

TRANSPORT INFRASTRUCTURE DEVELOPMENT IN NIGERIA; A CASE STUDY OF KEBBI, SOKOTO AND ZAMFARA STATES

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ABSTRACT

Nigeria is one of the fastest growing economies in the world and it has one of the largest road networks in the African continent. The country's socio-economic ambitions are directly based on its transport infrastructure. However, the country's current network transport infrastructure is in dismal state. Although the country has taken up ambitious plans to enhance its transport infrastructure by constructing new rail line and concession of the airports. This research discovered the following critical factors that could contribute to the development of transport infrastructure in Nigeria, such as good planning, coordination between federal and state governments on transport policies, availability of technical expertise, assets management and eradication of corruption in awarding contracts and project execution. The study used qualitative research approach by reviewing related literatures.

Keywords: Infrastructure, Transport, Development, Road, Railway, Seaports.

INTRODUCTION

Nigeria is one of the fastest emerging economies in the world and a prominent regional player in the African Continent. The country has abundant natural resources and a large population, thus making it one of the important economies in the world. In fact, in 2014, Nigeria overtook South Africa as the largest economy in Africa. In spite of its vibrant economy, the country's infrastructure, especially its road transport infrastructure is in a decaying condition.

However, the Government of Nigeria has identified improving transport infrastructure as one of the foremost goals of the country. Nigeria has one of the largest road networks in Africa, with more than 230,000 kilometres of roadways, which includes 75,000 kilometres of highways and expressways (Ohakwe, et al., 2011). Nigeria's Federal Roads Maintenance Agency (FERMA) operates, maintains and manages road transportation in Nigeria.

Inefficient transport infrastructure adds more than 7 to 8% to the cost of doing business in Nigeria, which can be a detrimental factor for the country to attract foreign investments. The current Nigerian Government plans to bring blanket reforms across all divisions of transport infrastructure in the country, so as to substantially improve avenues for investment.

Public and Private sectors are working in partnership to improve transport infrastructure in the country, road transportation plays an important role in the country, as it not only facilitates transportation, but bulk of the domestic business is carried out by using roads and highways in the country. Road transport in Nigeria is divided into three tiers, Federal, State and Local Government.

Of all the three tiers the federal or primary roads facilitate about 70% of passenger and cargo traffic (Ighodaro, 2009). This indicates the important of road transport in Nigeria. Moreover, Nigeria's railways and waterways are relatively underdeveloped compared to its Roadways, thus putting more stress on its existing road transport infrastructure. However, the Federal Government of Nigeria has made elaborate plans to rehabilitate and upgrade existing highways and other roads.

Apart from this, the Government has allocated US \$ 4.63 billion for construction of new roads, including highways and expressways. Apart from this the country has allocated US \$ 1.66 billion for regular maintenance of these roads (Dike, et al., 2012). All these plans are part of the country's medium term economic framework for the period 2012-2015. The government is also inviting many private companies to form Public Private Partnerships (PPP) to leverage more advantages as part of a major initiative to revamp its existing road infrastructure.

Financing these billion-dollar investments is a challenging task for the government, according to a Government report, the country needs about US \$ 3 trillion over next thirty years to build, operate and maintain adequate road transportation infrastructure in the country (Kayode & Babatunde, 2013). Effective business models for cooperation are required to raise adequate capital to fund these multi-billion projects. The Government of Nigeria has opened up some of its public-sector corporations to private investment, so as to improve the efficiency and performance of these poorly managed organizations.

The Public Private Partnerships (PPPs) are becoming very popular in many parts of the world; any many mega projects including construction of highways, metro rails, bridges, airports have all been executed across many countries in the world. Similarly, in Nigeria there is a visible push for this model, especially to construct and maintain new and existing highways in the country. The PPP model is helping the country to close its infrastructure gap (Orji & Mba, 2010). There are many prominent highways in Nigeria, each of these highways, not only connect different parts of the country, but also connect different cities located elsewhere in neighbouring countries.

LITERATURE REVIEW

Transportation plays an important role in a nation's economic growth and development, irrespective of the demographics and geography. Nigeria is one of the fastest growing economies in the world and with about 182 million people and an area of 923,768 sq.km, it is considered as one of the largest countries in Africa. As of 2015, the country's total GDP is about \$1.109 trillion and the country's growth rate is expected to reach 7% in 2016 (Federal Ministry of Works, 2013). A country, whose economic potential is expected to match some of the largest and fastest growing countries in the world, however has a dismal public transportation system. Strong and effective road transportation is critical for maintaining strong economic and social growth and prosperity.

