

# Transport Constraints on Agricultural Produce in the Rural Areas of Ungogo Local Government Area, Kano State, Nigeria

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**Abstract:** Transportation is important in physical and economic development of towns and cities all over the world. Man, nations, regions, cities, towns and the world would be severely limited in development without transportation, which is a key factor for physical and economic growth. This paper aim to assess the constraints of transporting agricultural produce in Ungogo Local Government Area and seek to identify the means of transportation used by farmers to convey their farm produce, to examine the problems of transporting agricultural produce in the area as well as to assess the condition of transport system in the study area. The study is purely qualitative using questionnaire and interview sessions. This study revealed that, the condition of the roads is critical. The roads are characterized by seasonality due to the persistence deterioration of roads by erosion and poor maintenance by authorities concern. Therefore, the study suggests that, there is need for construction of roads and bridges to make rural areas to all weather access and government should engage in construction more feeder road in rural areas that will link different farm in the areas among others.

**Keywords:** Transportation, Agricultural produce, Challenges, Ungogo, Development.

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## 1. INTRODUCTION

Transportation is a non-separable part of any society. It exhibits a very close relation to the style of life, the range and location of activities and the goods and services which will be available for consumption. It is therefore a major factor in all economic activities (Ajiboye & Afolayan, 2009). As an economic factor of production of goods and services; transportation provides market accessibility by linking producers and consumers. An efficient transport system offering cost, time and reliability advantage permits goods to be transported quickly (Rodrigue, 2006; Tunde & Adeniyi, 2012).

Advances in transportation, has made possible changes in the way of living and the way in which societies are organized and therefore have a great influence in the development of the economic sector. In rural setting, transport is important in the transfer of goods from the farm to the markets and such organization is ideal for local productivity improving the livelihood opportunities of the local farmers. As such transport is one of the various elemental factors in rural development and it is necessary to understand its role in rural development and particularly how it interacts alongside other factors of development, to produce the resulting structure of the rural economy and society.

However, most rural communities face transportation constraints which limit their ability to reduce their poverty, and in order to satisfy their need for greater access to health education and every possible opportunities, ease of physical accessibility and freedom of movement are top priorities (Ikporukpo, 1990). As such many African countries and other developing economies will not be able to develop industries based on their primary agricultural products, provide adequate employment or sustain current levels of foreign exchange earnings from their exports. Unfortunately, the transportation system needed to evacuate these goods is not available and adequate (Richardson, 1999).

Transportation in rural area of Nigeria is taking place with great difficulties. There is no were the constraint is more acute than in the rural areas. Rural areas in Nigeria are facing the problem of poor condition and seasonality of road where majority of settlement are not connected by road which are supposed to serve as a linkage between them and other places. The infrastructure e.g roads that exist are uncared, narrow in width, clad with potholes or depression and associated with impermanent bridges made from tree trunk (Dambazau, 2007). Most of the rural roads in Nigeria are hardly passable especially during raining season while vehicle and truck in mud or bridges are swept by water or flood. The poor condition inadequate rural roads infrastructure leads to increase in the cost of transporting the agricultural product from point of harvest to the point of demand (Market). The implication of the bad infrastructure in the rural areas, include among other; poor supply of agricultural goods and input becomes difficult, high cost of transport, or loss of perishable goods among others

## 2. MATERIAL AND METHODS

### I. The Study Area

### II. Location and Size

Ungogo is a Local Government Area in Kano State, Nigeria. Its headquarters are in the locality of Ungogo to the North of the city of Kano. Its geographical coordinates are 12° 5' 31" North, 8° 29' 47" East. It has an area of 204 km<sup>2</sup> and a population of 369,657 at the 2006 census. Ungogo Local Government has ten Wards namely; Kadawa, Karo, Fanisau, Zango, Rijiyar Zaki, Rangaza, Zaura Babba, Yada kunya, Ungogo, Gayawa and Tudun Fulani. It is borders with Dawakin Tofa in the North and West by Dala in the South and in the East by Minjibir local government area.

