

# ASSESSMENT OF THE STATUS OF ROAD TRANSPORT INFRASTRUCTURE IN CHIKUN LOCAL GOVERNMENT AREA (LGA), KADUNA STATE, NIGERIA

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## ABSTRACT

The study examined the status of roads, availability of road furniture, effectiveness, reasons of the present status of roads and the possible way forwards in Chikun LGA of Kaduna State, Nigeria. Primary data were generated through the administration of 384 questionnaires to randomly, systematically and purposefully sampled population. Oral interviews and field observations were also carried out for holistic and detail evaluation of the status of roads transport infrastructure. The result of the study shows that the status of roads in the area is generally poor and grossly inadequate as reported by 74.5% of the respondents. Most of the roads are not paved or tarred as indicated by 79% of the respondent and the study shows that 79% of the roads have no road furniture. The investigation further reveals that provision and managements of the roads are being done by the communities and individuals because the government has not constructed or repair any road that links the communities in the area for over seven years. Finally, the study reveals the reason for the poor status and inadequate good rood networks as well as road furniture as Government failures and neglects of the area. The study therefore recommends that government of Kaduna State should put aside political or ethno-religious difference and provide road infrastructure in the area.

**Keywords:** Status, road, infrastructure, furniture, transport

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## 1.0 INTRODUCTION

The importance of infrastructure for socioeconomic development, sustainable and siren environment, especially road transport which is by far the most use means of transportation in Nigeria for the betterment of all societies and economies. Roads are therefore, imperative and eminent in all locations and indeed throughout all ages. This implies that the presence of qualitative road infrastructure enhances healthy competition in virtually all the sector of the economy. It also provides pleasant environment free of pollution, diseases, slums and as well ensures availability of necessary goods and services which give rooms for sustainable development and good living standards for human beings in all ramifications (KADIMP, 2018; Mobereola, 2012) ).

It is not out of place to say that economic and social activities of people and nations revolve around transportation. It is a link to virtually all facets of the economy. Everything man does today in the world relies on transportation (World Bank 2010; African Development Bank Group, 2010). In Nigeria, road transportation is at the centre stage of our economy and our day to day activities depend heavily on it. Goods and services are being conveyed to different parts of the land by roads. This means that the significance of transportation to societal growth is immense and cannot be underestimated (Kulash 1999). Good, effective and efficient transportation network is no doubt very important in the economic growth and development of a nation since it serves as links among different sections of the country and other parts of the world (Eddington 2006; Lu *et al* 2009; Ogwude 2011).

Olagunju (2015) is of the view that over 70% of the means of transportation in Nigeria is by road being the fact that goods are delivered to markets and stores, people gets to work and other activities through means of transportation. Bolugun (2015) is also of the view that road transportation accounts for about 80% of the means of transportation in Nigeria. This is not different as the case of road transportation in Chikun LGA which is about 7 - 10 Km away from the Kaduna central market and administrative centres (Usman *et al*, 2017). The residents go to work and move about carrying out their legitimate duties by road (Sheriff 2009). However, despite the importance of road transportation and its usability in Nigeria and the world at large, only about 20% of the road networks in the country are paved or tarred and even though paved or tarred, they are in dilapidated states characterized by deep pot holes and drenches (Olagunju, 2011; Bolugun, 2015). Therefore, there is urgent need for more good and standard roads to be constructed and repair the existing ones.

It is very disheartening to note that infrastructural report of Nigeria, especially roads infrastructure are in shambles and sorry state both quantitatively and qualitatively (Agbola, 1998; Ajanlekoko, 2001; Onibokun, 1996). It is therefore, not only pertinent to provide roads in our societies but also very imperative to ensure that the status of such roads are good and of standard as well as to ensure the roads managed and sustained to pave way for good, clean, siren environment, economic growth and development. Good and available roads will no doubt, boast economic growth, alleviate poverty, and provide sustainable city and basic development (Bolugun, 2015). Therefore, good road networks in Chikun LGA will no doubt transform the physical landscape of the area and facilitate economic growth of area.