Sokoto state's Transport Authority provides transport services, both intra and inter- state. It has a fleet of about 32 vehicles. For air transportation, there is an airport of international standard in the state capital. The state has no train service. The state capital is well linked with all its 23 local government areas; it has a commendable network of single and dual carriage-ways.

Road and water are the only means of transportation in Kebbi state, there are no rail and air links, save for an airstrip at Zauro that can accommodate light aircraft. Roads generally account for 94% of all movements, while water accounts for the remaining 6% (Iliya 2000). The state is served with a Network of 1,033km federal roads (trunk A) and 822km state roads (trunk B). There are a number of rural feeder roads. An important aspect of road transport development in the state is the construction of a bridge over the Niger at Tuga in Bagudo local government area, thus linking the state to other parts of the country. Although not fully developed, water transport is an important means of transportation in the state. Small boats and canoes ply the River Niger, carrying goods and people and the river navigate for a distance of about 248km from Dole Kaina/Lolo down to the northern portion of Kainji Lake at Warra.

Zamfara state is served with a good road network (Trunk A) which links it to the neighbouring states of Sokoto, Kebbi, Katsina, Kaduna and even to Niger Republic. Most of the LGAs headquarters are linked to Gusau, the state capital, with good tarred roads. The state Transport Authority has many buses plying between the state and other states in the federation. There is a rail line from Kaduna, which passes through Gusau and terminates at Kaura Namoda. There is a functional airstrip at Gusau to aid air transpiration to and from the state.

TRANSPORT INFRASTRUCTURE IN NIGERIA

Emerging economies need good transport infrastructure in order to meet growing demands of business and public transportation. Good transportation greatly enhances growth and contributes for even stronger economic performance. Ekpudjureni (2012) asserts that ease of doing business is an important indicator in attracting investments, and quality of transport infrastructure plays a pivotal role in determining ease of doing business. However as per a report on “Reforming road transport infrastructure in Nigeria” published in 2012, Nigeria is ranked very low in quality of its transport infrastructure.

The Federal Roads Maintenance Agency (FERMA) is an autonomous body which takes up all works pertaining to road planning, construction and maintenance of Nigerian Roads. Both state governments and federal government share funding for road transport, however federal roads in Nigeria account for only 17% of the total road network in the country, while handling more than 80% of vehicular traffic in the country (Federal Highway Administration, 2012). This poses a great challenge on the federal government to increase funding, considering a population growth of 2.54% per annum. Moreover, the number of vehicles added on to the country’s roads has been increasing at the rate of 11% per annum, thus compounding to the already existing challenges of road transport infrastructure in Nigeria.

The country now boasts of Road Asset Management System (RAMS), which is an integrated and coordinated systems established by Federal Ministry of Works, FERMA and Road Sector Development to deal with all kinds of road transport infrastructure problems (The Nigerian National Bureau of Statistics, 2014). With the support of Ministry of Finance, the Nigerian government is currently aiming to bring cost effectiveness by establishing infrastructural

developmental programmes and providing funding at all levels in the government for developing road transport infrastructure.

CAUSES OF INFRASTRUCTURE FAILURES

Physical infrastructure, especially transport infrastructure plays an important role in the growth and development of economy. There are many reasons for infrastructure failures, these failures may be different for different countries, and however there are some common causes for most of the transport infrastructure failures (Teglasi, 2012). Lack of funding, community opposition, political differences, agency conflicts and technical failures are the most common causes for transport infrastructure failure. Funding is the most important factor in any kind of infrastructure project. Big projects usually run into millions of dollars, and it is important that project financing is properly secured before work on the project begins.

Land acquisitions can also lead to number of litigations, which may take years to resolve. Lastly technical failures also cause substantial damages in infrastructure development. According to KPMG (2010), there are six factors that are crucial for success of a transport infrastructure project, and these factors play a significant role in determining whether an infrastructure project can be a success or a failure.

- Project environment must be conducive for efficient functioning of the project team.
- Most infrastructure projects fail because of lack of clear goals and ineffective planning (Allport & Travers, 2010).
- Political control and sponsorship is very critical, before any major transport infrastructure project is taken up
- It is important to assess the political risks and have clearly defined ownership and responsibilities for project outcomes.
- Effective planning is very important for infrastructure projects, as they require heavy investments
- Good infrastructure and transport planning must form the basis for decision making.