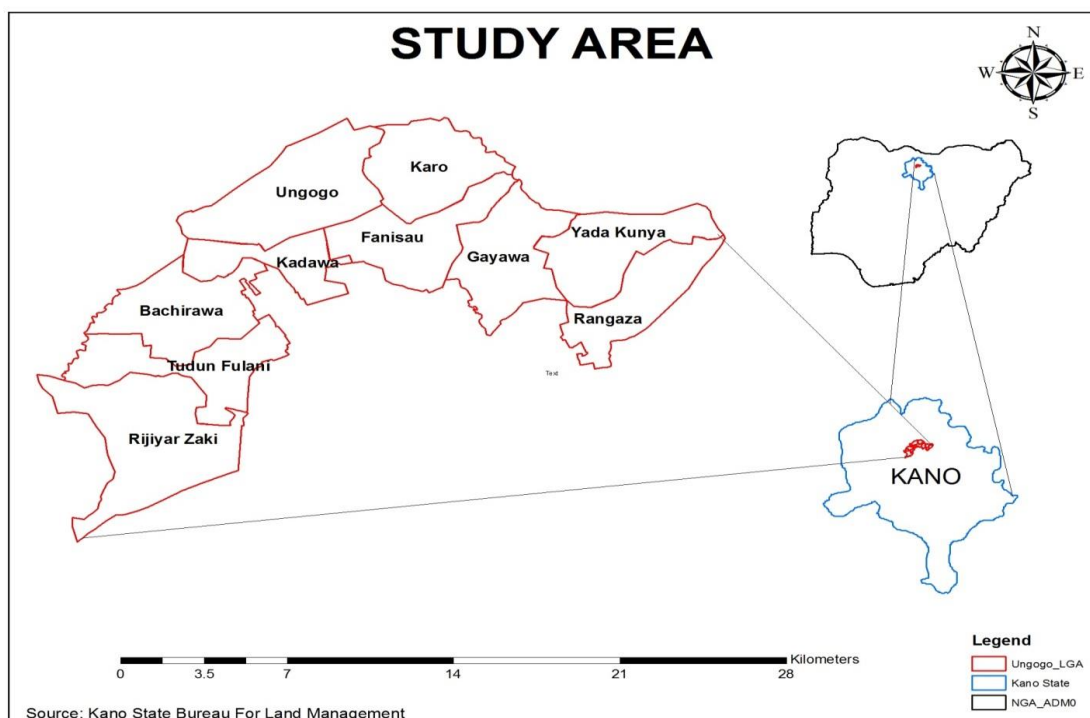


Figure 1: Map of Ungogo Local Government Area *Kano State*

Source: Source: Kano State Bureau for Land Management, 2018

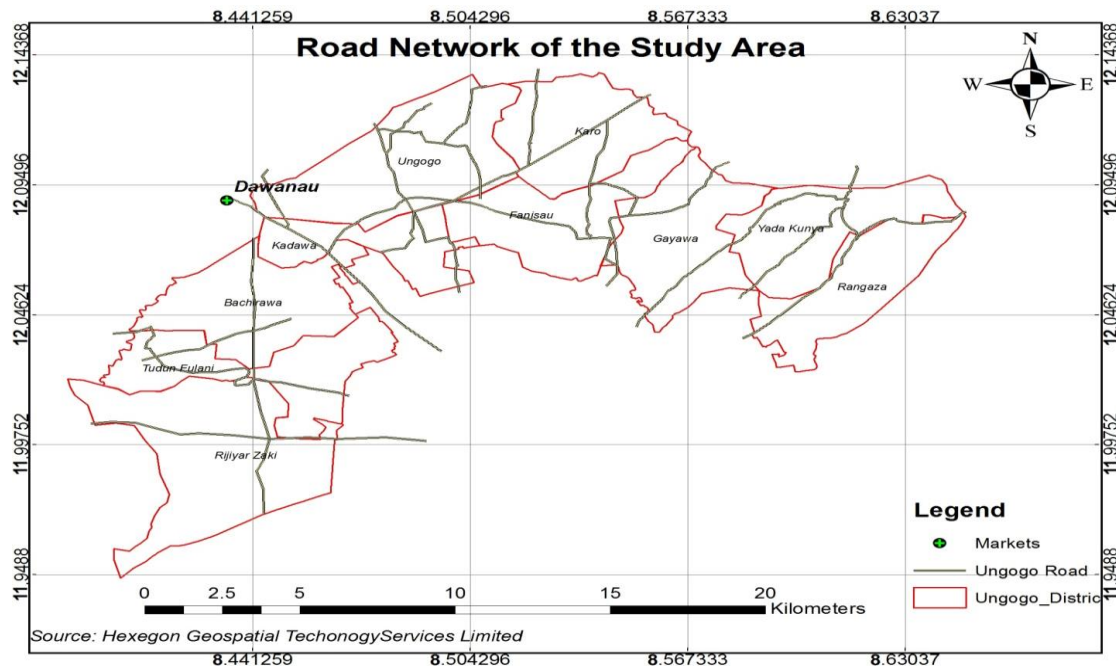


Figure: 2 Road Network of the Study Area

Source: Hexagon Geospatial Technology Limited, 2018

### III. The Physical Setting

#### a. Geology and relief

The geological composition of Ungogo is similar to those of other states located in the same geographical belt. It is underlain mainly by quartzite meta-sediments and the Basement Complex rocks of the Pre-Cambrian age. Action of prolonged denudation resulted in deep clay soil and laterite compositions.

The relief of Ungogo is lower plains of about 500 metres above sea level. Scenery is characterized by picturesque, sandy plains, alluvial channels and some stand-alone rock formations (op.cit, 2004: 18).

#### b. Climate

Climate of Ungogo is classified as tropical wet and dry (Koppen, 1923). It is characterized by four distinct seasons, namely; the dry and cool season, which lasts from mid-November to February and marked by occasional dusty harmattan haze; a dry and hot transitional period between the harmattan season and the wet season which lasts from March till May; the wet and warm season follows the hot season and lasts till September; and lastly the dry and warm-takes over till mid-November (Essiet and Tudun Wada, 1999: 56).