## 2.0 MATERIALS AND METHODS

### 2.1 Location

Chikun Local Government Area (LGA) is geographically located between latitude  $10^{\circ}31'500''$  north of the Equator and longitude:  $7^{\circ}27'400''$  east of the Greenwich Meridian. Chikun LGA which is located in the Southern part of Kaduna State is one of the four LGAs that made up the Kaduna Metropolis. It shares boundaries to the north with Kaduna North and Igabi LGAs. It also shares boundaries with Kajuru and Kachia LGAs in the east as well as Niger State in the South western part (Figure 1). Chikun LGA covers a total land mass of  $4801\text{Km}^2$  having Kujama as its administrative centre (Bako, 2006; (Mortimore, 1970 cited in Umaru, 2006).

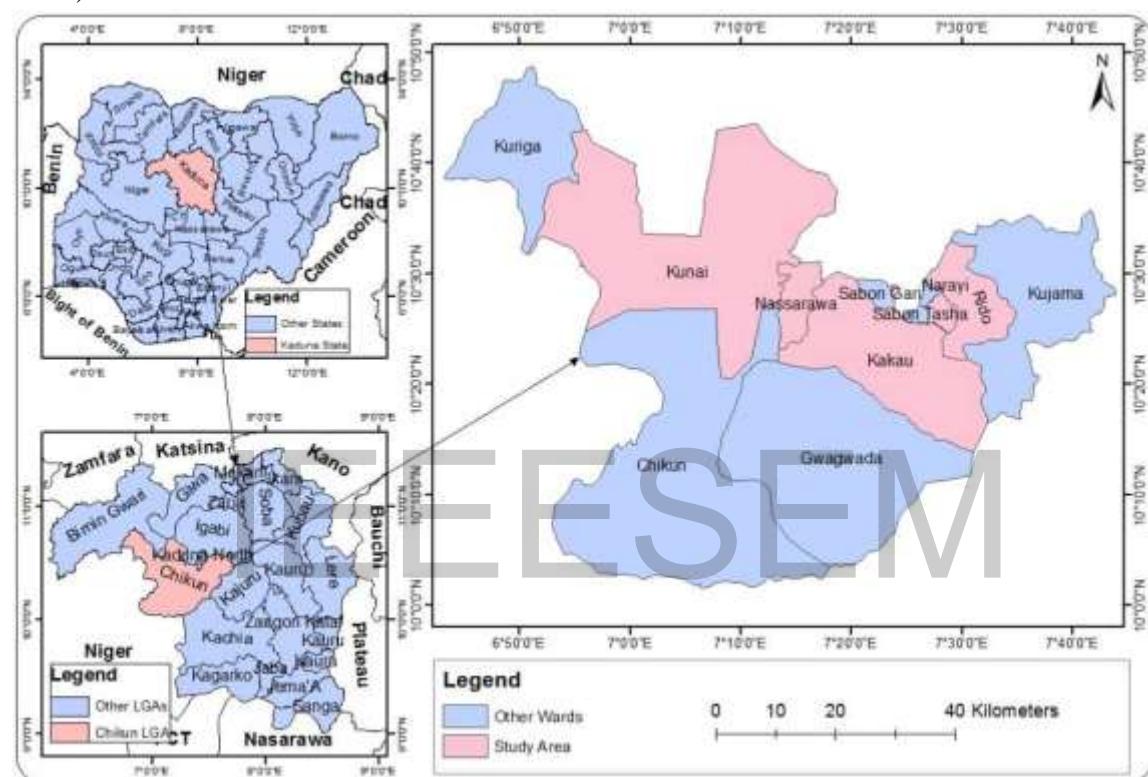


Figure1: Map of Chikun LGA

Source: GIS Unit, Kaduna State University (2020)

### 2.2 Climate and Weather

Benedine and Adamu (2017) are of the opinion that Chikun LGA falls under the Tropical Continental type of climate which is characterized by seasonal variations. The area experiences the on-set of the rainy season from April to October while the dry season (harmattan) lasts from November to March. The temperature is high throughout the year with the peak in March and April ( $37^{\circ}\text{C}$ ) while humidity is most often high usually above 60% at afternoon and near to 100% at night during the rainy season. The main geology of Chikun LGA is of the metamorphic rocks of the Nigerian Basement Complex which has today metamorphosed in the area into high undulating plains with interfluves passively identified especially in ridges. They are influenced by weathering activities (fluvial erosion) during the rainy season (Mortimore, 1970 cited in Umaru, 2006). The geology contributes in washing away of paved and earth roads where drainages or culverts are absent.