FINANCING ROAD TRANSPORT INFRASTRUCTURE PROJECTS

Nigeria is one of the fastest growing economies in the world, and transport infrastructure is vital for sustaining its social and economic developmental goals. According to Nigerian Federal Ministry of Transport (2012), the country requires more than US\$3 trillion in transport infrastructure projects over the next thirty years to meet the growing demands for adequate transport infrastructure in the country. Financing road transport projects has been quoted as one of the top priorities of the government.

The federal government is the primary source of finance for building road transport infrastructure in the country. Most of the roads including highways are controlled by states and

federal government, in fact the local/state governments control over 67% of the roads in Nigeria compared to 33% by the federal government. A majority of the financing problems concerning Nigerian roads are based on local factors; hence it is a challenging task to implement a uniform financial policy on road transport development across Nigeria (Oni, 2010). However, like in many advanced economies, financing options for infrastructure projects are many and are implemented based on existing conditions and availability of resources.

Odeleye (2012) states that private sector financing is still in nascent stage in Nigeria, and majority of financing of road infrastructure projects in the country is provided by the Nigerian government. There is a tremendous need for road transport development in Nigeria, because of long term negligence and underinvestment in this sector.

Public sector financing in road transport in Nigeria faces great challenges, as there are also other significant areas such as sanitation, healthcare, education and other high priority areas which require substantial amounts as investments. Similarly, the federal government is tightly constrained by national budgets, owing to insufficient borrowings as well as creation of more wealth in the country (Igwe, et al., 2013). Furthermore, getting capital from external sources is turning out to be a critical component to meet transport infrastructure needs of the country.

Public-Private Partnership (PPP) model has been widely used across numerous European, North American and Asian countries since many years in various sectors including transport infrastructure projects. The PPP model allows private sector investments and expertise to be used for infrastructure projects, and the revenues are shared between the government and private companies (Odeleye, 2012). The PPP model has many benefits including reduced political risk, leveraging public funds, attracting international sponsors and a clause for risk sharing.

Lack of adequate capital, opportunities for risk diversification and availability of emerging technologies makes investments for private sector a lucrative opportunity for governments (Rodrigue, 2013). The PPP model, as the name suggests is collaboration between the public sector and the private sector so that synergy between these two sectors can yield greater results.

Primarily the PPP model works on three types of agreements.

- Build-Develop- Operate – The private sector leases existing asset from the government, invests capital so as to develop infrastructure and then operates the assets as per the contract with the government.
- Build-Own- Operate – In this sub class of PPP, the government provides an opportunity to a private company to construct and operate an asset as per its specifications, although the final ownership remains with the private company, once the asset is built
- Build-Operate- Transfer – In this type of PPP, the private entity is entrusted to construct the infrastructure, operate for specified year as agreed with the government and then transfer it back to the government.

