

Article citation info: Afolabi, O. J.- Ademiluyi, I.A. – Oyetub, A. O., Analysis of rural transportation of agricultural produce in Ijebu North Local Government area Ogun State Nigeria. *Transport & Logistics: the International Journal*, 2016; Volume 16, Issue 41, December 2016, ISSN 2406-1069

ANALYSIS OF RURAL TRANSPORTATION OF AGRICULTURAL PRODUCE IN IJEBU NORTH LOCAL GOVERNMENT AREA OF OGUN STATE NIGERIA

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Abstract:

The physical condition of various rural roads used in transporting agricultural produce in Ijebu North Local Government Area is of great concern, vehicle used to transport agricultural produce along the routes linking the rural areas are rickety and unsuitable for such purpose. A well-designed questionnaire, personal observation and descriptive and inferential statistics were employed. The respondents consist of (378) of the total population, while simple random technique was used to select 113 (30%) farmers and 95 (25%) produce transporters were equally selected systematically, 170 (45%) produce traders were purposively selected to gather information on socio-economic, agricultural produce, transportation of produce and challenges of moving agricultural produce. The respondent use the following means of transportation in the study area i.e. walking, motor bike, bus, pick-up van and car. Roads in the study area are in a deplorable condition, the type of vehicle used by farmers and traders depend on the volume of the agricultural produce, while petrol, maintenances, ticketing and extortion are the operating cost of vehicle in the movement of produce by the transporters. The research recommends among others things the provision of good storage facility, massive road rehabilitation, provision of modern public transport, empowering agricultural agency to complement the existing effort and extension of rail services towards enhancing transportation of agricultural produce in Ijebu North Local Government area.

Key words:

Agriculture, Rural Transport, farmers, Physical distribution and Ijebu-North.

INTRODUCTION

Agricultural produce consist of various food crops, cash crops, livestock and poultry produce as well as the perishables such as vegetables, tomatoes, pepper and fruits among others that are produced majorly in rural settlement. A greater percentage of the Nigeria population lives in the rural area and they are mostly farmers, the rural dwellers produce the food consumed in the cities and most of the agricultural raw materials used by industries. Rural infrastructure constitutes the substance of rural welfare; effort to raise rural welfare must necessarily go beyond the limited approach of rising per capital income through agricultural development but also to make provision for rural transport facilities. Rural areas serve as the base for the production of food and fiber, the major sources of capital formation for a country, and a principal market for domestic manufactures (Olayiwola and Adeleye, 2005). In general terms, the rural areas engage in primary activities which form the foundation for any economic development. Despite this level of contribution to economic development, rural areas have been neglected in terms of development, which has made it non- attractive to live in and also increase poverty level in the rural areas. This is justified by the high correlation that exists between rural living and poverty with this situation particularly exacerbated in developing countries (World Bank, 1994).

Ogunsanya (1981) observed that there are three types of routes in the rural areas via; bush paths, unsurfaced rural roads and surfaced rural roads. However, the bush path is very common but the least developed of all the routes. Bush paths link villages with farmsteads and they are usually narrowed, winding and sometimes overgrown by weeds especially during the rainy season. In a study carried by Filani (1993) in rural areas of Nigeria, it was discovered that where motor able roads exist they are mostly of unpaved surface, narrow width, circuitous alignment and with low quality bridges. In most cases, they are either clad with potholes or characterized by depressions and sagging. Such unsurfaced roads are hardly passable during the rainy season when vehicles get stuck in mud or when the improvised bridges of cut-free trunks get swept away by flood. In another study carried out by Ogunsanya (1988) on relationship between transportation, underdevelopment and rurality, he observed that the greater the degree of rurality, the lower the level of transport development. In Nigeria, the issue of rural transportation development has continued to be of national importance. For instance, most of the rural roads are in poor condition, and this has imposed significant cost on the national economy especially to the agricultural activities due to increased vehicle operating costs and travel times (Akintola, 2007).

The physical condition of various rural-urban roads used in the transportation of agricultural produce in the study area is of great concern, coupled with the deplorable condition of the roads in the area. Vehicle used to transport agricultural produce along the routes linking the rural areas are rickety and unsuitable for such purpose. The major farm settlement in the area are geographically dispersed, there is need to link this settlement with the consumption center through an efficient rural-urban transport services that will bridge the gap between activity site and consumers of the agricultural produce. An urgent need to improve the rural-urban means of conveying agricultural produce from various producing centers to urban area to reduce poverty and hunger in the country and to meet the Millennium Development Goals (UNDP, 2010).

