Developing Country Studies
ISSN 2224-607X (Paper) ISSN 2225-0565 (Online)
Vol.12, No.4, 2022

Road Transport Infrastructure Planning Study: Panacea for Nigeria Economy Development

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Abstract
The growth of regions and cities is dependent on transportation infrastructure. Access to city transportation infrastructure services, in general, has a significant impact on reducing income disparity. Despite all efforts to adopt a sustainable transport policy in Nigeria, the country's transportation infrastructure remains in poor condition, thwarting the lofty goal of reshaping the transportation network and economy. As a result, this study has demonstrated the need for proper transportation infrastructure investment as a panacea and national remedy for the Nigerian economy's enhancement and acceleration of economic growth and functioning national mobility. This study adopted the empirical exploratory analysis by surveying stakeholders in the state of Lagos. A qualitative research technique was employed, which included conducting in-depth interviews. The study recommended that the federal government's budget allocation to the transportation sector be raised, as this will increase funding directed toward improving existing transportation infrastructure such as roads, bridges, seaports, airports, trains, and canals.
Keywords: Infrastructure, Transport, Quality, Economy, Policy
DOI: 10.7176/DCS/12-4-04
Publication date: April 30th 2022

1. Introduction

Infrastructure development for road and highway networks, such as bridges, tunnels, culverts, retaining walls, and bus terminals, as well as passenger waiting places, bus loading bays, and pavement blocks, has been widely regarded as one of the most significant characteristics in assuring passenger safety. For example, agricultural products made in rural areas must be transported to urban centers for further distribution, which can only be effective through efficient transportation to other service centers, and the competence of this vital infrastructure is an important determinant of a nation's effort in diversifying its transportation operations, expanding trade, and linking resources and markets into an integrated system of the economy.

The study of transportation in Nigeria has grown in importance as a result of its critical role in the flow of economic activity and the necessity to alleviate traffic congestion and provide an efficient, effective, and uniform transportation system. In terms of environmental and economic impact, the action (use) phase of a road transportation infrastructure has remained the most significant. The road network and accompanying physical infrastructure, such as signage, lighting, and car refueling service, are defined as road transport infrastructure in this assessment. High-quality transportation infrastructure will help a region become more geographically specialized in the production of specific goods or services for which it has superior conditions than other locations. Increased production and the establishment of spatial linkages across regions are both aided by specialization.

The 2007 Draft National Transport Policy represented the government's investment and funding of transportation infrastructure in Nigeria. The policy emphasized the development of an integrated transportation policy, stating that Nigeria needs more real transportation options, better buses, and trains, a better deal for motorists, better-maintained roads, a passenger-friendly railway, more funding for public transportation, more freight on the railway, and a safer and more secure transportation system. The pioneering prior administration was required to establish developmental plans that earmarked large capital spending on transportation infrastructure to achieve the goal of transportation infrastructure repositioning. This is since the leadership recognized the economic benefits of better transportation and sought to develop the sector through capital allocation. According to Lotto (2006), the deplorable state of Nigerian road, rail, air, and water transportation has been so alarming that some regions have been neglected, particularly rural areas, where many villages have been isolated while a large number have been isolated without link roads to the rest of the country, and as a result, the various modes of transportation have not been properly and sufficiently linked, thereby retarding development aspiration. Given that resource mobility is a metric of development, this circumstance does not support proper resource mobility.

1.1 Overview of Transport Infrastructure Effect on Major Sector in Nigeria Economy

I. Economic Growth: Trade and Commerce

In recent years, economics has almost universally been regarded as a major goal of national policy. Economic growth is defined as a rise in a country's output of goods and services, as measured by its Gross Domestic Product (GDP) (CBN, 1995). In their study, Nageri (2013) defined economic growth as "the steady process through which the economy's productive capacity is strengthened overtime to produce rising levels of national output and

revenue."