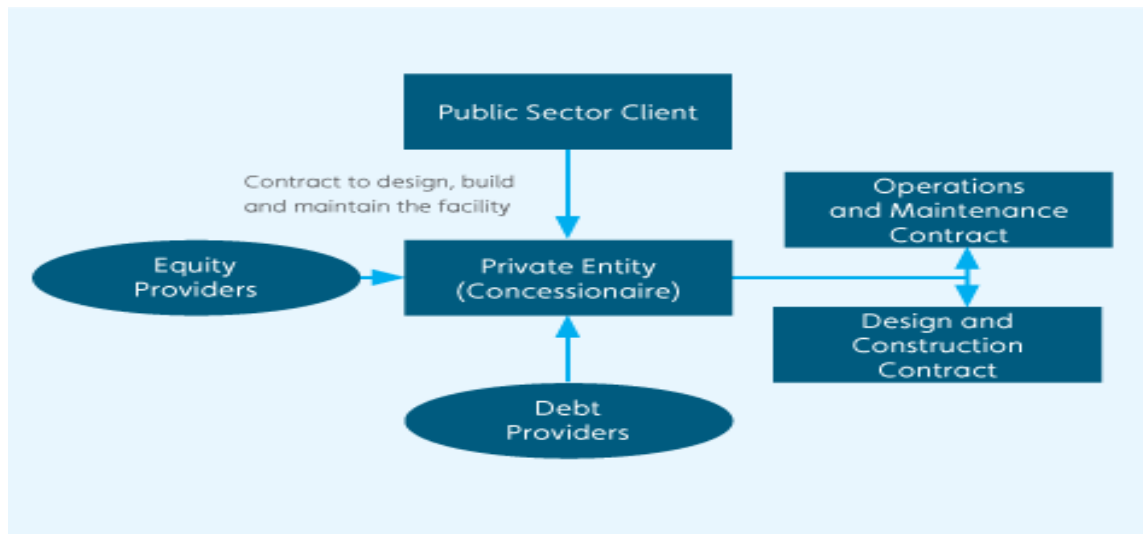


Figure1: Public Private Partnership.

Source: nzsif.co.nc

The advantages of this model are that it fills infrastructure gap, increases efficiency of operations, and allows for optimal risk allocation and pricing. Moreover, both public sectors companies and private sector companies get an opportunity to share resources to build best possible transport infrastructure (US Department of Transportation, 2011). In spite of many advantages of PPP model, the model has some limitations such as the cost of financing may be on the heavier side for private sector companies, there are chances of increased transaction costs as the infrastructure project progresses. Capital investments can be futile if both parties do not honour their commitments towards the partnership.

Asset Management

Road networks constitute one of the largest public assets and are generally owned by governments. Organisations or institutions responsible for transport infrastructure usually oversee road assets, including its maintenance, operations and replacements. Transport assets, like all other assets require human and financial resources for achieving asset performance objectives. Querioz and Kerali (2010) explain that since road networks are scarce, they must be handled more effectively. Moreover, since road networks come under public property in most countries, there is an increased public scrutiny from people for improved levels of safety, reliability, quality and comfort from road infrastructure.

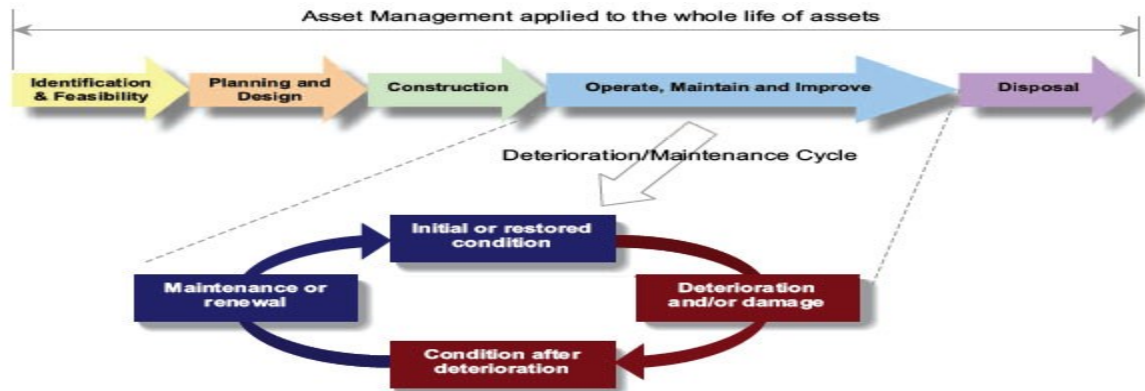


Figure 2: Asst Management Model
Source: Transportscotland.gov.uk

The concept of managing roads as assets is an important factor in improving quality and durability of road infrastructure performance. The Federal Highway Administration (1997) mentions that road assets comprise of many aspects, including physical infrastructure, human resources, equipment and material and other items such as computer systems, methods, processes and technologies.

In spite of spending vast amount of resources on building transport infrastructure, if there is no proper maintenance or management of these assets, then the entire efforts put on the project becomes useless. Hence it is important to manage these assets efficiently. The Department of Transport (2012) assets that transport infrastructure assets must be managed using a life cycle approach. That is government or private sector must ensure that cost effective management strategies are developed to manage long term commitments. Moreover, it is important to manage risks that are linked to asset failures (Ang, 2014). Finally, there must be effort for sustainable use of available physical resources and there should be continuous improvement in asset management processes.

Bryant (2014) explains that every road asset has a capital value, which can be calculated from its repair costs or replacement costs. This way of valuation of road assets helps in building a common language that can be understood by financial managers and representative road authorities. In advanced countries, governments are responsible for implementing standardised asset inventory, valuation and depreciation methods, even for road infrastructure assets, as used in other public and private organisation. This brings an element of credibility and reliability on government’s spending on road infrastructure projects.