#### c. Rainfall

Rainfall is a very critical weather element in Ungogo. This is because of its deficiency during the dry season. The rainfall occurs during summer months which starts mostly from May and ends in October with rain days ranging between 150-200, and an annual rainfall of over 1000mm. Amount, duration, and frequency of rainfall vary widely from one year to another. Highest amount of rainfall is received usually from July ending and through August every year. Rainfall is characterized by strong wind, thunder and lightning. Showers are intense and last for short periods (IAR, 2012). Over the years the rainy season is characterized by late annuals, early cessations and long spells of drought of up to 21 days (IAR, 2012).

#### d. Temperature

Temperatures of Ungogo range between 26°C and 34°C. Unlike the rainfall, there is little variation in temperature from one year to another, but the mean temperature value could be as low as 20°C during the harmattan period especially at night and up to 40°C + in April – May. (IAR, 2012).

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### e. Soils

Soils of Ungogo are mostly Ferruginous tropical soils and aerosols derived from the Basement complex rocks. Most of the soils have undergone prolonged weathering to produce fairly deep profiles, which have been subjected to lateralization in some cases (Okeagu, et al., 2004: 19).

### f. Settlement

The Settlement is traditional nucleated pattern, which is prevalent within the local government headquarters. Houses are irregular in shape because some are round, while others are either rectangular or square in shape. Some of these houses are roofed with mud.