The primary sources of data for this study were from structured questionnaires and oral interviews from randomly selected six wards in the LGA (Figure 1). Using Krejcie and Morgan's (1970) table of sample determination, for a population which is equal to or greater than 100,000 a sample of Three Hundred and Eighty Four people (384) respondents is a representative for the entire population. Chikun LGA has a 2018 projected population of 528,545 (NBC, 2012). Therefore, a total of the 384 respondents, considered as the sample size for the study were randomly, purposefully and systematically selected and administered questionnaires on the status of road transport infrastructure in the area.

Purposeful sampling technique was also employed in the selection of motorists and commuters because of their high rate of the frequency of the use of the roads while other respondents were randomly selected. Five staff of the Ministry of Works and Transport were purposefully chosen and interviewed. Another important primary source of data was the direct field observations of the roads infrastructure in some wards of the LGA where photographs were taken. The secondary data were obtained from desk review of literatures and records from the local government council and Kaduna State Ministry of Works on the status of road infrastructure in the LGA.

### **3.0 RESULTS AND DISCUSSION**

This section presents data obtained from the field on the status of road infrastructure and opinions of different actor groups interviewed were presented using descriptive statistics such as tables, charts and figures.

**3.1 Socio-Demographic and Economic Characteristics of Respondents:** Demographic variables as age, marital status, occupations and number of children have considerable impact on the life style and perception of self and the environment (Alm 2015; Butu and Mshelia, 2017). The study therefore, considered the demographic characteristics of motorists, commuters, civil servants and residents within the LGA. Out of the 384 respondents, 65% males and 35% females of the population were administered questionnaires and interviewed. This is because majority of motorists (drivers) are males especially those within the age group of 25 – 30 and 31 – 40.

### **3.2 Means of Transportation in the LGA**

Figure 2: Shows the responses of the residents on the most used means of transportation and 97% of the respondents overwhelmingly reported road as the means of transportation in the LGA and only 2% indicated rail while others reported 1%. Those that reported rail perhaps lives within the areas where rail was used as town service from Chikun LGA to other part of the metropolis in 2008 – 2010.

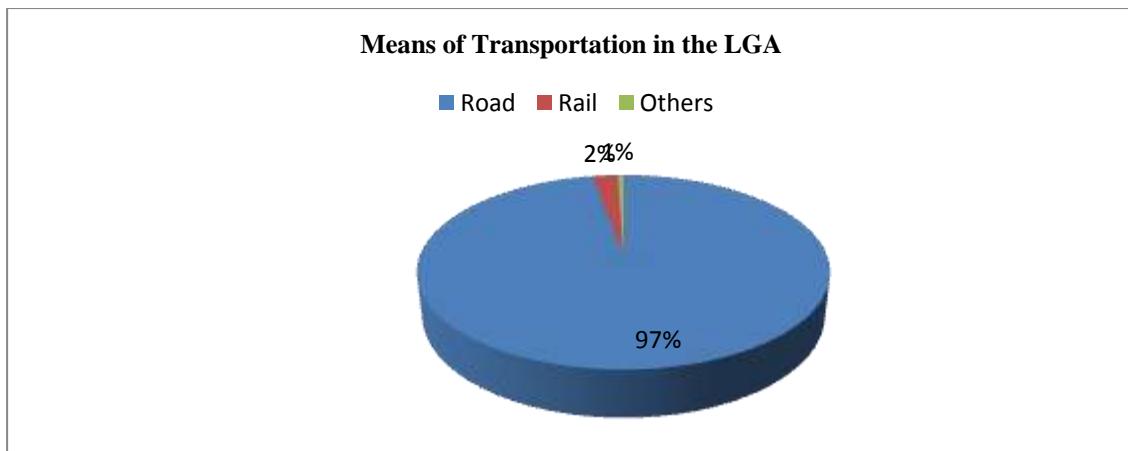


Figure 2: Means of Transportation in Chikun LGA

Source: Field Survey (2019)

