# Transportation Infrastructure: Transport Infrastructure Policy ( A case Study of Nigeria and Uganda

## Training on Transport Statistics for Uganda Bureau of Statistics ,

## 9 -10 August, 2017

# Introduction

- Over the long term, world GDP is expected to grow strongly and could possibly double over the period to 2030. On this basis

  - ✓ Air passenger traffic could double in 15 years; air freight could triple in 20 years; and port handing of maritime containers worldwide could quadruple by 2030.

- Quality infrastructure is a key pillar of international competitiveness. It is trade-enhancing – especially for exports – and has positive impacts on economic growth

# ❑ Introduction

- Major international gateway and corridor infrastructures are crucially important to the exports and imports of all the products and resources that the economies of all countries need. In the future, they will become even more important.

  - ✓ There needs to design a new “strategic” infrastructure category that includes the major international gateways *and* their key inland connections

# ❑ Introduction

- Current gateway and inland transport infrastructure capacity will not be adequate to meet 2030 demand (SDGs)

  - ✓ Most of the current gateway and corridor infrastructure could not handle a 50% increase, let alone a doubling of passengers in 15 years or a tripling of freight in 20 years

# ❑ Introduction

- Despite the recent financial crisis and recession, which has increased deficits, debt and unemployment:

  - ✓ Countries with good planning processes and strategic infrastructure plans linked to assured funding are continuing to successfully build the strategic infrastructure they need

- In the future, since funding of gateway and inland transport infrastructure from traditional sources will “dry up”:

  - ✓ Improved funding is needed in many countries to ensure funding security and levels consistent with the development of the strategic infrastructure required to meet future needs.
  - ✓ Countries without good funding arrangements may not see their strategic infrastructure built.

# A Case Study of the Nigerian Transport System in Perspective

- The evolution of modern transport system in Nigeria can be categorized into two distinct phases. These are
  - The colonial period which marked the origin of modern Transport System
    - ✓The networks of rail, water and road developed then were geared essentially to meet the exportation of cash crops, such as groundnuts, cocoa, cotton and palm products and to the importation of cheap, mass produced consumption goods
    - ✓which later proved inadequate to accommodate heavy vehicles.

# A Case Study of the Nigerian Transport System in Perspective

- The post colonial period/attainment of independence
  - ✓The development of petroleum resources from the 1950's had significant impact on the nation's social and economic growth, putting increasing demands on the transport system
  - ✓With a re-orientation of goals, transport became one of the instruments of unification of the country and an important tool for social and economic development..

# A Case Study of the Nigerian Transport System in Perspective

## Public Investment in the Transport Sector

| Plan Period | Plan Size (₦ Million ) | Transport Allocation (₦ Million) | Percentage of total Investment |
|---|---|---|---|
| 1962-68 | 1,586.00 | 309.09 | 19 % |
| 1970-74 | 2,050.74 | 472.40 | 23% |
| 1975-80 | 43,318.67 | 9,677.00 | 22% |
| 1981-85 | 70,500.00 | 10,474.46 | 15% |

# A Case Study of the Nigerian Transport System in Perspective

## Percentage of Intermodal Share in the Transport Sector Investment

| Plan Period | Road | Rail | Water | Air |
|---|---|---|---|---|
| 1962-68 | 58.0 | 10.0 | 25.0 | 7.0 |
| 1970-74 | 67.0 | 9.3 | 13.0 | 10.0 |
| 1975-80 | 70.6 | 9.4 | 10.0 | 10.0 |
| 1981-85 | 60.0 | 25.0 | 9.0 | 6.0 |

# A Case Study of the Nigerian Transport System in Perspective

- Government's investment in the country's transport system in the past is not substantial

- All the transport sub-sectors suffer from the effects of past shortages of resources which has reflected in Inadequate maintenance and has lend to serious deterioration of the transport system

# Challenges and Opportunities

- The Nigerian transport system faces great challenges and also offers several opportunities. The predisposing factors include;
  - **The size of the country:**
    - ✓With area coverage of 923,768.64km$^2$, spanning longitude **3$^{oE}$-16$^{oE}$** and latitude **4$^{oN}$- 14$^{oN}$** Nigeria is a comparatively large country. It is inhabited by over 180 million people
    - ✓Transportation is a crucial instrument for linking the country economically, socially and politically
  - **Nigeria's vast natural resources:**
    - ✓Nigeria is endowed with petroleum, gas and solid mineral resources

