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Effects of Transportation on the Nigerian Economy

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Abstract— This study set out to assess the effect of transportation on economic growth in Nigeria. The essence of this study is to determine the nexus between transportation and the Nigerian economy. The research relied on secondary data sourced from the Central Bank of Nigeria statistical bulletin. The data were analyzed using descriptive and regression analytical tools. The result shows that the tabulated F-statistics=309.065 > calculated F-statistics= 8.94064512. Hence, the Hull hypothesis which states that transportation has no significant impact on Nigerian economy was rejected. The model developed for this study used the GDP as the dependent variable and transport modal output as independent variables. Generally, the study discovered that a unit change in the output of each of the transport mode causes a substantial corresponding increase in GDP. The paper suggests that government increases spending on transport infrastructure which will have a multiplier effect on transport sector output and in turn increase the GDP.

Keywords— Transportation, economy, infrastructure, change, output

I. INTRODUCTION

Transportation is an essential part of human activity and in many ways form the basis of all socio-economic interactions. Indeed, no two locations will interact effectively without a viable means of movement. Therefore, transportation is defined as the movement of goods, persons, information and services from one point to the other. This movement could be on sea, land or air. Transport is a derived demand; it is linked organically to the survival of other sectors namely social, political and economic sector. Hence the need for transportation services in any economy cannot be under estimated [1].
In Nigeria, the share of transport in the Gross Domestic Product (GDP) is in the neighborhood of 3 per cent. Transport statistics are grouped into five basic categories, namely, rail, road, water, air and pipeline transport. Land transport involves movement of people and goods on land, from one location to another. It is the dominant form of transportation in the world and includes road, rail and pipeline.

In Nigeria, rail transport accounts for less than a half per cent to the GDP of the transport sector. Although rail has always contributed a tiny proportion of value-added in transportation, its share of value-added continues to decline because road transport (freight and passenger) has virtually taken over all the traffic previously conveyed by rail. The relegated status of the Nigerian Railways is a classic illustration of a transportation policy which has sidelined an important and cheap means of transport to foster the growth of privately-owned long haulage transport services. Railway system plays a significant role in the development and overall growth of any economy. Rail transport is seen as the mainframe around which an integrated national transport system is built. Its capacity, which is further accentuated by its safety and security factors, coupled with its ability to travel longer distance with ease and lower unit costs, places it in good stead to serve as the hub of a transport system of a nation [2]. Nigeria has over 3528kilometres of operated railway tracks, in which 3505kilometres are narrow gauge tracks and 276 kilometers of standard gauge tracks. The network has been extended by a narrow-gauge line between Onne and the Enugu-Port Harcourt line and 320km standard gauge line from Ajaokuta to Warri. Abuja to Kaduna is a 186km line with standard gauge railway tracks from Idu, near Abuja, to Kaduna

Road transport activities involve the conveyance of passengers, animals, farm produce, merchandise and the rendering of mobile services (clinics, libraries and banks). The optional use of motor cars for pleasure, which can be distinguished from the three uses listed above, also contributes tremendously to the importance of road transport [3]. Road transport is the most commonly used mode of transport in Nigeria and accounts for more than 90% of the transport sector output. Transport sector contributes 3% to the GDP and road transport mode controls over 95% of all surface transportation with a total asset of over 3 trillion Naira. Nigeria has a total of 193,200 kilometers of roads, made up of 34,123kilometers of Federal roads, 30,500kilometres of state roads and 129,577 kilometers of local government roads [4].

Maritime transport is one of the oldest forms of transport in Nigeria. It has been in existence since the time of our forefathers. It was the main form of trans-continental transportation; it was this form of transport that was used in the famous trans-Atlantic slave trade, where slaves were

exchanged for goods such as jewelry, clothing materials and the likes. Nigeria's maritime heritage has been an important economic engine for Nigeria throughout most of its history. This is due to the fact that Nigeria is endowed with different water bodies such as the Atlantic Ocean, lagoons and various rivers [5].

Water transport scores a distant second to road transport, with an average share of about 1.6 per cent of Nigeria's GDP. Water transport is slow and therefore, unsuitable for passenger movement, except for holiday and tourist traffic where time is not a constraint or where other forms of transport are not available. Water transport comprises of three components namely: ocean transport, coastal water transport and inland water transport. Inland water transport is only advantageous in terms of costs of moving heavy traffic, especially where speed is less important than cost. Nigeria has 8600 kilometers of inland waterways and an extensive coastland of about 852 kilometers. Nigeria's largest ports are at Lagos (Apapa and Tin can Island), Port Harcourt, Calabar, Sapele, and Warri. Nigeria waterways have an average share of about 1.6 per cent of the GDP.

