INFRASTRUCTURE DEVELOPMENT IN TANZANIA

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PRESENTATION LAYOUT

1. DEFINITION OF INFRASTRUCTURE
2. SOME MAJOR INFRASTRUCTURE PROJECTS IN AFRICA IN THE 21ST CENTURY
3. SOME INFRASTRUCTURE PROJECTS IN TANZANIA
4. INFRASTRUCTURE GROWTH IN TANZANIA
5. CONTRIBUTION
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INFRASTRUCTURE

DEFINITION

Infrastructure are the fundamental facilities and systems which include organizational structures, services and physical structures (e.g. buildings, roads, power supplies) serving a country, city, or a place necessary for its economy to function, economic develop and prosperity.
INFRASTRUCTURE ... CONT’D

CLASSIFICATIONS:

- Infrastructure
- Hard Infrastructure
- Soft Infrastructure
HARD STRUCTURE

Hard Infrastructure

Include:- Roads, Bridges, Railways, Buildings, Bridges, Irrigation Structures and Water supply systems.
SOFT STRUCTURE

Soft Infrastructure

Services and system e.g. Educational, Health, Legal, Courier, Financial, Security, Political Systems, Management Systems, Governance, Regulations, Standards, Policies, Procedures, Guidelines etc.
INFRASTRUCTURE … CONT’D

OTHER CLASSIFICATIONS INCLUDE:

- **SOCIAL INFRASTRUCTURE:** PARKS, CHILDREN PLAYGROUNDS, HOSPITALS, SPORTS AREA, ETC.

- **ECONOMIC INFRASTRUCTURE:** DISTRIBUTION NETWORKS, FINANCIAL INSTITUTIONS AND MARKETS, ETC.

- **MILITARY INFRASTRUCTURE:** BARRACKS, AIRFIELDS, ETC.

- **COMMUNICATIONS INFRASTRUCTURE:** POLITICAL NETWORKS, SOCIAL NETWORKS, INFORMATION TECHNOLOGY, BROADCASTING, COURIER ETC.
INFRASTRUCTURE .... CONT'D

PURPOSE OF HARD INFRASTRUCTURE INCLUDE TO FACILITATE:

• TRANSPORT OF PEOPLE AND GOODS
• PROVISION OF SAFE WATER
• SAFE DISPOSAL OF WASTE PRODUCTS
• PROVISION OF ENERGY
• TRANSMISSION OF INFORMATION

PURPOSE OF SOFT INFRASTRUCTURE INCLUDE TO:

• PROVIDE SERVICES SUCH AS HEALTH, EDUCATION, ETC.
• SUPPORT HARD INFRASTRUCTURE IN TERMS OF KNOWLEDGE AND SKILLS, MANPOWER, ORGANIZATION, CONTROLS, SECURITY, ETC.
ENGINEERS GENERALLY CONSIDER THE TERM "INFRASTRUCTURE" TO MEAN FIXED ASSETS THAT FORM A LARGE NETWORK OR HARD INFRASTRUCTURE, BUILT AND MAINTAINED INDEFINITELY.
FROM ENGINEERING PERSPECTIVE, INFRASTRUCTURE IS COMPOSED OF PHYSICAL FACILITIES SUCH AS:

- ROADS
- RAILWAYS
- BRIDGES
- TUNNELS
- WATER SUPPLY
- IRRIGATION SYSTEMS
- GAS SYSTEMS
INFRASTRUCTURE .... CONT’D

• SEWERS
• ELECTRICAL GRIDS
• TELECOMMUNICATIONS SYSTEMS
• AIRPORTS
• DAMS
• PORTS
• BUILDINGS
• INFORMATION TECHNOLOGY
SOME MAJOR INFRASTRUCTURE PROJECTS IN AFRICA

