



Assessment of Population Growth on Housing Demand in Sokoto Metropolis

Ibrahim Abubakar Audu¹, Ali Badema²

¹Department Of Environmental And Resource Management, Usmanu Danfodiyo University, Sokoto, Sokoto State

E-Mail: Ibrahim.Audu@Udusok.Edu.Ng

²Department of Geography, Umar Suleiman College of Education Gashua, Yobe State

E-Mail: Alibadema1@gmail.com

ABSTRACT

Population growth and housing provision has lately gained global attention. This study therefore focuses on the assessment of population growth on housing demand in Sokoto metropolis. The study adopts a survey research design. Systematic random sampling technique was employed in the study area, in order to ensure a fair representation of information gathering and provide a basic for fair coverage. A total number of 382 respondents were used constituting landlords and tenants. This study employed two types of data, secondary data and structured questionnaire (primary data). The questionnaires were processed using SPSS 22.0 software. The data in this research was analyzed using descriptive statistics. Findings of this research show 95% of tenants said that population growth had an impact on housing demand and also the show that 3% of tenants say that natives are most vulnerable, 38% of them noted that low income migrant workers are mostly affected, 32% of the tenants indicate that middle income migrant workers are vulnerable, a further 2% of tenants point out that high income groups are those that are vulnerable while the remaining 25% of tenants think that higher educational level students are those that are mostly vulnerable to challenges associated with housing demand. Furthermore, the study also found that housing demand in the Sokoto metropolis has been on the increase leading to it outstripping supply. The study recommends that encouraging public-private partnership in housing provision, making of mortgage loans available, and enforcing rent control policies is right to make rent rates affordable.

Keywords: Sokoto, Housing, Metropolis, Population, Growth, Demand.

Introduction

The state of increasing population growth became a prominent twentieth century phenomenon and was responsible for fast increase in the number of large urban centers (Ekanem, 1982). The experiences of developing countries of the world in the 21st century have not departed from this observation of special development interest in population dynamics is the impact on the growth and development of spatial units or urbanization. This linkage was clearly expressed by Udo (1975), when he noted that the rate at which towns became urbanized was influenced by a number of issues such as population growth, increasing and varied functions in the areas of administration, industrialization and commercialization which further attract people and generate more growth. Few aspects of human societies are as fundamental as the size, composition and the rate of change of population (Alabi, 2009).

The growth of human population in the last fifty years has been staggering. According to the United States Census Bureau (2007), the global population was 2.5 billion in 1960; it increased to 3.5 billion in 1975, 5 billion in 1999 and 6.5 billion in 2006. The rate of increase of world population is alarming and so causes increased demand for food, shelter, clothing and other life-supporting needs. These needs are derived directly or indirectly from the natural environment (Animashaun, 2002). This growth in human population has a number of environmental, social, economic, political, and physical consequences. Population growth therefore infers a situation where the percentage of the population in the world or a given country living in areas with a population of more than 2,500 is increasing more than expected (Miller, 1999). This study therefore focuses on population growth as a cause influencing the demand for housing services.

Indeed everyone has a decent home (Awake, 2005). Housing is one of the basic needs of man which is ranked second after food. It constitutes the residential environment and the physical structure used for shelter including service facilities needed for physical health and social wellbeing of the family (Odeluyi, 1992). Therefore, there is no doubt that it has an effect on health, welfare and productivity of individual. This is why its importance cannot be over emphasized since there is a universal ducting provision of houses.

Cohen (2004) evaluates urbanization in African countries. According to him, Africa witnessed fastest rate of urbanization which was put at about 67% compared with the other developed and developing countries. According to the World Bank Regional Report (2005), the rate of urbanization in Africa is the highest in the world. Also, the report estimated that more than half of the African population will be urbanized by the year 2050. This possesses a sustainable urban development challenge, because African countries are characterized by ineffective and unsustainable urban planning and this has been compounded by the complexity of the development arena, which present myriad of systems. There is high magnitude of housing, inadequacy in urban centers in Nigeria (Adedeji and Rowland, 1973).

