Impact of Integrated Transport System (Its) on the Productivity of Smes in Selected South-Western States of Nigeria.

AWOREMI, J. R., PhD.[1*]; AJAYI, J.O. [2]
1. Department of Economics, Faculty of Management Sciences, Ladoke Akintola University of Technology, Ogbomoso, Nigeria
2. Department of Transport Management, Ladoke Akintola University of Technology, Ogbomoso, Nigeria
*E-mail aworemi_remi@yahoo.com / TEL: +2348033967307

Abstract:
This paper examines the impact of Integrated Transport System on the productivity of SMEs in selected states of South-Western Nigeria. The sample frame consisted of SMEs that registered with the Chambers of Commerce and Industries of the selected states and are located within the state capital of the study area. Stratified sampling technique supplemented by cluster sampling was adopted. Data were elicited with the aid of structured questionnaire administered on 460 registered SMEs out of which 424 were found analysable.

The study revealed that there is a strong (P= 0.864) inverse relationship between SMEs' productivity and Government Policy (GP) on Integrated Transport System that is, slow responsiveness to Integrated Transport System by Nigeria Government. Based on the findings of this research, it was concluded that Nigeria Government's responsiveness is slow and having provided the efficacy of ITS in aiding SMEs' effectiveness in developing countries, the time is ripe for it accelerated adoption and implementation not only with SMEs but with other sectors of the economy.

Key Words: Transport, Transport System, Integrated Transport, SMEs, Infrastructure,

1. Introduction

Transportation is an indispensable tool used in facilitating economic activities. The imperativeness of transportation to economy facilitation of Small and Medium Scale Enterprises cannot be overemphasized. This inevitability of transport to SME stems from the derived demand function of moving people, produce and or services from one place to another just for the purpose of human satisfaction.

Transport is so vital that it has been likened to the human blood circulatory system whose healthy functioning is a necessary condition for sustenance of human life (Adeniji, 2000).

In modern economy, the role of transport is very strategic because it facilitates trade, enhances and improves the movement of goods, people, ideas, technology and services. Furthermore, it permits the knitting of friendship and fraternal relations, among people (Mamoud, 2007). This is no doubt the basic requisites of SMEs activities.

There is hardly any human society or human settlement system that can function efficiently and effectively without adequate, reliable, safe and affordable transport systems. The most fundamental reason for this being the catalytic effect of transport development on socio-economic growth and development. Transport also plays a significant role in territorial administration, political development, and the defence of territories as well as the promotion of regional cooperation (through the flow of people and goods along the import-export corridors of neighbouring countries). Precisely, transport development is central in the developmental process for the economy and society to grow healthily. This is because transport influences and it is influenced by other sectors that make up, not only the total urban system (Stopher and Meyburg, 1975), but also the entire human settlements' system.

Olanrenwaju (2011) classified transportation infrastructure as one of the hard infrastructure that are basic, physical and organizational structures needed for the operation of a society or enterprise, or the services and facilities necessary for an economy to function effectively.

The entirety of transport infrastructures like road and highway networks, mass transit systems, railway and terminal facilities, canals and navigable waterways, seaports and light houses, airports and air navigational systems, bicycle paths and pedestrian walkways, ferries among others. Cutting across the four basic modes of transportation: road, rail, water and air modes are summed up and called the transport system and each mode is considered an element of integrated transport system. When two, three or all of the modes meet and function at a point of convergence, it is assumed to be the Integration of Transport System.

Transport integration or integrated transport can be described as the operation of whatever mode of transport involved as one seamless entity for the benefit of the fare-paying public. In other words, it is the smooth and

streamlined flow of operations between transport mode and consequently making operations as door-to-door as possible. Transport can also be integrated within one same mode of transport taking different forms. For instance, the road transport takes the form of public transport, private car movement, motor-cycling and pedestrianization. Within these forms of road transport, transport can be integrated through combination of two or more forms in order to serve different functions or purposes. Integrated transport is aimed at providing a sustainable transport system which gives the desired result or expected development without degrading the ecological economy and social environment. Integration also gives additional value to the operation of the transport system. Mamoud (2007) posits that the integration of transport system is concerned with addressing the problems of serious and pathological imbalance that exist between the supply side of transport services, goods and technology. It further provides SMEs with alternatives of making choices among modes, transport cost reduction, stress reduction through easy movement of goods, sustainable environment to go about activities and profit maximization.

