Developing a seamless Multi-Modal Transport System: Is Uganda on track?

Overview

Vision 2040 emphasizes the importance of having a multimodal transport system. It notes that to attain rapid socio-economic development, Uganda must develop the different transport modes and technologies, and accumulate sufficient quality stock of transport infrastructure. The third National development plan (NDP III) carries on the same strategy.

The Integrated Transport and Infrastructure Services Programme (ITIS) focuses on the NDP III objective of consolidating and increasing the stock and quality of productive infrastructure. The goal of the programme is to develop **a seamless, safe, inclusive and sustainable multi-modal transport system**.

In the recent past, the Government of Uganda (GoU) has heavily invested in development of the transport sector in order to achieve this goal. Despite the continued investment in the sector, achieving a sustainable multi-modal transport system remains a distant goal.

This briefing paper highlights the progress towards achieving a multi-modal transport system in the last five years. It identifies the key constraints, and proposes recommendations for achieving this goal.

Key Issues

- Uganda's transportation system that is predominantly road based is not sustainable.
- Rail and water transport have a competitive advantage in advancing regional trade but they are underfunded.
- Poor maintenance of transport infrastructure is detrimental to the achievement of a multi-modal transportation.

Introduction

Uganda has four major modes of transport including road, railway, air and inland water transport (IWT). The transportation system in Uganda is highly dominated by road transport which accounts for 99% of total passenger flow, and 95% of total goods cargo. However, this transport system which is predominantly road based is not sustainable due to high associated costs (National Integrated Transport Master Plan 2021 – 2040). In 2019, the external transport costs which include traffic congestion, transport accidents, and pollution were estimated to have a combined total of Ug shs 8 trillion (US$ 2.3 billion). Thus, the transport sector needs to reduce costs and provide better value through the development of a seamless multi-modal transport system.

Importance of a Multi-Modal Transport System

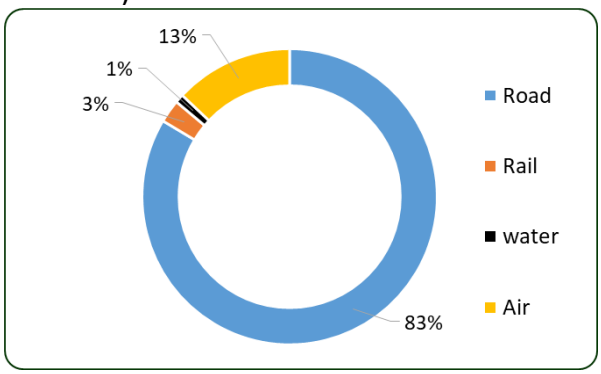
A multi-modal transport system relies on several modes of transportation to move freight and people across the country and the region, thereby harnessing the advantages of each mode of transport. Some of the benefits of developing a multi-modal transport system are:

- Economic growth through the reduction in transport costs for goods and people.
- Reduction in over-reliance on road transport and the associated maintenance costs by gradually executing model shifts and balancing the freight on roads, water, rail, and air.
- Improved transport safety: Air, rail and water transport provide better transport safety than road transport.
- Reduction in emissions and noise pollution: Railway and water transport have less pollution compared to road and air transport.
- Developing water transport is an equity intervention for island communities.

Financing of transport infrastructure

The government has been investing in the transport sector using both local revenue and external financing from development partners. Between FY 2019/20 and FY 2021/22, a total of Ug shs 13,856bn[1] was disbursed for transport infrastructure. This funding was biased in favour of roads with Ug shs 11,594bn (83%) for road transport, Ug shs 346bn (3%) for railway transport, Ug shs 130bn (1%) for water transport, and Ug shs 1,786bn (13%) for air transport *(Figure 1)*.

Figure 1: Transport Mode Budget Share (FY2019/20 - FY2021/22)



Source: MoWT, UNRA, and URF Q4 Performance Reports

Key achievements under each transport mode

Road Transport: The stock of paved national roads has increased from 4,521km in FY 2017/18 to 5,878km in FY 2021/22, bringing the percentage of paved national roads to 27.8%. However, this is still short of the NDP III target of 30%. Relatedly, Vison 2040 projects that 80% of the network should be paved by the year 2040. This means paving 16,816km or on average an additional 600km per year. Averagely, Uganda National Roads Authority (UNRA) has paved 341km annually over the last five years.