Nigeria similar to many African countries is experiencing population growth which has made housing one of the critical challenges, especially in the largest urban centers. Housing in Nigeria is a major problem to the point that there is even a deficit for the high-end market.

Demand far outweighs supply and as a result, informal settlements have grown exponentially. Rent values are very high and unaffordable to low income urban dwellers. The growth rate of urban population is more noticeable in Nigeria than other African countries. The number of urban centers in Nigeria rose extremely in the last one hundred years. The resultant effect has been the formation of more urban centers, which are densely populated (Mabogunje, 2001).

Developing countries are experiencing a rapid rate of population growth; this is manifested more in Africa where the average annual growth rates were estimated the United Nations as 4.7% and 4.6% between the periods of 1960 to 1980, and 2000 respectively (Alabi, 2009). Population growth and its effect on the stressed that a reduction in population growth rate is necessary in less developed development have become topical in the last two decades. The point is increasingly countries, if they are to improve their standard of living; this follows recognition in the nineteen seventies (1970s) that development is complex and multi-dimensional process in which the population factors place a major and sometime a decisive role. The world population conference held at Bucharest in 1974, stress the need for better understanding. The inter relationship between the population and development in order to facilitate policy formulation and development planning.

Nigeria is one of the developing countries that have experienced rapid population growth since 1960. The population is still increasing although the growth rate reduced from 3.3 percent in the 1980's to about 2.8 percent in 1991 and rose slightly to 3.0 per cent in 2006 (National Population Commission, 2009). The increase in the rate of population growth occurring in most Nigerian cities has been and other economic activities (Salau, 1978).

This rising demand for urban land tends to be reflected primarily in the congestion of the central areas of cities, rise in land values and in the conversion of rural land population growth is its impact on residential land use, particularly, in the urban at the peripheries of cities to urban use. One of the implications of uncontrolled population growth is its impact on residential land use, particularly, in the urban areas. Urbanization and high population density have caused land degradation especially in most parts of the developing countries. The demand for housing increasingly due to the rapid rate of population growth, this problem could be as a result of certain factors, including rural urban migration, insecurity in some parts of the north western Nigeria, and early marriage among others. Population growth has brought many problems associated with difficulties of providing infrastructures such as water, power supply, and recreational facilities in most of Nigerian towns and cities. The most outstanding of all the problems is that of provision of adequate housing facilities for the population.

Sokoto metropolis has been the capital of Sokoto State since 1976. It is the administrative, socio-cultural, political and economic hub of the state. According to Mamman (1999) and Shamaki (2006), the importance of Sokoto in the northwestern region of Nigeria derives from its being the seat of The Caliphate, dating back to 1804 when ShehuUsmanuDanfodiyo fought the Jihad war and subsequently established the throne for the Caliphate. Thenceforth till early 1960s when it became the capital of the then northwestern region, the growth of the city started increasing though at a slow rate.

The Sokoto metropolis, as the capital of Sokoto state is experiencing an increasing degree of centrality as a higher order service center, such as public health care, health and teacher training colleges, polytechnic and university education which are all drawing increasing numbers people from all over the country for further education and training, job seekers and investors, which account for population growth. More so, there has been mass influx of people into Sokoto metropolis probably making provision of shelter like any other urban area difficult. The demand for housing is increasing perhaps due to the rapid rate of population growth or less interest in building houses for rent by the well to do people. In view of diverse characteristics of different towns and cities of this country, generalization based on these studies alone is not appropriate. Therefore, the particular task of finding details of a town or city and being local specific on the housing issue is worthy of undertaken. It is also significant to note that studies concerning housing to population growth are part of development.

Methodology

Study Area

The study area is the Sokoto metropolis, the capital of Sokoto State, located between longitudes 5.136040 E to 5.302310 E and latitudes 12.956610 N to 13.083790 N. The area is drained by the westward flowing Sokoto-Rima River system which is responsible for rich alluvial soil fit for variety of crops. The valley has an average altitude of 240 metres above sea level, representing the lowest level in the study area. The highest part of the study area has an altitude of about 321 metres above sea level, giving an altitudinal difference of 81 meters. The metropolis has an estimated population of 685000 persons spread over a geographical area of 31041 km² (National Population Commission, 2022). The average annual rainfall is about 640mm, with the raining season lasting between May and October. The dry season spans between November and April. Temperature is as high as 430^c around March/April (middle of the dry season) and as low as 230^c in December/January (middle of the cold season).