Kuznets (1971) described economic growth as a "long-term increase in capacity to deliver more diverse economic goods to its population, depending on improving technology and the institutional and ideological adaptations that it necessitates." As a result, it incorporates growth, structural and institutional changes, as well as life's vital elements such as education, health, nutrition, and the environment (i.e., human and development indices). Increases in the real gross domestic product (GDP) or real gross national product (RGNP) are commonly used to signify economic growth (GNP).

Road Infrastructure and Agricultural Practice

Road infrastructure facilitates agricultural access to markets and the availability of institutional finance; perishable items necessitate a short time to market, which can only be achieved via the availability of transportation plans. Farmers' income is reduced due to the lack of transportation to carry agricultural produce to market. In many places of the developing world, where ranch products are hauled away by garbage, it is a stumbling obstacle. The type of transportation available and the distance between points will have a significant impact on the distribution of agricultural systems. Due to the high expenses of getting surpluses to markets, many subsistence farms were unable to sell surpluses. Agriculture in Africa has enormous potential; it is estimated that agriculture presently generates $31 billion, or roughly half of the region's GDP. the year 2030 (World Bank 2013). Agriculture's potential, on the other hand, has yet to be fully realized in Nigeria.

Nigeria can feed itself if the right inputs and mechanics are in place, such as road transportation infrastructure improvements. Nigeria, as a country, needs to participate in more agricultural productions in light of its rapid urbanization and ever-increasing population. All around the world, transportation is regarded as a vital aspect of agricultural development.

It is the only way for food produced on the farm to be transported to different houses and marketplaces.

Transportation creates a market for agricultural products, improves contact between geographical and economic regions, and expands the economic focus to other areas (Tunde and Adeniyi, 2012). Other incidental and equally essential effects of good infrastructure can be found. Improved roads, according to Fan and others (2004), led to the growth of small rural non-farm companies such as food processing and marketing, electronic repair shops, transportation and commerce, and restaurant services. The expansion of the rural economy is aided by the development of rural infrastructure. Infrastructure plays a multifaceted role, with indirect consequences. Infrastructure, on the other hand, is a critical stimulant for agricultural development and expansion, but it is insufficient in all Nigerian rural areas, resulting in poor welfare and poverty persistence in Nigerian communities. Several studies (Fan, Hazell, and Thorat, 2000; Mundlak et al., 2002; Fan and Zhang, 2004; Kessides, 1993; Alaba, 2001) have found that infrastructure investment is necessary to improve farmers' access to input and output markets, as well as to stimulate the rural non-farm economy and to revitalize rural towns.

Apart from having negative effects on passengers, cargo, and traffic flow, bad road conditions also result in significant losses of perishable agricultural produce, a high cost of transporting agricultural produce and other items, and extravagant vehicle maintenance costs. According to the ADB (2007), poor infrastructure and a lack of infrastructure investment have stifled growth.

Poor infrastructure, which is a major contributor to rising business costs, has a considerable negative influence on the Philippines' perceived competitiveness and attractiveness as an investment location. Farmers would not want to produce in huge amounts if there was no good road network because they were afraid that their perishable farm produce would not get to the place of sale before it expired. If agriculture is to meet the rising demand of a growing population, a good road network will be required to reduce the cost of transporting agricultural commodities to urban areas and to provide the necessary information for rural services, allowing the agricultural sector to contribute meaningfully to overall economic growth. This will make it easier to accommodate the growing flow of input and output from rural areas to metropolitan areas. Nigeria as a whole is a country with a lot of potentials. Aside from this, studies have used infrastructural expenditure, which includes water, air, and road infrastructure, but this does not accurately reflect road transportation infrastructure, which connects areas to market centers.

II. Agriculture

The Nigerian transport infrastructure system has several serious issues, including a decrepit road network, insufficient bus and truck fleets, irregular, insufficient, and overcrowded railroads and airlines, and congested waterways. Furthermore, there is a shortage of appropriately skilled transportation administrators and planners, capital investment challenges, institutional reform issues, and inefficient traffic rules. This condition has never aided the pursuit of accelerated economic development in nascent Nigeria's economy, but rather has generated anomalous faults in resource distribution, resulting in many individuals being disfigured and some dying as a result of road accidents and airline crashes. Every government that has led the country's affairs has worked to develop transportation infrastructure in one manner or another. However, the industry is still far from reaching the

necessary degree of development, which would allow the country's economic development to accelerate quickly.