# Challenges and Opportunities

- **Nigeria's vast natural resources:**
  - ✓The country is also blessed with abundant agricultural and forest resources, which vary by the three ecological zones of the country.
  - ✓The country is endowed with a highly productive open sea with abundant and diverse marine resources within her coastline of 852km bordering the Atlantic Ocean in the Gulf of Guinea and her maritime area of 46,000 km
  - ✓Transport therefore plays an important role in the exploitation and distribution of these resources and in the reduction of spatial inequality and in poverty alleviation

# The Need for a National Transport Policy in Nigeria

- The National Transport Policy document of 1993 states that
  - “At present, the Nigerian transport system functions in a crisis situation”, and one of the principal causes, it identified was “a major imbalance between the needs of Nigerian society and economy for adequate transport facilities and the ability of the transport sector to meet such demands”.

# The Need for a National Transport Policy in Nigeria

- Therefore, the present National Transport Policy strives to attain maximum realism both in the identification of the problems and in the assessment of the means to rectify them
- The responsibility for planning, developing and maintaining the nation's transport infrastructure is shared among the three tiers of Government to this end;
  - ✓intra-state roads are the responsibility of State Governments,
  - ✓the Local Governments are required to cater for intra-urban and rural feeder roads, which account for over 60% of the existing road network

# The Need for a National Transport Policy in Nigeria

- ✓ The Federal Government is responsible for the national highways which constitute only 17% of the existing road network. In addition, the Federal Government through its Agencies is also responsible for Inland Waterways/River Ports, Sea Ports, railways, airports and pipelines