Reconnaissance Survey

The preliminary survey of the area of study, allows a researcher to familiarize himself with the study area. The survey assists in designing questions, sampling procedures and selecting target population, it helps the researcher in the identification of various households and observation of house sizes, the structure of the population, and people's main occupation.

Research Design

The study adopts a survey research design. The survey research design helps the study to obtain vast and accurate data/information on the topic under study to conclude.

Sampling Technique

Systematic random sampling technique was employed in the study area, in order to ensure a fair representation of information gathering and provide a basic for fair coverage. A total number of 382 respondents were used for the study as it can be justify by Krejcie& Morgan, (1970), the targeted population size of 6, 85000 wasn't given in the table, so the population figure was round off to the nearest, million which is 1,000,000, which shows that a population size of 1,000,000 with margin error of 5% and confident level of 95% the sample size will be 382. For the purpose of this research major areas will be used and sampled to the targeted population of Sokoto metropolis, these are the high, medium, and low income earner which includes: Arkila, Mebera, Gawunnama, Tafawabalewa, Yawuri flat, Tudunwada, Ugwunrogo, Iraqi, Bado and Runjinsambo area of Sokotometropolis.

Table for Determining Sample Size from a Given Population

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

Note.—*N* is population size.
S is sample size.

Source: Krejcie & Morgan, (1970)

Method of Data Collection

This study employed two types of data, the population data (secondary data) were collected from National population commission Sokoto. Structured questionnaire was used for data collection (primary data). The questionnaires were administered using the face-to-face method of data collection, as it is recommended to be the superior and reliable method for data collection. A total number of 382 questionnaires were administered, and 368 were returned after they were properly filled, while 14 were not returned at all.

Methods of Data Analysis

The questionnaires were sorted, coded, and processed using SPSS 22.0 software. The data in this research was analyzed using descriptive statistics and display the results as frequency distribution table, bar charts and pie chart to show the population growth on the type's residential housing demand in Sokoto metropolis.

Result and Discussion

Sex Distribution of Respondents

The result in Figure 1 shows the sex distribution of landlords and tenants. From the figure Male landlords are 25% and tenants 46%, female tenants constitute 19% and land ladies 10%. The results also indicate that 63% of the respondents are tenants while landlords constituted 37% of the total household sample population of 368. The excess of the proportion of tenants over that of landlords means that the number of people demanding accommodation is higher than those who are able to supply accommodation in Sokoto metropolis. Again, the dominance of males over females among both tenants and landlords is a manifestation of gender roles in patriarchal societies; where the provision of shelter is a productive role, and is reserved for male landlords (Moser, 1993).



Figure 1: Sex Distribution of landlords and Tenants
Source: Field Survey, 2022

Age Distribution of Respondents

Table1 displays the age ranges of the household respondents. The classification is based on that of the US National Centre for Health Statistics (2006). In general, the ranges could be further grouped under the youthful age (20-49), the middle age (50-69) and the aged (70 and above). If we make further summations based on this categorization, we obtain 17%, 14% and 5% of landlords for the youthful, middle age and the aged year groups respectively. On the other hand, among the tenants, the corresponding proportions are 48% for youthful age group, 11% for middle age and 5% representing the aged. The results suggest that majority of both the tenants and landlords fall within the youthful age brackets. As most of the respondents are in the youthful age group, it is an indication that they fall in the active reproductive group and so there is a high potential of it leading to population growth.