Any road transport infrastructure requires significant investments, and hence valuation in the context of asset management helps in reporting road assets in monetary terms. This is very useful in reflecting the physical conditions of a road network, which otherwise is not possible. Valuation of road assets is also useful in decision making, as it helps governments and private entities to analyse effects of using different financing strategies (Boadi, et al., 2015). Infrastructure assets are valued using different approaches, and depending on the country and its preference, governments or institutions can follow any or some of the approaches mentioned below

- Economic value – This approach is used in valuation of road assets, when the value of efficient movement of goods and people is used to derive the value of road assets for the benefit of whole community
- Historical cost – This method uses historical cost, or the cost expended on constructing a road asset. It is usually calculated on the basis of accumulation of all costs since the beginning of construction to the inception of asset for public use
- Current replacement cost- This approach is used in the context of engineering costs, that is taking into account existing market conditions and cost efficiencies resulting from improvements in technology for replacing the road assets with a similar road asset.

In straight line depreciation, the values of the asset are reduced constantly over a period of time and in condition-based depreciation, the condition of road assets, determine the percentage of value to be reduced. Road assets which are subject to vehicle loading are usually depreciated using straight line method and for assets such as bridges and pavements, condition-based depreciation is used.

Asset management systems can provide wide range of benefits to users and governmental agencies by

- Providing necessary information on transport infrastructure (both external and internal to the administration)
- Asset usage, condition, expected benefits and level of usage
- Road network performance
- Asset management tools and processes and
- Investment decisions
- Resource development

There has been wide spread increase in traffic, and more specifically in developing countries. With countries becoming strong economically, income levels of people have allowed them to buy more vehicles, causing burden on already exasperated road infrastructure in many developing countries. There is an emergent need to establish exclusive agencies or institutions to handle road transport development in most countries. While many countries including Nigeria has an exclusive agency that takes care of road transport development in the country, including providing increased investments, much of the investments did not yield desired benefits (Igwe, et al., 2013). However, a sustained long-term road transport infrastructure development, which delivers value on investments, is necessary. Asset management systems works in achieving this objective, if efficiently planned and managed.

An important aspect of asset management plan is lifecycle planning. Lifecycle planning for road infrastructure assets provides an objective way of evaluating and comparing alternative ways of achieving required performance and service levels. Road infrastructure assets can be build using different types of capital structuring; however, asset management systems also help in taking into account the operational expenditure for each type of capital investment.

SUSTAINABILITY ISSUES

Human beings should thrive for sustainable development across all areas, including road transport, which is a major contributor for carbon emissions and cause of climate change. While people are entitled to lead a healthy and productive life, a consequence of such a life style must not impact environment that we live in (Wilmot & Wilmot, 2003). Worldwide, road transport is considered one of the primary reasons for climate change, and there are various factors associated with road transport that cause pollution and in turn affect sustainability of climate. Increase in traffic will lead to higher levels of noise pollution, air pollution and fuel consumption which can negatively impact all living beings and the environment.

