

The Provision and Conditionsof Infrastructural FacilitiesNexus in a Rapidly Evolving Medium-Sized City in Nigeria: An Empirical Analysis of Lokoja, Kogi State

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Abstract

The provision of infrastructure is crucial in realizing the theme “The Future We Want” which aims to eradicate poverty, enable economic growth and address the challenge of access to services for all. This study assessed the provision and conditions of infrastructure in Lokoja, Nigeria - a rapidly evolving political cum administrative capital of Kogi State, with a view to enhancing sustainable development in urban areas. The study used copies of questionnaire and oral interviews on household heads in Lokoja community. A descriptive survey research method was adopted for this research, and data were derived from both primary and secondary sources. However, in order to determine the sample size (10%) for this study, the population of each community systemically selected was used to determine the number of questionnaire administered. Those included Adankolo, Ganaja, Gadumo, Sarkin-Noma, Kabawa, and Lokongoma. A total of 5710 residential buildings were identified, and 10% sample size was taken to give 5710 questionnaire administered to residents. The finding among others revealed that, basic infrastructures with poorest condition were roads and water supply with indices of 2.1036, and 2.8235 respectively. In summary, the study concluded that, Lokoja was alone in the middle of nowhere when compared with other evolving ancient capital’s infrastructural facilities where the people were covered with a blanket of dust. On the basis of the findings, the study revealed the requirement of master plan for the city, and the redesigning of Lokoja with special reference to infrastructure distribution, encouragement of public-private partnership/participation in infrastructure provision and delivery; which, in-turn, would prolong its durability and efficiency.

Keywords: Infrastructure facilities, Lokoja, Maintenance, Sustainable development, Provision

1. Introduction

The new urban agenda recognized the provision of infrastructures in a novel viewpoint on issues of disparity, negligence of different stakeholders (Straka & Tuzova 2016; Anjorin, *et al.*, 2022). The provision of infrastructure and management plays a central role in economic growth, achieving sustainable development, green environment, rural – urban migration and direct impact on more than eighty percent (80.0%) of the UN-SDG targets. The contention is to change the narrative of infrastructure provision globally, given the fact that sustainable development particularly in Africa is an economic and social importance in the transformation of the towns and cities. Generally, African Modern cities and towns are noted to experience excessive urbanization growth, which has resulted in economic, social and physical change in many Saharan Africa countries (UN, 2013; Okosun, 2023). Consequently, to enhance infrastructure provision, new approaches into construction and operation of infrastructure facilities, social and environmental factors, inclusive economic efficiency inclusive should be taken into account (Okosun, 2023). This implies that, provision of infrastructure is an indispensable component of growth for any economy.

Africa’s urban population will be about two billion by 2040 (United Nation, 2013). Therefore, the support for the provision of infrastructure in many developing countries such as Liberia, Libya, Ghana, Mali, South Africa, Togo, Senegal, Ghana, Namibia and Nigeria is an indispensable mechanism for the countries to get on the path of sustainable economic development.

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Presently, the Nigeria population growth in 2023 was 223,804.633; a 2.41% increase from 2022 (Okosun *et al.*, 2023), and the urban areas are growing rapidly, consequently, the urban infrastructure has to meet the needs of dense population/increasing users. Okosun and Ukoje (2023) reported that to improve the industrial and economic performance of urban areas in Nigeria, issues of lowquality infrastructures (educational facilities, healthcare facilities, clean water supply, drainage etc), uncoordinated urban growth, and increasing pollution need to be adequately studied and addressed by all stakeholders practically the 3 tiers of Government. The failure of the government weak institutions to address these problems has lead to the relocations of people an business to neighboring countries due to a number of contributing factors; and relatively poor business environments (Jamal 2017; 2030 agenda for Sustainable Development; Okosun 2023).

Presently, Nigeria lacks adequate and sustainable infrastructure to support the increased economic growth and development needed to improved their well-being (Olujimi, 2009; Okosun 2021). The problems of inadequate urban infrastructural provision and delivery range between lack of employment opportunities, squatter settlements, increased urban poverty, deteriorating building, growing insecurity and rapidly increasing crime rates (Okosun 2023). In this regards, closing Nigerian's urban area infrastructure gap index would requires a useful tool that support the plan for people (SDGS), and interactive framework of infrastructure provision and management linked with economic development and equality (The SDGs is referred to as a plan for People, Planet, Prosperity, Peace and Partnership).

The deficient of basic amenities is the major factor affecting the quality of life of people in urban communities, thus weaken the effort enhancing urban lives, and socioeconomic transformation of cities (Adeyoye, *et al.*, 2011). The deprived state of most infrastructural facilities in Nigeria cities has created economic problems (Okosun and Ukoje, 2023), duo to high population concentration in the urban areas, beyond the facilities necessary to sustain its growth, and as such has a serious effect on the state (i.e. conditions) of the available infrastructures. The rapid growth in human population in Kogi state with Lokoja the capital has lead to an accelerating unprecedented transformation of its communities (Okosun 2023). In this vein, the existing infrastructure provision in the city became grossly inadequate to meet the needs of the users. This arguably sets the stage for the eventual rapid urbanisation process in Lokoja. Through this exploration, the study aim to provide a comprehensive analysis that underscores the critical importance's of urban infrastructurein shaping the future of cities ("The Lokoja We Want").

Summarily, this study aim to assess the existing infrastructural facilities and conditions in a rapidly evolving medium-sized city in Nigeria, with a view to enhancing sustainable infrastructure in Lokoja. The specific objectives of this study are as follows: i) highlight/examine the main socio-economic characteristics of respondents, ii) assess the distribution of infrastructural facilities, and; iii) reveal the condition/state of the existing infrastructure provision in Lokoja.

Statement of the research problem

The United Nations reports in 2013 revealed that, infrastructure development is central in the growth of any given society, they promote production, and consumption activities as well as advance the wellbeing and societal existence of people. The urban dwellers in most developing countries are living below the livelihood standard (WHO, 2012), because they do not have appropriate access to basic infrastructures; such like good roads, electricity, water, hospitals/health care centres and schools. The school facilities are grossly inadequate for any significant development (WHO, 2012). These problems no doubt deprived people access to job opportunities and healthy life styles.

