KADUNA JOURNAL OF GEOGRAPHY
2026, VOL. 8, No. 1, 331-340
https://doi.org/10.47514/kjg.2026.08.01.035

Research Article

Assessment of Housing Need and Supply in Lokoja, Kogi State, Nigeria

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ABSTRACT

The study attempts to identify the effects of urban growth on housing need and supply in emerging settlements like Lokoja metropolis with respect to the identification of the causes of the upsurge in population, the impact of it on the immediate environment, challenges of residence in terms of housing need and demand, and the solution of this housing challenge faced by both indigenes and other settlers in Lokoja. Data collected from the field were analysed using descriptive and inferential statistics. The results revealed that the population responds positively and significantly to housing demand in the Lokoja metropolis [β = 1.037; t = 7.641; ρ = 0]. 000 (< 0.01 significant level)]. This suggests that as the housing demand increases, the population increases. Income responds positively and significantly to housing need and supply in Lokoja [β = 0.110; t = 2.927; ρ = 0. 007 (< 0.01 significant level)]. This suggests that as housing demand increases, income increases. The study recommends that government at the state level should embark on massive acquisition and construction of low cost housing units to accommodate the rising demand for the housing by the people, the encouragement of private sector participation in housing delivery, the state government should upgrade and in some places carryout urban renewal schemes to reduce the influx of the people to the fringes of Lokoja and the government's provision of subsidized building materials to encourage land owners to build standard houses to improve on the housing quality in Lokoja metropolis.

ARTICLE HISTORY
Submitted 29 November 2025
Accepted 12 May 2026
Published 21 May 2026

GUEST EDITOR
A. M. Ahmed

KEYWORDS
Housing Need, Housing Supply, Urban Expansion, Lokoja

1 Introduction

The global trend of urbanization is further increasing, and as of 2021, more than 56% of the world's population resides in urban areas (UN-DESA, 2019). Cities and towns are expanding, the global population is increasing, and young people are moving to cities to find work and a better life, especially in rapidly developing countries. More residential, commercial, and industrial areas are needed to satisfy the demands of an increasing urban population. Sustainability, quality of life, health, air quality, moderate temperatures within city boundaries, the urban climate, green spaces, and closeness to nature and recreation need to be heeded when planning the future state of our living space. With the unprecedented speed of urban development, planning measures to address these considerations are even more difficult. Africa is one of the least urbanized places in the world, and its urbanization rate will continue to be among the fastest in the world in the coming years (Heinrigs, 2020).

In 1950, Africa's urban population was 27 million, approximately 567 million people. The Organization for Economic Cooperation and Development (OECD) report argues that since 1990, Africa's rapid growth in urbanization has been driven primarily by high population growth and the reclassification of rural settlements. It also predicts that Africa's population will double between 2020 and 2050 and that urban areas will absorb two-thirds of this population increase (Moriconi-Ebrard et al., 2020).

The share of Africans living in urban areas is projected to grow from 36% in 2010 to 50% by 2030. A continent's urbanization rate, which is the highest in the world, can lead to economic growth, transformation, and poverty reduction. Alternatively, it can lead to increased inequality, urban poverty, and the proliferation of slums. Therefore, the laws, policies, and actions needed to reap positive dividends from Africa's urbanization are critical in the continent's transformation (Teye, 2018).

Urban centres in Nigeria are facing the problems of overstretched infrastructures, environmental degradation, seasonal flooding, and the destruction of natural vegetation, all of which result from an increase in population (Momoh et al., 2018). The movement of people from rural to urban centres in search of better livelihoods has led to an expansion of urban areas and an increase in social and economic activities along flood plains, thus increasing the risk of urban dwellers and infrastructures to natural disasters such as floods (Ishaya et al., 2012; Charles et al., 2018). The city of Lokoja is proliferating with the inadequate provision of all urban services with respect to the adequacy and coverage of the area. This study seeks to assess housing needs and supplies in the Lokoja metropolis. How cities have influenced and shaped social life throughout history has led scholars of urban studies to delve into the origin and development of the urban form. Urbanization is a complex phenomenon with various dimensions (Hussain & Imitiyaz, 2018).