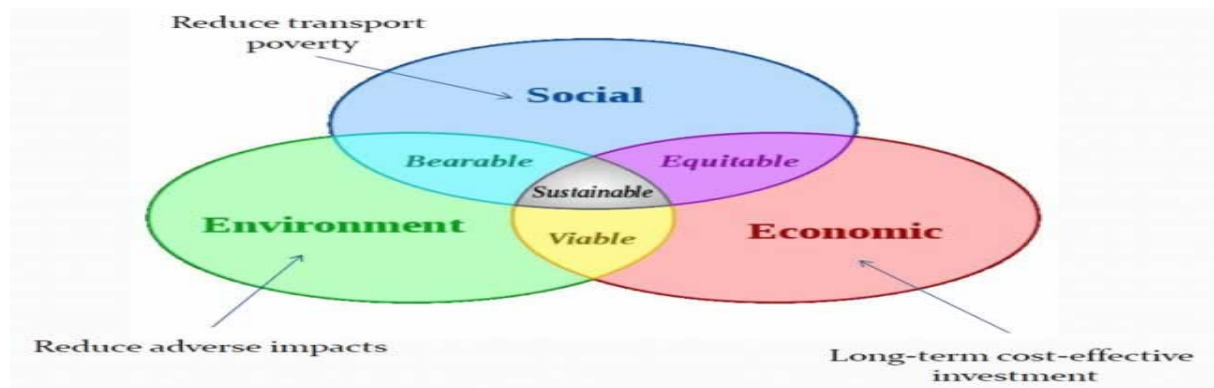


Figure 3: Sustainability Issues

Source: commons.wikimedia.org

- Economic sustainability - even though sustainability is always based on ecological goals, sustainability cannot be achieved, unless economic priorities are fulfilled. This includes the impact of sustainability goals on economy, employment and provision of goods.
- Environmental sustainability – this remains one of the main focus of sustainability, the purpose of having sustainability is to ensure that ecological stability is maintained, and carbon emissions and other types of pollutants do not impact environment. Environmental sustainability must guarantee the stability of eco-systems at local and global level
- Social sustainability – a sustainable development program must finally fulfill the needs of the society, fair distribution of resources, and stable human development are the key goals of social equity and ultimately social sustainability

Pears (2004) explain that sustainable transport is the essence of having transport infrastructure that can be adaptable to the changing needs of the society, environment and climate impacts. Evaluating sustainability in transport infrastructure is not only a responsibility to check usability of infrastructure over a period of time, but it is also important to reassess the impact of changing infrastructure on climate change (Hutton, 2013). Most modern transport infrastructure are designed to be climate friendly with minimal carbon emissions, not only does this help in increasing the satisfaction level of travelling but it also helps in keeping the environment clean and

pollution free. Sustainable road transport infrastructure can be built only when sustainable construction process has been incorporated as a means of sustainable development.

Bringing sustainable development in road transport is not an easy task; costs play an important role in framing a sustainable transport policy. In principle, there are two types of costs, which have an impact on developing sustainable transport system policies; they are internal costs and external costs.

- Internal costs – these are the costs that are expended on construction and maintenance of transport infrastructure, usually these costs are recovered from the users of the transport infrastructure. Generally, these costs form the basis for all decisions in building infrastructure assets
- External costs – external costs usually stem from negative effects of transportation, this includes costs arising out of congestion, pollution, emissions and other similar factors which negatively impact the users of the infrastructure and the eco-system.

External costs need to be planned and controlled effectively in order to bring any kind of substantial change to the process of designing and implementing sustainable road transport infrastructure (Litman & Burwell, 2006). This can be achieved by using regulatory approach, where procedures, restrictions and other rules can be imposed on individuals and institutions to curb external costs.

Similarly, cooperation agreements can be used to agree on some common framework or consensus to implement and achieve policy goals and objectives towards achieving sustainability (May, 2013). Even market-based approaches, such as economic incentives or disincentives can be used to achieve policy goals. Governments can alter or change price of private transport supply and demand to influence users' decisions on using public transport more often.

Emissions caused by vehicles causes greenhouse effect and changes in climate, an effective way to control this is by consuming less fuel. By undertaking good road infrastructure planning, such as building bypasses, reducing distances through construction of flyovers, bridges and gravel roads, fuel efficiency can be increased in vehicles. As this not only reduces distances, but also saves fuel. By having bypasses, capacity of regular roads can be increased, and traffic jams, and vehicle speeds can be improved, which will reduce fuel consumption and increase fuel efficiency (Boschmann & Po Kwana, 2008). This reduces pollution and helps in smoother driving, which reduces over-consumption of fuel, thus reducing carbon emissions and negative impact on the climate.

The International Federation of Consulting Engineers (2012) mention that for assessing sustainability in road transport infrastructure projects, it is important to use certain appraisal and decision-making techniques to assess sustainable project viability, assess the road design process including applicable standards and agreements and lastly checking the project frameworks and models for sustainability assessment.

Zuofa and Ocheing (2014) have proposed that road transport infrastructure projects must be evaluated for their sustainability and there are three main methods that help in decision making process, Cost Benefit Analysis (CBA) is a widely used tool for evaluating infrastructure projects,

for road projects, the CBA is used to compare financial costs with long term benefits of the project including whether sustainability criteria and characteristics have been met in the process of project completion.

The Multi Criteria Decision Analysis (MCDA) is another important tool for choosing alternative projects which can have important social, environmental and economic impacts. The MCDA is very useful in this context, as it takes multiple criteria and opinions of all stakeholders in selecting or rejecting a sustainable road transport infrastructure project (Igwe, et al., 2013).