Table 1: Age Distribution of Respondents

Age group	Landlords/Ladies (%)	Tenants (%)
20-29	1	19
30-39	3	13
40-49	13	16
50-59	8	6
60-69	6	5
70 and above	5	5
Total	36	64

Source: Field Survey, 2022

Information from the table above indicates that the dominant age groups of the landlords are between 40-49 and 50-59. Majority of the tenants are between the ages of 20-39, which is the most economically active persons. In the case of tenants, it is further deduced from the data that their relatively high proportion is because most of them are migrants from other parts of the country at large, for purposes such as education, formal and informal sector employment opportunities.

Educational Background of Respondents

In terms of educational background of landlords, it is obvious from Figure 2 that 3% had primary school education, 14% had secondary school education, 13% had tertiary education, and 1% had vocational education while 9% had no formal education. The facts presented here about the landlords' educational status illustrate that most of them have had formal education with a slight majority having senior high school educational experience. As majority of them are educated, they are critical in taking decisions regarding payment of their house rents by their tenants because they consider the current economic conditions before deciding on their house rent rates. With regard the tenants, it is seen from the figure below that 7% obtained primary education, 8% had secondary school education, 40% obtained tertiary education, 2% had no formal education and the remaining 3% had vocational education. It is clear from the figure that all the tenants are literates with the largest group being those who reached tertiary level. This gives the signal that the migrants who are into higher education are more likely to be renting. The results show clearly that both landlords and tenants have more educated people than the uneducated with tenants having the highest levels of education.

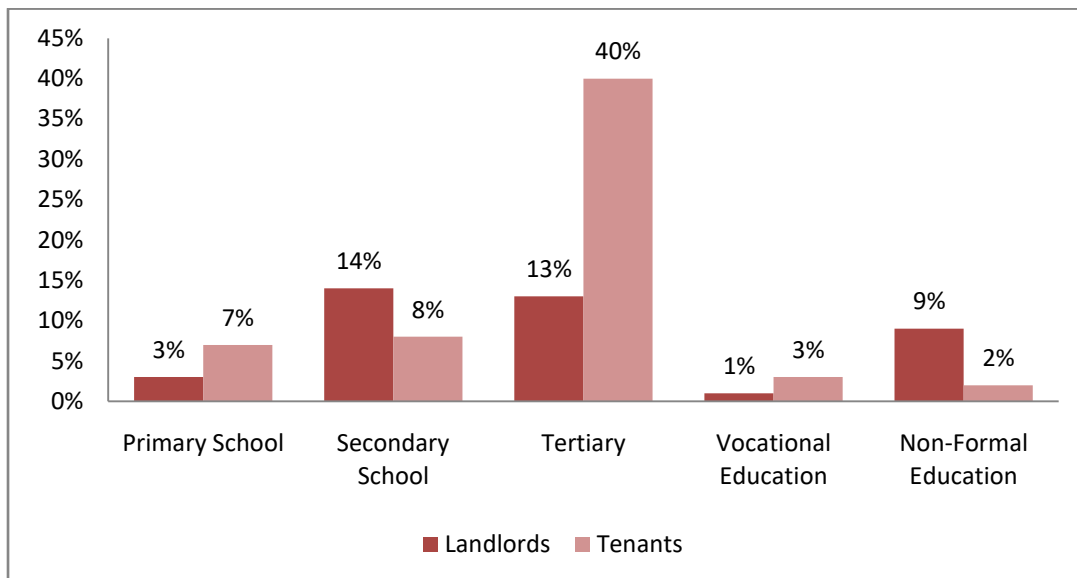


Figure 2: Educational Background of Landlords and Tenants

Source: Field Survey, 2022

Occupational Distribution

Indication from the occupational distribution of landlords presented in Table 2 show that the dominant professions in this category of respondents include farming (12%), civil servants (6%), and business (20%). Since business is the most significant on the list of occupations for the landlords, it is an indication that such people make much profit from their business and then use the money to invest in housing for rent.

Table 2: Presentation of Occupational Distribution of Respondents

	Civil servant	Business	Farming	Labourers	Students
Landlords	6	20	12		
Tenants	29	11	9	4	9
Total	35	31	21	4	9

Source: Field Survey, 2022

For the case of the tenants, the results on their occupational status reveal that civil servant (29%), farming (9%), business (11%), labourers (4%), and students (9%). Civil servants are mostly those that rent residential accommodation in the Sokoto metropolis as they migrated from other places to work and have no option but to rent. Business men's are the dominant landlords.