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However, the size of a place has been the most widely used criterion in the definition of the urban population. Urban areas have a higher concentration of population in a limited area and thus a higher density of population and social heterogeneity. According to Moreno (2017), urbanization is an increased system modernization process that modifies socioeconomic activities and revolutionizes the land use pattern in accordance with the time frame. Additionally, Bae and Richardson (2017) define urbanization as a complex diffusion process that dramatically spreads and affects rural landscapes at varying spatial scales.

Tan (2020) stated that residents' satisfaction is determined by the perceived gap between their achievements and aspirations. Similarly, Abe and Kato (2017), Adeyemo and Aderonmu (2020), Fagbenle and Adeyemi (2020), Olubodun (2001), and Adenuga (1999) define residents' satisfaction as the level of happiness or fulfilment that individuals living in a particular residential area experience with the physical, social, and environmental conditions of their residential environment. It serves as a measure of residents' well-being and happiness with respect to their living conditions. Understanding how residential satisfaction is affected by the residential environment and different aspects of housing, such as housing unit and neighbourhood characteristics, management, demographics, and socioeconomic status, is crucial in housing research. However, the extent to which each factor influences overall residential satisfaction varies, and further research is needed to bridge this gap, as noted by Mohit et al. (2014) and Adeyemo and Aderonmu (2020).

2 Materials and Methods

2.1 Study Area

The study covers Lokoja town in Kogi state; it is made up of approximately eight (8) zones (Figure 1). The population studies of Lokoja highlight rapid urban growth driven by rural–urban migration, significant shifts in land use, and evolving socioeconomic dynamics since it became the capital of Kogi state in 1999. Lokoja has experienced a substantial influx of population, leading to rapid expansion and urban sprawl. The population of the Lokoja Local Government Area (LGA) increased from approximately 77,516 in the 1991 census to 196,643 in the 2006 census and was projected to reach approximately 265,000 by 2022.

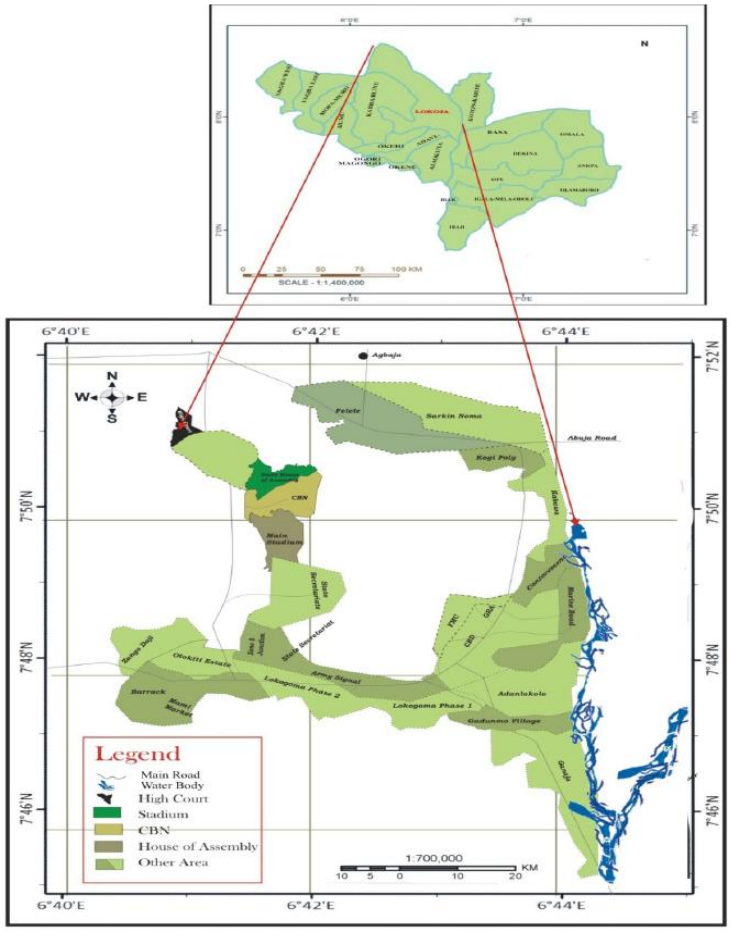

Figure 1: Map showing Lokoja metropolis, Kogi State
Source: Kogi Geographic Information Service