# The Need for a National Transport Policy in Nigeria

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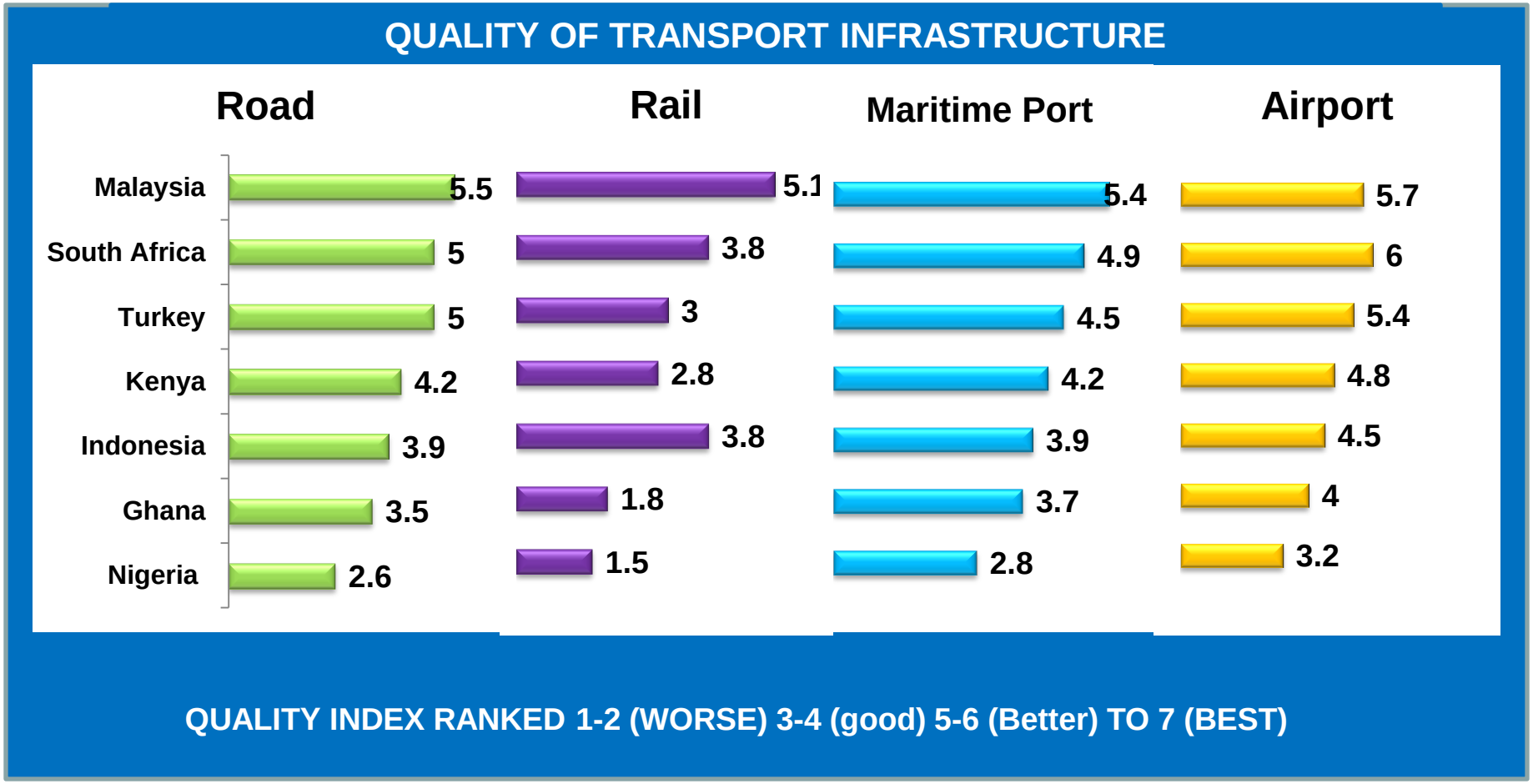
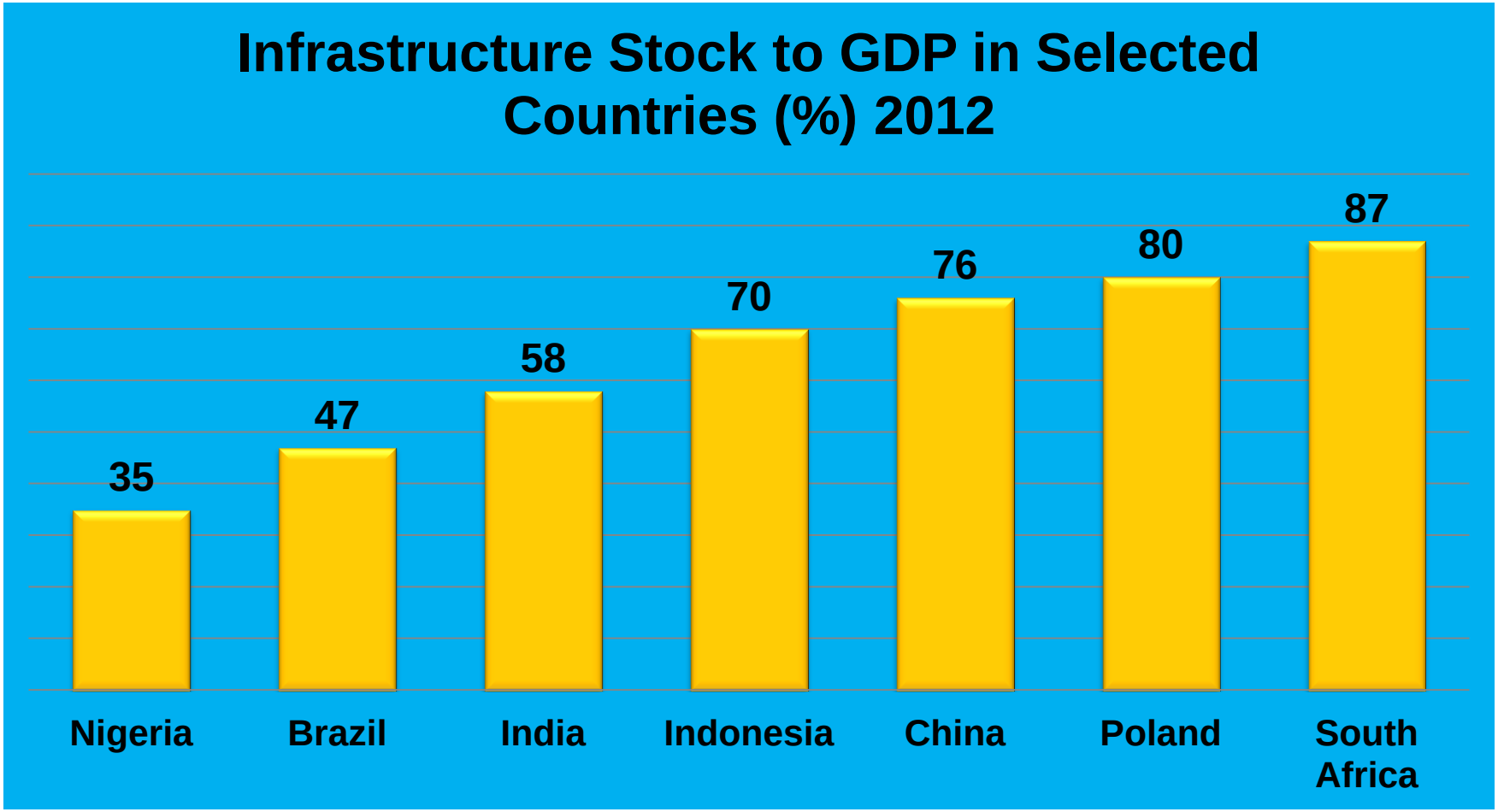