### 3.3 Frequency of the Usage of the Road as Means of Transportation

A total of 384 questionnaires were administered to the respondents and their responses revealed that 50% are of the view that they make use of road transportation on daily basis and also more than once in a week as indicated on Figure 3. This reveals that majority of the residents make use of the road either on daily basis or at least once in week which makes as one of the major factors that contributes to traffic congestion in Sabo Peugeot and Command Junctions. 21% of the respondents are of the opinion that they make use of the road on weekly basis and 24% use the road more than once a week while only 5% reported that they use the road occasionally. The responses show that the residents greatly make use of road for mobility in the city hence; this justifies the presence of heavy traffic flow at almost all the major commercial areas and junctions such as Sabo and Command Junctions in the LGA.

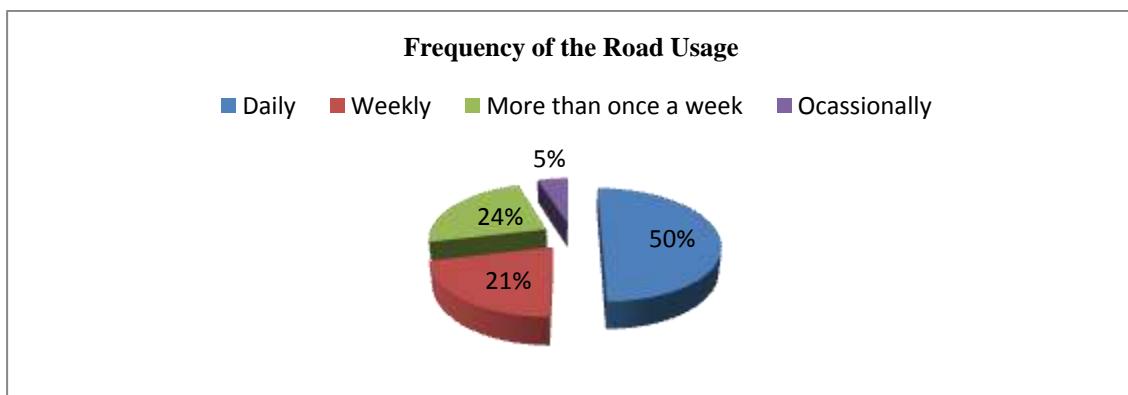


Figure 3: Frequency of the Use of the Road as Means of Transportation

Source: Field Survey (2019)

### 3.4 Status/State of the Road Transport Infrastructure in the LGA

Responses of those administered questionnaires to; on the status of road transport infrastructure as shown on Figure 4 reveals that only 0.5% are of the view that the status of roads are excellent, 1.8% reported that the roads are very good, 3.4% are of the opinion that the roads in the LGA are good and 13.8% are of the view that they are fair. The highest respondents of 40.1% reported that the status/sate of roads in the LGA is poor and 34.41% are of the view that the status is very poor. This clearly reveals that statuses of the roads network in the area is generally poor and are in bad state as shown on Plate 1, 2 and 3. Some residents of 4.9% did

not respond to the questionnaire. Further interview with one Yakubu Bahago of Unguwan Pama and Elisha Katung of Romi ward on 3<sup>rd</sup> February, 2020 shows that some of the roads have never seen the presence of government since the settlements evolved in wards such as Kamazo, Jan ruwa, Unguwan Boro new extension and Pama among others.



