Transport Infrastructure, Manufacturing Sector Performance and the Growth of Gross Domestic Product in Nigeria, (1999-2011).

[1]Ogwo E. Ogwo, PhD and [2]Agu Godswill Agu, PhD.
Department of Marketing Abia State University Uturu, Nigeria
[1]ogwoeogwo@gmail.com, [2]agugagu.absu@yahoo.com, [2]talk2godsag@yahoo.com

Abstract
This study examined the extent of influence of transport infrastructure provision on the performance of manufacturing firms in Nigeria and the effect of such performance status on the Gross Domestic Product of the nation. Primary and secondary data were used in the study. The primary data were sourced from selected manufacturing firms operating in the south east, while the secondary data were national figures on the manufacturing and transport sectors and the GDP of the country. A judgmental sample size of 100 respondents was adopted for the primary study, while the secondary data covered a period of thirteen years (1999-2011). The study revealed that the state of road infrastructure in Nigeria has negative effect on the marketing performance (sales and profitability) of the manufacturing sector. The quality of road infrastructure in Nigeria does not influence manufacturing capacity utilization significantly while it affects manufacturing production index significantly. Again, the annual budgetary allocation to the transport sector has significant influence on the contributions of the transport and manufacturing sectors to the growth of the nation. It was recommended among others that the government should consolidate the present attention being given to the transport sector in view of its multiplier effect on the economic growth and development of the nation and that adequate attention should be given to the manufacturing sector especially in the areas of power, security, finance and regulatory policies.

Keywords: *Transportation, Infrastructure, Manufacturing, GDP.*

Introduction

It is practically impossible for any nation to achieve and sustain meaningful development without efficient, reliable and adequate infrastructural facilities. Of all the basic infrastructural facilities generally known as essential amenities; (hospital facilities, power, water, transport etc), the transport infrastructure stands out. This is because of its impact on the performance of other key sectors of an economy. An efficient transport system has remained an important element of economic growth and development. Njoku (2009) and (Ikpechukwu and Ureal , 2012) pointed out that the transport sector is the pivot of the economy, the hub upon which the wheel of the economy revolves and that the neglect of this sector draws development backwards. The importance of transportation to the economic strength and efficiency of a nation cannot be overemphasized. A fundamental requirement of manufacturing is the distribution of products from the point of production to the appropriate target market at the right time, right quantity and right quality for customers' satisfaction at a profit. Any significant disruption of the flow of

goods and people will impact economically a great number of businesses and individuals adversely, (Smith, 1994).

In Nigeria, the transport sector has suffered over fifty years of neglect with the rail sector being the worst hit and the road segment being over used. This has led to the near complete collapse of the transport sector in Nigeria, the position of the sector to the economic status of the nation notwithstanding. Onolememe (2013) noted that the transport sector has not received meaningful attention in Nigeria unlike the developed countries of the world. Hence, the assertion that Nigeria is over twenty years behind in transport infrastructure. Transportation, according to David (2001) is the movement of goods and people from one location to another which can be by air, water, rail, pipeline, land etc. Agbonifoh, Ogwo, Nnolim and Nkamnebe (2007) assert that transportation links the different fixed facilities and markets, thus serves to neutralize the spatial separation of facilities as well as increasing the economic value of products by creating time and place utilities and promoting possession utility. While stressing the place of transportation in the physical distribution system, Okpara (2012) exposed that transportation is the costliest of the elements; Anyanwu (2003) stressed that over 50% of the total logistics cost is spent on transportation in Nigeria. As a result of its micro (organizational level) and macro (aggregate economy level) implications, transportation is a sensitive element in the developmental path of any nation. In fact, the transportation segment of an economy has a multiplier effect. Kotler and Keller (2007) observed that transportation choices affect product prices, condition of the goods, firm profit and customer satisfaction.