# The Need for a National Transport Policy in Nigeria

| Density of Transport Infrastructure | | | |
|---|---|---|---|
| S/No. | Country | KM of Road Per 100 Square KM | KM of Rail Per 1000 Square KM |
| 1 | India | 158 | 23 |
| 2 | South Africa | 62 | 17 |
| 3 | Kenya | 28 | 6 |
| 4 | Nigeria | 22 | 4 |
| 5 | Brazil | 19 | 3 |

# The Need for a National Transport Policy in Nigeria



# Strategic plans

- The value of Nigeria's total infrastructure stock (road, rail, power, airports, water, telecoms, and seaports) represents only 35% of GDP. This is far below the level of peer emerging
- market countries, where the average is 70%
- Federal Government plans to borrow up to $30bn over the plan period to meet its share of funds to build the Mambilla hydropower plant, and priority segments of the Coastal Railway, the Lagos-Kano Railway and the Abuja Mass Transit Rail line.
- In addition, it will also be making strategic use of the Nigerian Sovereign Investment Authority, which is home to the national sovereign wealth fund

# Strategic Actions

- The Abuja-Kaduna passenger rail services have been completed.
- The Lagos-Ibadan and Port Harcourt-Calabar railway projects have been signed off.
- Eighty-five major ongoing road projects have been mobilised and;
- The concession process for the four major airports started.
- Although these are steps in the right direction, much more is needed to overcome the backlog in transport infrastructure that is hampering economic growth and development aspirations

# Policy objectives

- Restore degraded sections of the Federal highway network to improve connectivity over a distance of 4,000km.
- Construct strategic rail projects to connect major economic centres across the country. The target is to complete construction of the Lagos- Kano and Lagos- Calabar rail projects.
- Offer concessions on the four major airports to improve infrastructure maintenance and boost operational efficiency.
- Dredge 1,000km of inland waterways and reinforce riverbanks to increase the capacity of inland waterways.

# Key activities

- Establish a robust capital project development framework to encourage and increase PPPs to deliver critical projects, such as roads, rail, seaports and airports
- Review the Infrastructure Concession Regulatory Commission Act to resolve conflicting legislation with the Bureau of Public Enterprises and Bureau of Public Procurement Act and strengthen the Commission's regulatory mandate to facilitate private investment
- Harness the existing pool of sustainable development funds to assess the viability and bankability of critical infrastructure projects

# Key activities

- Leverage a sustainable and alternative mix of funding for critical infrastructure projects, including project financing initiatives, infrastructure bonds, diaspora bonds, and value-capture financing
- Fast-track the completion of airport cargo and passenger handling terminals to increase capacity from 208,424 to 276,848 tons and 15 million to 45 million tons, respectively, by 2020
- Complete the road sector reforms to establish a Road Authority and a Road Fund to enhance best world practice in the administration of road network development and management in the country

# Key activities

- Ensure the approval of the Tolling Policy so that some of the major dual carriageways can be used for maintenance, while government diverts the saved funds from this maintenance of other critical roads on the federal road network to the nations refineries, ports, NNPC depots and agricultural hubs, etc

# A Case Study of the Uganda Transport System in Perspective

- The transport sector is one of the most crucial sectors in the country as other sectors depend on it either directly or indirectly for transport.

- This sector's contribution to total GDP at current prices was 2.8 percent in 2014/15, which is slightly lower than in 2013/14 at 2.9 percent.

- However, the sector has not developed the capacity to effectively utilize the huge investment from both government and the development partners.

# A Case Study of the Uganda Transport System in Perspective

- This has resulted in the unutilized funds being returned to the treasury.

- The delay in the maintenance and improvement of the transport network has in a way resulted in the continued depreciation of the country's transport infrastructure.

# A Case Study of the Uganda Transport System in Perspective

- The collapse of the Uganda Transport Corporation that offered bus services to and from Kampala in the 1990's gave birth to the individualized approach to public transport, resulting into the current challenge of taxis and boda-bodas in the city
- Taxis are 14-seater buses licensed as PSV's (Public Services Vehicles) by the TLB (Transport Licensing Board) to operate for hire and reward but without any fixed routes

# A Case Study of the Uganda Transport System in Perspective

- Boda-bodas are motorcycles operating as informal taxis

- The level of service of public transport is very poor with no timetables, no fixed fares, no fare structure, no formal stops, no terminals, and no fixed routes.

