

Transportation and development in Uganda

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1.0 Introduction

Uganda is a land-locked country, lying nearly 800km from the Indian Ocean, and bordered by Kenya to the East, Tanzania and Rwanda to the South, the Democratic Republic of Congo to the West, and Sudan to the North. The total area is 241,038 square km, of which over 18% is water or swamp. While most of the country lies between 600 and 1,500 metres above sea level, there are mountainous areas in the East, South West, with the highest peak rising to over 5,000 metres. The principal river is the Nile, which runs through Lakes Victoria, Kyoga and Albert on its way to Sudan and the Mediterranean. There are also several smaller lakes. Apart from some drier areas especially in the north-east, most of Uganda enjoys a well distributed annual rainfall of between 1,000 and 1,500 mm. Soils are generally moderately to highly fertile, especially in a wide crescent to the north of Lake Victoria.

During the past decade population is estimated to have grown at around 3.5% per annum from 16.7 million at the last census in 1991 to 22million in 1999. The urban population has grown significantly more rapidly than the rural population over the same period and is now estimated to be nearly 4.6million, of which the capital, Kampala, accounts for just under 1.4million. Overall population density per Sq. Km of land area is approximately 113, but there are wide regional differences with the northern region having a population density of only 51 per Sq. Km.

With moderate temperatures, as well as good rainfall and soils, Uganda has excellent agricultural potential. The key cash crops are coffee, tea, cotton, tobacco and sugar. During the past decade, real annual growth of GDP averaged 6.5%. Nevertheless, Uganda is still one of the poorest countries in the world with a per capita Gross Domestic Product (GDP) of around USD300.

2.0 Transport infrastructure and transport modes

Uganda is served by road, rail, inland water and air transport. Road is by far the dominant transport mode in terms of scale of infrastructure and the volume of freight and people movements.

2.1 Roads

Road infrastructure comprises of classified (national) roads, feeder (district) roads, urban roads as well as community access roads. The size of the network can be summarized as follows:-

-	Classified roads	9,496 Km (23.5% paved)
-	Feeder roads	24,326 (virtually all unpaved)
-	Urban roads	1,376 (42.9% paved)
	TOTAL	35,198 Km.

The network of community access roads is believed to amount to around 55,000 Km, but there is little information on it and it is not known what proportion of it is accessible to motor vehicles. The community access roads support rural travel and transport which are dominated by walking, head loading and bicycle transport.

2.2 Rail and Lake

The Uganda Railways Corporation was established by a Presidential Decree in 1997 to take over the operation of the parts of the former East African Railways network within Uganda. The Uganda railway network totals 1,244 Km and comprises the following lines. The central line between Kampala and Malaba (Kenya border). This 251 Km line forms part of the international northern corridor between Kampala and Mombasa;

- spur lines to the Jinja and Port Bell ferry terminals on Lake Victoria (15Km). These form links with the international Lake Victoria ferry routes between Kisumu (Kenya) and Port Bell and between Mwanza (Tanzania) Port Bell and occasionally, Jinja;
- The western line between Kampala and Kasese (333km)

Of these, only the Central Kampala -Malaba line and the Spur lines to the international ferry terminals on Lake Victoria - 21% of the network - remain officially operational. This paper will mainly dwell on rural transport and particularly bicycle and motorcycle transport.

2.3 Air Transport

Uganda has only one truly international airport, which is Entebbe International airport (EIA). In addition to EIA a further five upcountry airports in Uganda were designated as international entry points in 1994. International flights are allowed directly in and out of these upcountry airports without the requirement for prior or subsequent landings and customs clearance at Entebbe. The five aerodromes are: Arua, Gulu, Kasese, Kidepo and Pakuba. There are an additional seven smaller domestic airfields.

3.0 Social, economic and cultural base data/norms of rural transport

The rural transport task in Sub-Saharan Africa is of far greater complexity than is shown in most traffic surveys. Most surveys are conducted along roadways, and usually record only motorised traffic. They ignore the large numbers of informal means of transport such as pedestrians, bicycles, pack animals and animal-drawn carts.

Motorable road comprises only a small portion of the rural transport and travel network. There exist vast but unmeasured networks of tracks, paths, and trails linking scattered villages with each other and the fields in which women, children, and men do the bulk of their work.