Household Size

With reference to household size of landlords, the results from Figure 3 illustrate that the largest sector of the pie chart which is 45% represents a household of 4 to 6 people while the smallest household constituting 18% of the pie chart comprise 1 to 3 people.

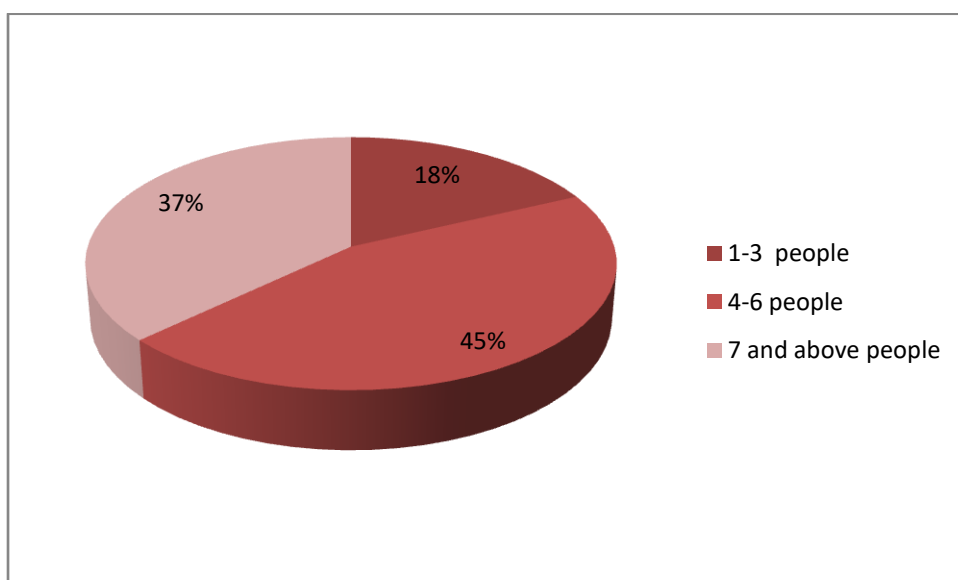


Figure 3: Household Size of Landlords

Source: Field Survey, 2022

It is noticed from Figure 4 that in terms of household size for the tenants, the largest sector of figure 4, which constitutes 50% of tenants, corresponds with 1 to 3 people whereas the smallest sector representing 10% make up 7 or more people. The results indicate that majority of the tenants have smaller household sizes than the landlords, the reason for the differences in the household sizes is that, in the case of the landlords they are permanent residence where their entire family lives. However, with respect to the tenants most of them are civil servants. Ironically, the Tenants are those that demand for more rooms for residential purposes therefore making their expenditure on rent very high since most of the landlord's increase the rent every year. Comparing the 2 respondent categories (i.e., tenants and landlords), it is obvious that the landlords have larger households than the tenants.