Sanusi (2012) identified the country's current infrastructure state as one of the primary obstacles impeding the realization of the targeted nation's ambition of becoming one of the world's greatest economies by 2020. Furthermore, the country's road network is in bad shape, with around 70% of the country's 193,000 kilometers of roadways in poor condition.

Nigeria presently spends 7% of its gross domestic product on infrastructure, which is above average in Sub-Saharan Africa, but this is insufficient to move the economy to the needed level of development, according to his analysis.

The effective provision of environmentally sound infrastructure such as roads and transportation is a vital and fundamental aspect of sustainable development; nonetheless, considering the importance of transportation infrastructure to growth, Nigeria's transportation infrastructure is in a bad shape. According to Sanusi (2012), the current state of Nigeria's transportation infrastructure is a major developmental barrier in reaching the country's aim of being one of the world's greatest economies by 2020. In his study, Otegbulu (2011) claims that inefficiency and a lack of urban transportation services and infrastructure in developing nations like Nigeria is a key hindrance to economic growth and urban productivity.

Picture 1: Abuse of Road Infrastructure

Picture 1, demonstrate the abuse of the road infrastructure which is meant to be utilized for the distribution of traffic flow and also to enhance the operation of the economic activities. But this infrastructure has been converted into a repair site for abandoned cars and the access road to an informal shop which is been used by hooligans as a hideout spot.

In their research of government spending on road infrastructure and its impact on the growth of the Nigerian economy, Nworji and Oluwalaiye (2012) criticized Nigerian road networks. They claim that most of the roads connecting places and regions were built more than three decades ago and have deteriorated due to neglect and poor maintenance; a situation that the Central Bank of Nigeria described in its report CBN (2003) as having major cracks (longitudinal and transverse), depressions, broken down bridges, and numerous potholes, making road travel slow and dangerous.

Obi (2009) and Adeniji (2000) also found that less than half of the national road network is in fair or good condition, resulting in an average daily traffic jam of 50 people; less than 300,000 tonnes of freight and 2.3 million passengers are transported by rail; more air crashes occur in the aviation sector; a high rate of congestion in the seaport; and more pipelines are vandalized. When all of these losses are taken together with the economic cost of lost productive man-hours, it becomes evident that the industry needs immediate attention.

Unfortunately, due to a lack of adequate dredging and contemporary river cruising vessels, the inland waterways have remained impassable, contributing to Nigeria's poor infrastructure on this means of transportation. The government's efforts to dredge and modernize some of the seaports have yet to yield major results; as a result, water transport in Nigeria is still in its infancy. Rose, Kalu, and George (2014).

The length of the roadway, railway, and waterway in the country over years is been shown below. Table 2.1: Length of Roadways, Railways, Waterways in Nigeria (1998-2019)

Year	Railway length/km	Roadway length/km	Waterway length/km
1998	3505	107990	8575
1999	3505	107990	8575
2000	3505	107990	8575
2001	3505	107990	8575
2002	3567	107990	8575
2003	3557	32105	8575
2004	3557	32105	8575
2005	3557	32105	8575
2006	3557	51000	8575
2007	3557	194394	8575
2008	3557	193200	8575
2009	3557	194394	8575
2010	3557	194394	8575
2011	3557	194394	8600
2012	3557	194394	8600
2013	3505	194394	8600
2014	3505	194394	8600
2015	3505	193200	8600
2016	3505	193200	8600
2017	3505	193200	8600
2018	3505	193200	8600
2019	3505	193200	8600

Source: National Bureau of Statistics, 2020

1.2 Global View of Transport Infrastructure Benefit and the Government

Long-term benefits of capital investment in transportation facilities, according to the Economic Development Research Group (2009), include improved travel conditions with associated cost savings and productivity improvements for economic agents in Virginia; creation of jobs for various sectors of the economy; minimize leakage of income and savings that typically flow to businesses outside the country; business efficiency and increased tax revenue generation for the government.