Lokoja, which lies between altitudes of 45–125 m above sea level, has precise geographical coordinates or locations between latitudes 7° 45′N and 7° 51′N and between longitudes 6° 41′E and 6° 45′E. However, because Lokoja covers a small urban area rather than a single point, its coordinate range portrays latitude spans: approximately 7⁰ 45′ to 7⁰ 51′N, whereas its longitude spans: approximately 6⁰41′E to 6⁰ 45′E. This range further describes the spatial spread of the Lokoja metropolitan area used in geographic and planning studies. These coordinate ranges help in GIS mapping, spatial analysis, and surveying within a city. It lies on the western bank of the Niger River, close to its confluence with the Benue River. The majority of the town is sandwiched between the Niger River and Mount Patti. Lokoja covers a total area of approximately 804 km2 (80,400 hectares). The area limit of Lokoja is entrenched in the land use order of 1991, in which all parcels of land within a 20 km circle (as the crow flies) around a Centre point at the General Post Office with geographical coordinates of 7° 48'05''N, 6° 44' 39''E (Figure 1).

2.2 Data sources

The primary sources of data collection included the following: the administration of a structured questionnaire to residents of the Lokoja metropolis; interviews with the opinion leaders, landlords, and tenants; and direct observations of the state of the housing situation in the area. The questionnaire was extensively used in the study to collect large volumes of primary data. Through this method, data on the socioeconomic characteristics of the respondents and the factors influencing housing demand were obtained. The data collected through the questionnaires were used to test the residents' perceptions of housing demand in the Lokoja metropolis as one of the hypotheses.

Face-to-face oral interviews were conducted with selected residents of the study area, which included traders, workers, businessmen, students, professionals, and key officials of the relevant governmental ministries and parastatals. The information obtained from this source centres on housing demand, population trends, migration, urbanization, pressure on existing infrastructure, and those factors influencing housing demand in the Lokoja metropolis. During the interviews, questions related to the participation of the stakeholders in the housing sector were discussed. Data collected from this source were used to validate data collected from other sources.

Direct observations were made on the patterns of housing delivery, rates of urbanization, housing conditions, and factors that influence housing demand in the Lokoja metropolis. The information collected from direct observations revealed the magnitude of some factors affecting housing demand in the Lokoja metropolis.

2.3 Data collection

The primary data was obtained by personal observation, direct interviews (which were held with government officials, landlords, and tenants), and the administration of questionnaires to residents of the area. The secondary data. To include the topographic map of Lokoja and materials from the internet.

2.4 Sampling procedure

To obtain information on the housing needs of Lokoja, a set of questionnaires was administered to residents in each of the eight (8) zones in the area using the projected population for 2022, which is 265,000, and by utilizing Yamane's formula of sample size with an error of 5% and a confidence coefficient of 95% (Yamane, 1967). The respondents who were adults aged 18 years and above were selected for a total of four hundred (400) participants. The breakdown of the samples in the study area is shown in Table 1. This is followed by the division of each zone into streets. Five (5) streets were selected systematically from each zone to provide a fair representation, and a proportional sample of questionnaires was assigned to each street. The questionnaire was administered to each selected street through a simple random technique. However, 372 correctly completed questionnaires were retrieved and processed for analysis, while the criteria that led to the rejection of the remaining questionnaires included incomplete responses, inconsistent or contradictory answers, multiple invalid responses, wrong target respondents, noncompliance with the survey instrument, and evidence of enumerator error. The subsections employed in this research work were as follows: instrument type and purpose, where data for this study were collected via a structured questionnaire designed to assess housing needs and supply in Lokoja, Kogi state; instrument structure, which also describes the sections and content areas; and a questionnaire consisting of six sections. Section A covers the socioeconomic characteristics of the respondents; Section B addresses housing development programmed by successive governments; Section C examines trends in housing demand in Lokoja; Section E discusses the problems associated with housing demand; and Section F focuses on measures for addressing housing demand challenges. A pilot survey was conducted to test the clarity and relevance of the questionnaire items, identify ambiguous and confusing questions, check the time required to complete the questionnaire, assess respondents' understanding of the questions, evaluate the data collection procedures and enumerator performance, and, most importantly, improve the reliability and validity of the instrument.