1 RURAL TRANSPORTATION SYSTEM

Poor accessibility in the rural areas of developing countries perpetuates the deprivation trap by denying communities access to their most basic needs. All community require access to supply, services facilities and opportunities, basic need include water, power, food, health

services, education and employment. People need access to market and may wish to participate in civic, religious and leisure activities. Accessibility can be measured in time, effort and cost, it depend on infrastructure (availability of water source, road and bridges, school, hospitals, market) and available and affordable transport option for people and their loads. Poor rural people often have to spend much time and effort to access necessities and the reduction of isolation and inaccessibility are fundamental to poverty reduction. Accessibility depends on mobility (ease and frequency of movement) and proximity (distance). Access may improve by greater mobility and improved proximity to services (piped water, local health center).

The basic means of transport is human transport, people walking between locations and carrying things themselves. Walking and carrying are simple, cheap and efficient for short distance, difficult terrain and small loads. It is the other end of the spectrum are large-scale means of transport including truck, buses, automobiles, train, airplanes and ship, these are generally designed for moving people and goods quickly over long distance with large loads. Rural transport depends on appropriate infrastructure (path, road, waterways, bridges, railway track and their associated maintenance and traffic management system). The infrastructures include path, trail, track, access or feeders roads, secondary roads and primary truck roads. These may vary in quality, depending on weather, season, construction and maintenance and some means of transport require certain infrastructure standards to operate effectively.

The relationship between urban and rural areas is changing in countries all over the world. Transport is seen as a necessary ingredient in all aspects of economic and social development. It plays a key role in getting land into production, in marketing agricultural Poor roads characterize rural areas in sub-Saharan Africa. In virtually all the cases, these roads are perpetually in a state of disrepair. Yet, it is on these deplorable roads that the rural dwellers trek daily to obtain water, firewood, farm produce and to secure services from such places as markets, schools and clinic. Rural dwellers also rely on the poorly maintained roads to transport crops, raw materials and foodstuff that are meant for consumption in the urban areas. Rural roads play a governing role in the development of rural areas. In reality, the concept of "rural" cannot be narrowly defined. In fact, many definitions of rural exist. The way people think of rural largely depends on where they are from and where they live. US Department of transportation (2012) in their document classified rural into three forms. Three general forms are described below (Basic Rural, Developed Rural and Urban Boundary Rural).

Basic rural is what we traditionally think of as "truly rural". These areas are dispersed counties or regions with few or no major population centers of 5,000 or more. The economies of these areas tend to be predominately agricultural or natural resources based, and are characterized by typical "farm-to-market" localized rural transportation. Populations in *basic rural* areas tend to be stable or declining. These areas are typically interested in economic development and normally welcome transportation projects that may help stimulate growth.

Developed rural can be thought of as dispersed counties or regions with one or more population center(s) of 5,000 or more, and perhaps a metropolitan area(s) with 50,000 or more. There are developed urban areas in the county or region, but there is still a significant amount of the region that is *basic rural*. Economies in these areas tend to be mixed industrial and service based in the cities and agricultural and natural resource based in the rural areas. Populations in *developed rural* areas tend to be stable or growing. Transportation in these areas is more diverse than in *basic rural* areas, involving much more commuting, intercity travel, intercity freight, and other trip purposes. Some *developed rural* areas welcome growth and economic development, while others are interested in preserving the rural character of the area and are less interested in growth. Some areas can be described as *urban boundary rural*, which refers to rural areas that are located just beyond the fringe of large urban areas. We see

these "ex-urban" areas as rural areas beyond the suburbs that are experiencing growth. Travel patterns and population growth in these regions are greatly affected by the metropolitan area. Many of these areas are experiencing high rates of population growth from a low base, hence the impacts in terms of diminishing rural character and increasing transportation system requirements is great. Transportation in these areas is completely diverse, with high levels of commuting and intermodal freight movements. Many *urban boundary rural* areas have members of their communities who oppose growth and wish to maintain rural character in these areas, while others wish to realize the economic benefits of their locations. Therefore, rural transport is important for the evacuation and marketing of farm products and the delivery of farm inputs and extension services. It also aids innovation diffusion, expand production and raise incomes (Gannon and Liu, 1997; Olukotun, 2007). Improved rural transportation reduces travel time thereby, increasing the time available for economic and social activities while also promoting access to basic facilities.