In Uganda, the bicycle has become one of the focus of Uganda's path to rural economic recovery. Although official figures are not available for the total number of bicycles in the country, their existence and intensive use in many rural areas is providing an obvious and visible valuable to the producers, suppliers and marketing of the country's staple food. They are also used extensively for transport of other commodities and cash crops in most rural areas. The evidence of their widespread and intensive use can be seen from traffic counts taken from 55 counting stations in rural roads in south-west Uganda in 1991. Total traffic counts at those stations averaged 715 movements per day, with 538 pedestrians (75%), 164 bicycle (22%) and only 15 motor vehicles (2%). The motor vehicle traffic of 15 ADT included 4 trucks, 1 tractor, 2 cars and 8 pick-ups/4 WD vehicles. Minibuses and buses were observed at only 9 of the 55 counting stations.

A separate survey and study of the cost of owning and operating a bicycle used in the transport of matooke (green bananas) revealed that all those surveyed were operating on bad roads and tracks. The bicycles were used for an average of 4, 3 days per week during which they made 6.3 trips that averaged 13.2 Km, one way. Each bicycle moved a total of 260 ton km per year at an average income of US.\$2.8 (1991) per ton-km per year leaving the owner with a profit of US.\$1.90 gross per ton -km per year. This results in a net return to the operator of US.0.22 per hour for 1,420 hours per year. This excludes the farm-gate value of the matooke which would accrue to the farmer if he were the transporter.

A more recent study found that bicycle operators are mostly young men who provide a tax service between rural areas and rural townships in many districts of Uganda. Users of these services include people who work outside their villages, the business community, students and patients going for treatment. Boda Boda operators (as the cyclists are known), are usually quite well organised, and while providing an affordable transport service to the users, it is also an income-generation activity for men who ride the bicycle.

The benefits from boda boda transport for women is, however, limited since fewer women than men work outside their villages or engage in transport activities that take them to the rural towns. Most of a woman's transport burden results from travel within the village or nearby.

Although bicycles are intensively used in Eastern and Northern Uganda, they are not a very common feature in the Western and Central parts of Uganda. This is mainly due to the terrain and cultural beliefs, particularly as regards women. In some parts of Uganda, there are still some cultural taboos that inhibit the use or operation of bicycles by women. These include body contact with operators or passengers and sitting positions (women are not expected to sit with their legs apart). In Central Uganda, tradition does not allow women to ride bicycles although they can be carried on them. It is however important to note that these taboos are dying out and will soon be a thing of the past.

In a research study conducted by Harriet Iga, in Mpigi District, on "Women's Travel needs in Uganda." She found that all *boda boda* operators were men and that 52% of those interviewed were aged between 20-29 years, 28% were aged between 30-39 years and only 20% were aged between 15-20 years.

With regard to their educational level, 20% had never gone to school, 56% were drop-outs at primary level and 24% had dropped out of Secondary School. All these indicators point to one fact i.e. this kind of transport service (*boda boda*) is rendered mainly by male school drop-outs and those who have never been to school. This conclusion can be applied across the Ugandan populace.

The study also found out that *boda boda* services have a positive and significant impact on the development of their localities. Findings indicated that the services have promoted trade and created jobs in the rural areas and have bridged the transport gap between the rural and peri-urban areas, and therefore need to be promoted to boost community/rural development.

4.0 Transport problems in Uganda

Like most developing countries, Uganda faces two major rural transport gaps. Firstly, the operating environment which includes factors such as infrastructure, demand, income levels and institutional factors. Secondly, the fixed and variable cost of vehicle operation which together constitutes vehicle operating costs. These principal elements affect and influence the level of competition, diversity of vehicle types, vehicle utilisation and ultimately service frequency and cost of travel.

By far the majority of transport and travel activity in Uganda occurs in rural areas where approximately 85% of the population lives. The greater part of transport in rural areas - in terms of both distances and amounts carried - is usually off road. Almost all this transport, in turn, is non-motorised (in fact, non-wheeled) and dominated by head loading by women and children of loads of up to 30 Kg.

In Uganda, the transport infrastructure particularly the roads would be adequate as indicated earlier, but it is their level of maintenance, which is appalling. Of the 55,000 km or so of community roads and 24,326 km of rural feeder roads only a very small fraction is passable during the rainy season. The poor state of these roads provides a disincentive to actual and potential operators from going to the rural areas. The rural

people then have no alternative but to turn to head loading and bicycle transport (and more recently to motorcycles).