The condition of roads has also improved. For instance, the national roads network in fair to good stands at 96% for paved roads, and 81% for unpaved roads against the NDP III target of 85% and 70%, respectively. In addition, the accessibility index which represents the percentage of the rural population living within 2km of an all-season road has increased from 85% in FY2015/16 to 90% in FY2020/21 (Uganda Bureau of Statistics (UBOS) - 2021).

On the other hand, road transport in the urban areas especially the Greater Kampala Metropolitan Area (GKMA) has remained poor due to high levels of congestion, poor road conditions, and high accident rates. The NDP III plan to introduce efficient mass transport systems including Bus Rapid Transit (BRT) has not commenced.

Air Transport: For Uganda, air transport plays a major role as the main gateway for international tourism and business. The focus on air transport has gradually increased in the recent past, as evidenced by the increased spending in the sub-sector from Ug shs 178.5bn in FY 2018/19 to Ug shs 797bn in FY 2021/22. Several projects aimed at increasing the capacity of air transport in the medium term are ongoing, including:

The US$ 200 million expansion and upgrade of Entebbe International Airport (EIA) phase 1, will increase the total capacity of EIA from 2.0 million to 3.5 million annual passengers. The construction of Kabaale International Airport to support the oil industry will also develop regional tourism and agriculture. However, both projects have experienced time overruns.

Two upcountry aerodromes were rehabilitated and upgraded while the pre-feasibility study for the development of five up-country aerodromes (Gulu, Pakuba, Kidepo, Arua and Kisoro) was finalized.

The government has also revived the National Airline with the procurement of six new passenger planes and the acquisition of the relevant certifications and licensing. However, the Airline is operating at a loss. In FY 2020/21, the Airline registered a loss of Ug shs 164bn. This was attributed to weak internal management and failure to operationalise all the planned flight routes.

Railway Transport: Uganda's Vision 2040 lays out the railway sub-sector as key in modernizing the economy through transforming the transport sector. Uganda currently operates 256km of the old Metre Gauge Railway (MGR) between Malaba-Tororo-Kampala, Kampala-Portbell, and Kampala-Nalukolongo.

In addition, the Tororo-Gulu MGR line is under rehabilitation. The GoU has also commenced an ambitious plan to develop the Standard Gauge Railway (SGR), an advanced railway network which will add 1,724km of railway in Uganda.

[1] Excludes Ministry of Local Government

However, the project has been greatly delayed due to challenges in securing funding for the construction.

In a bid to alleviate the congestion problem in GKMA, Uganda Railways Corporation (URC) has revived train passenger services on the Kampala-Namanve route; 155,816 passengers were moved in FY 2021/22. Other planned measures in the NDP III like the construction of Light Rail Transit Systems and trams have not commenced.

Inland Water Transport: The level of investment in water transport has been diminutive in the recent past. There are two main Ports on Lake Victoria - Jinja Port and Port Bell which should be effective in handling Uganda's cargo from out of the country. However, the Jinja Port is abandoned and Port Bell operates at minimal capacity (handles about 80 wagons from Mwanza Port, weekly). The decline of these ports is largely attributed to neglect of the multimodal rail/water services during the Rift Valley Railways concession.

Recent investments in water transport include the rehabilitation of Port Bell including the inter-modal rail/road terminal, concrete quay, and warehousing. In addition, GoU started the first phase of the construction of the new Bukasa Port which includes compensation of Project Affected Persons (73% complete) and the development of a master plan and preliminary designs. Ultimately the port will be linked to the proposed Kampala Jinja Expressway and the SGR.

The UNRA also operates 11 ferries that transport over 3 million passengers and vehicles annually across lakes and River Nile. In FY2021/22 UNRA reported that ferries registered 111.1% adherence to scheduled trips, while ferry crossing availability stood at 97.9%. Efforts to improve this service have been made through the construction of landing sites and new ferries.

Achievement of National Key Development Results under the ITIS Programme

The above investment efforts are supposed to yield progress towards the achievement of National Key Development Results (NKDR) under each mode. However, in FY 2020/21 the ITIS Programme achieved two (22%) out of the nine NKDR targets that were assessed as shown in Table 1.