2.5 Data analysis

Data were collected and analysed via a table with inferential statistical techniques, i.e., the chi-square (X^2) test for independence, to test the relationships between categorical variables and their application in alignment with the study, which included housing adequacy × income level, tenure status × housing condition, and location × housing shortage. Decision rule: if $p < 0.05$, a significant relationship exists. The chi-square test revealed a significant relationship between household income and housing adequacy in Lokoja ($X^2 = 12.45$, $p < 0.05$). Independent sample t tests compare the mean differences between two groups, i.e., the mean housing expenditure of owners vs. renters and the average household size of adequate vs. inadequate housing. The t-test revealed a significant difference in the mean housing expenditure between renters and owners, i.e., occupiers ($t = 3.21$, $p < 0.05$).

Analysis of variance (ANOVA), which also compares means across more than two groups, i.e., housing affordability across income groups and housing quality across residential zones. One-way ANOVA indicated significant variation in housing affordability across income categories in Lokoja ($F = 5.62$, $p < 0.01$).

Table 1: Selected zones and number of questionnaires administered and retrieved

Zone Name	Area of coverage	Coordinates		Sample Distributed	Sample Retrieved
		Latitude	Longitude		
Ganaja Township	Along Ajaokuta road	7°42' - 7°45'N	6°42' - 6°45'E	60	53
Lokoja A	Otokiti and Workers Village	7°48'07"N	6°44'39"E	53	47
Lokoja B	Post Office and Marine Road	7°48'6"N	6°44'38"E	47	46
Lokoja C	Gadumo Village and Adankolo	7°46′45″N	6°44'21"E	50	47
Lokoja D	Mount Patti and N.T.A.	7°48′8"N	6°43'59"E	43	40
Lokoja E	Nataco Junction & Sarki Noma	7°50'32"N	6°44'47"E	46	44
Nagazi Farm	Kabba/Kaduna Junction	7°49′29"N	6°35'06"E	57	48
Oworo	Felele	7°51'11"N	6°44'03"E	44	47
Total				**400**	**372**

3 Results and Discussions

The findings of this study reveal a pronounced imbalance between housing needs and the housing supply in Lokoja, Kogi State. The persistent housing deficit observed reflects the rapid pace of urbanization and population growth associated with Lokoja's status as a state capital and commercial centre. This result is consistent with earlier studies on Nigerian urban centres, which established that urban growth often outpaces formal housing provisions, resulting in widespread shortages (Ajanlekoko, 2017; UN-Habitat, 2020).

The dominance of informal housing development identified in the study further underscores the inability of the formal housing sector to meet demand. Similar patterns have been reported in cities such as Minna, Ilorin, and Makurdi, where households resort to self-help housing due to limited access to affordable, planned residential units (Olotuah & Taiwo, 2015). In Lokoja, this situation is exacerbated by challenges related to land accessibility, bureaucratic bottlenecks in land administration, and weak development control mechanisms. These factors contribute to uncoordinated housing growth and the proliferation of substandard residential environments.

The study also revealed high levels of overcrowding and rising rental costs, indicating that housing affordability remains a major concern for low- and middle-income households. This finding aligns with the assertions of Ademiluyi and Raji (2008), who noted that housing demand in Nigerian cities is increasingly driven by income constraints rather than household preferences. The pressure on the existing housing stock in Lokoja has led to increased occupancy ratios, which negatively affect housing quality and residents' well-being.

Furthermore, the inadequate infrastructure and basic services observed in many residential areas suggest that the housing supply in Lokoja is largely quantitative rather than qualitative. While new housing units may emerge, they are often not supported by an adequate water supply, road networks, drainage, or sanitation facilities. This finding supports the argument of Mabogunje (2016) that housing should be viewed as a package of services rather than mere shelter.

The findings demonstrate that the current housing supply mechanisms in Lokoja are insufficient to address both present and future housing needs. Without deliberate policy interventions, the housing deficit is likely to widen. The study therefore reinforces the need for integrated housing policies, improved financing, and stronger public–private partnerships (PPPs) to ensure sustainable and inclusive housing delivery in Lokoja.