- This results in long travel times, and a high level of noise and pollution.

# A Case Study of the Uganda Transport System in Perspective

- The current mode share in the city is around: 48% walk, 33% taxi, 10% boda-bodas and 9% other including private car. This makes walking the most predominate mode.

- The Government of Uganda is moving towards the implementation of National Development Plan II

- The National Development Plan (NDP) covers the fiscal period 2015/16-2019/20.

# A Case Study of the Uganda Transport System in Perspective

- There are five strategic objectives in the NDPII for the Transport Sector:
  - ✓ Develop adequate, reliable and efficient multi modal transport network in the country
  - ✓ Improve the human resource and institutional capacity of the Sector to efficiently execute the planned interventions
  - ✓ Improve the National Construction Industry(policy, legal, regulatory and institutional framework for the construction industry)
  - ✓ Increase safety of transport services
  - ✓ Develop adequate, reliable and efficient air transport network in the country

# A Case Study of the Uganda Transport System in Perspective

- To fulfill this objective I in the NDP II, the Sector plans to improve and boost the linkages in all the modes of transport. In this regard, the Sector's priority is:
  - ✓ Conduct a national study on multi-modal transport system.
  - ✓ Rehabilitate and maintain the District, Urban, and Community Access (DUCA) road network
  - ✓ Construct new and rehabilitate old bridges
  - ✓ Undertake periodic inspection of the pavement condition
  - ✓ Standard gauge rail development (Uganda Section)

# A Case Study of the Uganda Transport System in Perspective

- ✓ Develop inland water transport
- ✓ Establish Second Generation Road Fund to effectively control the revenue from Road User Charges for road maintenance
- ✓ Develop and maintain the roads to tourism, mining and agriculture producing areas
- ✓ Climate-proof existing and future transport infrastructure to ensure climate resilient transport systems
- ✓ Promote vehicle efficiency and technologies to reduce transport emission

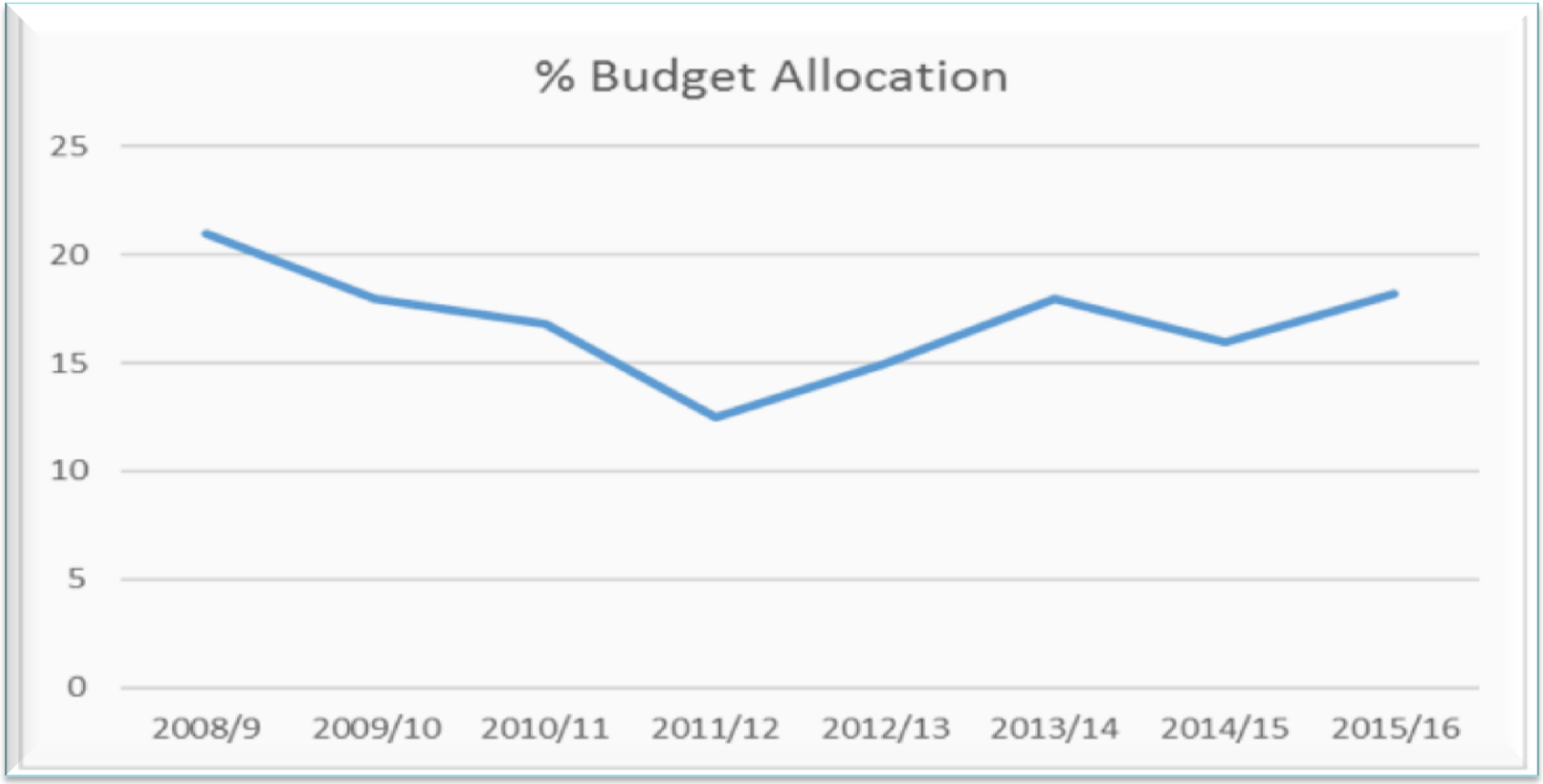
# Budget Allocation to the Transport Sector