The Nigerian manufacturing sector seems to be the worst hit by the poor condition of transport infrastructure in the country. No fewer than 500 companies in Nigeria closed shop between 2009 and 2011 due to high operating business costs emanating mainly from power and transportation difficulties, (NACCIMA 2012). According to CBN Statistical Bulletin, (2011), agriculture and telecommunication sectors contributed 40.84% and 4.56% respectively to the GDP of the nation in 2010, the manufacturing sector contributed only 4.16%. In Malaysia as noted in CIA World Fact Book (2011), the manufacturing sector contributed 45% in 2010. Again the transport sector has seen virtually all the sub segments in near total collapse. While describing the nature of rail transport in Nigeria, www.wikipedia.com, (2012) contends that the railways own nearly 200 locomotives of which about 75% (150 pieces) are not operational. As at 2011, there were about 54 shuttles, 480 passenger coaches and over 4900 freight wagons. But less than 50% of the coaches and wagons are in serviceable condition, Ndibe, (2012). The rail segment has remained inefficient and ineffective for many decades. Iteale, Nwankwo and Obiene (2012) lamented that in 1964, 11288000 passengers and 2960000 tons of freight carried by Nigeria Railway Corporation dropped to 4342000 passengers and 1098000 tons in 1974. The passenger traffic came down to 1.6m in 2003 and today only Lagos state can boast of carrying close to 14000 passengers daily, Ndibe (2012) and Rasheed (2012). The performance of the rail segment has been so poor that it contributed just 0.001 percent consecutively to the GDP of the nation between 2001 and 2005. Also, other segments of the transport sector; air, water, road and pipeline have varying degrees of unending problems hindering their effective and efficient performance and significant contribution to the GDP of the nation. Again, CBN Statistical Bulletin (2011) shows that between 2001 and 2005, the aviation segment contributed 0.04%, 0.05%, 0.04%, 0.04% and 0.05%, respectively while the sea segment contributed 0.19%, 0.21%, 0.24%, 0.26% and 0.20% respectively. The bulk of the contributions of the transport sector to the GDP since 1981 comes from the road transport segment with 5.93% as the highest ever in 1982, 2.77%, 2.97%, 2.96%, 4.08% and 5.29% from 2001 to 2005 respectively. The CIA World Fact

Book (2009) observed that over 90% of the 3% contribution of the transport sector to Nigeria's GDP in 2009 came from the road segment. With this, road transport remains a leading contributor to the growth of the Nigerian economy from the transport sector. It therefore demands quality attention and management. The performance of the manufacturing sector in the south east and other parts of the country and its contribution to the GDP also depend greatly on the nature of road networks in the zone and the country at large. The heart-breaking performance of the manufacturing industry in Nigeria caused by heavy transportation challenges among others makes this study imperative.

The researcher is aware of the fact that economic growth is a complex interaction of numerous factors. Eliah (2013) identified such factors as productivity, population growth, education and health of workforce, as well as entrepreneurial spirit. Other factors identified by Zhihna (2013) and Rutten, (1998) include nature of governance, technical progress, rates of investment and savings, labour skills, state of infrastructure and natural resources endowments. However, Kenny and Williams (2001) lamented that "we do not know too much with certainly about exact causes of economic growth''. Hence, OECD (2003) report disclosed that economic growth is best measured with the rate of increase in GDP. Keeping all other variables for economic growth and development and other factors that may enhance the performance of a manufacturing outfit constant, the study measures the impact of road infrastructure on the performance of manufacturing firms as well as the impact of the performance of the manufacturing and transport industry on the GDP of Nigeria.