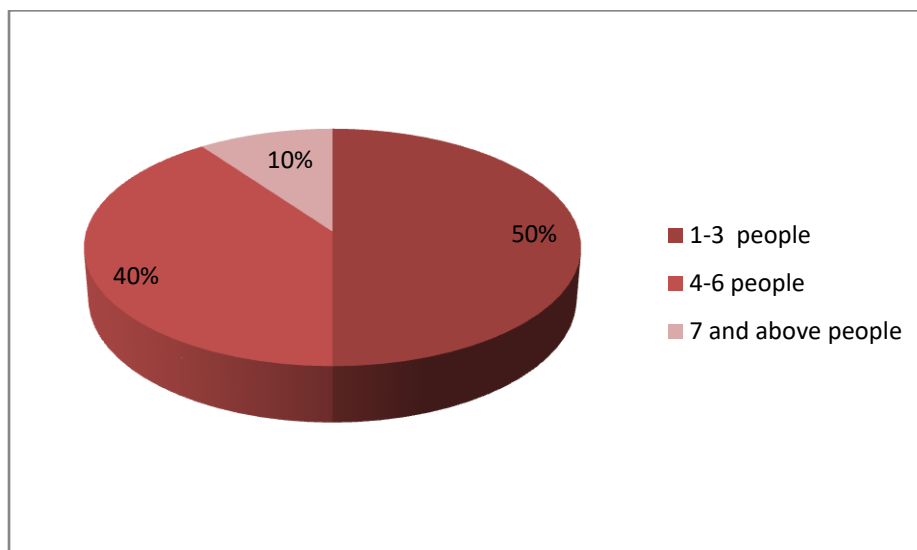


Figure 4: Household Size of Tenants

Source: Field Survey, 2022

Trend of Population Growth

Population growth of any settlement may take the pattern of increasing, decreasing or being stagnant or fluctuating. The trend of population growth in Sokoto metropolis from 2013 to the year 2022 has been on the increase. Table 3 and Figure 5 give details of the trend in population growth in Sokoto metropolis.

Table 3: Population Trends in Sokoto metropolis from 2013 to 2022

Year	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total population	520,000	536,000	552,000	569,000	586,000	603,000	622,000	641,000	662,000	685,000
Percentage increase (%)	2.97	3.08	2.99	3.08	2.99	2.90	3.15	3.05	3.28	3.47

Source: National Population Commission (2022)

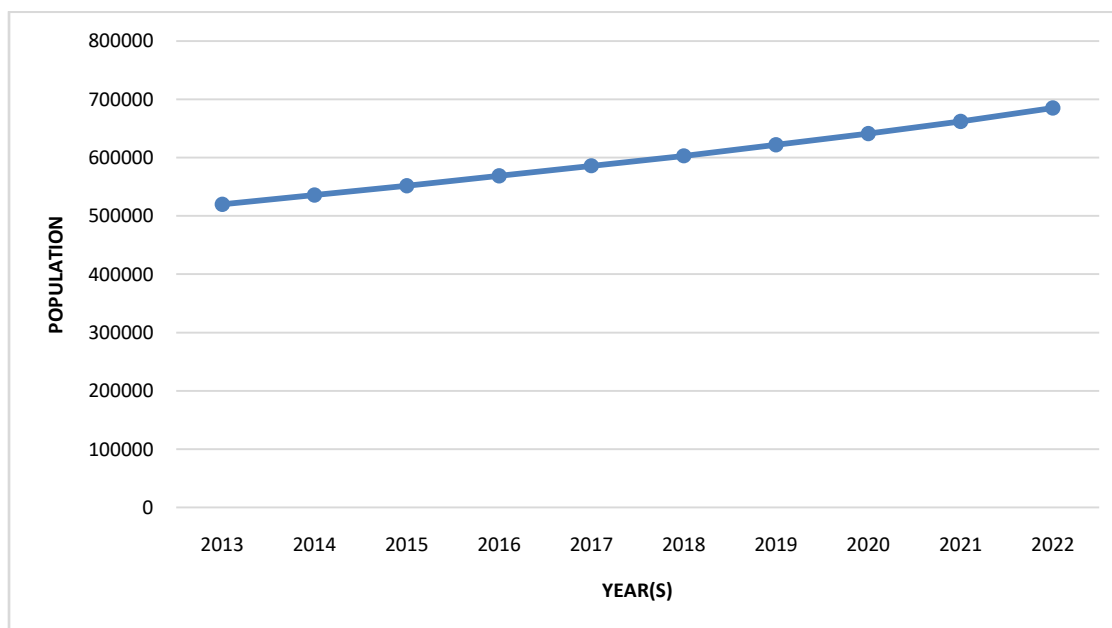


Figure 5: Population Trends in Sokoto metropolis from 2013 to 2022

Source: National Population Commission (2022)

The general trend of population growth in Sokoto metropolis is illustrated in Table 5. A look through the table shows that the population of Sokoto metropolis is increasing steadily. This is because in 2013 the population was 520,00 that increased to 536,000 in 2014 and further rose to 552,000 in 2015, same is the trend shown in figure 5. The 2016 population increased further to 569,000, in 2017 rose to 586,000, in 2018 increased again to 603,000. The population further increase to 622,000 in 20219, the population increased to 641,000 in 2020 and further rose to 662,000 in 2021and lastly 685,000 in 2022. This implies that every year there is an addition to the population of Sokoto metropolis. From the table it can also be seen that the growth of Sokoto metropolis is as a result of the setting up of financial institutions, establishment of new institutions of learning among others thereby attracting' more people into the metropolis.