Air transport has a unique advantage over all other modes of transport if speed, time and distance are major considerations. Air transport is of high value in relation to weight. It is also preferred where accessibility by other modes is a problem (especially in riverine or mountainous regions). Air transportation is a system with many inter-related parts. Each airport is connected to the system through the airways and other airports with which it exchanges flights. Air transportation is an important aspect of economic growth; it represents one of the yardsticks for gauging development. The aviation industry all over the world is credited for a significant influence in terms of development even in the face of airline mishaps that ravage the industry. Air transportation in Nigeria generates some economic benefits. First, air transport contributes to the provision of employment. About 159,000 indigenes and foreigners are gainfully employed directly or indirectly by the Nigeria aviation industry. Second, air transport industry is a viable means for generating revenue via personal income and profit taxes. Third, it has contributed over 4 per cent to GDP [6]. Other significant contributions are in the area of tourism development, globalization, trade development and foreign direct investment opportunity. Nigeria has three major international airports which are located in Lagos, Abuja and Kano. The various internal flights that serve the majority of state capitals, of which Kaduna, Port Harcourt, Enugu are the busiest.

Pipeline transport is the newest mode of land transport. It is now widely used for the transportation of bulk liquid and gaseous consignments over long distances. The country pipelines are owned by both the public and the private sectors. In 2004, Nigeria had 105 kilometers of pipelines for condensates, 1896 kilometers for natural gas, 3638kilometer for oil, and 3626 kilometers for refined products.

The Nigerian transportation sector faces numerous problems. The situation of Nigeria transportation infrastructure is at a poor state. More than 50% of the national road network is in fair or bad condition. Aviation sector records more occurrences of air crashes; there is high rate of congestion in the sea ports, railway system has been in comatose due infrastructure decay and there is incessant vandalization of pipeline. When these losses are summed up to economic cost for loss of productive man-hour, it becomes obvious that the situation really needs urgent attention. It is against this background that the study set out the objective to determine the nexus between transportation and Nigeria economy.

Hypothesis

Ho: Transportation has no significant impact on the Nigerian economy.

II. RELATED WORK

Extensive studies had been conducted on the link between transport and economy. Reference [7] estimated the contribution of transportation investment, congestion and traffic related accident to economic growth in Nigeria between 1975 and 2006, using the extended Cobb Douglas production function model found that transport investment positively contributes to economic growth and traffic accidents contributes negatively. The estimated model used was the error correction mechanism with the real GDP as the dependent variable and the explanatory variables include physical capital, labour force, total road network, automobile density and traffic related accident.

Reference [8] reviewed the contributions of transport sector to economic growth in Nigeria and discovered that the direct and significant impact of road transport, air transport as well as post and courier services on real gross domestic product (RGDP) in Nigeria, is as a result of the heavy utilization of these modes of transport. The study further revealed that water had inverse relationship with real gross domestic product in Nigeria due to their crowding out effect.

Reference [9] analyzed the contribution of transport capital to growth for a sample of Sub Saharan African (SSA) and a sample of Small Island Developing States (SIDS), using both cross sectional and panel data analysis. In both cases, the analysis concluded that transport capital has been a contributor to the economic progress of these countries. Analysis further revealed that in SSA case, the productivity of transport capital stock is superior as compared to that of overall capital while such is not the case for the SIDS where transport capital is seen to have the average productivity level of overall capital stock.

Reference [10] applied production function approach on panel data covering the period between 1992 and 2004 to compare transport-economy linkage of developed countries and developing countries. His results indicate that physical units of transport infrastructure are positively and

significantly related to economic growth and the output elasticity with respect to physical units for developed countries is higher than developing countries.

Reference [11] opined that transportation infrastructure serves as the backbone of extensive economic activities in any given geopolitical entity and as such facilitates multilevel transportation of people and goods through divers' logistic outlets in search of economic opportunities and a higher standard of living. The work further asserts that different conditions of roads affect logistic operations to different extents, ranging from delayed journeys to complete inaccessibility.