The Life Cycle Assessment (LCA) is one of the most popular tool to assess the environmental performance of a project or a product. It is based on various factors, at various stages in a life cycle of an infrastructure project to analyse the impact of the project on environment. For social, economic and environmental benefits, it is not only important to have good quality road transport infrastructure, but also to have a sustainable infrastructure which is durable, environment friendly and provide wide range of other benefits, which increases project operability and durability. Hence it is important that all outstanding issues on sustainability and asset management of infrastructure projects are duly addressed before undertaking road transport development works.

Policy and Framework

The Nigerian constitution allows both the Federal and State Governments to spend on investments and maintenance of road and rail infrastructure. Hence both the governments at the federal level and state level have their own authority on their respective transport infrastructure assets. While this allows for more transparency and accountability, it will be difficult for the country to build and operate road transport infrastructure without effective coordination and collaboration.

The current policy on road transport infrastructure at state and federal levels must establish agencies for public ownership and private operation of transport infrastructure assets. Furthermore, there should be agency to regulate prices, standards and practices for maintenance of these transport infrastructure projects (Bueno, et al., 2013). This will ensure that transport infrastructure in the country reflects the growing need for the country to attract more investments and adds value to the economic output of the country.

According to Igodharo (2009), Nigeria has massive infrastructure deficit among all emerging economies in the world, and much of the deficit is in the road infrastructure sector. The McKinsey Report states that the Nigerian Government must spend at least US \$ 1 trillion in the next 15 years to bridge this infrastructure deficit in land transport sector (Bofinger, 2011). Apart from creating massive infrastructure with this amount, it also fuels high GDP growth and creates tremendous employment opportunities.

According to Elias and Okoli (2015) the Nigerian government has been funding major road infrastructure projects across many of its highways as part of its Federal subsidy reinvestment and empowerment program, the government has allowed 5 years income tax holiday on all major road infrastructure companies as part of its financial and tax reforms for encouraging infrastructure development in Nigeria (Odeleye , 2012).

Likewise, many tax sops and equity programs have been implemented for transport development; however, the current infrastructure deficit makes these initiatives insufficient. As part of taking the road infrastructure development to next level, private sector investment from within and outside the country is required.

Private sector investments can only happen if the government provides a stable environment that is free of political and economic risk, unless these things do not happen, private sector investments in road transport infrastructure will remain elusive. Certain bills which are projected to address infrastructure deficits such as Federal Roads Authority Bill (2013), which is pending in the National Assembly does not address some key issues concerning private sector investment, which can discourage foreign investors. The government of Nigeria has proposed four-point agenda to upgrade its existing road transport infrastructure in the country in the coming years (Federal Government of Nigeria , 2010)

- Overseeing planning, construction, maintenance and rehabilitation of all federal roads in the country
- Undertaking all constructing and maintenance of bridges along all federal highways
- Increasing the provision of facilities such as street lights, road markings and signs on all federal roads across the country
- Providing consulting and professional services to state governments on improving road transport infrastructure at state level

The Nigerian government, under the Ministry of Works monitors the works of Federal Roads and Maintenance Agency (FERMA) and Surveyor General of the Federation to make the country's road network developmental programmes more effective.

A state policy can be described as a set of ideas, principles, aspirations and vision for betterment of the society, undertaken by a federal or state government. Transport infrastructure is usually in the realms of federal government, and transport policy outlines the process of regulating, managing and controlling transport infrastructure in order to facilitate effective and efficient operations of economic, financial, social and political objectives of a country by spending lowest possible social costs (Umar, 2014). Transport policy is an important policy document that outlines or provides a framework for regulating transport, in order to provide its citizens, efficient, safe, comfortable and cost-effective transport systems.

Like in all developing countries, corruption has become a major bottleneck for socio-economic growth, the role of corruption in impinging growth and development is far more visible in road transport sector than all other sectors in Nigeria. Since large amounts are invested into infrastructure projects, there is a high scope for corruption in these projects. This not only delays the projects, but also creates sub-standard infrastructure assets, causing great damage to the economy and compromising peoples' safety (Sieber, 2012). The transport sector has many characteristics that make its more vulnerable to corruption, especially in developing countries.