RAILWAYS

• USD 11 BILLION 1,400 KM RAILWAY FROM LAGOS IN THE WEST TO CALABAR IN THE EAST

• USD 8.47 BILLION, STANDARD GAUGE RAILWAY PROJECT IN KENYA
  • NAIROBI TO MOMBASA 472 KM WORTH USD 3.27 BILLION;
  • NAIROBI TO NAIVASHA WORTH USD1.5 BILLION;
  • NAIROBI TO KISUMU WORTH USD 3.7 BILLION;

• USD 4.5 BILLION 759 KM ADDIS ABABA TO DJIBOUTI ELECTRIFIED RAILWAY
SOME INFRASTRUCTURE PROJECTS IN AFRICA … CONT’D

RAILWAYS

• IN 1976 COMPLETION OF 1,860 KM TANZANIA-ZAMBIA RAILWAY (TAZARA), USD 406 MILLION OR TODAY'S EQUIVALENT USD 2.56 BILLION

• IT WAS THE THIRD-LARGEST INFRASTRUCTURAL PROJECT EVER UNDERTAKEN IN AFRICA AT THE TIME (AFTER THE ASWAN AND VOLTA DAMS).

• AT THE TIME IT WAS ALSO THE LONGEST RAILWAY IN SUB-SAHARAN AFRICA.
SOME MAJOR INFRASTRUCTURE PROJECTS IN AFRICA… CONT’D

POWER

• USD 5.8 BILLION, 3,050 MW MAMBILA HYDROELECTRIC POWER PROJECT IN NIGERIA WITH FOUR DAMS UP TO 150 METERS TALL.

• USD 14 BILLION, 4,800 MW HYDROELECTRIC POWER PLANT AT INGA FALL IN THE DEMOCRATIC REPUBLIC OF CONGO

• USD 4.8 BILLION, 6,450 MW, GRAND ETHIOPIAN RENAISSANCE DAM, THAT WILL BE THE LARGEST HYDROELECTRIC POWER PLANT IN AFRICA AND THE 7TH LARGEST IN THE WORLD.
SOME MAJOR INFRASTRUCTURE PROJECTS IN AFRICA ... CONT’D

POWER

• 1.2 BILLION USD, 542 KILOMETRES MTWARA–DAR ES SALAAM NATURAL GAS PIPELINE

• MTERA DAM IS THE LARGEST DAM IN THE COUNTRY IN TERMS OF HEIGHT, CREST LENGTH AND CONCRETE VOLUME. ITS RESERVOIR IS ALSO THE LARGEST MAN-MADE LAKE IN TANZANIA.

• 2,100 MW STIEGLER'S GORGE HYDROELECTRIC DAM POWER STATION IS PLANNED IN TANZANIA.
OTHER HYDROELECTRIC POWER STATIONS IN TANZANIA:

• HALE DAM
• KIDATU DAM
• KIHANSI DAM
• KIKONGE HYDROELECTRIC POWER STATION
• NYUMBA YA MUNGU DAM
• PANGANI POWER STATION
• SONGWE HYDROELECTRIC POWER STATION
SOME MAJOR INFRASTRUCTURE PROJECTS IN AFRICA … CONT’D

PORTS - BAGAMOYO

• USD11 BILLION IN A NEW MEGAPORT AND ECONOMIC ZONE AT BAGAMOYO

• CHINA, OMAN AND TANZANIA PLAN TO INCLUDE OVER 190 INDUSTRIES,

• LARGEST PORT IN EAST AND CENTRAL AFRICA.,

• ALSO LARGEST PORT CONSTRUCTION PROJECT IN THE AFRICA DURING THE TIME.
PORTS - BAGAMOYO

• TO MOVE 20 MILLION CONTAINERS A YEAR,
• IT WILL SERVICE CARGO TO AND FROM LANDLOCKED COUNTRIES:- UGANDA, RWANDA, BURUNDI, SOUTH SUDAN, ETHIOPIA, ZAMBIA AND THE EASTERN DEMOCRATIC REPUBLIC OF CONGO (DRC),
SOME MAJOR INFRASTRUCTURE PROJECTS IN AFRICA… CONT’D