According to the World Bank report in 2002, Nigeria was ranked 3rd to the last, in terms of the Quality of Infrastructure (QOI). The infrastructure in Nigerian cities is in a state of disrepair and negligence; and the city's infrastructures are inequitably spread where available. Okosun (2023) concluded that, infrastructure provision by states Government of Nigeria only exists in pages of the Nigerian Newspapers than in reality. The Nigerian Institute of Social and Economic Research (NISER) in 2001 noted that, the poor state of infrastructure in Nigeria is endemic. Of course, the main reason for increasing interest in infrastructural facilities development in rapidly evolving medium-sized cities (United Nations, 2011; Nigerian Institute of Town Planners, 2019; Okosun *et al.*, 2024).

The Nigeria infrastructure situation in the urban areas/or cities has been translated into increasing underdevelopment, poverty, and low-self esteemed among the dwellers. Past studies carried out on urban infrastructure facilities in rapidly evolving medium-sized citiesin Nigeria (Olujimi, 2010; Emmanuel, 2010; Manggat, *et al.*, 2017; Okosun and Olujimi, 2023)had attracted increased attention in recent years. This further justifies the need for an analysis of the provision and condition of infrastructural facilities. A recent study carried out by Okosunand Ukoje (2023), on infrastructure delivery in Ekiti-South West Local Government Area of

Nigeria, revealed that, a larger percentage of the residents paid a remarkable amount on a monthly basis for water and electricity provision and maintenance. Fourteen (14) years ago, a study, “*State of infrastructure and funding in Kogi state, Nigeria*” carried out by Alabi and Ocholi (2010), found out that funding was the main limitation to infrastructure provision. However, the study failed to established stakeholders involvement in the provision and management of infrastructural facilities in Lokoja. It can infer that, human’s in a given town/cities would require a commensurate infrastructure that would affect their quality of life.

Lokoja the capital city of Kogi state is experiencing rapid urban growth in decades with serious consequences on the environmental resources and existing infrastructural facilities. A study carried out by Ukoje (2016), revealed that, settlements in the fringe of Lokoja expanded from 3 to 83% between 2000 and 2016 without commensurate provision of social and physical infrastructure. These studies have shown that the provision and expansion of basic infrastructural facilities is essential, as it enhanced the living standard of the urban dwellers (poor and non-poor household). Based on the forgoing, this study assessed the provision and conditions of infrastructural facilities in the urban areas, in order to advance their well-being. There is no doubt that, the provision of infrastructure plays a key lead in catering for the welfare of inhabitants and promoting capacity buildings. The reason adduced is that, infrastructural facilities provision, if not the wheelbarrow, then it the wheel for a modern society to function well. Among the infrastructural facilities in Lokoja, the capital of Kogi State, schools (i.e educational facilities), water, healthcare facilities, electricity, markets, town-halls, post office, police station, banks and good road network will play notable roles in the development of the city. In relation to the above assertion, Okosun *et al.*, (2024) explored the provision of infrastructures delivery Management System (IDMS) in Ekiti South West Local Government Area, Southwestern Nigeria, and revealed that several infrastructure gaps still exist. This study therefore assessed the provision and conditions of infrastructure facilities in a rapidly evolving medium-sized city in Nigeria, with special attention to Lokoja the ancient political administrative capital of Kogi state.

Review of Related Literatures

In the contemporary world, a country develops through the sufficiently in infrastructure provision that facilitate efficiency, effectiveness and good governance (UN, 2013; Okosun and Ukoje, 2023). This cannot be underscored, the reason adduced is that, infrastructures relates to the aggregates of all facilities that allow a city/town to function efficiently. The term “infrastructure” refers to energy system (including power, oil, and gas), transportation, water supply, hospital, healthcare, sanitation and urban/rural services. Infrastructure provisions in the urban setting are often seen as non-profit oriented project, their provision, maintenance and sustenance are therefore expected to be funded with public fund. In Sub-Saharan Africa (SSA), such as Burkina Faso, Capo Verde, Burundi, Cameroon, Congo, Cote d’Ivoire, Ethiopia, Sierra Leone, Uganda, Zambia, Zimbabwe, South Africa, Kenya and Nigeria for instance, the government efforts at addressing the urban infrastructure challenge failed despite the adoption of several measures, and reform programmes. Closing SSA’s infrastructure provision gap would thus require a multi-track approach to increase all forms of public and private investments and leverage a variety of financial instruments, including guarantees and public private partnership.

Several studies have shown that, the provision of basic infrastructures like road infrastructure is essential for communities’ well-being and advancement (Rozema and Martens, 2010; Mascarenhas, et al., 2010). It promotes adequate accessibility and delivery of vital urban infrastructures (Brooks & Go, 2011; Owen, Terence & Green, 2012). Jamal (2017) observed that, the investment infrastructures provisions in South Africa path of sustainable development, such as electricity (power generating capacity) will aid healthcare services and communication network, while the provision of transportation infrastructure encompasses various components that facilitate the movement of people, goods, and services within an urban area. Transportation systems therefore enhance mobility. On the other hand, improving Kenya’s infrastructure up to the level of middle- income countries, would boost annual growth by more than 3.5% points, and for Nigeria, this would mean an increase in annual real GDP growth by around 3.6% points.

In Nigeria, the study of Alabi and Ocholi (2010); found out that, the weakness in infrastructural provision have been found to be a reflection of lack of involvement of stakeholders in infrastructure provision. Accordingly, proposed infrastructure projects were not executed due to lack of fund, hence individual partnership/involvement was suggested to help compliment the efforts of the state government. However, there is increasing interest in provision of infrastructural facilities. The increase in attentions stems from various studies which had shown more commitment in the provision of infrastructure. These studies include Okosun and Ukoje (2023), who carried out a study on the involvement of Local Government Councils in Infrastructure delivery in Ekiti South West Local Government Area (LGA) of Ekiti State, while Olujimi, (2009) carried out a study on evolving planning strategy for managing urban sprawl in Nigerian, Okosun and Olujimi (2016), analyzed the activities of Local Government Councils and Community-Based Development Associations in the provision and maintenance of Educational

Facilities in Ilawe Ekiti. Ukoje (2016) carried out a study on the impacts of rapid urbanisation in urban fringe, and they that, provision of infrastructure represent fundamental requirements for sustainable infrastructure development; by (i) improve infrastructure investment in towns/cities in Nigeria; (ii) develop institutional capacity and manage them; (ii) Match financing approaches with the different needs linked; with policy reform, and improved management and delivery all leverage each other. From the forgoing, none of these studies has sufficiently looked into the assessment of the provision and conditions of infrastructure in Lokoja. This has brought about the choice of Lokoja with population above 196,643 inhabitants. These phenomenal growths exert a tremendous pressure on the existing infrastructure.