In research to establish the effects of infrastructure development on growth and income distribution, Calderon and Serven (2004) suggested that universal access to infrastructure services is critical to reducing income inequality. They discovered that the stock of infrastructure assets has a favorable impact on growth and that income inequality decreases as infrastructure quantity and quality increase. Three categories of infrastructure assets - telecommunications, transportation, and power - were determined to have positive and large output contributions. These assets estimated and marginal productivity was likewise shown to be much higher than that of non-infrastructure capital. They also believe that a significant chunk of the per-capita output gap that developed between Latin America and East Asia between the 1980s and 1990s can be attributed to a slowdown in Latin America's infrastructure development during those years.

The majority of economists feel that public infrastructure is critical for a country's economic development. Rioja (2001). However, he points out that in developing nations, more emphasis is normally paid to the construction of new public infrastructure projects, while fixing potholes that inevitably occur with time and use receives far less attention. According to the same analysis, a one-million-dollar investment in reducing power line losses might have saved $12 million in generating capacity. He claims that ignoring maintenance causes road deterioration, irrigation canal blockage, leaks, and electricity line failures, all of which lower an economy's productive capability. According to WBDR (2006), infrastructure access has a significant impact on economic potential. According to the findings of the study, those without power have fewer and lower-quality access to public services in more unequal societies. Because much infrastructure is usually provided by the government and hence driven by the political process, this frequently refers to the poor. This is inequitable infrastructure access.

Because much infrastructure is usually government-provided and hence driven by the political process, individuals without influence receive less and lower-quality access to public services in more unequal countries.

This often implies the poor. Inequitable access also affects distant areas and marginalized groups, and it sometimes has a gender component. Their analysis indicates that, in the case of land, more equitable access to infrastructure would be beneficial to equity and, in many cases, growth. This necessitates resolving to challenge financial challenges, barriers to infrastructure access for the poor, and severe accountability issues through institutional designs that allow a more equal response to needs. It found good evidence that infrastructure investments extend prospects for people and communities by integrating them into regional and national production and commerce systems, as well as boosting their access to public services, in its review of a large body of literature and research.

According to Anderson, Renzio, and Levy (2006), public infrastructure has two main effects: microeconomic and macroeconomic. The microeconomic consequences of public investment, according to these scholars, have two main effects: quantity effect and price effect. An investment in public infrastructure boosts the number and/or quality of public goods and services. Because public commodities are created exclusively by the government, corporations and households must initially ration their supply. Additional public infrastructure investment, on the other hand, results in an increase in the quantity and/or quality of this rationed item, benefiting both businesses and households.

Much of the public infrastructure in this example provides direct welfare gains by increasing the number and/or quality of final commodities and services. In Nigeria, Ogun (2010) looked into the impact of infrastructure improvement on poverty reduction. To provide empirical evidence on the implications of increasing urban infrastructure for the urban poor, the relative effects of physical and social infrastructure on living standards or poverty indices are explored.

According to the preceding analysis, infrastructure investment is substantially positively connected with aggregate economic growth as well as social indicators. The effects are observed to be greater in developing economies (such as Nigeria) than in established economies (such as the United States). To maximize impact, however, new infrastructure investments or the extension and upkeep of current infrastructure expenditures, as well as the quality of infrastructure to be built, should be considered. However, the relationship between transportation infrastructure and economic growth is far from straightforward. Economic growth can occur either directly or indirectly as a result of the expansion of transportation infrastructure. It has also been stressed that the degree to which infrastructure contributes to economic growth is determined by the quality of governance and institutional environment.