• USD 8.5 BILLION NEW SUEZ CANAL PROJECT IN EGYPT,
• USD 5 BILLION, 912 KILOMETERS, NACALA CORRIDOR RAIL AND PORT PROJECT IN MOZAMBIQUE.
• USD 1.2 BILLION, LEKKI DEEP SEAPORT IN NIGERIA.
TANZANIA HAS MADE GREAT PROGRESS IN IMPROVING THE QUALITY OF THE ROAD NETWORK. (86,472 KM); 14% TRUNK ROADS, 25% REGIONAL ROADS

THE COUNTRY HAS ALSO MADE GREAT PROGRESS IN ICT NETWORKS INCLUDING THE NATIONAL ICT BROADBAND Backbone (NICT).

THE POWER INFRASTRUCTURE IS BEING IMPROVED AND DIVERSIFIED TO INCLUDE HYDROPOWER, FUEL AND GAS.
SOME INFRASTRUCTURE PROJECTS IN TANZANIA… CONT’D

• RURAL ELECTRIFICATION PROJECT

• THE PORTS OF DAR ES SALAAM, MTWARA, TANGA ARE ALSO UNDERGOING EXPANSION.

• THERE IS A TOTAL OF 3,569 KILOMETERS OF RAILWAY TRACK IN TANZANIA.

• ACCESS TO SAFE WATER PROJECTS EXTEND TO RURAL AREAS
SOME INFRASTRUCTURE PROJECTS IN TANZANIA.... CONT’D

• MAJOR BRIDGES: FOR EXAMPLE KIGAMBONI BRIDGE, RUFIJI BRIDGE, ETC

• DAR ES SALAAM METROPOLITAN DEVELOPMENT PROJECT TO IMPROVE URBAN SERVICES IN DAR ES SALAAM BY UPGRADING AND BUILDING PRIORITY ROADS AND DRAINAGE SYSTEMS.

• DAR ES SALAAM RAPID TRANSIT
SOME INFRASTRUCTURE PROJECTS IN TANZANIA.... CONT’D

• STANDARD GAUGE RAILWAY PROJECT - SGR
• TANZANIA STRATEGIC CITIES PROJECT (TSCP). THE PROJECT COVERS EIGHT RAPIDLY URBANIZING CITIES IN TANZANIA: TANGA, ARUSHA, MWANZA, KIGOMA, DODOMA, ILLEMELA, MBEYA AND MTWARA.
KIGAMBONI BRIDGE
DAR ES SALAAM BUS RAPID TRANSIT
Tanzania Strategic Cities Project
USD 130m

WORLD BANK GROUP
SOME INFRASTRUCTURE PROJECTS IN TANZANIA

IMPROVING THE TRANSPORTATION INFRASTRUCTURE IS A KEY PRIORITY FOR THE GOVERNMENT OF TANZANIA. IMPROVING THE NATION’S ROADS, PORTS, RAILWAYS, ENERGY AND AIRPORT INFRASTRUCTURE IS CRITICAL FOR THE COUNTRY FOR THE PURPOSE OF IMPROVING ITS INTERNAL AND EXTERNAL TRADE AND COMMERCIAL ACTIVITIES.
• THE PROJECTS ARE IN LINE WITH VARIOUS SECTOR POLICIES AND IMPLEMENTATION STRATEGIES

• FOR EXAMPLE THE IMPLEMENTATION STRATEGIES OF TRANSPORT POLICY OF 2011-2025, CALLS FOR A CONTINUED FOCUS ON THE DEVELOPMENT OF INFRASTRUCTURE, WITH A PRIORITY ON THE CONTINUED DEVELOPMENT OF THE NATION’S ROAD SYSTEM, PORTS, AIRPORTS AND RAILWAYS.
SOME INFRASTRUCTURE PROJECTS IN TANZANIA.... CONT'D

• TANZANIA’S NATIONAL TRANSPORT POLICY SETS GOALS AND OBJECTIVES FOR EACH OF THE MAJOR TRANSPORTATION SERVICES INCLUDING:

  • INCREASING RAIL FREIGHT TO 2.3 MILLION TONS ANNUALLY BY 2018 AND 4 MILLION TONS BY 2023
  • EXPANDING SEA AND LAKE PORT CARGO HANDLING BY 50 PERCENT BY 2020
SOME INFRASTRUCTURE PROJECTS IN TANZANIA…. CONT'D

• EXPANDING JULIUS NYERERE INTERNATIONAL AIRPORT’S PASSENGER AND CARGO HANDLING CAPACITY

• IMPROVING URBAN TRANSPORTATION NETWORKS TO IMPROVE MOBILITY AND REDUCE CONGESTION

• THE DEVELOPMENT OF MORE EFFECTIVE INTERMODAL TRANSPORT LINKS

• DEVELOPMENT AND STRENGTHENING OF INSTITUTIONS
JULIUS NYERERE INTERNATIONAL AIRPORT
TERMINAL BUILDING AT SONGWE INTERNATIONAL AIRPORT
INFRASTRUCTURE GROWTH

• ELECTRICITY INSTALLED CAPACITY INCREASED AT AN AVERAGE RATE OF 1% PER YEAR

• ELECTRICITY MAXIMUM DEMAND INCREASED BY 4% PER YEAR

• RURAL ELECTRIFICATION PROJECT IS ROLLING ON

• ROAD NETWORK EXPANDED AT 10% PER YEAR

• PAVED ROAD HAVE INCREASED AT A RATE OF 14% PER YEAR
INFRASTRUCTURE GROWTH

- **RAILWAY CARGO** transport has been shrinking at a rate of 10% per year.
- **MARINE CARGO** has been increasing at a rate of 12% per year.
- **AIRPORTS** have been receiving passengers at a growing at rate of 9% per year.
- **MOBILE** subscribers are growing at 12% per year.
- That’s the **COUNTRY** is developing at 7% overall.
CONTRIBUTION

• TANZANIA’S GDP WAS AROUND TZS 100 TRILLION ABOUT USD 50 BILLION

• CONSTRUCTION IN TANZANIA CONTRIBUTED 8.8% TO ITS GDP IN 2008 AT USD 1.9 BILLION AND 13.6 % TO ITS GDP IN 2015,

• REAL ESTATE ACCOUNTED FOR 3.7% OF THE COUNTRY’S GDP (USD 1.8 BILLION) DURING 2014.

• WATER SUPPLY ACCOUNTED FOR USD 240 MILLION OR 0.5% OF GDP IN 2014

• POWER SECTOR CONTRIBUTED ABOUT 1% TO THE COUNTRY'S GDP IN 2015.
FINANCING

• AS AN EXAMPLE THE UNITED STATES FOR EXAMPLE, PUBLIC SPENDING ON INFRASTRUCTURE HAS VARIED BETWEEN 2.3% AND 3.6% OF GDP

• TANZANIA GOVERNMENT BUDGETED IN 2017/2018 ABOUT 4.5 OF GDP FOR INFRASTRUCTURE DEVELOPMENT
FINANCING

- Irrigation, water supply, sanitation, transport and energy infrastructure financed mostly by government.

- ICT and telecommunications and some other infrastructure are by both government and private sector.
CONCLUDING REMARKS

• TANZANIA HAS SUSTAINED RELATIVELY HIGH ECONOMIC GROWTH OVER THE LAST DECADE, AVERAGING 6–7% A YEAR.

• TANZANIA WOULD NEED TO INVEST MUCH MORE ANNUALLY IN INFRASTRUCTURE DEVELOPMENT TO MEET ITS ECONOMIC TARGETS OF REDUCING POVERTY
CONCLUDING REMARKS

• LOCAL FIRMS PARTICIPATION IN LARGE INFRASTRUCTURE PROJECTS SHOULD BE ENCOURAGED AND SUPPORTED SO THAT THEY GET EXPERIENCE AND GROW AND REDUCE UNEMPLOYMENT.
WHENEVER A TASK IS SKILLFULLY ACCOMPLISHED
IT IS REFERRED TO AS **ENGINEERED**
THANK YOU