Materials and Methods

The study area

Lokoja is the capital city of Kogi State, North Central Nigeria which occupies a unique place in the history of Nigeria. It is located at latitude 7°45'N-7°51'N and longitude 6°41'E-6°45'E and lies at an altitude of 45 to 125 meters above sea level. Lokoja has for long been an administrative center as it was the capital of the British colonial government after the amalgamation of Northern and Southern Nigeria Protectorates (Official Gazette Kogi State Ministry of Information, 2011). The creation of Kogi state on 27th August, 1991 with Lokoja as the capital no doubt brought an influx of population to the capital city and according to 1991 census, Lokoja had the population of about 77,516 people, which increased to 196,643 in 2006 (Nigeria Official Gazette, 2009). The selected communities for the study include; Ganaja, Phase one, Adankolo, Gadumo, Lokongoma, Kabawa, and Sarkin-Noma, as shown in Figure 1.

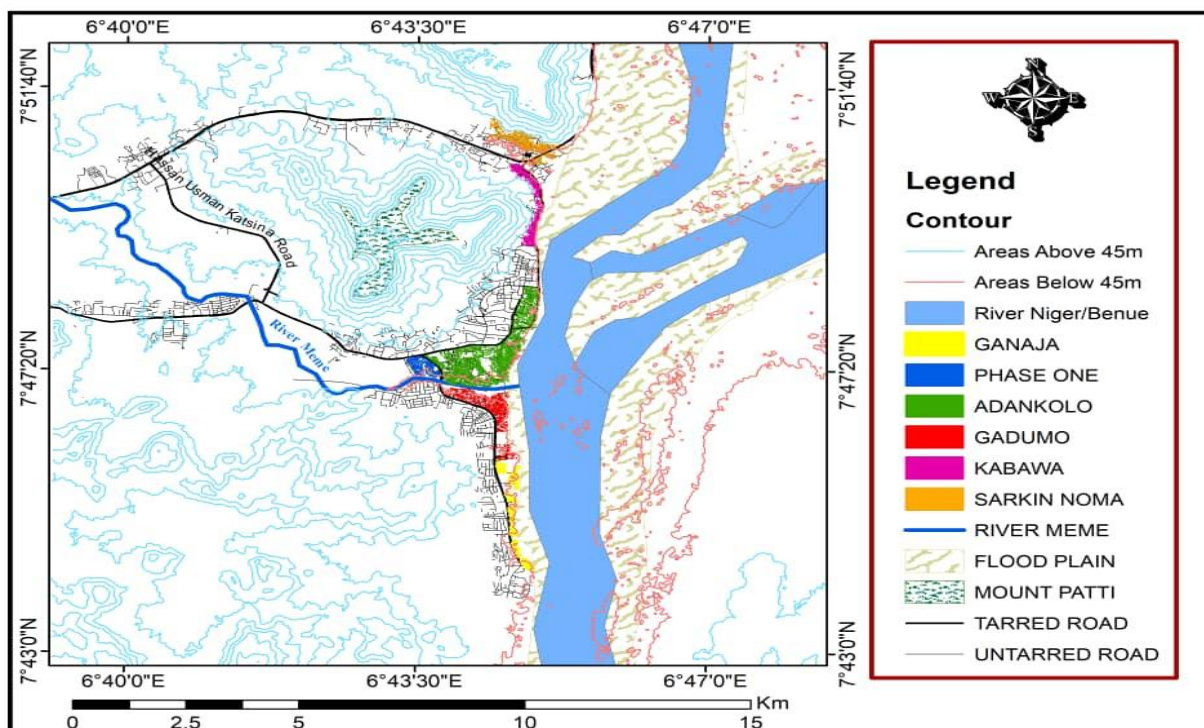


Figure 1: Map of the study area (neighbourhoods in Lokoja, Kogi State)

The increase in human population in the city centres has led to infrastructure quest and challenges of the inhabitants. Urban land-use growth, tourism, and leisure services thrive well within the city, characterized by random, sporadic and fragmented urban growth which has hindered development towards optimum units in the promotion of local public utility, infrastructures and services.

Research Method

A survey research method was adopted for this research and data were observed from both primary and secondary sources. The research populations were classified into four groups such being Lokoja Local Government Area Caretaker Chairman, Development Unit in-charge of Community Development Projects in LKPGA, Development Associations (DAs) and Residents in Lokoja communities. A multiple random sampling techniques approach was employed for use in this study. The Systematic sampling technique was used to select the

unit for detailed survey, which comprised of five hundred and seventy-one (571) residential building from a frame of 5710 in the identified communities/areas.

Overall, 571 copies of questionnaire were administered, based on the numbers of residential buildings, by using a purposive sample, thus representing a sample of 10% administrated questionnaire on the resident's. The sample of 10% was deemed adequate to avoid repetitions based on homogenous characteristics (cultural composition, physical layout characteristics/settlement, economic level/occupation) of the households. However, the 10% was used to gain more in-depth view of their opinions (thoughts, and beliefs) regarding the infrastructure provision and situation in Lokoja. That helped with the selection of a subset of a population to represent the entire population of interest (Okosunand Ukoje2023). Only the President/Chairman/Secretary of the DAs was interviewed. Only one questionnaire was administered on the LKLGCA Caretaker Chairman and also one questionnaire was administered on the official in-charge of the Community Development Project. Data were collected with the aid of structured-multiple choice questionnaire. In this study, the researchers and six field assistants administered the questionnaires. However, to determine the sample size for this research understudy, the population of each of six selected communities was used to determine the numbers of questionnaires to be administered. Those communities include Adankolo (1445), Ganaja (549), Gadumo (792), Sarkin-Noma (677) and Kabawa (861), and Lokongoma (1386) as shown in Table 1. The lists of the DAs were obtained from the Community Heads/representatives in the town and through field work.