The predominant human activities engaged by the inhabitants of Ungogo local government are farming crops such as millet, sorghum, rice, beans, wheat, groundnut, Zobo, maize, guinea corn, Barbara nut, groundnut, beans etc. are produced at subsistence level they also practice irrigation system in the area. Physical environment to the large extent determine life and occupation of the people in the area include rain fed farming, irrigation farming pastoralist. Other activities engaged by the people in the area include trading and cattle rearing.

## 4. RESEARCH DESIGN

Structured questionnaire were used in the collection of primary data. Questionnaires were administered according to the various villages in the area of study. This was done randomly making sure all areas are adequately represented.

The method adopted by the research is by the following interviews, physical observation and questionnaires which were distributed then the research design.

Structure interview is conducted and directed strictly to household heads in order to seek for their opinion about the problems they are encountering towards transporting of their agricultural produce in their respective areas. The data collection instruments contain question relating to socio economic characteristics of respondent, the means of transportation used in the study area, identify and describe the problem of transport in both wet and dry season.

This is the process of selecting some of the population in the target area. In this research sample random sampling was adopted. Generally, Ungogo Local Government Area consists of 10 wards which are: Bachirawa, Gayawa, Kadawa, Panisau, Rangaza, Rijiyar Zaki, Tudun Fulani, Ungogo, Yadakunya, and Karo. The wards were listed alphabetically those with odd numbers were selected for proper geographical representation.

### 4.1 Interview with community Members

Structure interview is conducted and directed strictly to household heads in order to seek for their opinion about the problems they are encountering towards transporting of their agricultural produce in their respective areas. The data collection instruments contain question relating to socio economic characteristics of respondent, the means of transportation used in the study area, identify and describe the problem of transport in both wet and dry season.

What kind of problems do people face in transporting farm product to market and possible solution to the problem?

### 4.2 Data Analysis

Sorting and stacking of retrieved questionnaires according to ward areas. The questionnaires are coded with set of numbers and grouped into themes for further analysis. The codes of each questionnaire are entered into excel spread sheet one by one, later the data transferred into SPSS software version 20 to run the analysis. Chi square test and cross tabulations were used in the data analysis.

## 5. RESULTS AND DISCUSSIONS

### 5.1 Demographic Characteristics of the Respondents

Figure 3 shows that 60% of the respondent has informal education means that most of the people gone through Qur'anic schools, also the next level is primary school which are 21.25% respondents. Only 16.25% attend secondary school, also 13% were opportune to attend higher institutions. Base on the above research there is need to encourage people to acquire more western education.

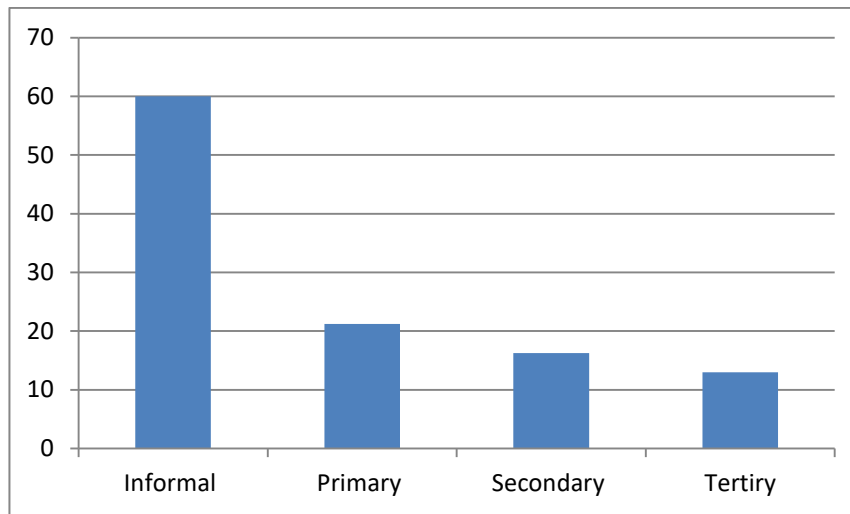


Figure: 3 Demographic Characteristics of the Respondents

Source: Field Survey, 2018

5.2 Occupation:

Figure 4 shows that, 71% of the respondents engage in farming activities while 29% engage in non-farming occupation or secondary occupation. It implies that, majority of the respondents in the study area are farmers.