2 PATTERN OF RURAL TRANSPORT

Rural transport involves many types of movement for a wide range of purpose both within villages and beyond. Adesanya et al. (2000) had observed that rural travel and transport in most rural areas in Nigeria still take place with great difficulties thereby compounding and worsening the problem of rural productivity and rural poverty. The purpose of the travel may relate to household (obtaining water, fuel and food), agriculture (tending and marketing crops and livestock, or a wide variety of socioeconomic activities (education, religion, recreation, health, employment, income generation). Journeys may have multiple purposes, different means of transport maybe appropriate depending on infrastructure, purpose, distance, gender and age. Much rural transport takes place close to villages, external trip (motorized or non-motorized) are fewer but have economic and social importance. Rural transport is time consuming, family member have various need and roles, with important gender difference and motorized trips are typically infrequent.

Effective rural transport relies on variety of means of transport to move passenger and goods, with the type and diversity depending on infrastructure environmental condition, users and demand. Ogunsanya (1993) and Filani (1993) found in different studies that where motorable road exist in rural area in Nigeria, they are mostly of unpaved surface, narrow with, circuitous alignment and with low quality bridges. In most cases, they are either clad with potholes or characterized by depressions and sagging, such subsurface road are hardly passable during the rainy season when vehicle get struck in mud or when the improvised bridges of cut-free trucks get swept away by flood. Most rural transport take place in the vicinity of villages, trips generally involve short distance and small loads carried on paths and tracks, typically for marketing collecting water and firewood and tending crops and animals, intermediate means of transport are ideal for such purpose but are not sufficiently promoted or supported by government transport planners and they are expensive for poor rural people. Motorized public and private rural transport services concentrate on routes from villages to market towns and from towns to cities where there is a greater demand and better infrastructure.

3 RURAL TRANSPORTATION PROBLEM

Rural transportation is essential not only for connecting people to jobs, health care and family in the ways that enhances their quality of life, but also for contributing to regional economic growth and development by connecting business to customers, goods to markets and tourists to destinations. Commodities including timber, fuel and agriculture product must

be moved from rural areas where they are produced to urban areas where they are processed, consumed, or sent out of the state or country. Rural road network has significant effect on the distribution of facilities in rural areas and has the potential of reducing poverty (Aderamo et al., 2010).

Improving rural people's access to essential service requires improving mobility through better transport infrastructure and services and attention to the location, quality and price of facilities. Importance of rural transport are enormous, they accelerate the delivery of farm input and the services of extension workers, preventing excessive rural to urban migration with the attendant problems, facilitate the evacuation and marketing of produce from agriculture, ease of human movement within and outside the community, thereby reducing or eliminating repetitive movement and there increase in residual time for other activities, enhance the effectiveness of policy, reduce the level of wastage of agricultural produce which bring about reduction in prices, accelerate the delivery of basic needs to the rural majority, mobilizing the vest natural and human resource potential of rural sector, help the local population regain their lost ability of self-reliance especially in the area of food production. Despite all these, it is very ironical that many rural communities in Nigeria still lack good road and consequently find it difficult to transport their goods.

Rural roads play a governing role in the development of rural areas. Sundry scholars are unanimous and unequivocal in their assertion that rural development is predicated on efficient rural transportation infrastructure (Idachaba, 1981; Adeniji, 1987; Ogunsanya and Ojetola, 1993; Oyekunle, 1995; and Ovbude, 2000). The consensus reached by these academics is that the inadequacy of rural transportation facilities is an insidious encumbrance to rural development. As Filani (1988) put it, "one of the major prerequisites of efficient functioning of an area is the facility for the movement of people, goods and services quickly and economically". The evolution of rural transportation in Nigeria has spatial and temporal dimensions.