Statement of the Problem

Globally, the manufacturing sector of any nation plays a catalytic role in the economy. The sector as noted by Enusea (1996), Ogwuma (1995) and Loto (2012) has many dynamic benefits which it creates to the economy. First, it ensures steady growth in gross domestic product, solves unemployment problem, ensures favourable balance of payment, and improves per capita income, aggregate consumption and investment level. These benefits are derivable only when the sector is well taken care of. Before the discovery of oil in large quantity, the manufacturing sector remained a major contributor to the GDP of the nation. Oputu (2010) disclosed that in 1969 and 1979, the manufacturing sector contributed 8.2% and 9.6% to the GDP respectively, while its average contribution between 1989 and 1999 was about 4%. Similarly, Okonji (2013) lamented that oil discovery changed the mentality of Nigerians, reduced the country's productivity and manufacturing sector performance from its above 5% contribution to GDP before oil discovery to less than 4% average over the years. Again, CIA World Fact Book exposed that as agriculture's relative share of Nigeria's GDP was falling, manufacturing sector's contribution rose from 4.4% in 1959 to 9.4% in 1970. It, however, dwindled during the oil boom to 7% in 1973. As observed by Edo (2013) the oil boom led to significant stagnation in the manufacturing sector. In fact, capacity utilization in the sector has continued to fall from 73.3% in 1984 to 53.3% in 2009 and 52.12% in 2010. This shows that the growth of the sector was severely impaired by the oil boom as a result of insufficient allocation of resources to the key sectors that drive the economy, such as transportation. The contribution of the manufacturing sector has continued to dwindle as a result of unresolved challenges facing the sector. Kuye (2012), Osagie (2011) and MAN (2010) observed some of the challenges facing the sector to include infrastructure, electricity, finance and local content policy. In fact, MAN (2010) noted that in 2009 a total of 834 manufacturing firms closed shop in the country, contribution to GDP dropped from 4.7% in 2009 to 4.5% in 2010, output declined from ₦183. 8 billion in the first

half of 2009 to ₦165.7 billion in the same period of 2010, while over 83,400 jobs were lost from the sector.

Many companies experienced tough times between 2005 and 2012 in the south east Nigeria, owing to the deplorable and dilapidated nature of the highways including federal, state and local roads. Products worth billions of naira were damaged in transit as a result of heavy and hopeless traffic congestion, breakdown of trucks, robbery attacks and lost markets from customers who could not wait for the late arrival of ordered products Babatunde, (2013) and Ajaero, (2012). In fact, all the federal roads leading to the eastern states: Enugu – Port Harcourt, Aba – Ikot Ekpene, Bende – Ikot Ekpene, Umuahia – Ikot Ekpene, Onitsha- Enugu, Abakaliki – Enugu, OKigwe to Abakaliki and other roads linking the five states and other zones had remained largely un-motorable for the period under review. Only recently (from late 2012) has the federal government started reconstruction of some of the worst spots. This means that the industrialists pass through difficulties while trying to get their goods to the various destinations. The loss of skilled human resources (lives) on these roads is a routine occurrence. These problems impinge on the performance of the manufacturing firms in terms of turnover, profitability, patronage, market share, customer loyalty, customer satisfaction and also deplete the contribution of the sector to the GDP of the nation in terms of consumption and investment. The challenges faced by the manufacturing sector led to the collapse of over 800 manufacturing firms in the country.178 of the firms were from the south east, 46 collapsed in the south-south zone,176 in the Northern zone, 225 in the South-West zone and 214 in Lagos state (MAN,2010). Among the most debilitating challenges faced by the manufacturers include poor power supply and dilapidated infrastructure (NACCIMA, 2012).This study tries to call the attention of the people to the important role the transport sector plays in repositioning the manufacturing sector towards contributing effectively to the GDP of the nation.

The neglect of the link between transport infrastructure and the performance of the manufacturing sector has crippled the growth of the Nigerian industrial sector. Reviewed literature has shown that economic growth is a complex process (Lekshmanan,2007; Cavelle, 1998; Eliah,2003; Zhihna,2003; Rutten,1998; Kenny and William ,2001; Todaw and Smith,2002). Therefore, success or failure can rarely be attributed to one particular element within the system. However, transport infrastructure appears to have central role in view of its linkage effect on all other variables of economic growth**.** It is sad to note that the annual budgetary allocations to the transport sector and *the near total neglect of road infrastructure have limited the performance of the manufacturing sector (Manufacturing Capacity Utilization and Manufacturing Production Index) and the contributions of both sectors (transport and manufacturing) to Nigeria's GDP growth over many years. It therefore becomes imperative for a study to be carried out to examine the nature of relationship existing between the manufacturing sector and the quality of road transport infrastructure and to also measure the effect of such relationship on the GDP growth of the nation. It was this fit that the present study sought to actualize.*

Research Objectives

This study is aimed at identifying and evaluating the impact of the state of transportation infrastructure on the marketing performance of manufacturing firms in Nigeria with special attention to the south east and to measure their effect (transport and manufacturing performance) on the Gross Domestic Product of the nation. Specifically, the study tries to:

(1) Ascertain the extent of influence the quality of road infrastructure has on the performance of manufacturing firms.
(2) Determine the extent of the contributions of transport and manufacturing sectors to Nigeria's GDP.
(3) Know the extent to which budgetary allocation to the transport sector influences its contribution to GDP in Nigeria.
(4) Ascertain the extent to which budgetary allocation to the transport sector influences the performance of the manufacturing sector.