Table 1: Sampling in Lokoja LGA

S/N	Name of Community/Area	Population as at 2020	No of housing units	Questionnaire Administered (10%)
1	Adankolo	54,646	1445	145
2	Ganaja	29,232	549	55
3	Gadumo	17,220	792	79
4	Sarkin-Noma	13,092	677	68
5	Kabawa	27230	861	86
6	Lokongoma	42,960	1386	138
	Total	184,380	5710	571

Source 1: National Population Commission, 2006, and AEDC, 2023

Source 2: Author's Field Survey, 2023

In all, there were 49 Development Associations (DAs) in the research environ as shown in Table 1. The two most active DAs in each community were purposely adopted for the administration of the questionnaire. This unit was considered adequate due to accessibility, and the fact that the views of the associations were from the same perceptive. In achieving this, the researcher consulted the Community Heads/representative in the study area. A Community Head/representative in each of the six communities in the study area was interviewed with the aid of an interview guide. They were purposively interviewed because of the relevance of their activities in this study. The other source of data collection, such as in-situ observations were used to obtain relevant data for this research, all of which were subjected to analyses using the Statistical Package for Social Sciences (SPSS) version 19 which was presented using tables and figures.

Inferences were made about the general population understudy, based on the research findings from the sampled. The extent of conditions of infrastructure provision is the measurement of a relative weight attached to an element by all the dwellers taken together. It is expressed as the sum of all the actual scores on the five point scale given by all the various dwellers as a ratio of the sum of the highest likely scores on the five points that all the dwellers could give to that element. This is represented as: n_1 = Number of respondents that is very poor, n_2 = poor, n_3 = fair, n_4 = good, n_5 = very good, and N = Total number of respondents.

Table 2: Questionnaire Administered and Retrieved in the Research Environ

Sample frame	No of units	Number of questionnaires distributed	Questionnaires Retrieved
Community/Area-Heads	6	6	6
Development Associations (DAs)	49	12	12
Residential building (Households)	5710	571	510

Source: Author compilation, 2023

Results and Discussion

The findings derived from the study were therefore based on the research objectives as follows:

Objective 1: This objective seeks to examine the main socio-economic characteristics of the respondent's

On the socio-economic characteristics of Lokoja Government Area residents, from table 3, the study revealed that, 31-40 years were more in the study locale. This represents 39.2%, followed by those between the ages of 41 and above which represents 30.8%. Those below 20 years constituted 4.1%, while those between 21-30 years represent 25.9%. This set of populace formed the youth organization.

Table 3: Age of the respondents

Age	No of Respondents	Percentage (%)
Below 20 years	21	4.1
21-30 years	132	25.9
31-40 years	200	39.2
41 years and above	157	30.8
Total	510	100.0

Field survey, 2023

Figure 2 shows that, business activities constituted the main occupations (41.2%) of the inhabitants in Lokoja; Farming was the next notable occupation; which represents 29.4%. The implication of this high percent could be ascribed to poverty and the owing to the fact, Kogi state is a civil servant state. The people engaged in agriculture. However the people are popularly known for fishing and farming activities in the North central Nigeria, thus used for business. Business was the major employer of labour in Lokoja, this confirmed the findings of Straka, &Tuzova (2016) and Okosun (2023) who revealed that business is the major services easily accessible for Nigerian to venture into.

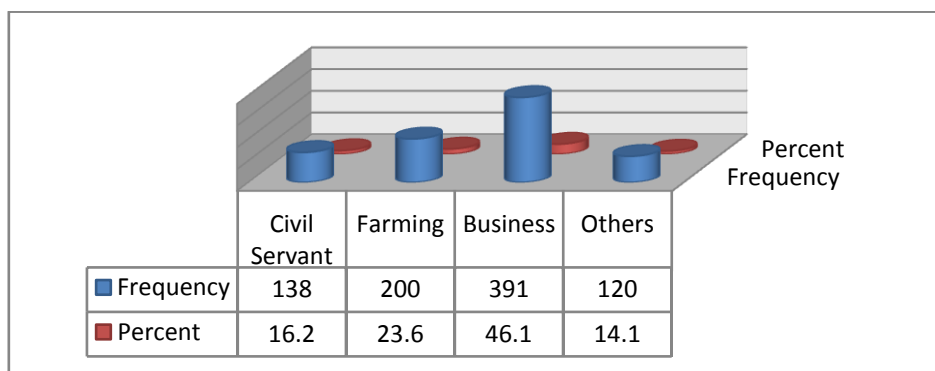


Figure 2: Predominant occupational structure of the respondents

Source: Field survey, 2023

The monthly income of the residents in Lokoja as shown in Table 4, show that 20.0% earned less than the new minimum wage of thirty-five thousand naira (N35,000) per month in 2023 declared by the Federal Government of Nigeria from 1st September 2023. In Lokoja, there were more dwellers earning N30,001 and N60,000 (34.0%), followed by those earning between N60,001 – N90,000 (30.2%), while those earning N90,001 and above represents 15.8%. The distribution showed that the respondents mostly earned less than N60, 001 per month (Okosun and Olujimi, 2019). It can be therefore inferred that the majority of the respondents lived below poverty level of a minimum of \$2.15 (N1717.85) daily per person per day (World Bank, 2023). This indicates that, majority of the residents wallow in abject poverty. The urban poor have less access to infrastructures like education, electricity, healthcare and water and as such are more vulnerable to climate change and relocation to neighbouring/surrounding town/states to settle, due to poverty in order to improve their standard of living and affordable lifestyle. The residents of the Lokoja hold their faiths and live with the problems of marginality (challenges in inadequacy of infrastructural facilities that allows people and society to function well). Therefore, understanding poverty in Lokoja is fundamental to understanding how ancient cities can progress, thus central to the UN's Sustainable Development Goals (SDGs) for 2030; ending extreme poverty and promoting shared prosperity in every country in sustainable manner.

Table 4: Monthly income level of the respondents

Income level	Respondents	Percentage
Less than 30,000	102	20.0
30,001 – 60,000	173	34.0
60,001 – 90,000	154	30.2
90,001 and above	81	15.8
Total	510	100

Source: Field survey, 2023

The table 5 shows the monthly income level of respondents Lokoja communities in the year 2016 and 2021. In 2016, communities such as Kabawa and Sarkin-Noma recorded highest number of respondents earning less than N10, 000 monthly with total percentage of 100.0 and 85.2 respectively. Meanwhile, this has been attributed to lack of infrastructural developments in the region. In 2021, 80.0% of respondents earned less than N10, 000 monthly. The distribution of transformers to upgrade power supply has improved small scale businesses requiring electricity, upgrading of roads leading to communities/towns. The establishment of Kogi state Polytechnic, and Federal University Lokoja in the city, has also increased the income level of the people thereby reducing poverty level particularly at Sarkin-Noma, Kabawa and Adankolo.