- Large budgets, usually running into millions of dollars, and forming significant proportion of national budget
- Many entry points at various levels of project implementation, including planning, construction, maintenance, permits and contracts
- Weak control mechanisms to limit corruption
- Political interference, especially in large scale projects

All these factors usually increase the chances of corruption. Weaknesses in frameworks such as policy, legal framework and regulations can further increase chances of corruption. Corruption at the highest levels can cascade down to various project levels, and can affect various stages of road infrastructure projects, this includes planning and preconstruction to post completion and maintenance of infrastructure projects. Peterson and Chauduri (2007) explain that corruption risk can greatly increase, if there is any procurement activity, and since road transport infrastructure projects requires large resources and material for construction, transport sector is prone to corruption.

Good governance in transport policy and planning is one of the major steps to eliminate corruption in the road transport sector. Fraud is usually enhanced because of poorly designed transport policies, inadequate regulations and no proper enforcement agencies. It is important for governments at the federal and state governments to eliminate corrupt practices in the transport sector (Odeleye , 2012). Usually there is no single approach to achieve this purpose; however, governments have a pivotal role to transform public sector organisations by implementing effective transport sector policies, undertaking institutional reforms, improving and checking procurement activities and increasing anti-corruption audits.

The National Transport Policy document published in 1993 finds that there is a great “imbalance between the needs of Nigerian economy and society for adequate transport systems and the ability of its transport sector to meet such demands”. Even after twenty years the situation has remained very much same, except for some improvements dispersed across different areas in the road transport sector (Adam Smith International, 2013). In spite of similar transport policy documents published over the years, the road transport situation in the country remains grim. Even though some major improvements have been accomplished, especially in the last decade, the overall demand for transport facilities does not meet the supply.

The Nigerian government has proposed high level policies for attaining its goals for road transport development by the year 2020. Most of the policies intended to develop road transport infrastructure in the country are inter related with other areas and objectives for overall development of the economy and social indicators (Federal Ministry of Transport, 2015). Nigeria’s comprehensive Millennium Development Goals (MDGs) require the transport policy to be reliable, functional and effective which can fulfil the growing demands for sustainable road transport. The latest National Transport Policy recommends certain steps or guidelines for planning, management, regulation of transport sector, these guidelines include

- Providing necessary and relevant information to all stakeholders on the government’s decisions and actions on road transport infrastructure development.

- Identifying any gaps and short comings in the developmental programme and addressing them through consensus among various governmental agencies
- Explaining how different modes of transportation can achieve common goals of sustainable transport system in the country
- Enhancing the system of monitoring and accountability in all public and private partnership agreements
- Ensuring that there is a consistent approach in the application of all policy matters concerning the development of road transport infrastructure in the country

The major objectives of the government's road transport policy and framework is to encourage public-private partnerships in all major road infrastructure projects, by achieving results that are based on realising economic, social and environmental benefits (Federal Government of Nigeria , 2010).

Economic objectives

- To accelerate investment opportunities in road transport infrastructure and ensure that existing infrastructure is upgraded or repaired to meet sustainable transportation objectives and aspirations of its citizens
- To ensure that all road infrastructure projects deliver value for the money invested and the costs involved are affordable to the government
- To increase economic growth, productivity and competitiveness of the Nigerian market, by improving the efficiency of transport network in the country
- To ensure that all road infrastructure projects are efficiently prioritized and managed to maximize social and economic returns
- To ensure that fiscal risks created under public private partnership contracts are under the scope of budgetary framework

Social Objectives

- To use financial resources and government assets efficiently so as to benefit all users of road transport system
- To increase the accessibility of transport systems and increase the quality and performance of the infrastructure assets

Environmental Objectives

- To protect the environment and prevent changes to natural ecosystems
- To minimize the damage caused by carbon emissions and greenhouse gas effects by introducing stricter emission norms.

CONCLUSION

The purpose of this study was to seek solutions to the research question, which is to identify the critical factors that can contribute for transport infrastructure development in Nigeria. From this study, it was found that increasing financial investments in road infrastructure projects, using latest technologies for building sustainable transport infrastructure projects and limiting the role of



bureaucracy in infrastructure projects are three main factors that can greatly contribute for transport infrastructure development in the country. Similarly, in the process of undertaking this study, the current state of transport infrastructure in Nigeria has been evaluated, and various causes of failures in transport infrastructure projects have been analysed. The current policies and frameworks of the Nigerian Government's in improving the country's road transport infrastructure was reviewed.

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