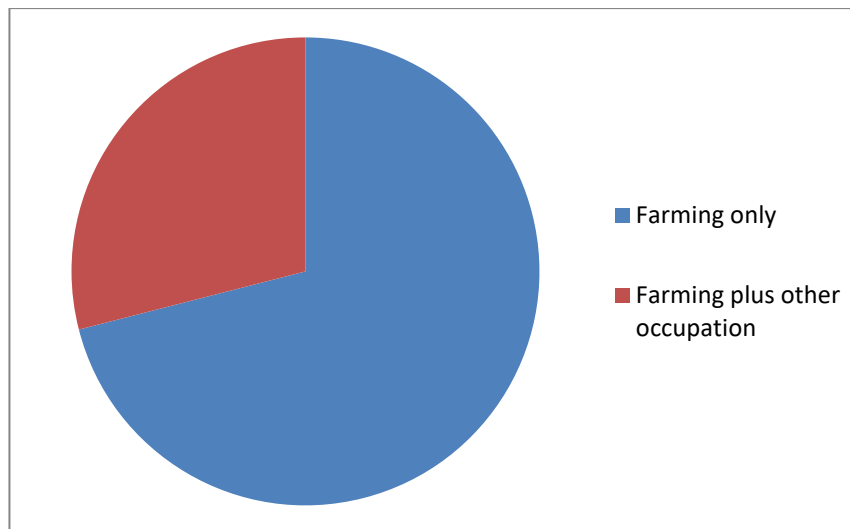


Figure: 4 Occupation of the Respondents in the Area

Source: Field Survey, 2018

Analysis shows that, there are different occupation besides farming includes, commercial motorcycle operators (Achaba) petty trading, cap making, mat weaving, and brick layers. From the analysis 30% of the respondents are engaged in commercial motorcycle operation and 22% engaged in trading, the remaining are engaged mat weaving, brick layer, cap weaving. Majority of them engaged in other occupation in order to maintain during dry season when they have lesser farming activities to do.

5.3 Average Cost of transport fare to the nearest market in the area

Figure 5 shows that, 36.25% of respondents spend between ₦201 – 300 on transport (to and from) daily followed by 26.6% of the respondent who spend ₦101 – ₦200 daily as a cost of transport whereas 13.75% of respondents spend ₦301 – ₦400 to market daily also because of the nature of product carried. The costs of transportation usually depend on the kinds of farm produce transported. Transporting of cattle is said to be more costly than other farm produce per cattle is

at the rate of ₦400. 16.25% respondents spend less ₦100 as cost of transport especially to very close market area. While the least of transport is ₦401 and above which accounted for 7.5%. It is observed during fuel scarcity, they very few vehicle around, even the available one is expensive than ordinary time of no scarcity of fuel. The cost of transport sometime extends to about N250 per trip and cost is also exacted or charge on farm produce to Dawanau. Thus, problem adversely affects movement to their respectively market(s).