According to the Nation Bureau of Statistics (NBS, 2012), since the attainment of independence in 1960, the problems of Nigerian transport system include bad roads, inadequate and overcrowded trains and airplanes, and congested ports. These are said to be common features of the developing nations. Today, road transport accounts for more than 90% of the county's goods and passengers movements (Filani, 2002). The importance of the road sector is reflected in government resource allocation to it in the last four decades (Oni and Okanlawon, 2004). As a result of the predominance of road transport, Nigeria's transport system is clearly imbalanced (Ogwude, 2011). Oni and Okanlawon (2004) further revealed that water transport scores a distant second to road transport in terms of usage with an average share of about 1.6% of Nigeria Gross Domestic Product (GDP), the relegated status of Nigeria railway has made it important and cheap means of transport which fosters growth of privately owned long haulage transport services to be side-lined. However, due to the uniqueness and advantages of air transport over other modes in terms of speed and safety, it is still been held in high esteem, nonetheless, its share of the GDP is still negligible in Nigeria. As a result of this imbalance and insufficiency of infrastructure in the transport system, integration is limited because of the unavoidable difficulties that will be experienced and as such the present level of transport integration is considered low in Nigeria and in the same vain, SMEs have been deprived of the ability to function effectively and confer commensurate benefits on the economy.

The output or productivity of SMEs is largely determined by the profit of such firm. Transportation happens to be a fundamental and integral cost that most SMEs incur and as such, an efficient integrated transport system subsidises the cost firms incur on transportation.

On the hand, the efficiency of an integrated transport system is measured against key factors that determine the degree of integration of the transport system vis-à-vis inter and intra modal transport policy, institutional setup, town planning and urbanization. In summary, it has been observed that the influence of these variables on the profit of SMEs has been detrimental and this serves as the basis of this paper.

This paper attempts to identify and measure variables that are answerable for the imbalance and dearth of infrastructure in the Integrated Transport System against the productivity and viability of SMEs as economy builders in South-western Nigeria. It also looks into the existing contentions within the transport system and prescribes ameliorative measures so that SMEs can flourish and in turn serve as useful economic propeller.

2. Literature Review

Basically there are two mode of transport that can be said as most relevant to the activities of SMEs in the south-west geo-political zone of Nigeria; road and rail. As earlier mentioned, road transport dominated the transport sector of the nation. Available statistics revealed that the road transport mode was used predominantly for the evacuation of sea ports between 1970 and 1990 and it still accounts for a very significant proportion to date (Oni and Okanlawon, 2004). It was further reported that the road subsector which accounted for 54% of the federal governments total public sector planned capital investment in transport in the 1962-68 First Nation Development Plan received more than 70% of the allocation during (1975-80) and fourth (1981- 85) Development Plan periods. The importance and preference given to the road subsector has been deleterious to the rail sub-sector. Ogwude (2011) revealed that the current imbalance in modal share between rail and road transportation emerged in the 1960s. As at then, the railway carried over 60% of the freight tonnage compared to its current share of less than 5%. This unhealthy rivalry between the two modes has brought about excessive use of road leading to damage and lack of proper maintenance. It has brought about non-flexibility in the use of modes of transport and has made the Nigeria Railway Corporation (NRC) a lame duck with total reliance on the government for subvention. Other problems associated with over-concentration on road transport are low safety levels, poor quality of service provision, lack of regulation and misallocation of bulk traffic which could have been carried by rail.

It is however apt to mention that the rivalry between the two modes is not the only type of competition that exist in modal operation. Competition can also happen within one same mode of transport within its forms. The same

road transport sector attests more to this fact. Forms of road transport include private car ownership, public transport, cycling, para-transit and pedestrianization.

It is often observed that these modal form work at cross purposes. For instance, the high rate of car ownership and dependency has greatly affected the effectiveness of public transport adversely thereby resulting to more traffic volume and congestion on most Nigerian roads. Another instance is the laziness para-transit has instilled into some people and thus discouraging pedestrianization. It can therefore be said that such competitions has continued to mar the availability and effectiveness of integrated transport system.