Table 5: Comparing the income status of the communities in 2016 and 2021 (Percentage in Parenthesis)

Community	2016	2021	2016	2021	2016	2021	2016	2021	Grand Total 2016/2021 (100%)
	Less than N10,000 (%)		N10,000 -N15,000 (%)		N15,000 -N20,000 (%)		N25,000 and above (%)		
Adankolo	16 (57.1)	10 (35.7)	12 (42.9)	11 (29.3)	0 (0)	6 (21.4)	0 (0)	1 (3.6)	28
Ganaja	23 (57.1)	20 (50)	17 (42.5)	15 (37.5)	0 (0)	5 (12.5)	0 (0)	0 (0)	40
Gadumo	13 (56.5)	10 (43.5)	10 (43.5)	9 (39.1)	0 (0)	4 (17.4)	0 (0)	0 (0)	23
Kabawa	25 (100)	20 (80)	0 (0)	2 (8)	0 (0)	2 (8)	0 (0)	1 (4)	25
Sarkin-Noma	23 (85.2)	20 (74.1)	2 (7.4)	3 (11.1)	1 (3.7)	3 (11.1)	1 (3.7)	1 (3.7)	27
Lokongoma	15 (53.6)	10 (35.7)	12 (42.9)	11 (39.3)	0 (0)	6 (21.4)	1 (3.6)	1 (3.6)	28

Source: Field survey, 2023

In figure 3, between 2016 and 2021, there is a fall in lowest income level at 26.9%. This shows the annual decrease of 5.3% in the lowest income level of the people of Lokoja. There is an increase in the high-income level of the people between 2016 and 2021; 62 and 123 respondents received ₦25,000 and above in 2016 and 2021 respectively in the study area, thus presenting 94.2% increase in the level of income within a span of five years.

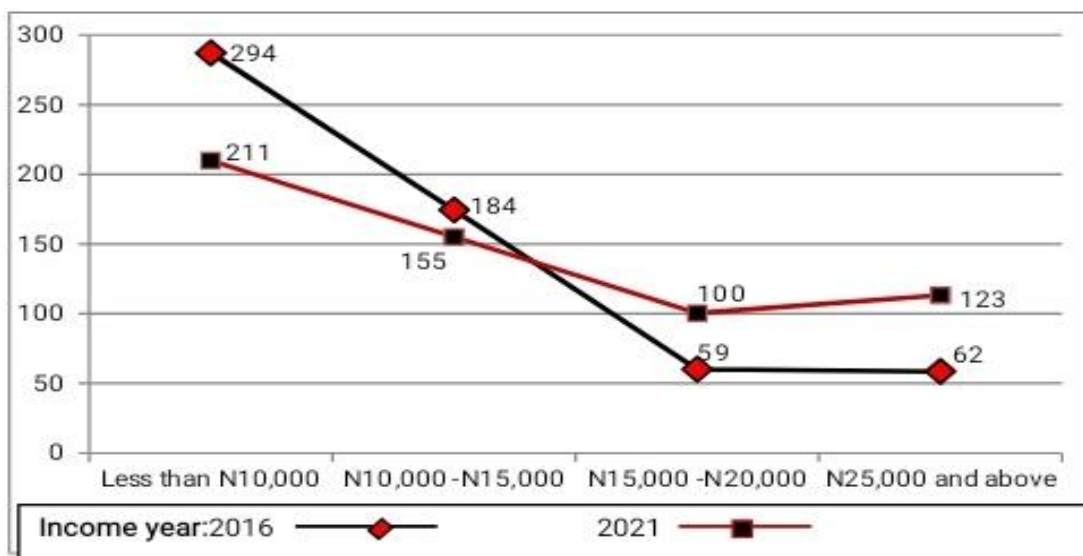


Figure 3: Income level Curve of residents in 2016 and 2021
Source: Field survey, 2023

The adequacy of infrastructure in an urban or rural setting helps to determine a country’s success or failure in relation to living conditions of people, etc. In Figure 4, majority of the respondents expressed that the infrastructures provided in Lokoja is not adequate, this represents 94.3%, 5.1% of the respondents revealed that, adequate provision is made for infrastructures in Lokoja. These groups of people are senior government officers of the Kogi State Government Office. Further findings revealed that, the infrastructural facilities are grossly inadequate. This implies that, the existing infrastructure in Lokoja will have a serious effect on the economy and quality of life of the inhabitant, therefore, adequacy of basic infrastructures, such as good roads, clean water supply, health facilities and schools in good condition is the main key to the wellbeing of the dwellers. Government and all stakeholders should join hands together in providing infrastructures which will in-turns improve the conditions of the infrastructures provided in Lokoja. In comparisons with previous studies (Olujimi, 2009, Okosun and Ukoje, 2023), this study strongly agreed with the submission that, improved income and investment in infrastructure is a measure of United Nation’s 2030 Agenda for Sustainable Development in urban/rural areas, which could only be enhanced if facilities that could improve quality of life are adequately provided and supported by all stakeholders or through public private partnership (PPP).

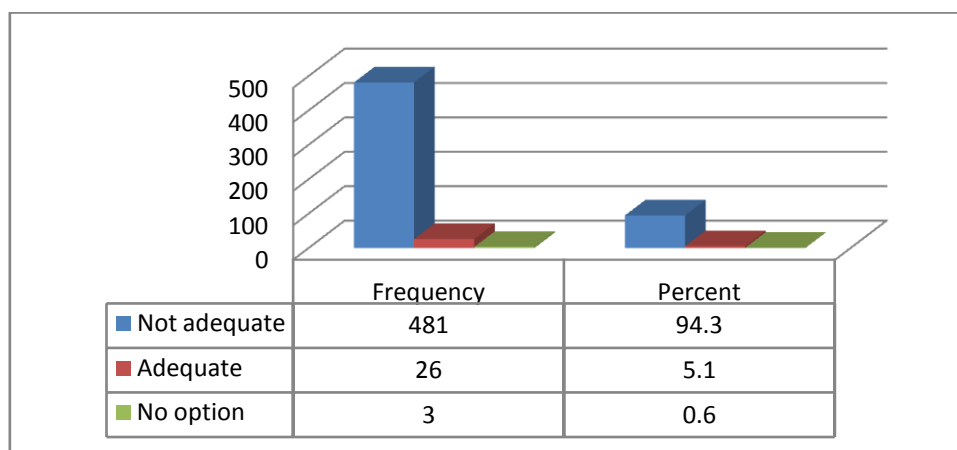


Figure 4: Adequacy of Infrastructural Facilities in Lokoja
Source: Field survey, 2023