Adesanya et al. (2000) had observed that, rural travel and transport in most rural areas in Nigeria still take place with great difficulties thereby compounding and worsening the problem of rural productivity and rural poverty. The ability of agricultural and forest freight to absorb motorized transport cost varies according to the purpose and type of agricultural production. Because of the foregoing reasons, head portage moves substantial part of the country's rural agricultural commodities. Bicycles, hand drawn/push carts, pick-up van and adapted vehicles (Bolekaja and Mammy Wagons) are the dominant modes of public transport in the rural areas.

The word "rural" connotes different meanings to different people depending on their background. What is regarded in developing countries as rural may be regarded as urban in developed countries. However, given certain criteria, rural settlements in Nigeria for instance are regarded as settlements with less than 20,000 people and whose population predominantly engages in primary production (Aderamo et al, 2010). Rural settlements was also described by (Weir and McCabe 2012), as areas with relatively low development densities, typically less than 1 resident per acre.

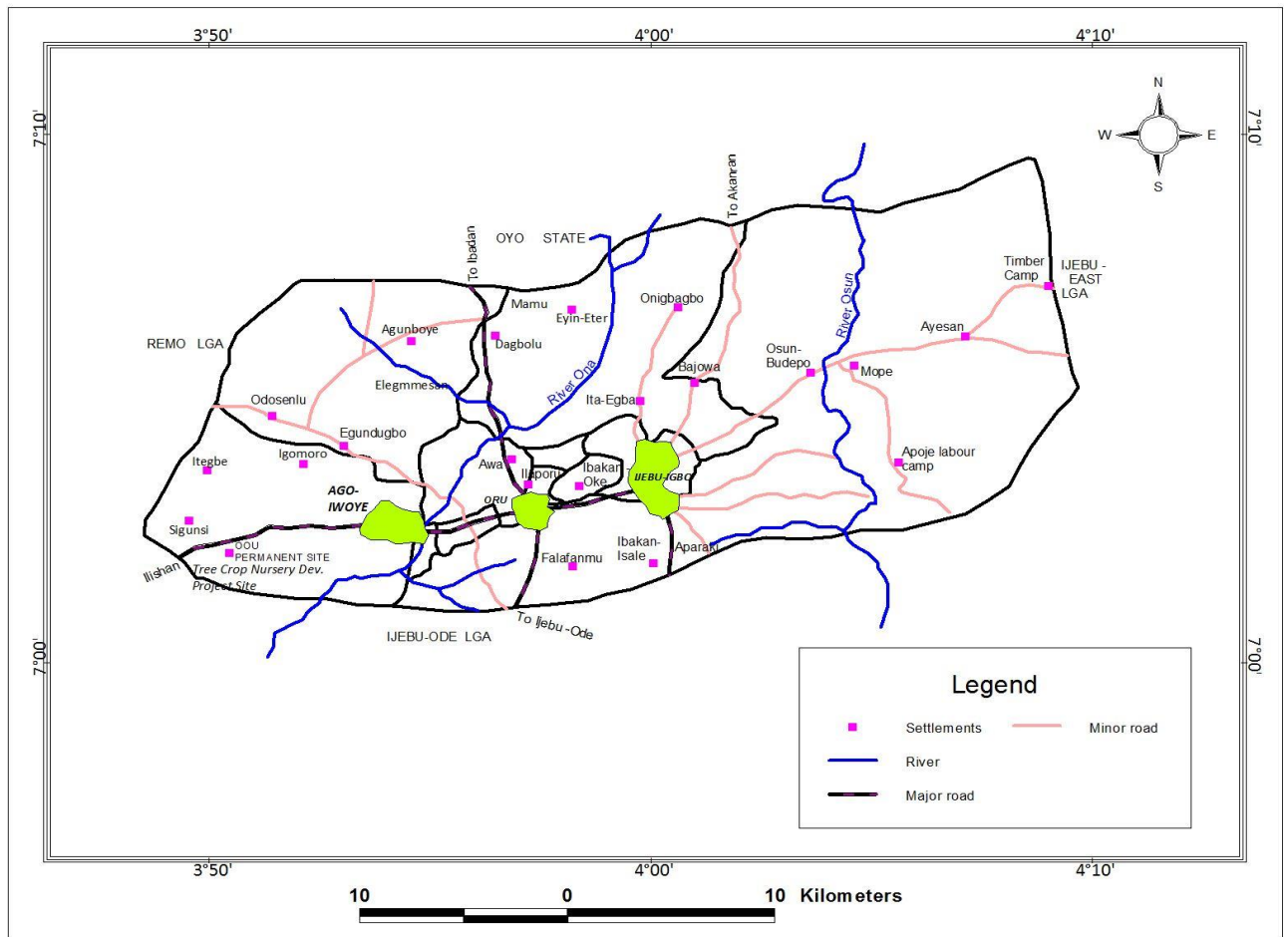


Fig. 1 Map of Ijebu North Local Government Showing the Road Network



Fig. 2 Pick-up van for Transporting Agricultural Produce in the Study Area.