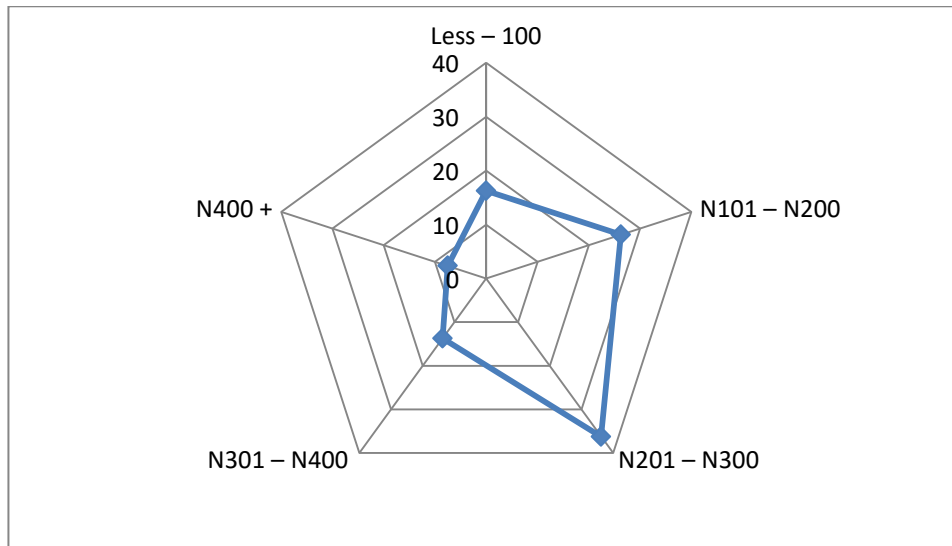


Figure 5: Average Cost of transport fare to the nearest market in the area

Figure 6 reveals that, there are different means of transport used to convey agricultural produce from farm to home which includes foot/head loading, trucks, bicycle, motorcycle and lorry. Analysis shows that majority of the respondents used motorcycle for transportation of Agricultural produces from farm to home. This is because; it is capable of carrying huge amount of farm produce, followed by bicycle and head loading.

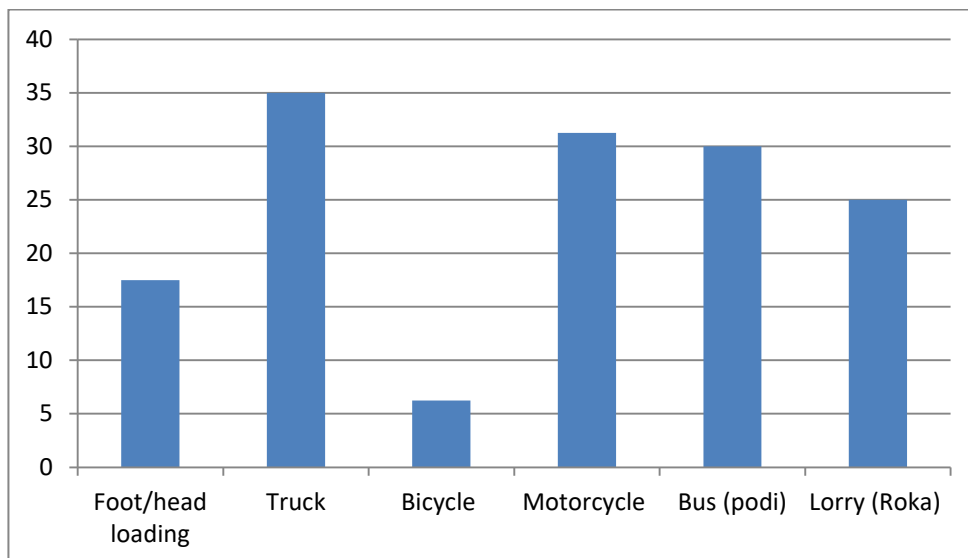


Figure: 6 Means of transport used to convey agricultural produce from farm to Home/Market

Source: Field Survey, 2018

Figure 7 reveals the condition of roads in the study villages during wet and dry season. The analysis shows that half of the villages have dry season access and majority of roads are all year round access. Majority of the road in most of rural area are characterized by seasonality due to the persistence of deterioration of roads by activities of rural erosion and poor maintenance by the authorities in charge. From the data collected and observation, analysis shows that most of the roads

are motor able during dry season while during wet season most of the unsurfaced road become water logged. This creates a form of hindrance of the flow of vehicle and passenger and farm produce will be equally affected. The poor quality of road surface has altered the distribution of traffic among various routes of most village(s) (Uffort, 1999). However, motor able all year round accounted for about 25% which is related area close to their main road and e.g Ungogo and non motor able all year round accounted for 23.75% especially in Karo