Table 2: Demographic characteristics of the respondents

S/N	Item	Variable	Frequency	Percentage (%)
i.		Male	206	55.4
	Gender	Females	166	44.6
		Total	**372**	**100.0**
ii.	Age	30 – 40 years	82	22.0
		41 – 50 years	111	30.0
		51 – 60 years	96	26.0
		61 and above	82	22.0
		Total	**372**	**100.0**
iii.	Marital Status	Single	66	18.0
		Married	228	61.0
		Divorced	52	14.0
		Widow/Widower	26	7.0
		Total	**372**	**100.0**
iv.	Educational	No formal education	36	9.7
	Background	Primary	44	11.8
		Secondary	102	27.4
		Tertiary	190	51.1
		Total	**372**	**100.0**
v.	Religion	Christianity	186	50.0
	Status	Islamic	166	44.6
		Traditional	20	5.4
		Total	**372**	**100.0**
vi.	Occupational Status	Student/Unemployed	47	12.6
		Self-employed	100	27
		Private-employed	87	23.4
		Public-employed	108	29.0
		Retired	30	8.0
		Total	**372**	**100.0**
vii.	Household Size	1 – 5	127	34.1
		6 – 10	193	51.9
		Above 10	52	14.0
		Total	**372**	**100.0**
viii.	Monthly	Below #50,000	38	10.2 (mean 1.68)
	Income/Annual House	#50,000 – #100,000	25	6.7 (mean 2.61)
	Rent Rate	#100,000 – #150,000	45	12.1 (mean 3.00)
		#150,000 – #200,000	53	14.3 (mean 3.25)
		#200,000 and above	112	30.1 (mean 3.60)
		None (i.e., landlord)	99	26.6 (mean 3.33)
		Total	**372**	**100 (mean 2.87)**

Marital status is essential in this study because it is a passive determinant of the number of people in a house, which further influences housing demand. The majority (61.3%) of the respondents were married, as 17.7%, 14%, and 7% were single, divorced, and widowed/widowered, respectively. Consequently, there is potential for population growth in the area.

The background of community residents in education is very important in adhering to the Town Planning Authority regulation standard in line with urban expansion and housing needs. It is perceived that most educated individuals have a better level of community issue awareness, such as those things accrued through urban expansion and housing demand. The level of change adopted by educated individuals in the spatial system seems better than the area dominated by less educated people. Table 2 shows that educated individuals dominated the area, with 51.1% with tertiary education, 27.4% with secondary education, and 9.7% without formal education. This clearly shows that the level of literacy, which affects the extent to which this analysis can be affirmed, is significant, as the level of literacy in the area

is high. Hence, there is a need for the government to help inculcate planning initiatives such as public awareness, sensitization, and radio programmes on urban expansion and housing demand for proper orientation. In terms of religious status, 50% of the respondents practiced Christianity, 44.6% practiced Islam, and 5.4% practiced traditional worship.

The occupational status of the respondents in descending order of magnitude is as follows: public-employed (29%), self-employed (26.9%), private-employed (23.4%), student/unemployed (12.6%), and retired (8.1%). It can be deduced that the majority of the respondents are civil servants, whereas the minority occupational group comprises retirees. High-income residents prefer low-density areas (suburban areas), whereas low-income earners often find themselves at the heart or core of the city system. This condition defines the financial strength of individuals in choosing areas of the city system.

The household size reveals overcrowding, where 51.9% of the respondents live in houses containing 6–10 occupants, 34.1% of whom live in houses containing 1–5 occupants, and 14% of whom have more than 10 occupants. Overall, the area is congested, suggesting a problem with housing. These findings are consistent with the typology of the residential building type in the traditional core of Yoruba city reported by Obateru (2005).

In terms of the monthly income of the respondents, the majority (30.1%) earn a salary of #200,000 or above (high-income earners), with the highest average rent rate of 3.60. This is followed closely by those who live in houses owned by individuals such as landlords (26.6%), while others come after. As graphically illustrated in Fig. 2, the flow line shows that the mean average monthly income increases with increasing rates of annual housing rent. From this analysis, it can be deduced that income is one of the determining factors, as the level of one's income helps to determine the type of housing accommodation that such a person could afford at a point in time.