- The Transport Sector was identified as a priority area for Government expenditure and was subsequently allocated 18.2 % of the budget in the FY2015/16 national budget.

- The proportion of the Government budget allocated to the Transport Sector has increased slightly to 18.7 % of the national budget for 2016/17. Trend in the financing of the Transport Sector is shown graphically below.

# Budget Allocation to the Transport Sector

## Trend in Budget Allocation to the Transport Sector as a Percentage of Total



# Budget Allocation to the Transport Sector

## Annual Percentage Increase in GDP (Total and for Transport) at Constant 2002 Prices

| No. | GDP | FY 2010/11 | FY 2011/12 | FY 2012/13 | FY 2013/14 | FY 2014/15 |
|---|---|---|---|---|---|---|
| 1. | GDP at Market Prices | 6.6% | 3.4% | 6.0% | 4.7% | 4.6% |
| 2. | Transport & storage | 7.8 % | 4.5% | 5.8% | 6.2% | 7.7% |

# The Need for Policy

- According to the National Budget Framework Paper FY16/17 on average 60% of UNRA's development budget will be allocated to upgrading several gravel roads by 400km annually.

- The other 30% of the development will be allocated to rehabilitation of the paved roads aimed at reducing the road maintenance backlog

- The key road projects that are expected to be funded in FY 2017 are the Kampala Entebbe expressway (UGX 307 billion) and the Northern bypass phase II (UGX 89 billion)

# The Need for Policy

- Some of the other key projects budgeted for UNRA under the FY 2017 development expenditure as listed in the detailed Central government estimate include:
  - ✓ Kampala flyover project (UGX 229 billion)
  - ✓ Transport corridor project (UGX 260 billion)
  - ✓ North Eastern Corridor UGX 102 billion)
  - ✓ Kibuye-Busega Mpigi (UGX 134 billion)
  - ✓ Kampala-Jinja Expressway (UGX 60 billion)

# Challenges in the Transport Sector Uganda

- Increasing the utilisation capacity of the funds available to the sector
- Inadequate research in  the sector has limited the development and growth
- Most roads in Uganda are narrow and road space is shared with road side parking.
- The few overhead crossings available do not seem to be popular and convenient from the pedestrian point of view
- City traffic jams growing by the day as more cars come onto the roads, aggravated by thousands of the mini bus taxis
- There are no pedestrian streets or walk-ways

# The Need for Policy

- The Ministry of Works and Transport is responsible for planning, developing and maintaining an economic, efficient and effective transport infrastructure and transport services by road, rail, water and air
- Transport sector policy aims at promoting cheaper, efficient and reliable transport services as the means of providing effective support to increased agricultural and industrial production, trade, tourism, social and administrative services

# The Need for Policy

- There is a need for an Urban Public Transport Policy for Kampala to set the direction for the re-organisation and improvement of public transport in the capital.