Plate 1: ECWA Hausa Road Uguwan Boro, vehicles meandering their ways on the bad road.  
Source: Field Survey (2019)



Plate 2: Firoro Road, Uguwan Boro  
Source, Field Survey (2019)



Pate 3: Pama – Sabo Market Road  
Source: Field Survey (2020)

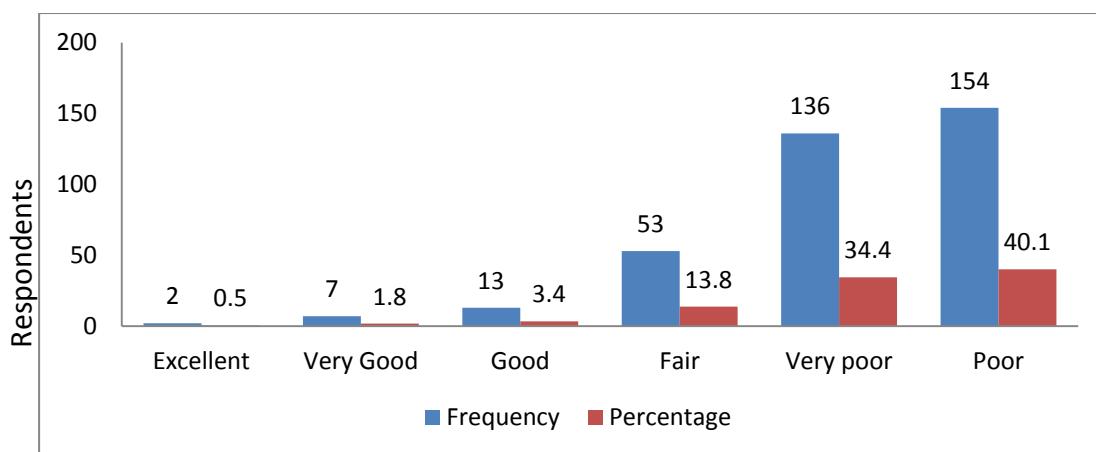


Figure 4: General Status/ State of Roads in the LGA

Source: Field survey (2019)

### 3.5 Provision of Road Infrastructure in Chikun LGA

Figure 5 reveals that 20.3%, 21.9% and 44.5% of the respondents are of the view that roads in the area are being constructed or provided by Government, individuals and communities respectively. This clearly reveals that there is little government presence in the area in terms of provision or construction of road networks to the people of Chikun LGA. Virtually, most of the roads in the area are provided, paved and managed by the communities and individuals to enable them link major roads in the town as shown on Plate 4 and 5. A good example is the Janruwa and Kamazo Road constructed and managed annually by the communities as shown on Plate 3. Private and others represent 7.6% and 8.3% of the respondents.

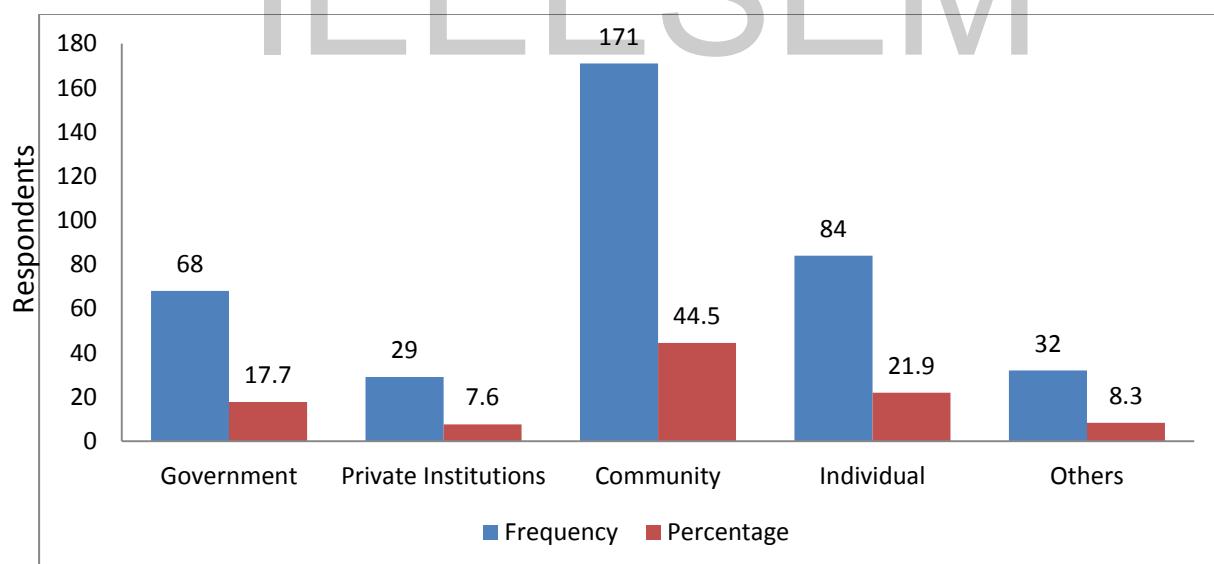


Figure 5: Provision/construction of Roads

Source: Field Survey (2019)