Scope of the Study

The subject scope of this study covered physical distribution and logistics management with particular emphasis on transportation, micro marketing with emphasis on marketing management and organizational performance, macro marketing with particular emphasis on marketing performance and gross domestic product and sustainable economic growth. The geographical scope of the primary data gathered for this research work was the south eastern states of Abia, Imo, Ebonyi, Anambra and Enugu. The scope was limited to manufacturing firms in the zone that are duly registered with the Corporate Affairs Commission and which are equally recognized by the Chambers of Commerce of the five states. The secondary data on the other hand covered the general performance of the Nigerian manufacturing and transport sectors from 1999 to 2011 with some reference to 1981 to 1998 data.

Review of Related Literature

The Position of Transportation at the Micro and Macro Marketing Levels

Micro marketing refers to the performance of marketing activities at the organizational level. It views marketing from the functional and managerial perspectives. Defining marketing from this angle, (Baker 1998) sees it as the management process responsible for identifying, anticipating and satisfying customers' requirements profitably. Emphasis here is on how to coordinate the marketing mix elements of product, price, place and promotion in an organization to ensure sustainable growth in the performance of the firm. On the other hand, macro marketing views marketing from the aggregate national level. That is, how marketing activities affect the overall growth of a nation in terms of GDP, employment creation, generation of foreign earning, correction of balance of payment issues etc. Defining marketing from this perspective, Kotler (2000) sees marketing as the social process by which individuals and groups obtain what they need and want through creating, offering and freely exchanging products and services of value with others. In all, the macro perspective views marketing from the social or societal perspective. Hunt (1981) suggested that macro market refers to the study of market system, the impact and consequences of marketing system on society and the impact and consequences of society on the market system.

Transportation has therefore been upheld as an important element at both levels. This is because the economic contributions of transport infrastructure are assessed from micro perspective which tries to identify the link between specific transport infrastructure units and organizational performance (Lekshmanan,2007). Also transport infrastructure offers an economy cost reduction and output expansion in terms of lowered production costs, increased productivity and improved investment (Cavelle,1998). These are macro benefits that will improve GDP growth rate. Organizations cannot perform effectively and efficiently without a carefully made logistics

decision which transportation is a major element as it affects the price of the product, time of delivery, quality of goods delivered as well as customer services level. At the micro level, recent studies have disclosed that transportation captures 37% of all logistics expenses in the organization (Ogwo, 2013). Time, place, ownership and possession utilities are created by marketing and it is transportation that ensures that these utilities are satisfactorily derived. In fact, even the fifth utility (form) cannot be effectively ensured without an attempt to transport the raw materials to the points of transformation (production).