Reference [12] asserts that mobility and transport are important requirements for economic prosperity. The mobility of people and goods provide more enhanced division of labour, increased productivity, structural change, greater competitiveness, growth in incomes and higher employment. Economic activity, in this chain of cause and effect, a policy of transport avoidance as government of Nigeria has bend risk to further progress in productivity and growth which retards economic development in setting targets for prosperity, what matter most is to make the transport processes more cost effective and more efficient.

III. METHODOLOGY

This study employed secondary data sourced from the CBN publications- Statistical Bulletin and National Bureau for statistics annual report. Both descriptive and inferential statistics were adopted in the analysis of data. However, in determining the relationship between transportation and Nigeria GDP regression analysis was used.

Specification of the Model

The dependent variable is the GDP and independent variables are the transport modal output from 2006-2015. Thus, the model is designated as:

$$GDPt = RT + RTP + WT + AT + TS + PCS + e \quad \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where:
RT = road transport
RTP = rail transport and pipeline
WT = water transport
AT = air transport
TS = transport service
PCS = post and courier service

Equation (1) shows that GDP is a function of the output of the transport sector and investment spending in the sector. It indicates that there is a relationship but does not specify the type of relationship. Assume that there is a direct economic relationship between transportation sector output and GDP, it allows that any addition to the independent variables will bring about corresponding increases in the flow of GDP. Hence, we can rewrite the model as follows;

$$GDPt = bo + b1RT + b2RTP + b3WT + b4AT + b5TS + b6PCS + e \quad \ldots\ldots\ldots (2)$$

"e" is the error term which depicts other external factors that might affect the magnitude of the GDP, not stated in the model.

Whereas b1, b2, b3, b4, b5, and b6 are the slope coefficients and depict the rate of change in the value of GDP, when there is a unit change in the value of any of the explanatory variables.

"bo" is the intercept coefficient showing the rate at which GDP will change independent of the of the explanatory variables. The basis for formulating this model is to determine the linkage between transportation output and economic growth, by measuring the elasticity of GDP to a change in the transportation output.

IV. RESULTS AND DISCUSSION

Data Presentation

Table 4.1: Gross Domestic Product of Transport Sector (N' Billion)

Year	Total GDP	Road (/10)	Rail & Pipeline	Water	Air	Transport Service	Post & Courier Service
2006	28662.47	363.34	0.08	3.31	22.41	17.85	7.85
2007	32995.38	421.47	0.08	3.51	25.44	18.93	8.94
2008	39157.88	488.91	0.09	3.70	25.75	20.02	10.20
2009	44285.56	567.13	0.09	3.90	29.20	21.18	11.62
2010	54612.26	619.14	0.11	4.23	32.67	22.65	15.98
2011	62980.40	670.80	0.14	5.04	56.49	30.01	16.86
2012	71713.94	784.81	0.19	5.57	65.61	42.18	18.96
2013	80092.56	893.13	0.22	6.22	76.91	53.05	21.69
2014	89043.62	1017.16	0.25	7.15	84.41	63.55	24.92
2015	94144.96	1156.29	0.28	8.07	95.74	72.95	27.73

Source: CBN Statistical Bulletin

Table 4.1, contains the data set used in testing the hypothesis. It therefore, shows the value of Transportation and GDP of Nigeria, for the period, 2006-2015.

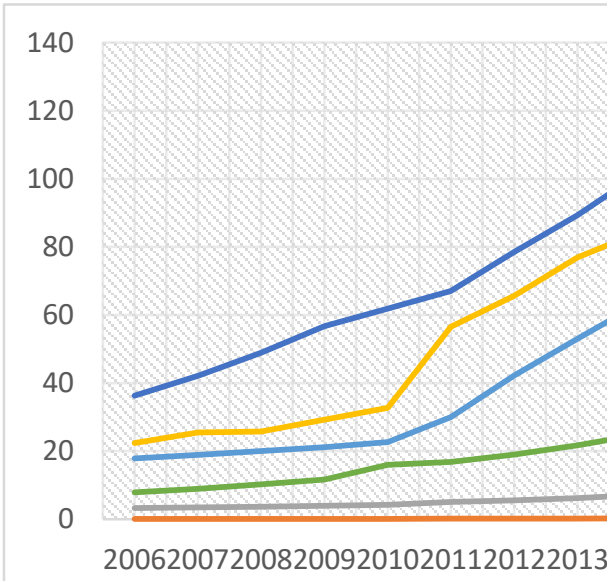

Figure 1: Trend Line of Transport Modal Contributions to GDP

Figure 4.1, shows that the trend line for road transport recorded the highest growth from year 2006 to 2015, which means that the most used mode of transport in Nigeria is the road and contributes more to the GDP with

much increase. The trend line for rail transport is almost parallel to the ground level this is an indication that this mode of transportation is rarely used in the country and makes little contribution to the GDP over the years. Water transport made little contribution between year 2006 and 2010 but from 2011 there was a rapid increase in this sector. The Air transport had slight increase over the years, which means little contribution to the GDP. Transport service also has much increase from 2011 to 2015 and has contributed to the GDP. Post and courier had slight contribution from 2006 to 2009 and then increased from 2010 to 2015.