Objective 2: This objective seeks to assess the distribution of basic infrastructure in Lokoja

In Lokoja, electricity supply (transformers), schools, boreholes (water supply), healthcare centres, and town halls were found in the communities. Tarred roads (motorable) were found in Adankolo, Ganaja, Sarkin-Noma, and Lokongoma. Road construction was mostly carried out by the state government, while DAs involvement and individual efforts on road construction projects were not reflected. Roads were constructed in Aaye, in 1991; Okebedo I, in 1990; Adin, in 1984; Oke-Emo, in 1990; and Okepa/Iro/Okeloye, in 1985. Findings revealed that in Lokoja, the Government only embarked on opening up (i.e. bulldozing), rehabilitation/upgrading of roads in Kabawa and Gadumo communities. However, the roads lack drainage systems and are grossly inadequate. Electricity supplies are present in all wards in the town, electricity power supply in the town is unsatisfactory as power outages are frequent and the power sector operates well below its estimated capacity. This has made most residents/industrialists to install their own power generator of which, very few in the community can afford; this is in line with the findings of Okosun (2021), that a weak relationship exists between public electricity supply and affordability cost, because the situation has worsens poverty. Water was an increasingly important infrastructure in the study area, but unevenly distributed resource in the town. Water supply and quality are constantly challenged by growing population, climate change, pollution, and changes in consumer behaviour and lifestyles.

Table 6: Distribution of basic infrastructure in Lokoja

Community /Area	Infrastructure provision							
	Sch	Transportation	Water supply	Power Supply	Market	Town hall	Healthcare Centre	Hospital
Adankolo	11	1	4	12	1	2	4	2
Ganaja	9	1	5	10	-	1	2	1
Gadumo	6	1	2	7	-	1	2	1
Sarkin-Noma	4	1	3	5	1	1	3	-
Kabawa	2	1	2	4	1	1	2	-
Lokongoma	14	1	6	9	1	1	7	1
Total	46	6	21	47	4	7	18	5

Source: Field survey, 2023

There is present of two general hospitals in the entire Lokoja LGA, three markets were provided in the entire local government area. Most of the markets do not have open or lock-up stalls. The findings revealed that, the distribution of those infrastructures has helped in enhancing the living conditions of the people to some extends; those infrastructural facilities include: schools, road construction, water supply, electricity power supply, market, and hospital/healthcare centres. These infrastructure have the power to attract investors to the research environ, which in-turns will transform the growth of the area.

Objective 3: This objective seeks to examine the current conditions/state of the existing infrastructures in Lokoja

Table 7 shows the current conditions of the infrastructure provided in the study area. It also reveals the infrastructures based in Lokoja as follows,

Water supply: The findings revealed that majority of the bore-holes are in fair condition, which represents 45.5%, closely followed by those in bad condition; are represented by 42.5% while 12.0% were in good condition, this is attributed to lack of maintenance and repairs of the existing government water sources. These were constructed by past senators and governor. Development Associations (DAs) and individuals constructed boreholes. Individuals' boreholes were found in Adankolo, Kabawa and Ganaja. Findings further reveals that, due to the poor maintenance of existing ones, most of the ones constructed by the government are no longer functional. Thus, the community has to rely on those boreholes constructed by individuals and the development associations. The findings reconfirm the work of Ayo-Odifrinet *al*, (2017), on government and urban infrastructure in Imo-State. He stated that, 90% of the boreholes water provided by the government in communities is in bad conditions.

Power supply: The provision of electricity (300/33kva/500/33kva power transformer) by the government in the Lokoja is encouraging, as only 47 transformers were installed in the identified research environ, resulting in available power supply in the town. 12 transformers were installed in Adankolo, 7 transformers in Gadumo, 10 in Ganaja, 4 in Kabawa, 5 in Sarkin-noma, 9 in Lokongoma. Table 7 shows that, power supply is in good condition (73.5%), despite the present of transformer cable vandals in Lokoja, who have stole cables belonging to the Abuja Electricity Distribution Company (AEDC). 24.5% of the respondents stated that, electricity supply in the town is in fair condition, only 2.0% said it's in bad condition, as a result of frequent power outages cause by the increasing population; which has overstretched the electricity supply in these areas.

Schools: The schools in Lokoja are in poor condition, this represent 40.0%. Philanthropic, social clubs, individual-owned private schools and this has help to complement the ones provided by the government. Government-owned schools and individual ownership, and has help in enhancing the quality of education of urban dwellers in Lokoja, particularly in Kabawa (Local government secondary school), where majorly of urban poor school children are found. However, the most notable government-owned secondary school in fair condition are government Science secondary school at Adankolo, Baptism High School along Ganaja, and Muslim Community Secondary School at Lokongoma, while nursery/primary schools were available in each communities surveyed, forty-two (42) of them were owned by individuals and Faith Based Organsations (FBOs).

Roads: The result as reflected in the table shows that most of the roads are un-tarred roads and are in bad condition (United Nations. 2011). This represents 62.5%, this may be due to rate of residential development is far above the provision of access roads and drains, minor tarred roads are in a terrible condition and most are out of use, due to constant use and inadequate drainage, the road is in a dilapidated state with potholes and is flooded during the rainy season. This study reconfirmed that of many urban areas in Nigeria where the roads are impassible and in a bad state (Oluwajana, *et al.*, 2022) . While those in fair condition are represented by 25.0% and 12.5% said they are in good condition. Findings reveal that the roads constructions in the study area are in good condition except in Kabawa and Sarkin-noma. It can be inferred therefore that that, 75% of the roads provided by the government of Kogi state is in bad conditions. Survey of road network infrastructure revealed that, dilapidated roads litter Lokoja, the capital of Kogi state, Nigeria, despite the state government's disbursement of billions of naira in 2017 and 2018 for road repairs and construction in the town (Premium Time, 2020). For instance, a shorter route linking Ganaja area to the townships is nothing but a single stretch untarred road cutting through thicker of bushes, there was no sign of multi-lane road in Adankolo, Gadumo, Kabawa and Sarkin-noma, except only in Ganaja junction central park which connects the town to Kabba, in the western part of the state, and Okene and Ajaokuta could be accessed in the east, the narrow dual carriageway, which is always congested with vehicular traffic and petty traders.