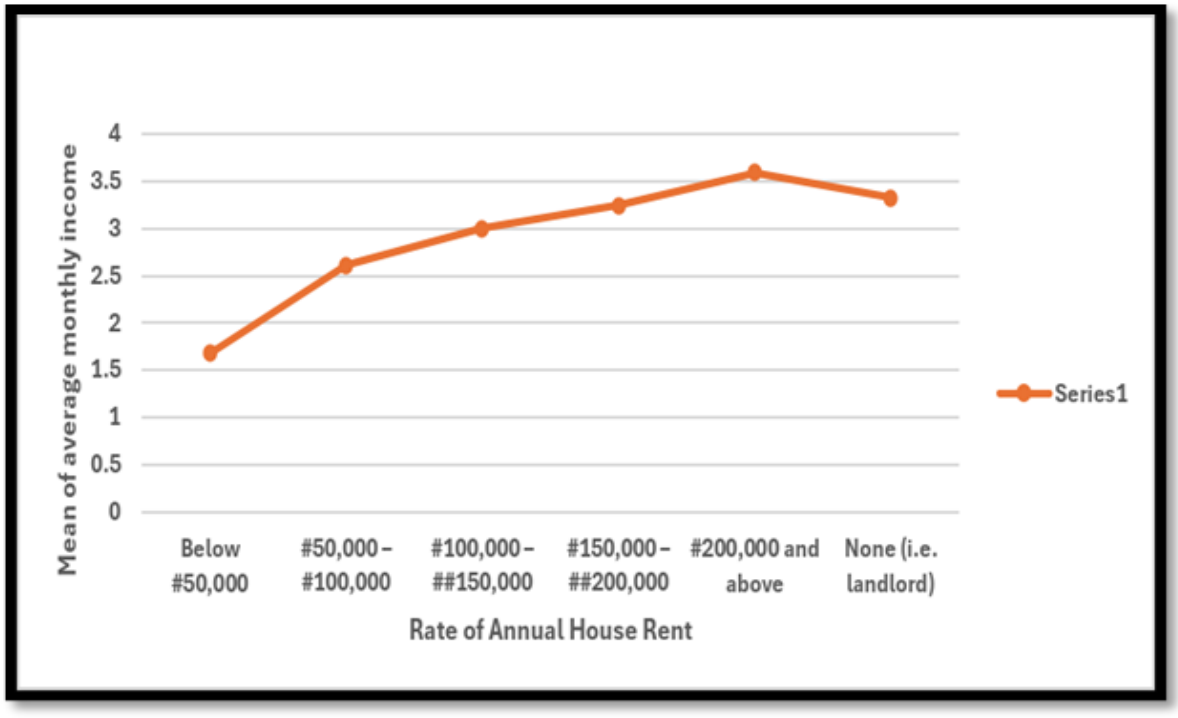

Figure 2*: Average Monthly Income and Rate of Annual House Rent in Lokoja*

Table 3 shows building ownership and other variables related to housing needs, in which the majority of respondents (36.8%) live in rented houses, whereas the smallest percentage (11%) live in government houses, with others falling between them. The length of stay of the respondents in the study area ranged from 6–10 years (34.1%), which constituted the majority, and 16-20 years (8.9%), which constituted the lowest percentage.

With respect to building age, buildings aged 11-20 years (40.3%) had the highest response, whereas buildings aged 31 years and above (13.2%) had the lowest response. By implication, houses aged 31 years and above are subject to weakness in terms of strength and physical appearance over time. Hence, there is a need for more houses in place to complement the available ones to avoid a shortage of housing accommodations in the future. Most parts of the world have been characterized by shanties and haphazard building arrangements. This was because fewer economic people mostly inhabit such areas. For this reason, Table 3 further highlights building types or designs categorized as follows: bungalow (53%), duplex (33.6%), and face-to-face (13.4%).

Field observations revealed that most of the existing residential properties in Lokoja were acquired by the migrating population and, in so doing, increased the demand for housing in the area. This trend of development in terms of growing economic activities and rapid growth in terms of population added pressure on the available land and existing structures, despite the difficult physical terrain of Lokoja. This has resulted in an acute housing shortage, leading to high rental values, high occupancy rates, a lack of adequate amenities and utilities, and poor environmental conditions. Currently, the state of housing in Lokoja has, in many ways, fallen short of housing standards in terms of fitness, basic amenities, and spaces. The swift increase in the urban population needs to be complemented by a significant increase in dwelling units for the populace. As a result, the existing units are precariously overcrowded due to limited accommodation, which is becoming very serious.