On the aggregate, transportation has been identified as a key factor in the developmental pace of a nation. Rodrigue and Nottemboom (2013) disclosed that efficient transportation systems provide economic and social opportunities and benefits such as better accessibility to markets, employment; additional investments; reduced cost of business operation and saves time of product delivery. Again, at the macroeconomic level, transportation and the mobility it confers are linked to the level of output, employment, and income within a national economy. Transportation accounts for over 10% of the GDP in many developed economies (Memedovic et al., 2010). Transportation links together the factors of production in a complex web of relationships between producers and consumers. Rodrigue et al. (2013) declared that in developing countries, lack of transport infrastructure and regulatory impediments are jointly impacting economic development by conferring higher transport cost and also rendering supply chain management unreliable. A poor transport service level can negatively affect the competitiveness of regions and corporations and this has a negative impact on the regional added value and employment, which will invariably affect adversely the national economy. The Researcher's observation tends to support the assertion of CIA World Fact Book (2009) that the road transport in Nigeria carries over 95% of the nation's goods and passengers. In the south – eastern states of Nigeria, most business activities are carried out through the road transport. This is because the rail transport has been moribund for over a decade, the level of poverty makes it difficult for the majority to approach airports much less patronizing them, and the zone does not have sea ports like the south – south and south west counterparts. Hence, road transport becomes the only means of business operations in the zone. This study is limited to this sub-segment based on these reasons. It should be noted that Nigeria has the largest road network in West Africa and the second largest south of the Sahara, CIA World Fact Book, (2009). The national network is currently estimated to be 194, 200km of which 34, 120km (17.6%) are federal, 30500km (15.7%) are state while 129, 580km (66.7%) are local and rural roads, (www.wikipedia.com, 2011). However the poor state of road networks in Nigeria has made the contribution of the sector to the GDP to be on a steady decrease. Among the problems of the road transport system in Nigeria as identified by Sumaila (2003) are; poor and inadequate planning, weak intermodal coordination, insufficient public transport to cope with ever increasing demand for movements, urban traffic congestion, neglect of rural transport system, safety and security challenges and environmental pollution, poorly maintained roads, poor rural access, poor road complementary facilities etc. Umali, (2012) noted that business premises in Aba are not passable during rainy season. Some shops are flooded; goods are constantly destroyed and damaged on the high ways when trailers fall.

The weight of the importance accorded to transportation as a key economic development factor led to the development of the first Logistics Performance Index in 2010 which ranked nations of the world based on the managerial and physical effectiveness of their logistics. The ranking according to Memedovic et al (2010) was based on six underlying factors of logistics

performance: Efficiency of the clearance process by customs and other border agencies, quality of transport and information technology infrastructure for logistics, ease and affordability of arranging international shipments, competence and quality of logistics services, ability to track and trace international shipments and timeliness of shipments in reaching destination.
A value of less than 3.0 out of the 6 points was seen as reflecting an array of problems within a nation's logistics system. This is the position where Nigeria belonged in the rating while Germany and Singapore were ranked first.

H_1: The quality of road transport infrastructure does not significantly influence the Manufacturing Capacity Utilization in Nigeria.

H_2: The quality of road transport infrastructure does not significantly influence the Manufacturing Production.

Economic Growth and Gross Domestic Product Examined
Economic growth can be defined as steady growth in the productive capacity of the country. It is the increase in the amount of goods and services produced by an economy over time. Ogbonna(2000) sees economic growth as a sustained increase in a nation's Gross National Product over time. He observed that the growth rate of a national output, that is economic growth is given by the "output- elasticities of the resources inputs multiplied by their respective growth rates". As indicated in webfinance (2013), economic growth is a function of technological innovation and positive external forces. To explain why some countries grow more rapidly than others or why a country may grow more rapidly during one period of history than another, economists have found it convenient to think in terms of production function which is a mathematical way of relating some measures of input to the inputs required to produce it.
The factor inputs may be land, capital, labour etc. Cobb and Douglas, (1928) quoted by Nwaimo (2009) and Ogbonna (2000) gave the production function as:
Q = f(K, L, N, T)
That is, total output capacity, Q is a function of Capital resources (K), Labour (L), Natural resources (land) and Technological know- how (T). According to (Wikipedia, 2013), economic growth is measured as a percentage change in the gross domestic product or gross national product. It can also be measured using the Purchasing Power Parity approach. A lot of transport investments that are profit oriented can be seen in Nigeria. Some are owned by private individuals (ABC Plc, The Young Shall Grow Motors, Chisco Ltd, Best Way, Peace Mass Transit, G. Agofure etc) and also by government (Aba line, Imo Transport Company, Cross Lines, Rivers Transport Company etc). Again, the government budgets annually on transportation as part of government spending on transportation. It should be noted that GDP can be at factor or market prices.