Plate 4: Road Being Graded by ECWA Church  
Source: Field Survey (2020)



Plate 5: Earth Road Constructed and linked to Yakowa Way by Kamazo Community  
Source: Field Survey (2020)

### 3.6 Kinds of Roads in Chikun LGA

A total of 384 questionnaires were administered on the kinds of roads in the area to assess if they are tarred, paved or not. The responses reveal that only 21% are of the view that the roads are tarred while the greater percentage of respondents of 79% reported that the roads are not paved or tarred as shown on Figure 6. This reveals that most of the roads in the LGA are earthened road.

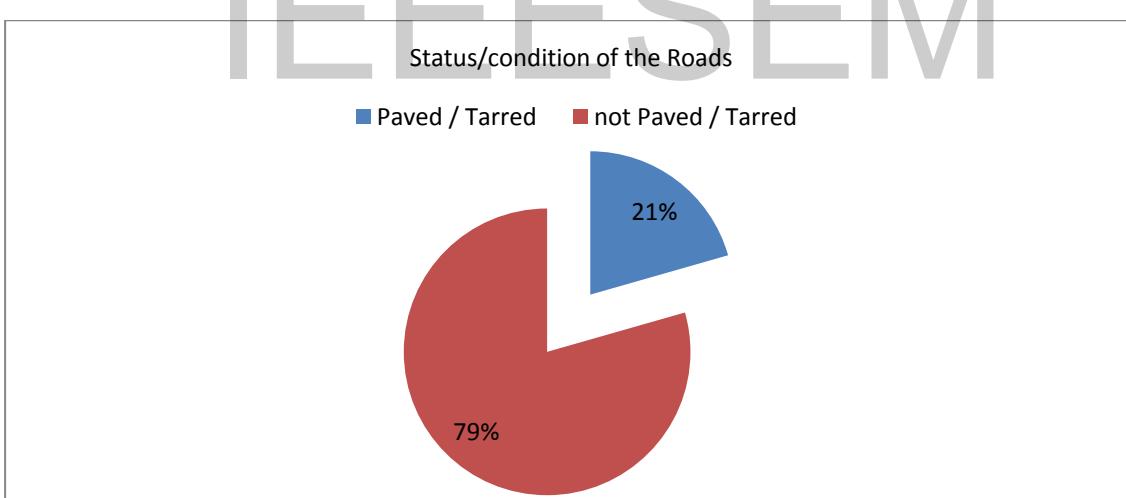


Figure 6: Condition of the Roads/Street  
Source: Field Survey (2019)

### 3.7 The Management of Roads in the Study Area

Figure 6 shows that 21.8% of the respondents are of the view that Government manages the road in the study area, Private institutions do not do much in the provision and management of roads in the area as only 7.3% reported that they manage road in Chikun LGA despite the location of Kaduna Refinery and Indomie Industry in the study area. Further responses of 41.2% and 24% are of the view that the communities and individuals respectively take care of their roads because Government shows no concern whether the road exist or not especially in sampled areas of the LGA. Others categories of people that manages the roads reported 5.7%.