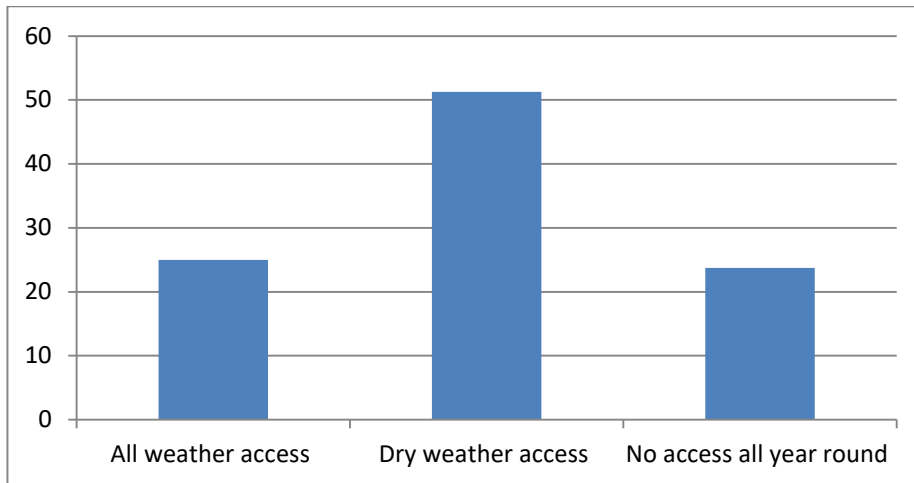


Figure: 7 Road condition (status) in the study Area

Source: Field Survey

5.4 Transportation problem

There are numerous problem of transportation in the village which includes, high cost of transport, maintenance, poor transport, low traffic volume insufficient and poor infrastructural facilities. Analysis shows that 50% of the respondent agreed that transportation is one of the problem affecting the communities especially in Gayawa, Yada Kunya, Rangaza whereas 32.5% of the respondent strongly agreed. Even available feeder road are not maintained adequately for suitability of traffic or vehicle. Majority of the roads are characterized by deep potholes which can hinder transportation, especially during wet season. 12.5% of the respondents reported disagree whereas 5% disagree strongly that transportation is a major problem.

5.5 Average Distance covered to the nearest market in the Area

Most of the respondents attend different markets, the most common ones are Dambatta, Janguza and Dawanau market etc. from the analysis majority attend Dawanau and Dambatta, those operating daily and on Sunday respectively, with only 16% to reach the nearest market.

