

Perspective of Integrated Transport Systems for Sustainable Development in an Emerging Economy

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Abstract: *Transport system plays a vital role in the economic growth and social wellbeing of any nation. In spite of its investment, Nigerian transport system has not always shown competent for accomplishing sustainable development. This paper examined the correlate of integrated transport and sustainable development. This paper adopts both primary data and secondary data using questionnaires and statistical bulletin as instruments. Both Descriptive and Inferential statistics were used to analyse the collected data. The result showed strong correlation between integrated transport system and sustainable development. It was concluded that integrated transport system is a veritable tool for sustainable development in any developing nation. Integrated transport also boosts the GDP of any developing nation like Nigeria by harnessing the various modes of transport. Revenue earned from transport sector should also be used to finance the sector in order to boost the GDP of the sector and also enhance productivity and sustainability of the sector.*

Keyword: integrated transport system, Gross Domestic Product, sustainable development

1.Introduction

Transportation is a dynamic and essential facility for the exploitation or development of economic resources on a national or international scale. It enables material to be moved from area of low utility to region of high utility (Branch, 1986). Transport keeps on encountering real changes inasmuch as there's the need and wants to move from one place to another (Kuhn, 1970). Transportation is a derived demand i.e. it isn't requested for its very own purpose but to satisfy other. It creates valuable needs between region, economic activities and people, its significance reflect in economic, political and social part of our lives. Present day business, industry and trade are relying on transport modes and communication facilities.

Notwithstanding, in Nigeria the real focal point of issues identifying with the transport sector has been equipped towards passenger movement to the detriment of the key significance of freight. One of the most significant structures of sound of economic performance is the productive conveyance of goods and materials as fast, economically as would be prudent. In local dissemination of freight, roads constitute the predominant mode of transport by providing to door to door service and also compliment different modes of transport because of its adaptability and flexibility (Waheed, Kadiri and Dele, 1996). Unfortunately, the sustainability of Nigeria transport system cannot be compared to other developing or developed country. The road have poor or lack drainage facilities, potholes and bridges that are not properly maintained. Odeleye (2010), opined that, "today, Nigeria's economy at last depends on road mode for sustenance of its economic exercises." Ironically, the road mode is to a great extent obliged because of its restricted conveying limit with respect to rail transport. Furthermore, the legislature through her national development plan allotted considerable extents of the plan budgetary allocations to

the development and maintenance of roads and extensions to the drawbacks of rail mode of transport.

The sea transport being one of the modes of transport is perceived as the impetus for national development, as it houses most basic infrastructure and furthermore a worth making center hub for the national economy. The need to form its potential into national economic strength is pertinent to accomplish feasible economic development. Regrettably, congestion mar the performance and productivity of Nigeria ports (Somuyiwa and Ogundele, 2015). Port congestion and deferral in cargo handling has immensely refuted the operational performance of Nigeria's ports. These stagnation in port exercises has made the Nigerian ports operationally inefficient which thusly resulted to longer dwell time of cargo in the ports, poor ship turn-round time, block stacking of containers, higher demurrage on shippers operating cost of vessels by shipping organizations, insufficient berth and space use and so forth. The economic ramifications of these are, shippers currently redirect traffic to ports in neighbouring nations; ports of Cotonou in Benin, Lome in Togo, Tema in Ghana, Abidjan in cote d'ivoire. These cargoes implied for Nigerian ports, consistently finds its way through smugglers into Nigerian boarder (Abiola, 2011).

Air transportation involves the mobility or carriage by air of people or cargo using aircraft (Wikipedia, 2011).It has become the major means of common carrier travelling. Proficient air transportation is a means of mobility that conveys passengers and cargo from one location to another securely, on time without delay or flight cancellation or any other constraint. It also contributes to economic growth and development. Unfortunately, Facilities provided at the nation's International Airports at Lagos and Kano is overstretched. Facilities such as seats, air conditioning system, conveyor belt, toilet facilities, and so

forth are. This emerges as they are not overhauled based on the increment of human traffic (Suleiman, 2012).

2. Literature Review

Transportation plays an essential role in the political, economic and social development of any society and whether in rural or urban societies, transportation constitutes the main avenue through which different parts of the society are linked together. As a society develops regarding populace and capacities, the requirement for collaboration among its different segments additionally develops in this manner requiring quality and effective transportation systems (Aderamo and Magaji, 2010).

Transport system grants goods to be sold to customers in places far inaccessible from the locale where they are created. Economists state that production is not complete until they have been transported to the final consumers who will fulfill their needs (utility) by the utilization of the goods. It implies transportation by moving goods from the point of production to the point of consumption is satisfying profitable and productive services of creation of utility.