Table 3: Building ownership and other variables

S/N		Variable	Frequency	Percentage (%)
i.	Building Ownership	Owned	133	35.8
		Rented	137	36.8
		Government apartment	41	11.0
		Family	61	16.4
		Total	**372**	**100.0**
ii.	Length of stay in the area	1 – 5 years	52	14.0
		6 – 10 years	127	34.1
		11 – 15 years	100	26.9
		16 – 20 years	33	8.9
		20 years and above	60	16.1
		Total	**372**	**100.0**
iii.	Age of Building	1 – 10 years	78	21.0
		11 – 20 years	150	40.3
		21 – 30 years	95	25.5
		31 years and above	49	13.2
		Total	**372**	**100.0**
iv.	Building Design	Bungalow	197	53.0
		Duplex	125	33.6
		Face-to-face	50	13.4
		Total	**372**	**100.0**

Housing development programs by the successive state governors in Lokoja, the state capital of Kogi State, since 1999, were considered, as indicated in Table 4. A total of 230 (61.8%) respondents were aware of housing programmes in Lokoja, whereas only 142 (38.2%) were not aware. Among the 230 respondents who knew about the housing programme, 105 (45.7%) agreed that the programme was slightly helpful, as 95 (41.3%) disagreed with the assertion, whereas 30 (13%) confirmed that it was of great help.

Table 4: Housing development programme by the successive governments in Lokoja, Kogi State

SN	Item	Variable	Frequency	Percentage (%)
i.	Awareness of Housing Programmes	Yes	230	61.8
		No	142	38.2
		Total	**372**	**100.0**
ii.	The extent it helped	Greatly	30	13.0
		Slightly	105	45.7
		No impact	95	41.3
		Total	**230**	**100.0**
iii.	Governor with more attention to housing development	Governor Audu	185	49.7
		Gov. Ibrahim Idris	62	16.7
		Gov. Ichala Wada	70	18.8
		Gov. Bello Adoza	55	14.8
		Total	**372**	**100.0**

Figure 3 shows that Governor Audu has the highest rating for the government with more attention to housing development (49.7%), followed by Governor Ichala Wada (18.8%), Governor Ibrahim (16.7%), and Governor Yahaya Bello (14.8%). This is an indication that the government's attention to housing development in Lokoja, the state capital, has been declining over the years, as Governor Audu, who served from 1999 to 2003, had a higher rating than his successors did. Some of his major achievements during his first two stints in office include the establishment of three different housing schemes for public officers, consisting of over 1,500 housing units in Lokoja.