- A clear policy will assist the political leadership to see the above initiatives within the context of a coherent set of objectives.

# The Need for Policy

- **Air sector policies:** Uganda is a landlocked country. Air Transport is therefore of strategic importance to the nation as it guarantees an alternative gateway to the rest of the world.
- It provides the most efficient and quickest transport means to and from Uganda.
- The country's perishable high value commodities like fish, flower, fruits and vegetables are exported by air.
- The development of a safe, efficient and reliable air transport industry is thus among government's priority programmes.

# The Need for Policy

- **International Airport:** Uganda has one international airport, Entebbe International Airport, which is located about 40 kilometres South West of Kampala City.
- It lies astride the equator, for which reason it has often been described as the airport on the Equator.
- It also borders Africa's biggest fresh water lake, Lake Victoria.
- **Domestic Airstrips:**The country has the following domestic airstrips:
  - ✓ Arua
  - ✓ Gulu
  - ✓ Pakuba
  - ✓ Kidepo
  - ✓ Kasese

# The Need for Policy

- **Airfields:** The country has the following Airfields :
  - ✓ Soroti
  - ✓ Mbarara
  - ✓ Lira
  - ✓ Masindi
  - ✓ Jinja
  - ✓ Moroto
  - ✓ Tororo
  - ✓ Kisoro

# The Need for Policy

- **Uganda Railways Corporation :** Uganda Railways Corporation (URC) is a corporate body established by the Uganda Railways Corporation Act (1992).The mandate of the Corporation is:
  - ✓ the construction, operation and maintenance of railway, marine and road services both in and outside Uganda, for the carriage of passengers and goods
- **Mandate:** The current mandate of the Uganda Railways Corporation is as follows:
  - ✓ URC is a lead agency on matters relating to Railways both current and future developments
  - ✓ To monitor and evaluate compliance of the railway concessionaire and their respective concession obligations

# The Need for Policy

- ✓ Spur lines to Jinja and Port Bell ferry terminals on Lake Victoria for routes to Kisumu (Kenya) and Mwanza (Tanzania):21km
- ✓ The western line from Kampala to Kasese:333km
- ✓ The northern line from Tororo to Pakwach:641km and;
- ✓ The Busoga Loop line: 15km.

- The railway transport system in Uganda also includes rail wagon ferry services on Lake Victoria connecting Port Bell and/or Jinja to rail networks in Tanzania at Mwanza and Kisumu in Kenya.

- The Uganda rail track is metre gauge. The government is in the process of constructing a standard gauge railway between Tororo –Pakwach and Kampala- Tororo and Malaba -Kampala

# The Need for Policy

- **Rift Valley Railways (RVR):** The Rift Valley Railways consortium took over the operations of the Uganda and Kenya Railways after acquiring a 25-year concession in November 2006 to operate the Kenya-Uganda Railway line built by the British.
- It stretches from the Port of Mombasa to Kampala in Uganda, touching major economic towns within the region
- The Rift Valley Railways Consortium (RVR) manages railways transport of Uganda and Kenya. Currently the service that is provided by RVR is only cargo transportation

# The Need for Policy

- A total of 818,520 tonnes was hauled in 2015 compared to 682,800 tonnes in 2014 representing an increase of 19.9 percent.
- The Net tonnes by rail ferried through Port Bell decreased by 66 percent in 2015.
- **Railway Transport statistics, 2012-2015**

# The Need for Policy

**Railway Transport statistics, 2012-2015**

| Indicators | 2012 | 2013 | 2014 | 2015 | % Change 2014 | % Change 2015 |
|---|---|---|---|---|---|---|
| Net ton-km ('000) | 136,247.3 | 131,033.7 | 153,747.6 | 189,081.0 | 17.3 | 23.0 |
| Net tones | 612,755.0 | 572,713.0 | 682,800.0 | 818,520.4 | 19.2 | 19.9 |
| Net tonnes by rail ferries through Port Bell | 24,245.0 | 27,481.0 | 9,669.5 | 3,255.2 | -64.8 | -66.6 |
| Wagon Productivity (tkm/wagon '000) | 103.0 | 98.4 | 161.3 | 235.9 | 63.8 | 46.2 |
| Locomotive Availability (%) | 7.9 | 6.6 | 5.0 | 7.8 | -23.6 | 55.0 |
| Locomotive productivity (km/loco/day) | 1,888.1 | 2,082.0 | 2,206.3 | 2,136.4 | 6.0 | -3.2 |