2.1. Integrated Transport System

The term 'integrated public transport' is commonly characterized as a system that provides door-to-door public transport services or passengers (Janic and Reggiani 2001). An integrated transport system infers the advancement of a seamless chain of associated and complementary transport which implies connecting different modes of transport so that each mode has the opportunity of satisfying its distinct potentials in a collaborating way. Integrated transport offers public transit user the likelihood to utilize different transportation means that work in coordination through infrastructure, fare structure, and normal approval systems. The integrated transport systems constitute three intrigue components and they are distinguished as:

- i. Suppliers of public passenger transport – they must be eager to give the interconnection of their systems as far as transport, economic, hierarchical and levy;
- ii. Users of public passenger transport – it very well may be said they are the leaders in terms of decision making, they make the interest and they choose about the achievement of transport system by their conduct,
- iii. Authorities: they make the legislative structure how the integrated transport framework ought to be worked, they change the prerequisites from occupants to the operators.

For operators engaged with the integrated transport framework the fundamental issue is to give integration in the accompanying fields such as;

1. Modal integration, which decreases journey time from the origin to destination. In this manner, time loss by passengers will be Minimized
2. Organizational-economic integration: the main piece of this integration is to oversee and acknowledge monetary related streams between the included subjects. It implies

chiefly partitioning the incomes from fares and subsidy streams to take care of the costs which are not secured by incomes (Bibiana, 2013).

3. Tariff integration: it incorporates the making of unit levy system which is intelligible to passengers. The region of integrated transport system is separated into to regular or irregular zones, the duty is made in agreement to tax structure, and the scope of ticket is made for ordinary and sporadic passengers. The levy and transport conditions are joined as well. It included likewise the selling and checking system (Bibiana, 2013).

2.2 Transportation systems in Nigeria

The system of transportation components are the road systems, railway system, water transport and Air transport. The road systems include the transit systems and paratransit services, including private vehicles and pedestrians. This accommodates the mobility of people and goods in an urban area. Transportation in an urban region is profoundly unpredictable on account of the modes included, the large number origins and destinations, and the sum and assortment of traffic. Rodrigue, Comtois, and Slack (2013) opined that rapid urban development over the globe infers an expanded number of travellers and cargo moving inside urban areas and thus creates an interest for mobility. Consequently as population increases in urban regions through urbanization, travel needs additionally increment and that the expanding numbers of travellers are better off and overseen by successful transportation infrastructure (Fawcett, 2000).

The presence of heavy vehicles such as trailer, lorries and tankers constitute problems to megacity in Nigeria. A good example is Lagos. Be that as it may, underinvestment in transport system could have dire outcomes on travellers' mobility, logistic system and the entire social and economic activities (Eddington, 2006; Chopra and Meindle, Lambert, 2006).

Heggie (1995), which completed an investigation on road maintenance for the World Bank in Sub-Saharan Africa saw that by 1990, almost a third of \$150 billion invested on roads in the area had been dissolved through lack of maintenance. The World Bank through the International Development Association (IDA) in July, 2008 approved a credit of USD39 million for Nigeria roads (Saliu, 2010). Yet most mega city in Nigeria such as Lagos still experience congestion. Distribution systems that depend upon on-time conveyances are especially helpless to congestion.

The Nigerian railroad appeared as a government department in 1898 kept running by the civil service design which implied that it needs to rely upon the government for budgetary support and direction. In 1955, Nigerian Railway Corporation was set up to assume control over the obligations of the then railroad department. In any case, government investment in rail transport can't be contrasted with road transport. For example, the Shagari regime invested \$32 million in 1983 toward the beginning of his civilian regime, and afterward there was no further investment funding from that point for

five years until Babangida came to power in 1986, when his military system invested \$88 million in 1988; Also 8 years after, Abacha came to power in 1994 and invested \$528 million in 1995; Similarly, an additional four years went until Obasanjo came in 1999 and he invested in 2003, 2004 and 2006 separately. Thusly, there is practically zero increment of cargo traffic contrasted with road transport. Sustainable development has not been accomplished till date(Oye, Kadom and John, 2016).

Water transport represents over 90% of cargo development in Nigeria (Waheed, Kadiri and Dele, 1996). It is viewed as the major impetus for growth in Nigeria. In spite of a few national, sub provincial, territorial and worldwide endeavors, existing instrument for the management of marine and coastal condition assets have not constantly demonstrated competent for accomplishing sustainable development and thus coastal assets and the coastal condition are being debased and disintegrated in numerous parts of the nation (Oyesiku and Gbadamosi, 2008).

In September 2008, the late president Yar'Adua invested N71billion naira to the Nigeria Civil Aviation Authority (NCAA) under Bilateral Air Services Agreement (BASA) finance. This assets was diverted to infrastructural development in the 21 airport under its regime (Saliu, 2010).