Healthcare Centres/Facilities: Majority of the health facilities are fairly effective this represents 45.0%, the survey further indicated that, 30.0% of the facilities provided are in bad condition. Some walls of the healthcare buildings are defaced, some few are unkempt, and in some cases the facilities are not updated with modern ones. However, the facilities provided are below standards. Findings revealed that, in Lokoja, there are fifty-six healthcare centres. Residents revealed that, the provision of the health care facilities in Lokoja has improved their health conditions.

Hospital: The condition of the hospital is in good condition was represented by 40.5% of the respondent's responses, while 30.0% are said to in fair condition and 25.5% in bad conditions. However, One Federal Teaching Hospital and a state specialist hospital exist as government-owned hospital in Lokoja. Findings revealed that, in Lokoja, there are five private-owned hospitals. Information derived from the respondents, revealed that, the provision of the hospitals has improved their mental health conditions of the people.

Market: The markets in Lokoja (Kogi International Market at Sarkin-noma, Old Market at Kabawa) are in fair conditions, this represent 50.0%. Provision was largely through governmental efforts, except Lokongoma market. Kogi International Market is the main market in the town, (periodic, every 5 days) where manufacturing goods and farm produce are sold. The market condition is poor and grossly inadequate. However the road infrastructure condition in the market centres affects patronage of the main market; this is in line with the findings of Okosun (2017), on market conditions and regional development planning in Ekiti-State, South Western Nigeria.

Table 7: Conditions/state of Infrastructure in Lokoja

S/N	Infrastructure	Condition of Infrastructure		
		Good (%)	Fair (%)	Bad (%)
1	Water supply	(12.0)	(45.5)	(42.5)
2	Power supply	(73.5)	(24.5)	(2.0)
3	Roads construction	(25.0)	(25.0)	(50.0)
4	Schools	(20.5)	(35.5)	(40.0)
5	Healthcare facilities	(25.0)	(45.0)	(30.0)
6	Hospital	(45.0)	(30.0)	(25.0)
7	Market	(10.0)	(50.0)	(40.0)

Source: Field survey, 2023

To find the weighted mean of the relative index of the level of basic infrastructure provision for each of the variables, calculation was done by summing-up the products of the Relative Index as indicated in Table 8. This table depicts the mean variables having the same characteristics. The variables of electricity indices of 5.0140 shows the condition of the aforementioned basic infrastructure in the study area is good. This is followed by market, educational facility, police post, and health facility with indices of 3.8599, 3.7815, 3.6499 and 2.9908 respectively. However, the basic infrastructures with poorest condition are roads, and water condition with indices of 2.1036, and 2.8235 (Table 10). The result from the finding reveals that, the basic infrastructures with lowest level of indices are in poor condition and these affect their standard of living as derived by the respondents from such facilities. Also the conditions of basic infrastructures have negative implication on health and physical development of the people. The aforementioned has made economic, social and environmental health in the town very cumbersome. In line with the claims, that residents' are unsatisfied with the infrastructure is negatively skewed (Anjorin, *et al.*, 2022).

Table 8: Respondent's Opinion on Condition of Basic Infrastructure

Condition of Basic Infrastructure	N	Sum	Mean		Std. Deviation	Variance
				Std. Error		
Condition of Water	510	1008.00	2.8235	.08349	1.57748	2.488
Condition of Educational facility	510	1350.00	3.7815	.07748	1.46395	2.143
Condition of Market	510	1378.00	3.8599	.10447	1.97384	3.896
Condition of Hospital/Health facility	510	1389.00	2.9908	.06327	1.19543	1.429
Condition of road	510	1465.00	2.1036	.10341	1.95394	3.818
Condition of Power supply	510	1790.00	5.0140	.07341	1.38707	1.924
Condition of Police post	510	1303.00	3.6499	.11785	2.22677	4.959
Total	510					

Source: Fieldwork, 2023

Conclusion and recommendations

The study concluded that, Lokoja is a state capital with no single good road infrastructures. The internal road infrastructures are in dilapidated conditions especially in Gadumo and Ganaja axis, where patches of tar spread across town. Lokoja is alone in the middle of nowhere when compared with other evolving ancient capital's infrastructural facilities where the people in the state capital are covered in a blanket of dust. Stakeholders (public and private) involvement and participation in infrastructure provision is an essential tool for economic

development and transformation of cities. However, the existing infrastructures like road, water supply, and healthcare facilities provided for the people are not in good state.

The study however recommends that,

- a) The Kogi state Road maintenance Agency, should carried out a partial repairs of road as a result of long stretching potholes, between Ganaja junction and Ganaja Village passing through front of 500 units Lokoja, Anaebo Quarters and Gadumo, while the Federal Road Management agency (FERMA) is assistance is needed in the repair/rehabilitation of roads infrastructures; between Zone 8 to crusher junction (an alternative route linking Federal University Lokoja, Felele campus), Kabba junction to Chari Maigumeri Barrack;
- b) The government and civil society should encourage people/private's participation and involvements from time to time, in improving the infrastructural projects developed; which in-turn will prolong its durability and efficiency;
- c) The need to sensitize the people on maintenance culture, physical and financial support toward provision and maintenance of basic amenities. Infrastructure needs to be adequately maintained as this will prolong its durability and efficiency;
- d) Government should intensify programme of environmental awareness in the protection and monitoring of infrastructures, such as schools, primary healthcare centres, market and roads, e) Provision of master plan for the city, and redesigned of Lokoja, with special reference to infrastructure distribution; and
- e) Provision of facilities map in all the towns/communities in Lokoja and Kogi state.