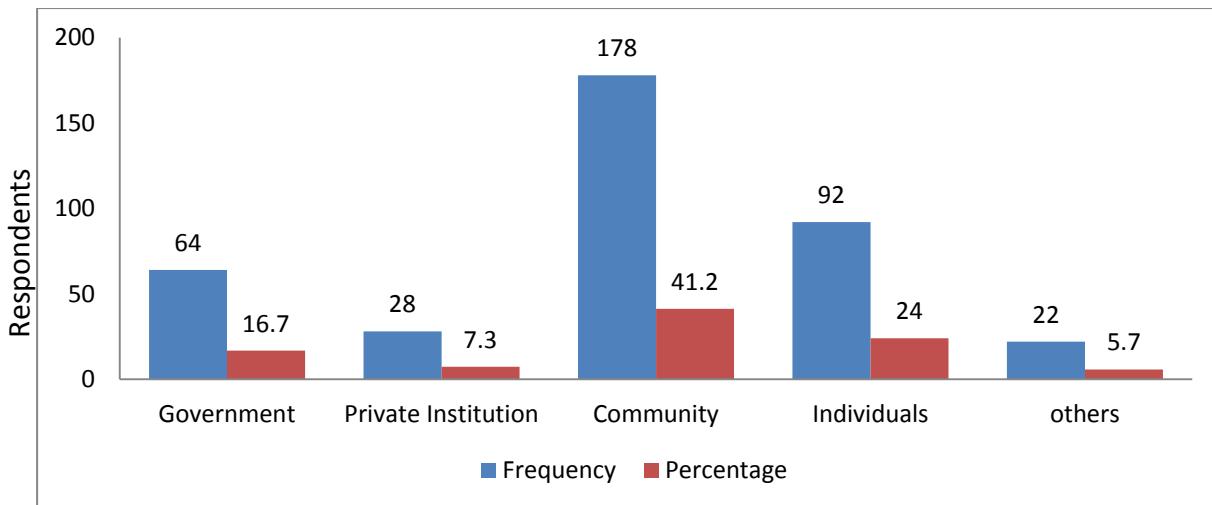


Figure 7: Management of Roads in Chikun LGA

Source: Field Survey (2019)

### 3.8 Status of Road Transport Furniture in Chikun LGA

Table 2 shows the responses of the residents in Chikun LGA on the status or state of road furniture in the study area. On the road signs status (informative, directional, prohibitive and mandatory) 22.9% reported that they are adequate, 49.7% are of the opinion that they are not inadequate while 27.3% indicated that the road signs are not available. The investigation reveals that the road signs which are very important road furniture are grossly inadequate. 78.6%, 54.7%, 54.2%, 42.4%, 41.1 and 66.1% of the respondents are of the view that Traffic Light, Zebra Crossing, Culverts, Road Marking, Interchange and Drainage Channels respectively are inadequate. Furthermore, responses on availability of Pelican and Pedestrian Bridges, Flyover, Road Shoulder, Chambers (Cross Slope), Road Island, Chicane (Bus Stop), Cat eye, Guard Rail and Parking lane/Layby shows 92.9% and 97.4%, 98.2%, 53.9%, 53.4%, 58.1%, 91.1%, 96.4%, 88% and 94.3% respectively.

The study clearly shows that many road furniture do not exist in the study area, this is because in the first place the area does not have adequate trunk A or B roads. The available roads are earth roads built, constructed and maintained by communities. Further interview with Ibrahim Musa a residents of Unguwan Boro reveals that some of the roads especially ECWA Hausa Church road in Unguwan Boro is not motorable during rainy season as shown on Plate 6 while Plate 7 shows kind of road in dry season in the Sabo ward of the LGA. The residents of wards contribute money every year to fill up the eroded road because neither the State government nor the local council has ever made an attempt to grade the road.



Plate 6: Status of Road during Rainy Season  
Sabo (Chikun LGA)

Source: Field Survey (2019)



Plate 7: Kind of Road during dry season  
Sabo (Chikun LGA)

Source: Field Survey (2020)