Putting in place an integrated transport system requires huge capital investment. Oni and Okanlawon (2004) noted that the construction in so many countries has traditionally had a large public sector component. In the last one and half decades, it is evident in Nigeria that there has been fundamental shift in the paradigm of infrastructure and service provision with the government retreating from being owners and operators of infrastructure and focusing more on their role as regulators and facilitators of infrastructure provided by private sectors.

Ogwude (2011) reported that the NEEDS framework constitutes a transport development strategy that is private sector-driven, providing an environment capable of addressing the issues of wealth creation, employment generation and poverty reduction; there is no doubt these are the basis of SMEs. More specifically, the Nigerian state is gradually giving up its place of provision of transport infrastructure for control of the sector through deregulation of some sub-sectors. The encouragement of Public-Private Partnerships (PPPs) in various forms and scales seems to be a key policy issue in financing all types of transport infrastructure (Oni and Okanlawon, 2004). According to Daramola (2003), Public-Private combination will ensure shared costs, reduced cost and improved efficiency. The private sectors are already taking more active parts in the provision of transport infrastructure through schemes like Built-Own-Operate-Transfer (BOOT) and Built-Own-Transfer (BOT). There has also been concessioning of projects to private investors so that in the long-run, the private sectors will be left with the responsibility of providing infrastructure while the government will be put in the place of management and control.

Between the two-said modes of transport mostly related to SMEs operations in South-Western Nigeria, it is apt to mention that the participation of the private sector has been most noticeable in the road transport sub-sector and this has contributed more to the poor state of the railway system in the country. However, generally Ogwude (2011) posits that transport infrastructure in Nigeria is currently inadequate and a lot of funding is required to increase its capacity to cope with an enormous transport demand made possible by an expanding economy. The expansion of economy can hence be inferred as a function of factors like SMEs. He further noted that whilst government would provide the funds to bridge the existing transport infrastructure gap in the country, much of funding needed to drive development of the transport sector in the years to come is expected from the private sector under the Public-Private program.

Without well-articulated policies to guide the direction of infrastructural development, the whole process will be haphazard and unidirectional. To a great extent, the type of transport policies in Nigeria has influenced the nature of the integrated transport system.

Presently, in Nigeria there is no single transport policy document that is legally produced or approved by the National Assembly. The result has been continual stagnancy and un-coordination of the country's transport sector. However, there are policy documents that have shaped the nature of transport development in the country such as: the 1975 Statement Policy on Transport, the 1993 Draft National Policy, the 2002 Master Plan for Integrated Infrastructure which takes Integrated Transport System as paramount, the 2002 Draft Transport Policy and more recently the 2010 Draft National Policy on Transport which provides guidelines for planning, development, coordination, management, supervision and regulation of the transport sector.

With specific reference to the 2002 Master Plan for an Integrated Infrastructure which was designed to provide guidelines towards developing the Nation's transport infrastructure; the main aim is to guide transport infrastructural development such that a networking of individual transport system will lead to the generation of greater economic and social benefits which can be brought about through economic propellers like SMEs. However, these said existing policy documents can be described as ad hoc, fragmented and uncoordinated and to make the situation worse, none has enjoyed resourceful implementation and hence major policy thrusts have been mere paper work thereby contributing to the poor Integrated Transport Infrastructure in Nigeria.

As earlier mentioned, with the new trend of PPPs, the government has been more concerned with the responsibility of management and control which involves planning, organizing, directing and control of provisions made for transport infrastructure. Policy formulation and implementation are also included. However, the functions and level of involvement of the three tiers of government in Nigeria are not clear. Their roles overlapped and are confused, whereas, successful implementation of urban transport policy can only be achieved within the context of an unambiguous, effective, coherent and well-coordinated institutional frame work (Oni

and Okanlawon, 2004). As a matter of fact, the tiers of government sometimes function at cross purposes and efforts are duplicated.

Furthermore, it is an observed attribute of the Nigerian setup that policies and plans are not always implemented. This is due to some factors typical of the institutional setup of a developing society like Nigeria. Makinde (2005) identified four salient factors which are communication, resources, dispositions or attitudes and bureaucratic structure. These four factors operate simultaneously and they interact with each other to aid or hinder policy implementation. In the Nigeria case, the implementation and the concomitant result has been inadequate transport infrastructure. The unstable political climate especially in the south-western Nigeria has also been detrimental to transport infrastructural development. It has been observed that, most awarded contracts and projects encounter cessation as a result of the fact that, different political parties adopt different plans, policies and styles in running government on emergence to public offices. Also, the availability of adequate and competent manpower that will fill key posts within the transport sector is a requirement for effective planning, and/or organising, directing at the central of transport activities.