# The Need for Policy

| Indicators | 2012 | 2013 | 2014 | 2015 | % Change 2014 | % Change 2015 |
|---|---|---|---|---|---|---|
| Wagon availability | 7.1 | 6.2 | 6.4 | 6.8 | 3.2 | 5.9 |
| Wagon Transit Time MSA-KLA (days) | 128.5 | 122.0 | 116.5 | 134.5 | -4.5 | 15.5 |
| Wagon turn- round time MSA-KLA-MSA (days) | 379.0 | 416.5 | 187.0 | 140.2 | -55.1 | -25.0 |
| Number of reported accidents | 172.0 | 204.0 | 255.0 | 549.0 | 25.0 | 115.3 |
| Number of fatalities | 9.0 | 8.0 | 2.0 | 2.0 | -75.0 | 0.0 |

***Source: Rift Valley Railways***

# The Need for Policy

- The takeover of the century-old line by RVR became necessary in order to restructure the railway to enhance its capacity for revenue generation.
- RVR is currently operating the Kampala-Mombasa route, but only for freight services despite the minimal use of the line, the cargo services offered by RVR are vital despite the fact the transport fares have gone up after the RVR takeover.

# The Need for Policy

- **Challenges of operating the railway transport system**. The following are the challenges of operating the railway transport system:
  - ✓ Cargo volume is still on the lower side. A lot of cargo still comes by road. The train is very slow as it moves at speeds of 25 kph.
  - ✓ There is about three times more traffic inbound than outbound. This causes a lot of congestion in rail yard in Kampala.
  - ✓ Across the country, the existing railway infrastructure is characterised by buried or old rails, dilapidated buildings and rotting wagons.
  - ✓ Out of the total of 1,266km rail network in Uganda, only 330km is operational. Lines were closed either due to their technical deficiencies or low traffic

**Source: Annual Abstract of UBOS**

# The Need for Policy

- **Road Transport :** The road transport is by far the most dominant mode of transport in Uganda, carrying over 95% of passenger and freight traffic
- The road network gives overall connectivity both along the main national and international highways and in access to individual towns, villages, workplaces and homesteads throughout the country
- The national roads currently make up about 25% of the road network and carry over 80% of the total road traffic. They also provide vital transport corridors to the land-locked countries of Rwanda , Burundi , South Sudan and parts of the eastern Democratic Republic of Congo to the sea.

# The Need for Policy

- The country's road network falls into four categories: national, district, urban and community access roads.
- National roads are managed by the Uganda National Roads Authority (UNRA).
- According to the Uganda National Roads Authority (UNRA), out of the 20,000km of the National roads, only 15% (2914km) is paved or tarmac
- Uganda's current road network comprises of 20,000Km of national roads (managed by UNRA), 13,000Km of district roads and 30,000 km of community roads

# The Need for Policy

- According to the 2012 statistical abstract from the UBoS, the length of paved roads increased from 3,112 km in 2010 to 3,264 km in 2011, and the length of unpaved roads decreased from 16,888 km in 2010 to 16,736 km in 2011
- **The following are the challenges facing the road sector:**
  - ✓ Policy Issues
  - ✓ High Cost
  - ✓ Lack of Local Capacity
  - ✓ Climate
  - ✓ Vehicle Over Loading
  - ✓ Inadequate Human Resources
  - ✓ Lack of Legal Framework

# The Need for Policy

- **Water Transport** : Uganda has a number of lakes which can be used for regional and internal water transport. Lake Victoria which shared with Kenya and Tanzania and Lake Albert shared with Democratic Republic of Congo can be used for regional transport in addition to internal transport. The other lakes and rivers of Uganda are only be used for internal transport.

# The Need for Policy

- Rift Valley Railways which has the concession to operate Uganda Railways operates 3 wagon ferries on Lake Victoria from Port Bell and Jinja in Uganda to Kisumu in Kenya and Mwanza in Tanzania. The maximum capacity of each wagon ferry is 880 tonnes
- **Government's support:** The Government of Uganda fully understands the importance of water transport as an essential component of the National Road network through the provision of "road bridges" between individual road systems severed by water. The government is in the process of replacing the aging ferries which act as road bridges.

# The Need for Policy

- **20 Year Water Master Plan** : In addition the government has already carried out studies to assess how to create an integrated road, rail and water transport.
- The recommendations in the study report are summed up into a 20-year Water Transport master plan with a capital investment of $484 million.
- However, the funds to implement the plan have not been mobilised

# THANK YOU