Table 4.2 Average Annual Growth Rate of Road Transport

YEAR	ROAD TRANSPORT	AAGR
2006	363.34	363.34
2007	421.47	15.99%
2008	488.91	16.00%
2009	567.13	15.99%
2010	619.14	9.17%
2011	670.8	8.34%
2012	784.81	16.99%
2013	893.13	13.80%
2014	1017.16	13.89%
2015	1156.29	13.68%

Source Table 4.1

Table 4.2 shows that as at 2006, the total contribution of road transportations to GDP was 363.34 representing 1.27% of the total GDP. This, however, increased to 421.47 in 2007 representing 1.28% of the total GDP leading to 15.99% growth rate of road transportation. In the year 2008, the growth rate of the sector was 16.00%, this rate was not sustained, it to 8.34% in 2011, rose to 16.99% in 2012 and dropped in 2015 to 13.68%. This indicates an improvement in the sector.

Table 4.3 Average Annual Growth Rate of Rail and Pipeline

Year	Rail & Pipeline Transport	AAGR
2006	0.08	
2007	0.08	0.00%
2008	0.09	12.50%
2009	0.09	0.00%
2010	0.11	22.22%
2011	0.14	27.27%
2012	0.19	35.71%
2013	0.22	15.79%
2014	0.25	13.64%
2015	0.28	12.00%

Source: Table 4.1

Table 4.3 reveals that in 2006, rail and pipeline transportation contributed a total of 0.08 to the GDP representing 0.00028% of the total GDP. In 2009, rail transport contributed 0.09 leading to a zero-growth rate of 0.0000%. However, in 2012, rail and pipeline transportation contributed 0.19 to GDP leading to a growth rate of 35.7143%. The year 2012 witnessed the highest growth in the sector. Thereafter, the sector witnessed a drastic fall to 13.6364% in 2014. In 2015, the sector maintained a marginal growth rate to 12%.

Table 4.4 Average Annual Growth Rate of Water Transport

YEAR	WATER TRANSPORT	AAGR
2006	3.31	
2007	3.51	6.04%
2008	3.70	5.41%
2009	3.90	5.41%
2010	4.23	8.46%
2011	5.04	19.15%
2012	5.57	10.52%
2013	6.22	11.67%
2014	7.15	14.95%
2015	8.07	12.87%

Source: Table 4.1

Table 4.4, shows that as at 2006, the total contribution of Water transportation to GDP was 3.31 representing 0.01% of the total GDP. This, however, increased to 4.23 in 2010 leading to 8.4615% growth rate of water transportation. In the year 2011, the growth rate of the sector was 19.15%. This rate was not sustained and the growth rate fell to 10.52% in 2012. It rose to 14.95% in 2014 and fell again in 2015 to 12.87%.

Table 4.5 Average Annual Growth Rate of Air Transport

Year	Air Transport	AAGR
2006	22.41	
2007	25.44	13.52%
2008	25.75	1.22%
2009	29.20	13.40%
2010	32.67	11.88%
2011	56.49	72.91%
2012	65.61	16.15%
2013	76.91	17.22%
2014	84.41	9.75%
2015	95.74	13.42%

Source: Table 4.1

Table 4.5 indicates that the contribution of Air transport to GDP has not been encouraging. The table shows that as at 2006, the total contribution of Air transportation to GDP was 22.41 representing 0.08% of the total GDP. In 2008 the sector experienced a poor growth rate of about 1.22%. In the year 2011, the growth rate of the sector was 72.91%. This rate was not sustained but it fell to 9.75% in 2014 and rose again in 2015 to 13.42%. This indicates an improvement in the sector.