Fig 3 Type of packaging used for Agricultural Produce in Study Area

4 RESEARCH METHODOLOGY

This study applies a quantitative method based on a structured self- administered questionnaire in order to assess the conceptual model and test the hypotheses. It gives a detailed insight into the view and responses of farmers produce traders and produce transporters in relation to production, evacuation, trading, and transportation of agricultural produce. A total of 378 questionnaires were randomly and purposive distributed in Ijebu North local government Area, 113 was distributed to farmers, 170 was distributed to produce traders and 95 was distributed transporters. The data collected from the questionnaire are distributed and analyzed in the tables below.

4.1 Analysis of Responses

4.1.1: Socio-Economic Characteristics of the farmers

Tab. 1 Sex distribution of farmers

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	83	73.5	73.5	73.5
female	30	26.5	26.5	100.0
Total	113	100.0	100.0	

Source: Authors Field Work, 2016

Analysis of the survey carried out showed that sex distribution of the farmers revealed that 83 of the farmers representing 73.5% are male and 30 of the farmers representing 26.5% are females. The studies revealed that majority of the farmers are male as shown in table 2.1.

4.1.2: Age of the farmers

The field survey revealed that 4 of the farmers representing 3.5% are below 20 years of age, 3 of the farmers representing 2.7% are between the ages of 20 to 25 years, 2 of the farmers representing 1.8% are between the ages of 26 and 30 years, 23 of the farmers representing 20.4% are between the ages of 31 to 35 years. 7 of the farmers representing (6.2%) are between the ages 36-40 years while 74 of the farmers representing 65.5% are above 40 years of age. The studies revealed that majority of the farmers are above 40 years with a percentage of 65.5% as shown in Table 2.2

However, it can be deduced that few teenagers below the age of 20 years with percentage of 3.5% are engaged in farming activities while majority of the farmers are above 40 years with a percentage of 65.5%.

Tab. 2 Age distribution of farmers

	Frequency	Percent	Valid Percent	Cumulative Percent
below 20yrs	4	3.5	3.5	3.5
between 20-25 yrs	3	2.7	2.7	6.2
26-30yrs	2	1.8	1.8	8.0
31-35yrs	23	20.4	20.4	28.3
36-40yrs	7	6.2	6.2	34.5
above 40 yrs	74	65.5	65.5	100.0
Total	113	100.0	100.0	

Source: Authors Field Work, 2016

Tab.3 Estimated monthly income distribution of farmers

	Frequency	Percent	Valid Percent	Cumulative Percent
below N5,000	5	4.4	4.4	4.4
N5,001-N10,000	5	4.4	4.4	8.8
N10,001-N20,000	41	36.3	36.3	45.1
N20,001-N30,000	19	16.8	16.8	61.9
above N30,000	43	38.1	38.1	100.0
Total	113	100.0	100.0	

Source: Authors Field Work, 2016

Table 2.2 shows that 5 of the farmers representing 4.4% earned below N5, 000, 5 representing 4.4% N5, 001 - N10, 000, 41 (36.3%) of the farmers earned between N10, 001 and N20, 000, 19 of the farmers representing 16.8% earned between N20, 001 and N30,000 while 43 (38.1%) earned above N30,000. The study revealed that majority of the farmers earned between N30,000 (38.1%) which is slightly above those who earned between N10,001-N20,000 (36.3%). This is shown in Table 2.2.

4.1.3: Level of education

The field survey revealed that 31 of the farmers representing 27.4% have no education, 44 of the farmers representing 38.9% have primary education, 10 of the farmers representing 8.8% educate up to secondary level, 3 of the farmers representing 2.7% have technical or grade II teacher training certificate, 9 of the farmers representing (8.0%) have National diploma while 16 of the farmers representing 14.2%. are University graduate. The study revealed that majority of the farmers has primary education with percentage of 38.9% as shown in Table 2.4

However, it can be deduced that few teenager below the age of 20 years with percentage of 3.5% of are engage in farming activities while majority of the farmers are above 40 years with a percentage of 65.5%.