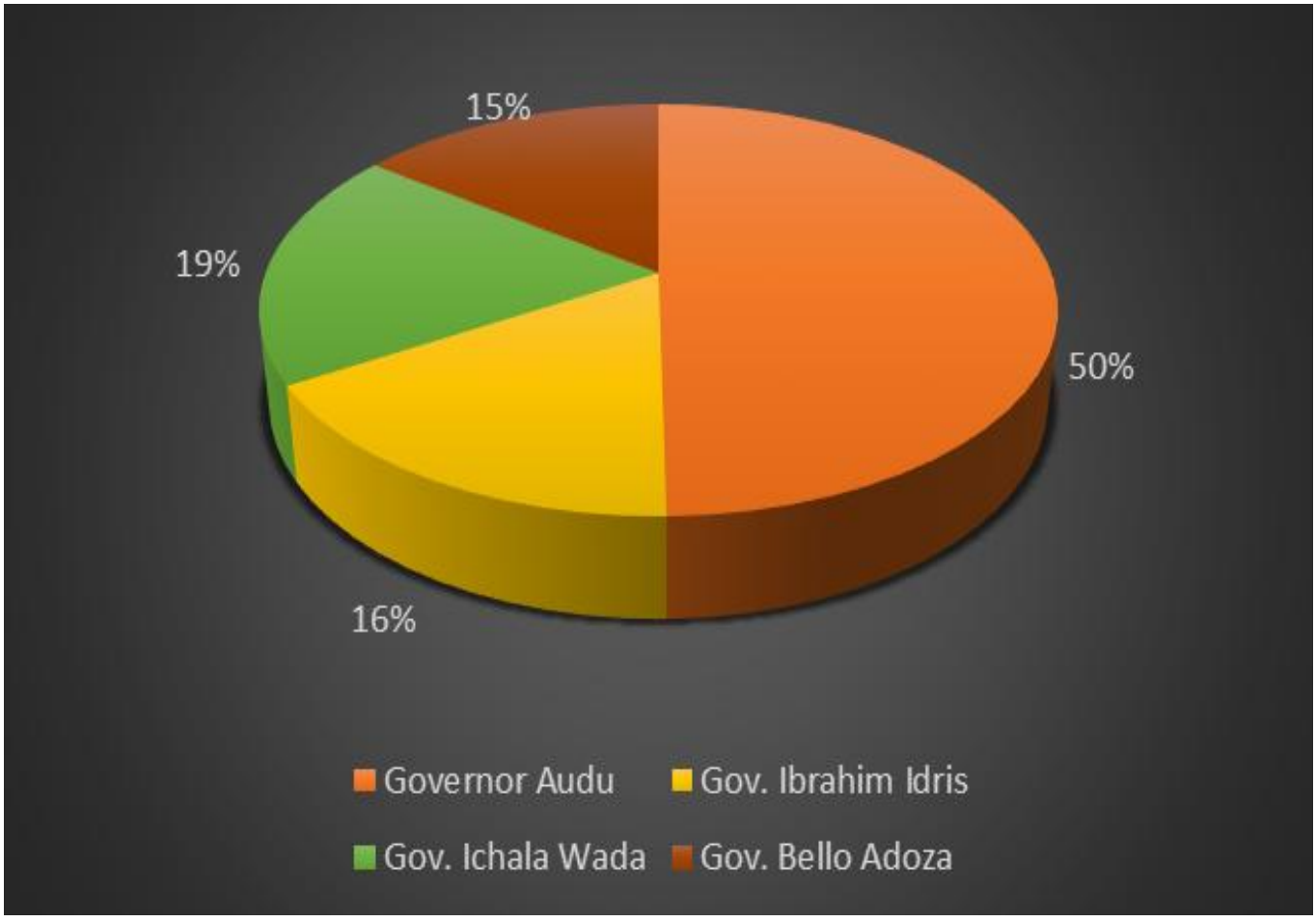

Figure 3: Housing development programs by successive governments in Lokoja

4 Conclusion

This study identified the determinants of housing need and supply in Lokoja metropolis. It was found that the housing demand differed over a period of three decades, from 1994 to 2024. There was also variation in housing demand among the various income groups. The low-income group had the highest housing demand among other income groups. It was followed in descending order by the medium-income and high-income groups, respectively.

However, six factors influenced housing demand at a 0.01 significant level. These are population, income, number of schools, public utilities, security, and household size. Four of the six identified factors, namely population, income, number of schools, and public utilities, responded positively to housing demand. On the other hand, the remaining two variables (security and household size) responded negatively to housing demand. This implied that the six factors are the determinants of housing demand and therefore should be considered in future housing policies and programmes.

Furthermore, the finding has improved the earlier notion, upon which housing policies and programmes are based, that population alone is the determining factor of housing demand. Other identified factors that also influence housing demand are income, number of schools, public utilities, security, and household size. This finding is the major contribution of this study to the existing knowledge in housing demand and supply.

Based on the findings of this study, the following recommendations are proposed to address the housing need and supply challenges in Lokoja, Kogi State.

i. The state government should sincerely transform rural areas with provisions of basic infrastructure

and social services; this will slow down the rapid urbanization being experienced in Lokoja metropolis.

ii. The housing needs of the low-income group; that constitute the majority in Lokoja metropolis, have to be clearly discerned to engender adequate planning for them. The intervention of the government in the provision of low-cost houses for this group is desirable and should be pursued with vigour. This should be based on genuine local participation to ensure sustainability.

iii. With the completion of the Greater Lokoja Water Project, the government should take the responsibility of reticulating the major pipelines to a point of inter-connectivity for households in the metropolis.

iv. To arrest the wave of anti-social behaviour, the poor security coverage in Lokoja metropolis should be widened, especially at night. The residents of the metropolis should be enlightened on the need for neighbourhood watch. The government should make sincere efforts to generate employment for the army of jobless youths in the metropolis.

v. No meaningful physical development can take place without urban planning. The state government should have the political will to begin the implementation of the Lokoja master plan. The metropolis requires extensive urban renewal programmes.

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