2.0 Methods

This study conducted an empirical exploratory analysis by surveying stakeholders in the state of Lagos, a qualitative study technique was used to determine the state of practice, lessons learned, needs, and gaps related to road transport resilience, which included conducting in-depth interviews. Respondents to the study and interviewees were from a variety of units in Lagos. The results of the empirical research.

3.0 Conclusion

This has demonstrated the necessity of proper transportation infrastructure investment as a panacea for economic progress. The study also revealed the importance of the transportation sector as a panacea for improving and speeding up the Nigerian economy. This study found that increasing investment in the transportation sector had a favorable impact on economic growth, which is under previous research. This indicates that increased transportation investment will boost economic growth.

This goes to show that if a significant amount of money is invested in transportation infrastructure, the sector will contribute significantly to the country's economic growth. In other words, increasing transportation infrastructure improves the quality of services provided by the sector, which has a multiplier effect on other aspects of the economy. According to the findings of this study, improving Nigeria's transportation infrastructure helps the country's economic growth.

4.0 Recommendation

According to the data, transportation infrastructure investment has a significant association with Nigerian economic growth. Dredging of rivers and streams in the country should be practicable and aggressively pursued with ease of passage. Airports and railways must also be aggressively sought. To guarantee that this goal is realized, the federal, state and local governments must work together. Procrastination has never been beneficial to a developing economy.

In this area, the government must open its doors to international private investors. This is because capital has always been viewed as a barrier to infrastructure investment. However, there is a caveat: a suitable and supportive environment must be given, and it must be very useful and enticing to other international investors. The government must cut the cost of governance, or recurrent spending, and invest more in capital-intensive transportation infrastructure. This necessitates sacrifice and a rethinking of how resources are allocated and used. As a result, the following recommendations are made in this research:

Road Sector

- The Federal Government's budget allocation to the transportation sector should be increased from N123 million to 200 million because this will enable the funds to be used to improve and expand existing infrastructure such as roads, bridges, seaports, airports, railways, viaducts, tunnels, and canals.
- The Ministry of Transportation should enforce transportation legislation, tight monitoring of allocation execution, improved human resource quality, and private sector participation.
- As stated in the National Draft on Transport Policy for the Federal Republic of Nigeria, public-private partnerships (PPPs) in the transportation sector should be fully implemented.

Water Sector

- To reduce traffic congestion and accidents, the government at the federal, state, and local levels should provide adequate transportation facilities in the form of road signs, traffic lights, street lights, medians, drainages, and functional mass transit vehicles by the government and private individuals.
- The Federal Ministry of Transportation needs to expand the number of high-quality road networks and add high-occupancy vehicle lanes.
- It is necessary to enforce the proper upkeep of existing road networks.
- Construction of flyovers at crossroads is also required to alleviate notoriously congested locations.
- Increased investment in research on other means of transportation, such as opening up rivers and rejuvenating the railway system to relieve congestion and pressure on current highways, should also be considered.
- Nigerians should pay their taxes, toll gate fees, and fines for disobeying traffic regulations since this will help the government balance its efforts to provide world-class transportation infrastructure. People should also take advantage of the other modes of transportation accessible in the country.

Air Sector

- A constant maintenance culture should be adopted and implemented.
- In most situations, political leaders would carry out the transportation project, but there would be no provision or obligation to ensure that it was maintained regularly.
- As a result, numerous trunk A and highway roads built a few decades ago have deteriorated.
- The local, state, and federal governments all need to adjust their attitudes at this time.
- Domestic and international investors must be allowed to engage in the transportation sector right now.
- The lack of a conducive atmosphere has deterred many investors from investing in the country.
- To stimulate, attract, and sustain investment in the transportation sector, the country's insecurity must always be addressed.

Rail Sector

- To put it another way, private investors can be hired to build transportation infrastructure and given a time frame to repay their investment and profit margin. This will benefit the residents of the area since it will have a multiplier impact, accelerating economic activity.

Declaration of Competing Interest

The authors state that they have no known competing financial interests or personal ties that could have influenced the research presented in this study.

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