According to some of the studies carried out by "The Rural Travel and Transport Programme", low density of demand for transport is the largest single obstacle to the improved provision of Rural Transport Services in Sub-Saharan Africa (Uganda inclusive).

It is however, considered that more can be done to maximise effective demand. This can be achieved through increased provisions of rural markets (so that peasants do not walk long distances to the markets), ensuring that rural road networks have a minimum degree of inter-connectivity to reduce dead end routes and use of modern communication devices such as radios and telephones to link isolated places to centres with vehicle services. In Uganda, measures are being put in place to formally establish and operate a Rural Communications Development Fund in the Financial Year 2000/01 to cater for rural areas. Mobile telephone services have also expanded rapidly and are already being sued by some boda boda operators in some parts of the country.

Due to the very low income levels of the rural poor, even where transport services have been provided, they simply cannot afford them.

Although transport providers tend to be organised into "Associations", these have become so powerful that they are the ones who set fares instead of Government, among other things. These associations tend to keep the fares high. There is therefore a need to reduce the powers of the transport associations through dialogue between the Transport Licensing Board (a Government Agency) and/or Town Councils and the various Transport Associations.

Lastly, but not least, the problem of acquisition and operation of vehicles needs mention. The most suitable vehicles for rural Uganda are the four-wheel drive Pick-ups, tractors, motorcycles and bicycles. Acquisition and maintenance of the above vehicles is too expensive for the rural poor. Motor vehicles apart, acquisition of a bicycle is very low and limited to well to do households. Head loading by women thus remains the principal mode of transporting goods in rural Uganda. As a mode of transport, it is very inefficient and hampers expansion because it is time consuming and expensive; high losses occur due to lower carrying capacities; opportunities to produce more profitable crops are not taken; and walking consumes energy which could otherwise be productively used on the fields.

5.0 The health sector and transport in Uganda

Very little material has been documented on how the health sector and Transport interrelate in Uganda. What is however true, is that the medical/health facilities in

Uganda are grossly under-developed. For example, in 1991 there were only 95 hospitals with a total of 22,714 beds for a population of 16,700,000 people. This makes an average of approximately 176,000 people per hospital and 735 people per bed. During the same year there were only 500 medical offices for the whole population. Moreover, the population of Uganda has been growing at an average rate of 2.5% per annum and yet the health services have hardly increased. Instead Government has been renovating the dilapidated ones. As if that is not bad enough, more than 51% of the population live more than 5 km from a health facility thus exacerbating the transport problems for the patients. Sighting patients being carried on papyrus made stretchers on other peoples shoulders is a very common feature in the rural areas of Uganda. Many patients sometimes lack any form of transportation and are compelled to walk. Incidences of patients dying by roadsides on their way to the hospitals or health facilities are not uncommon. The transport problems faced by rural population while trying to access health services are exactly the same as those mentioned in 4.0 above.

6.0 Conclusion and recommendations

It is clear that transport is the engine of development (growth) in the rural areas. It enables the rural population to access: markets for their produce, agricultural inputs, firewood, health services, education etc. The major transport problems facing the rural population have been identified as being poor transport infrastructure, low density of demand for transport, institutional inadequacies and cost of acquisition and operation of vehicles. The rural poor are thus confined to Head loading as the principal means of transport followed by bicycles (boda boda) where the terrain and cultural taboos are favourable.

In order to improve the transport situation of the rural population in Uganda, it is recommended that the following measures be adopted:

- Provide basic year round vehicle access by spot improvements on the community or feeder road network;
- Local governments should endeavour to set up more rural markets, health centres etc so that the rural population do not travel long distances to access these facilities.
- Telephone companies should be given incentives to link up the villages through telecentres.
- Village based vehicle owners should also be given incentives such as tax-exemptions to make them competitive and yet offer affordable services to the rural population.
- Local leaders should mobilise resources including community and self help interventions.

All these measures require funding and guidance by Uganda Government but it cannot afford all them. There is a need for a detailed study on Rural Travel and Transport so as to come up with the most recent status of the sub-sector and the best recommendations. The donor community could assist in this endeavour through Government or Non-Governmental Organisations.