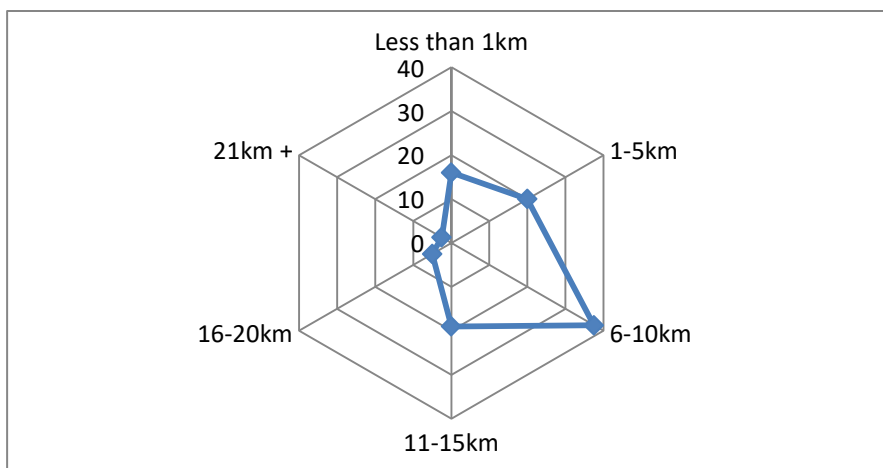


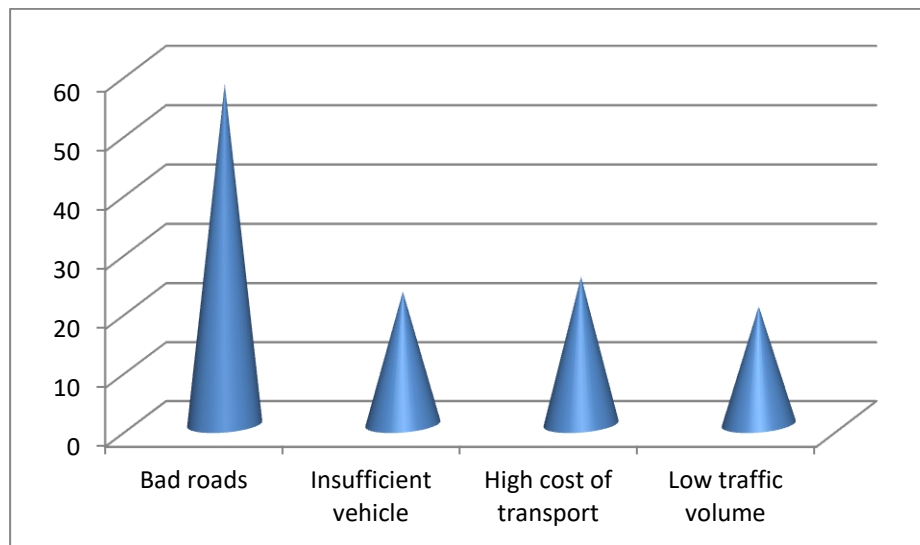
Figure: 8 Average Distance covered to the nearest market in the Area

Source Field Survey, 2018

**5.6 Problem of Transportation**

An attempt was made to find out from the respondents the major constraint faced when transporting their agricultural produce. The study revealed that most disturbing transport problems are bad roads. This is followed by high cost of transport, insufficient vehicle, and low traffic volume.

It is observed that many of the study villages like Yada Kunya, Karo, Kadawa are faced with problems highlighted above, some of the route are washed away during wet season. This constraint therefore prevents smooth evacuation of agricultural produce to market.



**Figure: 9 Problem faced when transporting farms produce to market as reported by respondent.**

Source: Field Survey, 2018

Generally speaking, constraint of transportation is more pronounced in the wet season. This is the period when most feeder roads are rough and turgid which makes them slippery and relatively inaccessible to users. This made the users to return to their traditional system of transportation carrying on their heads and in some cases on their bicycles or motorcycles

**6. CONCLUSION**

Transportation is an essential part of human activity and in many ways form the basis of all social economic interaction, as no two locations will interact effectively without a means of movement. Therefore, this study conclude that there is absolute need in restructuring of road network in Ungogo and its environment so as to ease the conveyance of agricultural produce from rural areas to the nearest markets.

**7. RECOMMENDATIONS**

**Recommendations**

- Construction of roads and bridges to make rural areas to all weather access.
- Government should engage in construction more feeder road in rural areas that will link different farm in the areas.
- Provide bicycle, motorcycle to individual farmers, tractor and buses to the farmer’s organization as a form of loan at subsidy. This will likely assist movement of farm inputs and outputs.
- The maintenance of good roads could be achieved through elicitation of self-help from communities served by their route. The contribution of communities could be in the form of helping in road maintenance. This would be achieved through government policy stating that areas where community self-help efforts have been directed to maintenance of routes should benefit from other government investment.
- Government should prevent occurrence of fuel scarcity which trigger increase in cost of transport of goods and service in the country.



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