It is a peculiarity of the Nigerian system that people who lack skills and with no relevant experience in the field of transport fill some key posts in the sector due to nepotism, favouritism and other corrupt acts. In such a case where the right pegs are not filled in the right holes, the management process is unidirectional, haphazard and this has been a bane on the Nigerian transport sector. It is also note-worthy that most abandoned projects, mis-awarded contracts, unexecuted projects and other consequential acts contending with infrastructural development are elements of corruption which has eaten deep down into every nook and cranny of the Nigerian system. These acts of corruption have hitherto marred the progress of transport infrastructural development which serves as a gate way to integrated transport system.

Finally, due to urbanization, the Master Plans of most cities in Nigeria that provided for adequate integrated transport system have been altered over the years thereby leading to uncoordinated and ad hoc infrastructural developments.

Urbanization is the process by which people live in urban centres through either migration or natural increase and the most significant change in the transformation being changes in the population of people and their characteristics.

Since the end of World War II, Urbanization in developing countries has accelerated greatly, with an increasing proportion of the urban population in each country concentrating in the large urban agglomerations. As a result of this high population growth, through rural –urban migration coupled with absence of physical plans and non-implementation of existing master plans and defective allocation of urban land use budget, the consequence has been haphazard, unplanned development and inadequate housing, most transport infrastructural projects could not be situated well and most infrastructural   developments in transport have been ad hoc in manner .To this end, it has greatly marred the being of integrated transport system in most cities and urban centres in Nigeria.

3. Methodology

This research is a case study of Integrated Transport System in South-Western Nigeria. Three states (Lagos, Ogun and Oyo) representing the major industrial states in the zone were selected for the purpose of study. The sample frame consisted of SMEs that are registered with the Chambers of Commerce and Industries of the selected states and are located within the state capital of the study area. Stratified sampling technique supplemented by Cluster sampling was used. Data were collected with the aid of structured questionnaire administered on 450 respondents SMEs' staff that is registered members in the study area out of which 424 were found analysable with inferential statistical tools of correlation analysis.

The function model used to examine the effects of Integrated Transport System on efficiency of SMEs in the study area can be specified implicitly as:

Y= f (ARI, SR, CH, AR, CA, AAT, GP, CAS, CIV, IA)

Where

Y= SMEs' output measured in term of turnover (₦)

RI= Accessible Roads for Intra-Modal operation (km)

SR=State of Railway (Good or Bad)

CH=Cost of Haulage (₦)

AR=Accessible Railway for Inter-state operation (km)

CA=Cost of Air Cargo (₦)

AT=Accessible Air Transport (Available or Not)

GP=Government Policy on ITS and petroleum products

CA=Cost of Auto spare parts (₦)

CI=Cost of Importing vehicles (₦)
IA=Insurance Adequacy

4. Results and Discussion

All variables were treated as continuous variables and the number of cases used for the present analysis is 424. The Correlation Matrix (Table 1) shows the relationship between the dependent variable (the SMEs' Productivity), (Y) and each independent variable as well as the correlation among the independent variables. The correlation between the dependent variable (Y) and each of the independent variables showed that, there is significant ($P \leq 0.01$) negative correlation between SMEs' Productivity (Y) and the State of Railway (SR), Cost of Haulage (CH), Government Policy on ITS and petroleum products (GP) and Insurance Adequacy (IA).This implies that these variables SR, CH, GP and IA reduces the SMEs' productivity of the selected States in South-western Nigeria.   Though, it was observed that, weak positive relationship exists between SMEs' productivity and Cost of Auto spare parts (CA), Cost of Importing vehicles (CI).

In addition, Government Policy on ITS and petroleum products (GP) has a very strong, positive and significant relationship ($r=0.818$, $P \leq 0.05$) with the Accessible Roads for Intra-Modal operation (RI), but positively weak and insignificant relationship with the State of Railway (SR) and Cost of Haulage (CH) in the study area.