References

- Alabi M.O and I. Ocholi, I (2010): State of infrastructure and funding in Kogi State, Nigeria *Current Research Journal of Social Sciences* 2(3): 209-213.
- Alaci, D. S. and Alehegn, E. (2009): Infrastructure provision and the attainment of millennium development goals(MDG). A Paper Presented at the Conference on the Role of the SubNational Jurisdictions in Efforts to achieve the MDGs, Abuja, Nigeria.
- Brooks, D. H., & Go, E. C. (2011). Infrastructure's role in sustaining Asia's growth. ADB Economic Working Paper Series, 294, 1-43.
- Egbetokun, O. A. (2009). Provision of rural infrastructures in Oyo State of Nigeria. *Journal of Agricultural Sustainable Practice*. 1(2), 69-70.
- Federal Government of Nigeria (FGN). (2004): National economic empowerment development strategy (NEEDS). A Publication of the National Planning Commission.
- Hall, D. (2006). Water and electricity in Nigeria. a report commissioned by public service interaction unit (PISRU), Business School of University of Greenwich, London. From www.world-post.org.
- Jamal S (2017): Sustainable infrastructure development in sub Saharan Africa: A view from the ground. *Research to Practice Policy Briefs, Institute for the study of International Development (ISID)*.
- Lawanson, T. O. (2006): "Challenges of sustainability and urban development in Nigeria, reviewing the millennium development goals," submitted for publication in *Africa insight*.
- Mabogunje, A.L. (2001): Infrastructure in planning process: town and country planning. summer school, England; University of London.
- Manggat, I., Zain, R., & Jamaluddin, Z. (2017). The impact of infrastructure development on rural communities: A literature review. *International Journal of Academic Research in Business and Social Sciences*, 8(1), 647–658.
- Mascarenhas, A., Coelho, P., Subtil, E., & Ramos, T. B. (2010). The role of common local indicators in regional sustainability assessment. *Ecological Indicators*, 10(3), 646-656.
- National Population Commission of Nigeria (2006): The 1991 census of Nigeria
- Na, K. Y., Han, C. H., & Yoon, C. H. (2013). Network effect of transportation infrastructure: A dynamic panel evidence. *The Annals of Regional Science*, 50(1), 1-10.
- Nigerian Institute of Social and Economic Research (NISER) (2001). The state in Nigerian development-niser review of Nigerian development 2000, Ibadan.
- Nigerian Institute of Town Planners (2015): A Book of Reading.
- Okosun, S.E (2023a): Infrastructure Development in Sub-Saharan Africa: The Participatory Role of Self-Help Groups in Ilawe-Ekiti, Nigeria. Special Issue on: Urbanisation and the Environment: *University of Benin Journal of Geography, Planning and Environment, (BJGPE)*, 3(1). Pp 286-299.
- Okosun, S.E (2023b): Assessment of Infrastructure in Ekiti-South West Local Government Area, Nigeria. *LASU Journal of Transport & Logistics*, 4(1), Pp 148-159.
<https://www.lasujotal.com/index.php/lajotal/article/view/17>.

- Okosun S.E, Olujimi, JAB, Adeowu, B.M and Sani D (2024): Assessment of the provision of infrastructures delivery Management System (IDMS) in Ekiti South West Local Government Area, Southwestern Nigeria. Pp 120-132.
- Okosun S.E and Ukoje J.E (2023): Assessment of the performance of local government council in infrastructure delivery in Ilawe-Ekiti, Nigeria. *African Research Journal of the Environment (AREJOEN)*, 6(1), Pp 74-83.
- Okosun, S.E and Fasakin, J.O (2019). Promoting rural development through sustainable infrastructural development in Ekiadolor community, Edo State, Nigeria. In O. B. Akinbamijo, E. E. Okoko, F. K. Omole & O. O. Popoola (eds.), *The just city: poverty, deprivation and alleviation strategies*. 476-486. Omolere, Akure: YEMPET Prints Ltd.
- Okosun, S.E and Olujimi, J.A.B (2019): The role of local government council and community-based development associations in the provision and maintenance of infrastructural facilities in Ilawe-Ekiti, Nigeria. In O. B. Akinbamijo, E. E. Okoko, F. K. Omole & O. O. Popoola (eds.). *The just city: poverty, deprivation and alleviation strategies*. 487-495.
- Okosun, S.E (2017). Market conditions and regional development planning in Ekiti-State, South Western Nigeria. *International Journal of Marketing and Consumer Research (IJMCR)* 1, 29–36. Available online at <http://www.iiste.org/journals/index.php/>.
- Okosun S.E, Olujimi, JAB, Adeowu, B.M and Sani D (2024): Assessment of the provision of infrastructures delivery Management System (IDMS) in Ekiti South West Local Government Area, Southwestern Nigeria, Okwakpam, I. N. (2010): Analysis of the activities of community development associations in rural transformation in Emohua town, Nigeria. *International Journal of Rural Studies (IJRS)* 17(1). Article 6, Pp 1-7.
- Oluwajana, S.M., Ukoje, J.E, Okosun, S.E. and Aje, I.O (2022): Factors affecting time and cost performance of road construction projects in Nigeria. *African Journal of Applied Research, University of Ghana, Accra, Ghana*, 8(1), Pp. 72-84. <http://doi.org/10.26437/ajar.03.2022.5>.
- Olujimi, J.A.B. (2009): Evolving a Planning Strategy for Managing Urban Sprawl in Nigeria?. *Journal of Human Ecology*, 25(3). Pp 201 – 208.
- Owen, D., Terence, H., & Green, A. (2012). Skill, transport and economic development: Evidence from a rural area in England. *Journal of Transport Geography*, 21, 80-92
- Premium Time, (2020): Dilapidated roads litter Lokoja despite disbursement of billion of naira, by Oche Akor, September 14, 2020
- Rozema, V. Z., & Martens, P. (2010). An adaptive indicator framework for monitoring regional sustainable development: A case study of the INSURE project in Limburg, The Netherlands. *Sustainable: Science, Practice & Policy*, 6(1), 6-17.
- Straka, J., & Tuzova, M. (2016). Factors affecting development of urban areas in the Czech Republic: A literature review. *Procedia-Social and Behavioral Sciences*, 220, 496-505.
- United Nation (2013). *World Population Ageing 2013*.
- United Nations. (2011). *Study on infrastructure for economic development and poverty* United Nations Development Program New York, USA.
- United Nations Development Programme (UNDP), (2013). *Human development report: The rise of the south: human progress in a diverse world*. New York: Explanatory note on 2013 HDR composite indices Nigeria. HDI values and rank changes in the 2013 *Human Development Report*.
- United Nations Sustainable Development Goals Report (2016): *The global goals for 2030 agenda*.
- Ukoje J.O (2016): Impacts of rapid urbanisation in Urban Fringe of Lokoja, Nigeria. *Journal of Geography and Regional Planning*, 9(10), Pp 185-194.
- World Bank, 2002. *An assessment of the private sector in Nigeria*. The Bank Group, Sept., Washington D.C., Retrieved from: www.journals.cambridge.org/production/action/cjoGetFulltext?fulltextid.
- World Bank (2023): *World Development Index (WDI), Poverty and Inequality*- <http://datatopics.worldbank.org>
- Yusuf, M.O. (2007), "Private sector initiatives and infrastructural development in Nigeria", at <http://www.centbank.org/out/publications/.../rd/.../jos>