Table 1: Performance of National Key Development Results in FY 2021/22

Mode of transport	Indicators	Target FY2020/21	Actual FY2020/21	Status
Road	% of paved roads to the total national road network	27	26	Not achieved
	Travel time within GKMA (min/km)	3.98	No data	No assessment
	Freight transportation costs (per ton per km) from coast to Kampala-US$	7	No data	No assessment
	% of district roads in fair to good condition	73	69	Not achieved
Railway	Proportion of freight cargo by rail (%)	8	7	Not achieved
	Travel time on railway network (no. of days)	19	20	Not achieved
Air	Volume of international air passenger traffic (Mn)	1,608,586	621,548	Not achieved
	Volume of domestic air passenger traffic	21,397	3,601	Not achieved
	Freight Cargo Traffic (tons)	39,594	23,492	Not achieved
	Freight Cargo Traffic (tons)	22,499	38,940	Achieved
Water	Freight Traffic on L. Victoria (tons)	44,683	50,105	Achieved

Source: ITIS Programme Performance Report FY2020/21

Constraints to achieving a Multi-Modal Transport System

a) **Low stock of transport infrastructure:** Despite the enormous investments in transport infrastructure over the past decade, the country's stock is still low and of low quality, largely due to the high costs of infrastructure development and the weak enforcement of construction standards. For instance, the road density is 0.73 km/km2, or 0.04 km/per capita, way below the critical mass of 3.0 km/sq.km; railway coverage is low with approximately 267km of the old MGR operational, and only one operational port for IWT.

b) **Imbalance in funding across transport modes:** The funding of the transport sector does not reflect the ITIS Programme's objective of developing a Multi-Modal Transport System. The funding is biased towards road transport over other modes. Despite the obvious potential of railway and water transport for bulk transportation and lower transport costs, the investment in these modes has been minimal.

c) **Poor intermodal integration:** There are inadequate intermodal facilities such as transport hubs, intermodal terminals, warehousing/transloading, and dry ports, among others for facilitating a seamless transfer of goods and persons between the modes. Little progress has been made towards the establishment of such facilities. Additionally, the coordination of planning and implementation between the transport sub-sectors is still weak. A case in point is the completed Gulu Logistics Hub which remains idle because the access road to the facility is behind schedule, as well as the rehabilitation of the Tororo-Gulu railway.

d) **Limited expertise:** Uganda has a limited number of professionals to adequately manage air, rail and water transport. The number of professional sailors to operate on inland waterways for example is limited. Most Ugandan sailors don't have a "Seaman's (discharge) book" which is an international requirement for each country. Similarly, there are no training facilities for professionals in railway transport.

e) **Poor maintenance regime of transport infrastructure:** The budget for the maintenance of transport infrastructure has consistently remained low and is declining, in comparison to development. For instance, the maintenance budget in FY 2020/21 was 35%, 30%, and 28%, of the required maintenance needs for national roads, district roads, and urban roads respectively. For rail, the maintenance depots for railways are in a dilapidated state with only the Nalukolongo Depot fully operational out of the four[2] depots.

Conclusion

A Multi-Modal Transport System that harnesses the advantages of road, rail, air and water transport is crucial for Uganda's economic growth. However, to a larger extent, the Government is off track in terms of achieving a multimodal transportation system. This is mainly due to the imbalanced funding and weak intermodal integration across the modes, worsened by poor infrastructure maintenance. It is, therefore, imperative that the government through the ITIS Programme makes balanced and coordinated investments across all modes to facilitate the achievement of a seamless multi-modal transport system.

Recommendations

- The ITIS Programme Working Group should increase the level of investment in rail and water transport including fast-tracking projects like SGR and Bukasa Port.
- The Ministry of Works and Transport (MoWT) should prioritize infrastructure maintenance to preserve the stock of transport infrastructure. Based on international best practices, the maintenance investment should be about 1.3% to 2.5% of the transport asset value per year.
- The ITIS Programme Working Group should increase coordination in the planning and implementation of projects under each mode of transport to ensure seamless integration and avoid redundancy of infrastructure.
- The MoWT should invest in training and skilling staff in railways and water transport. In addition, the ministry should establish training institutions for professional skilling under these modes.

References

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6. The Africa Community Access Partnership (AFCAP): Briefing Note, 2013

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[2] Nalukolongo, Jinja, Kampala, and Tororo