Tab. 4 *Level of education*

	Frequency	Percent	Valid Percent	Cumulative Percent
no education	31	27.4	27.4	27.4
primary school	44	38.9	38.9	66.4
WASC	10	8.8	8.8	75.2
Technical/TC.II	3	2.7	2.7	77.9
NCE/ND/HD/N ND	9	8.0	8.0	85.8
university graduate	16	14.2	14.2	100.0
Total	113	100.0	100.0	

Source: Authors Field Work, 2016

4.1.4 Experience of the farmers

The result of the field survey shown that 52 of the respondents representing 46.0% has less than 10 years experience in farming, 45 of the respondents representing 39.8% has year of experience in farming between 11-20 years, 15 of the respondents representing 13.3% has 21-30 years of experience while 1 (9%) respondents has more than 30 years of experience. We can deduce that majority farmers has less than 10 years of experience with a percentage of 46.0%, closely follow by farmers with the 11-20 years of experience as shown in Table 2.5

Tab. 5 *Experience of the farmers*

	Frequency	Percent	Valid Percent	Cumulative Percent
less than 10 yrs	52	46.0	46.0	46.0
11-20	45	39.8	39.8	85.8
21-30	15	13.3	13.3	99.1
31 yrs and above	1	.9	.9	100.0
Total	113	100.0	100.0	

Source: Authors Field Work, 2016

4.1.5 Type of vehicle for transporting produce

It is observed that the use of pick-up van accounted for 41.2%, the use of car accounted for 30.0%, the use of motorcycle accounted for 16.5%, the use of bus accounted for 11.2% while other means accounted for 1.2%. We can deduce that most of the produce traders make use of pick-up van transport there to market with a percentage of 41.2% as shown Table 2.3 below.

Tab.6 Type of vehicle for transporting produce

	Frequency	Percent	Valid Percent	Cumulative Percent
pick up van	70	41.2	41.2	41.2
Car	51	30.0	30.0	71.2
Motorcycle	28	16.5	16.5	87.6
Bus	19	11.2	11.2	98.8
Others	2	1.2	1.2	100.0
Total	170	100.0	100.0	

Source: Authors Field Work, 2016

4.1.6 Assessment of Road condition

Analysis shown that 4(4.2%) transporters operators revealed that the state of the road are good, 9(9.8%) transporters operators revealed that the state of the road are fair, 34(35.8%) transporters operators revealed that the state of the road are poor while 48(50.5%) transporters operators revealed that the state of the road are very bad. More than of the respondents agree that the state of the road in the study area is very bad 50.5% as shown in table 2.4 below.

Tab.7 Assessment of road condition

	Frequency	Percent	Valid Percent	Cumulative Percent
Good	4	4.2	4.2	4.2
Fair	9	9.5	9.5	13.7
Poor	34	35.8	35.8	49.5
very bad	48	50.5	50.5	100.0
Total	95	100.0	100.0	

Source: Authors Field Work, 2016

5 CONCLUSION

Inaccessibility to transport can make it difficult for movement of agricultural produce, while the importance of rural transport to agriculture includes accelerate the delivery of farm input and the service of extension workers, it facilitate the evacuation and marketing of agricultural produce, reduce the level of wastage of agricultural produce and it bring about reduction in prices, and finally accelerate the delivery of basic needs of the majority.

This research work analyzed the transportation on agricultural produce in Ijebu North local government of Ogun State towards improving the movement of agricultural produce to urban centers for consumption. In this study, the importance of good rural-urban roads and

suitable means of transporting agricultural produce to encourage productivity and enhancing profitable prices and minimizing cost of transportation were find out. Agricultural produce like food crop, vegetable, tubers, fruits and poultry products are in commercial quantity in the study area, while farming and produce trading occur throughout the year, the transportation of agricultural produce in the study area being agricultural base local government with many villages and the location of the farm settlement in the remote part of the area is characterized by the deplorable condition of roads which are mainly local rural-urban roads.

Finally, potential investment in rural-urban transportation is a vital tool towards rural and economy development of the study area as well as reducing poverty.

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