The significant negative relationship that exists between the Government Policy on ITS and petroleum products (GP) and SMEs' productivity   corroborates the earlier findings of Oni and Okanlawon (2004) that in the last one and half decades, there has been fundamental shift in the paradigm of infrastructure and service provision with the government retreating from being owners and operators of infrastructure but focusing more on regulation and facilitating infrastructure provided by private sectors. This implies that, SMEs tend to suffer and their productivity will be drastically affected.

5. Conclusion and Recommendation

The study revealed that government policy on Integrated Transport System (ITS) and Petroleum prices significantly correlated with the turnover of SMEs in the study area and that it is negatively correlated which implies that Government Policy (GP) has negative impact on SMEs' performance. Meanwhile, without well-articulated policies to guide the direction of infrastructural development, the whole economic process will be haphazard. Thus, government should adopt and implement policy that will improve transport sector so as to enhance SMEs efficiency and by so doing create job opportunities.

Based on the findings and conclusion of this study, it was recommended that Nigeria Government should quickly adopt and implement viable policy on ITS and petroleum products so as to enhance the productivity of SMEs.

References

Adeniji, K. (2000): Transport Challenges in Nigeria in the next decades; *Keynote Address* delivered at The National Council on Transport Meeting Organized by the Federal Ministry in Transport, Abuja, Nigeria.

Daramola, A.Y. (2003). Innovative Options for Financing Transport Infrastructure in Nigeria. NISER *Magazine*, Nos. 4 &5, December, 2003, Ibadan.

Filani, M.O. (2003).   Advancing the Cause of Private Participation in the Road Transport Sub-Sector in Nigeria. *A Paper Delivered* at the 10th Anniversary Celebration of the Associated Bus Company (ABC) Ltd., May 14th, 2003 at Ikeja.

Makinde, T. (2005). Problems of Policy Implementation in developing nations: The Nigerian Experience, *Monograph*, Department of Public Administration, Obafemi Awolowo University, Ile-Ife, Nigeria.

Mamoud, S.D. (2007). Prospects of the Integration of Transport Systems. *Paper presented at orkshop* on Multi-modalism: Integration of Transport Systems for the carriage of goods from 7th-8th June, 2007.National Bureau of Statistics (2012). Transport Sector National Transport Policy for Nigeria (2010)

Ogwude, I.C (2011). Transport Infrastructure and Mobility in Nigeria. Department of Transport Management and Technology. Federal University of Technology, Owerri. *Unpublished M.Tech Thesis*.

Olanrewaju, T.C. (2011). Infrastructure- Key challenge for SMEs. *Speech Delivered at the   Enterprise Development Centre (EDC)*, 3rd Alumni Conference at the Shell Hall, MUSON Centre on Nov., 29th.

Oni, S.I. and Okanlawon, K.R. (2004). Nigeria's Transport Infrastructural Development: An Integral Part of the National Economic, Empowerment and Development Strategy (NEEDS), Department of Geography, University of Lagos. Akoka, Lagos.

Stopher, P. R. and Meyburg, A.H. (1975). *Urban Transportation Modelling and Planning*. Lexington, (Mass); Lexington Books, Washington, D. C.s Health and Company.

Table 1: Correlation matrix of ITS influence on SMEs' Productivity in South-western Nigeria

Variables	Y	RI	SR	CH	AR	CA	AT	GP	CA	CI	IA	X₁₁	X₁₂	X₁₃	X₁₄
Y	1.000														
RI	-0.793	1.000													
SR	-0.341**	-0.136	1.000												
CH	-0.614**	0.148	0.453**	1.000											
AR	0.539	-0.408**	0.488**	0.058	1.000										
CA	0.568	0.546	0.418	0.572*	0.047	1.000									
AT	0.586	0.567	0.326*	0.415*	-0.063	-0.053	1.000								
GP	-0.864**	0.818*	0.048*	0.019*	0.322	0.423	-0.061	1.000							
CA	0.167*	-0.159*	0.052	-0.043	0.057	0.064	0.273	0.084	1.000						
CI	0.526*	0.417*	0.328	-0.058	0.168	-0.051	-0.138	0.151	0.667	1.000					
IA	-0.437**	-0.418*	0.526	-0.063	0.418	0.628	0.543	0.142	0.562	0.628	1.000				

** Correlation is significant at the 0.01 level
  * Correlation is significant at the 0.05 level
Source: Data Analysis, 2012