Road Rumuolumeni town in Rivers State from 2019 to 2023, and it was revealed that rental values increased steadily in the study area. The study also the rental values of the two residential property types under study had statistically significant difference within the study area from 2019 to 2023. The one bedroom flats recorded 61.03% increase while the two bedroom flats recorded 59.32% increase. These findings show that one bedroom bungalow recorded the highest growth against the two bedroom flats. The study also revealed that rising cost of building materials topped the list of factors that influenced rental values of the property types under study followed by good road networks.

The study recommends that investors be advised to develop more of one bedroom flat apartments in the study area than 2 bedroom flats as the demand on one bedroom flats revealed to be higher. The study further recommends that the government should formulate economic policies that would drive down inflation and bring about reduction in the price of building materials and commodities and finally it recommends revamping of infrastructural development within the study area, such as building better internal roads and drainages by the state government.

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**Publisher's Note:** All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers.

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