Table 4.6 Average Annual Growth Rate of Transport Service

7.5	TRANSPORT Service	AAGR
2006	17.85	
2007	18.93	6.05%
2008	20.02	5.76%
2009	21.18	5.79%
2010	22.65	6.94%
2011	30.01	32.50%
2012	42.18	40.55%
2013	53.05	25.77%
2014	63.55	19.79%
2015	72.95	14.79%

Source: Table 4.1

Table 4.6 reveals that out of the total GDP of 28662.47 in 2006 Transport service contributed 17.85 representing 0.06% of the total GDP. In 2008 and 2009, transport service contributed 20.02 and 21.18 respectively leading to growth rate of 5.76% and 5.79%. However, in 2011, transport service contributed 30.01 to GDP leading to a growth rate of 32.50%. The year 2012 witnessed the highest growth in the sector. Thereafter, the sector witnessed a fall to 19.79% in 2014 and 14.79% in 2015.

Table 4.7 Average Annual Growth Rate of Post and Courier Service

Year	Post and Courier Service	AAGR
2006	7.65	
2007	8.94	13.89%
2008	10.20	14.09%
2009	11.62	13.92%
2010	15.98	37.52%
2011	16.86	5.51%
2012	18.96	12.46%
2013	21.69	14.40%
2014	24.92	14.89%
2015	27.73	11.27%

Source: Table 4.1

Table 4.7 shows that out of the total GDP of 28662.47 in 2006, post and courier service contributed 7.85 representing 0.03% of the total GDP. The year 2010, this sector witnessed the highest growth rate of 37.52%. Since then, the sector witnessed a sharp fall to 5.51% in 2011. The sector maintained stead rates in 2013 and 2014 which are 14.3 and 14.8% respectively. In 2015, the growth rate reduced to 11.28% but added 27.73 to the total GDP of 94144.96.

Data Analysis and Hypothesis Testing

In order to determine the impact of transportation on Nigerian economy, regression model was conducted.

The Hypothesis states thus:

Ho: Transportation has no significant impact on Nigerian economy.

Regression Statistics	
Multiple R	0.999192114
R Square	0.998384881
Adjusted R Squ	0.995154644
Standard Error	1637.461287
Observations	10

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	6	4.97E+09	8.29E+08	309.0748	0.000283428
Residual	3	8043838	2681279		
Total	9	4.98E+09			

	Coefficients	*ɔndard Err*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	15803.60578	13235.81	1.194004	0.318281	-26318.64403	57925.85559	-26318.644	57925.856
RT	53.04994442	24.57213	2.158947	0.119694	-25.1495486	131.2494374	-25.149549	131.24944
RTP	84306.79348	167729.5	0.502635	0.649799	-449483.3307	618096.9177	-449483.33	618096.92
WT	-9747.146364	6907.452	-1.41111	0.253039	-31729.74027	12235.44754	-31729.74	12235.448
AT	457.1653135	233.1207	1.961067	0.144702	-284.7289391	1199.059566	-284.72894	1199.0596
TS	-330.1839944	588.2619	-0.56129	0.613799	-2202.296003	1541.928014	-2202.296	1541.928
PCS	1935.159919	1038.151	1.864045	0.15919	-1368.69917	5239.019008	-1368.6992	5239.019

$$GDPt = bo + b1RT + b2RTP + b3WT + b4AT + b5TS + b6PCS + e \quad \ldots\ldots\ldots\ldots\ldots (2)$$

$$GDP = 15803.60 + 53.04\,RT + 84306.79\,RTP - 9747.14\,WT + 457.16\,AT - 330.18\,TS + 1935.15PCS + e \quad \ldots (3)$$

The introduction of the error term 'e' to the model is to ensure that the results become more acceptable, the exponents of the explanatory variables become the coefficients; this therefore qualifies the coefficients of the explanatory variables (independent variables) as a measure of the degree of responsiveness (elasticity) of the dependent variable to the change in the explanatory variables. The coefficients of each explanatory variable (RT, RTP, WT, AT, TS and PCS) are the elasticity response of the dependent variables (GDP) with respect to relative explanatory variables.

From equation (3) the value of the constant term (intercept) is 15803.60. This signifies that if the explanatory variable is held constant, the GDP is 15803.60. Thus, this is the autonomous value of the real GDP. In the context of the computed elasticity (i.e. coefficient of the explanatory variables), the result suggests that, a unit change in Road transport (RT) will cause a 53.04 unit increase in GDP , a unit change in Rail transport and Pipeline (RTP) will cause a 84306.79 unit increase in GDP, a unit change in Water transport (WT) will cause a 9747.14 unit decrease in GDP, a unit change in Air transport (AT) will cause a 457.16 unit increase in Gross Domestic Product (GDP), a unit change in Transport service (TS) will cause a 330.18 unit decrease in GDP), and a unit change in Post and Courier Service (PCS) will cause a 1935.15 unit increase in GDP. This implies inadequate investment in Water transport (WT) and Transport service (TS) and for this to develop, more capital should be mobilized and this will eventually affect the GDP positively.