As can be seen from the line graph in figure 5, the general pattern of the population shows a continuous increase in population. The line further shows a continuous increase in population per the 2022 projected figure, but the rise is at an increasing rate. It is necessary that the challenges (i.e., demand for housing outstripping supply, development of slumps and shantytowns, and over stretching of social amenities schools, health centers, water services etc.) associated with rising populations are anticipated and remedies put in place. Similarly, the benefits (i.e., large labour force, increase in demand for goods and services) linked with increasing population growth should equally be forecast and structures developed to harness them maximally.

Effects of Population Growth on Housing Demand

The population of Sokoto metropolis is growing, since it is evident that the population is on the increase, it is necessary to find out if the population growth will have any impact on housing demand. Figure 6 presents the views of tenants on the effect of population growth on housing demand. Indication from the figure illustrate that 95% of tenants said that population growth had an impact on housing demand, 2% of them said that population growth did not affect the demand for housing whereas 3% of the tenants said did not know the 'effect of population growth on housing demand. The results show clearly that the growth in population has an effect on housing demand.

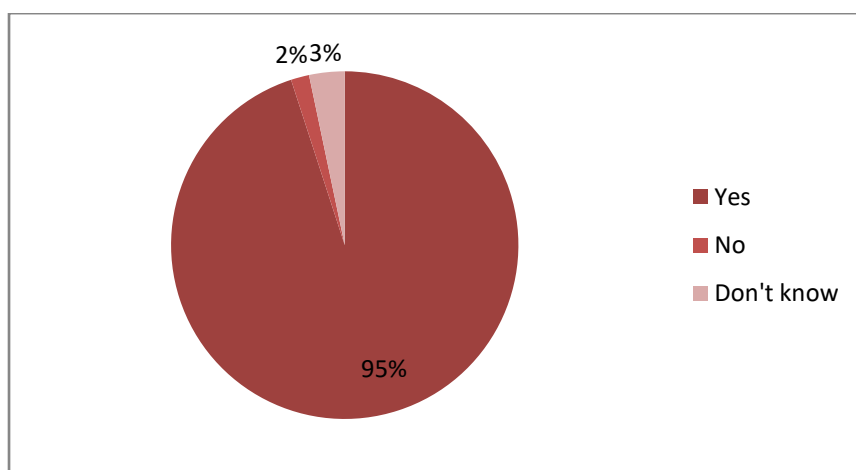


Figure 6: Effects of population growth on housing demand

Source: Field Survey, 2022

Categories of People vulnerable to Housing Problems in the Sokoto metropolis

In any problem, the degrees to which people are affected usually vary, on that basis it is essential to ascertain the groups in the Sokoto metropolis that are mostly affected by housing problems to be able to put in appropriate measures to lessen their burden. Figure 7 presents the opinions of tenants on categories of people they considered vulnerable to housing demand in the Sokoto metropolis. The results illustrate that 3% of tenants say that natives are most vulnerable, 38% of them noted that low income migrant workers are mostly affected, 32% of the tenants indicate that middle income migrant workers are vulnerable, a further 2% of tenants point out that high income groups are those that are vulnerable while the remaining 25% of tenants think that higher educational level students are those that are mostly vulnerable to challenges associated with housing demand.