Table 1: Availability of Road Infrastructure in Chikun LGA

Road Furniture	Adequate		Inadequate		Not Available	
	Respondents	%	Respondents	%	Respondents	%
Road Signs	88	22.9	191	49.7	105	27.3
Traffic Light	06	1.6	302	78.6	76	19.8
Zebra Crossing	72	18.8	210	54.7	102	26.6
Bridge	46	12.5	158	41.0	178	46.4
Pelican Bridge	05	1.3	22	5.7	357	92.9
Pedestrian Bridge	02	0.5	08	2.1	374	97.4
Flyover	02	0.5	05	1.3	377	98.2
Culverts	107	27.9	208	54.2	69	17.4
Road Shoulder	78	20.3	99	25.8	207	53.9
Chambers (Cross Slope)	67	17.4	112	29.2	205	53.4
Road Marking	158	41.1	163	42.4	63	16.4
Road Interchange	127	33.1	156	41.1	99	25.8
Road Island	58	15.1	103	26.8	223	58.1
Chicane (Bus Stop)	06	1.6	28	7.3	350	91.1
Cat Eye	03	0.8	11	2.9	370	96.4
Drainage Channels	89	23.2	254	66.1	41	10.7
Guide/Guard Rail	05	1.3	41	10.7	338	88.0
Parking Lane/Layby	07	1.8	15	3.9	362	94..3

Source: Field Survey 2019

### 3.9 Reason for Poor Roads in Chikun LGA

A total number of 384 residents were administered questionnaires and follow up interview on the reasons why the road status of Chikun LGA is poor as shown on Table 2. The responses reveal that 13.3% are of the view that poor funding is responsible for the poor states of roads in the area, only 8.3% are of the opinion that “I do not care attitude” of the residents is the factor for bad roads while 1.3% opined that the terrain of the area is responsible for the bad roads. Majority of the respondents of 51.6% are of the opinion that Government neglect of the area is

the reason of the poor state of roads in Chikun LGA as also put word by Aderamo, and Aina (2011) on issue of neglecting other parts of the land in terms of road infrastructure. Poor communal cooperation has 9.4% while 16.1% of the respondents are of the view that the roads are in bad state because of political and religious reasons. Adamu Yohanna of Kamazo ward on 4<sup>th</sup> February, 2020 further corroborated that the few tarred roads in the area were constructed during the People Democratic Party (PDP, 2003 - 2012) administrations of Makarfi and Yakowa and that the area has not witness construction of any road in the past five years of the All Progressive Congress party of Governor Ahmed El'rufai's administration.

Take 2: Reason for Poor Roads Chikun LGA

Reason	Frequency	Percentage
Poor Funding	51	13.3
I do not care attitude of the residents	32	8.3
Terrain of the Area	5	1.3
Government neglect of the Area	198	51.6
Poor Communal Cooperation	36	9.4
Others	62	16.1

Source: Field Survey, 2020

#### 4.0 CONCLUSION AND RECOMMENDATIONS

This study has brought into focus the issue of road transport infrastructure in Chikun LGA of Kaduna Metropolis being the study area. The study reveals that the general status of road transport is poor and even where there are available the roads are in a sorry state and dilapidated. The study also shows that most of the roads in the area are neither paved nor tarred. Virtually, all the roads that linked up the major express road that passes through Command Junctions, Sabo to Kachia and Yakowa Express Way are earth roads. Some of these roads are not motorable during rainy season especially in the month of August and September. The residents struggle to get to the main roads that connect them to the metropolis centres through the use of motorcycle popularly known as *Okada* or *Achaba*. The study found out that Chikun LGA of Kaduna metropolis has been under neglect by the State Government for a very long time as a result of religious, tribal or political reasons. More still, the Local Government being one of the LGA that comprises of the Kaduna metropolis is incapacitated to carryout major project due to the joint account with the state government. In this regard, the state government controls the fund. There is no single road constructed or repaired in the area apart from the three main roads which are: Kaduna-Abuja Road that passes through Gonin Gora, the Kachia Road that passes through Sabo and the Yakowa bye pass. The other roads are being created or constructed and maintained through communal and individual efforts.

To prevent Chikun LGA from environmental deterioration, economic collapse and cut off from other part of the metropolis, the study therefore made the following recommendations:

- The Government as a matter of urgency should visit the area and make assessment the roads in the area and fix them immediately.
- The State Government to show her presence through construction and repairs of roads in Chikun LGA.
- Kaduna State Government should embrace all people equally in respective of their

- religion, culture and political background and embark on road constructions in the area
- d. Residents through communal efforts should continue to cooperate and help in repairs and management of the roads.
  - e. Government should be fair and just in distributions of resources and infrastructures.
  - f. The residents in the area should vote only for credible people who can speak out for them or represent them well.

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