Significance of Estimate and Overall Regression Model:

Coefficient of Determination (r^2)

The coefficient of determination (R^2) is 0.998 for the model, this indicates that there is a very strong positive relationship between the dependent variables (GDP) and explanatory variables (RT, RTP, WT, AT, TS, PCS) and that the explanatory variable accounted for 99.8% of the variations in the GDP in Nigeria from 2006 to 2015, While the remaining 0.2% variation in the real GDP is explained by other exogenous variables that are excluded in the models (error term). This implies that the coefficients are high as 99%. Therefore, the models are good fit as only less than 1% of systematic variation is left unaccounted for by the model. Also, a brief look at the adjusted R-squared value of 99.5% indicates that after removing the effect of insignificant regressor" (explanatory variable), about 0.5% variation in the real GDP is still accounted for by the independence variables. Therefore, the model is a good fit.

Decision Rule:

Accept Ho, if $F_{cal} > F_{tab}$

Otherwise reject Ho and accept H1.

From the regression result, the value of our calculated F-statistic is 309.0748

Where k (the parameters) = 7

N (No of observations) = 10

F_{tab} = Fα, V1, V2
Where V1= k-1 (that is 7-1=6) and V2= N-k
(i.e., 10-7=3), where α = Level of Significance
F_{tab} = 49.5

Decision for the Model: Since $F_{cal} > F_{tab}$ (309.0748 > 49.5) at both 1% and 5% level of significance, we reject the null hypothesis (H0) and conclude that there is a significant positive relationship between the independent variables and GDP (economic growth) in Nigeria. In conclusion, the linear regression model has a reasonable fit and therefore could be deduced that relational expression exists between GDP, RT, RTP, WT, AT, TS and PCS. The Null hypothesis is therefore rejected on this basis.

V. CONCLUSION AND FUTURE SCOPE

The study reveals that there is a relationship between transportation output and economic growth. It discovered a positive relationship between GDP transport modal outputs. Thus, an increase in the output of the transport sector leads to increase in the GDP of the country.
The relationship between transportation and economic growth was captured through the model which made used of transport modes (Road Transport, Rail Transport and Pipeline, Water Transport, Air Transport, Transport Service and Post and Courier Service) as the independent variable and Gross domestic product as the dependent variable which captured the relationship between transportation and economic growth through statistical analysis. We found that economic growth is positively influenced by transportation whereby transport output exerts positive influence on GDP, which implies that improvement/increase in transport sector output will lead to an increase in GDP in the country which will bring about economic growth because transportation provides intermediate service for other sectors such as Agricultural sector, Manufacturing output, etc. which stimulate the economy to grow.

Public ownership and private sector operations of the transport infrastructure like roads, bridges, seaports, airports, railways, viaducts, tunnels and canals should be encouraged. So, government should provide such infrastructures and handover the management to private sector by lease, concession or partial privatization to ensure efficiency. Government should take legislative, policy and fund infrastructure. Government should ensure that most of international transport conventions are ratified through the National Assembly. Government should set up Transport Regulatory Commission which will provide regulatory roles while private sector provides the operational requirement. Transport business should not be all comers' affairs. Thus, Transport Regulatory Commission should provide standards to ensure safety and the Road Safety Commission should be actively involved in enforcement of such standards, etc. Inadequate transportation network and transport infrastructure have long hindered Nigeria's internal economic development. Therefore, a holistic strategy involving the overall improvement of all the modes is required. Consequently, a Master/Blue Print should be evolved instead of uncoordinated approach for all the modes.

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Dr. I. Njoku bagged Bachelor of Technology, Master of Science and Doctor of Philosophy degrees in Maritime Transport Management from the Federal University of Technology, Owerri Nigeria (FUTO) in 2000, 2009 and 2015 respectively. He also obtained another Master's degree in Financial Management from FUTO in 2007. He is a Lecturer at the Department of Logistics and Transport Technology, Federal University of Technology, Akure Nigeria. His area of specialization includes maritime transport and shipping finance. He has published widely in both national and international journals. He is a member of CILT, Nigeria.