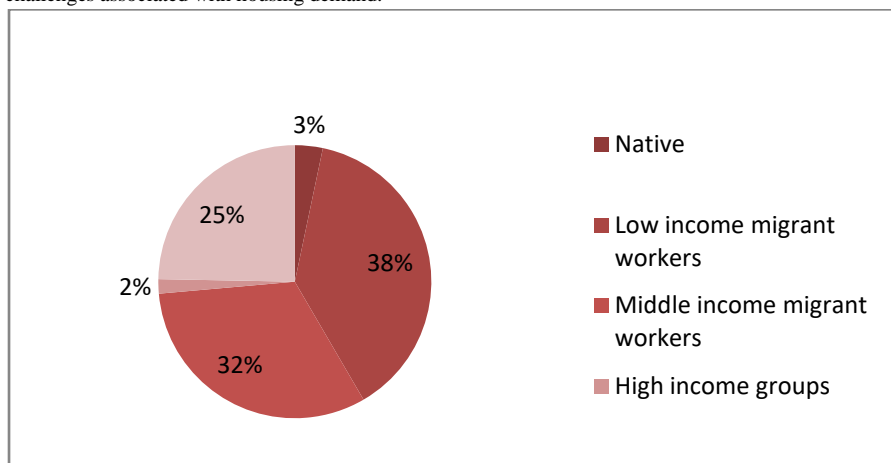


Figure 7: Categories of people vulnerable to housing problems in the Sokoto metropolis

Source: Field Survey, 2022

Population Pressure

The table 4 below reveals that 143 respondents representing 39% were of the view that population pressure is due to immigration, 100 respondents representing 27% said it is due to location, 15 (4%) said it is due to early marriage, 110 (30%) said it is due to high cost of rent. It is clearly revealed that the population pressure is due to high rate of immigration, and this can be attributed to the insurgency problem surrounding the study area.

Table 4: Population pressure

	Frequency	Percent
Immigration	143	39
Location	100	27
Early marriage	15	4
High cost rent	110	30
Total	368	100

Source: Field Survey, 2022

Qualities of Houses

Table 5 revealed the qualities of houses in the study area, 78 (21%) out of the total respondents have a very good housing quality, 96 (26%) of the respondents have a good housing quality, 124 (34%) of the respondents have a moderate housing quality and 70 (19%) have a poor housing quality. This is clearly revealed that the majority of the respondents have a moderately comfortable with their residential housing quality in the study area. Most of the population lives in the substandard and poor housing and unsanitary residential environments due to rapid population growth.

Table 5: Qualities of houses

	Frequency	Percent
Very good	78	21
Good	96	26
Moderate	124	34
Poor	70	19
Total	368	100

Source: Field Survey, 2022

Average number of persons per room

Table 6 revealed that 120 respondents representing 33% constitutes the majority are living in four persons per room which coincide with assertion of Adedeji & Rowland (1973) that as a result of inadequate houses in urban area high percentage of the population are living in overcrowded conditions or inadequate houses, while 25 respondent representing 7% are living above five per room and this is because most of them gave birth to many children.

Table 6: Average number of persons per room

	Frequency	Percent
One person per room	46	13
Two person per room	87	23
Three person per room	90	24
Four person per room	120	33
Above five	25	7
Total	368	100

Source: Field Survey, 2022

Conclusions and Recommendation

The study has found out that the study area is growing rapidly; this fast population growth is responsible for some reasons, such as insecurity in some neighboring states, rural urban migration, as well as influx of people for other reasons due to peaceful nature of the study area. The housing demand in the Sokoto metropolis is on the increase because of population growth it is forecast that the rent values would continue to rise further in the future. The individuals, public-private sector, private sector, and public sector do housing provision in the Sokoto metropolis with the individual provider as the major provider. In the light of the problems associated with population growth on housing demand in Sokoto metropolis as revealed in this study; it therefore recommends that; Government should support housing providers with long term loans as housing is capital intensive so that they could buy land as well as building materials. The government could also liaise with financial institutions to provide loans to housing providers at affordable interest rates and long term payments to enable them construct more houses. Also provision of housing loans for the individuals to construct their own houses is an important strategy in solving the housing demand challenge. Since the individual is the one making major effort to provide his/her own housing need, the government in partnership with financial institutions could assist the individuals by providing them mortgage loans. As the individuals get these loans at moderate interest rates, they will be in position to build their own houses.

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