3.Methodology

Nigeria is a nation in West Africa, circumscribing Niger in the north, Chad in the north east, Cameroon in the east, and Benin in the west. Its coast in the south is situated on the Gulf of Guinea in the Atlantic Ocean. The federation contains 36 states and 1 Federal Capital Territory, where the capital, Abuja, is found. The constitution characterizes Nigeria as a democratic secular state. The number of inhabitants in Nigeria is 140,431,790 based on 2006 populace enumeration. The researcher gathered data based on various locations across the nation through telephone meeting, surveys and web by getting some information about the best technique in evaluating the perspective of integrated transport systems in Nigeria. 210 respondents were selected. Thusly, Descriptive was used and Analysis of Variance (ANOVA-one way) was adopted.

4.Result

Figure 1 showed the demand for passenger service. The demand for mini bus (Danfo), midi bus (Coastal) and BRT in Lagos state recorded the highest level of patronage compared to others means of transportation. This is due to affordability, accessibility and availability. Both train and ferries recorded the lowest level of patronage by the passengers. The demand for road transport is very in Lagos.

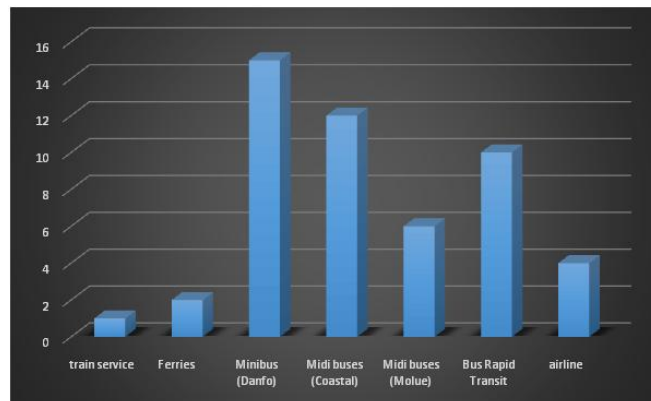


Figure 1: levels of patronage
Source: Author's Field survey (2018)

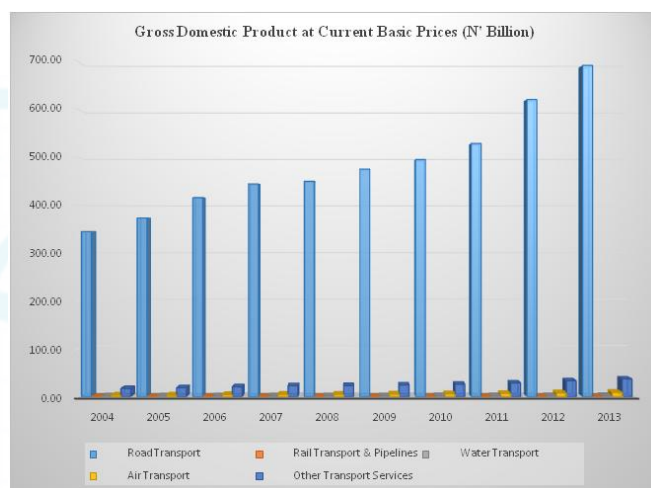


Figure 2: Gross Domestic Product at Current Basic Prices (N' Billion)
Source: CBN Statistical Bulletin (2014)

Figure 2 demonstrated that the GDP for rail transport service among the various modes of transport is at the lowest ebb. Although the trend increases across the years. i.e. from 2004 to 2013 at a low pace. In spite of government spending in respective years, of which, notwithstanding the Goliath measures of cash spent, the rail transport, water transport and air transport service provision are as yet inadequate in correlation with other developing or developed nations. However, Dosunmu and Adepoju (2016) concluded that, revenue generated from transport should not be diverted to finance other sector. However, revenue diverted to finance other sector mar the productivity of transport sector which in turn affects the Gross Domestic Product of the sector.

Table 1.0: correlation between integrated transport and sustainable development

		Integrated transport	Sustainable Development
Integrated transport	Pearson Correlation	1	.906**
	Sig. (2-tailed)		.000
	N	210	210
Sustainable Development	Pearson Correlation	.906**	1
	Sig. (2-tailed)	.000	
	N	210	210

**:. Correlation is significant at the 0.01 level (2-tailed).

Source: Author fieldwork (2018)

Table 1 showed that there is a strong correlation between integrated transport and sustainable development. The integrated transport system will enhance sustainable development in the country. However, Solanke (2013) opined that integrated transport is needed towards improving urban transport challenges in the country.

5. Conclusion and Recommendations

It was concluded that an integrated transport system is a vital instrument for sustainable development in any developing nation. Integrated transport also boosts the GDP of any developing nation like Nigeria by harnessing the various modes of transport. It was recommended integrated policy should be enacted, enforced through various concerned agencies. Revenue generated from this sector should also be used to finance the sector in order to boost the GDP of the sector and also enhance productivity and sustainability of the sector.

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