From the reviewed literature, transport infrastructure and the manufacturing sector play significant roles in determining the GDP, economic growth and economic development status of a nation. Oputu (2010), Okonjo (2013) and Edo (2013) traced the position of the manufacturing sector in Nigeria in terms of its contribution to GDP, economic and improved standard of living. They concluded that the neglect of the sector has hampered growth, development and GDP growth rate. Again, transport infrastructures have been upheld by most scholars as having

significant influence on the growth of an economy. Rodrigue et al (2013), Agbonifoh et al (2007), Ikpechukwu et al (2010) and Njoku (2007) have commented positively on this.

H_3: ***The transport and the manufacturing sectors in Nigeria have not made significant positive contributions to the growth of GDP.***

H_4: ***Budgetary allocation to the transport sector has not significantly influenced the sector's contribution to GDP.***

H_5: Budgetary allocation to the transport sector has not significantly impacted on the performance of the manufacturing sector.

Empirical Review

Scholars from different countries have carried out studies on the relationship between transport infrastructure and the performance of manufacturing firms, as well as the impact of the transport and manufacturing sectors on the growth of an economy using different parameters such as gross domestic product, standard of living, organizational profitability, foreign earnings etc. Studies have tried to relate economic growth with some of these factors influencing it. A study of 69 developed countries by Borensztein, Gregorio and Lee (1998) captured FDI as a major factor of economic growth. Spiegel (1994) identified technology, Levin (1997) identified finance and social institutions (income and genetics). Vickerman (2001) observed that the correlation between transport infrastructure and economic growth is not so stable, because according to him, it is difficult to measure a single causal direction of these two factors, regarding the high possibility of mutual interaction. Banister and Berechman (2001) noted that economic growth happens mainly due to capital, labour etc and only partly relying on infrastructural improvement. In his view, Gramlich (1994) stressed that a first massive provision of infrastructure could cause great effect on economic growth, however that after the basic infrastructure was in place, new investments would not have much results. Smith (1994) concluded in his study conducted in China that comparison between two specific regions shows positive effect of road infrastructure on the development of an economy and that the more developed areas benefit more than the under-developed areas. Also, Olakunori (2006) captured the necessity of transportation in the society and hence concluded that it is the engine and wheel of the society. Similarly, Sumaila (2012) posited that the transport sector has many cross- sectional implications and this makes its goals largely interdependent.

Njimante and Mbohjim (2012) researched on traffic congestion and economic growth and found out that traffic congestion affects productivity and hence, economic growth in Cameroon. Aschauers (1989) used annual time series data to measure road infrastructure and productivity, growth and output. In 2012, the study by Research Digest shows that the midpoint estimate of the elasticity of GDP with respect to road infrastructure lies around 0.15 for developed countries, implying that doubling of infrastructure raises GDP by 15%. Finally, Smith (1994) observed in her empirical study that pavement quality of road network has significant relationship with income growth which is a strong indicator of the level of economic growth of a nation.

The manufacturing sector also plays significant role in economic development. This has been validated by the empirical studies of Loto (2012), Ogwuma (1995), Enusae (1996), (MAN 2012), Amakon (2012). In recognition of this, the federal government of Nigeria embarked on an Industrial Revolution aimed at strategically positioning and empowering the sector as the key

driver of economic growth through job creation and increased contribution to GDP, Oladunjoye (2012). Many scholars have used manufacturing capacity utilization and manufacturing production index to measure the performance of the manufacturing sector of different countries. Alvaro, Luis and Jorge (2009) surveyed 26 African countries to find out the nature of the link between quality of infrastructure (Transport, telecommunication, energy, etc) on total factor productivity. They discovered that infrastructure quality has a low impact on total factor productivity. Also, Deepika (2002) studied the Indian manufacturing sector performance in terms of manufacturing production index and capacity utilization using time series data between 1965 and 1999. He discovered that infrastructure provision enhances the productivity in the manufacturing sector and it helps to lower the costs in the sector. Wing, Anderson and Lakshamanan (2008) and Gafer and Saad (2009) used Time Series data to measure the impact of infrastructural facilities on the economy. Gafar et al (2009) disclosed that industrialization and infrastructural facilities are co-integrated, while Wing et al (2008) disclosed that Transport infrastructure has broader benefits that can enhance the growth of an economy.

Research Methodology

This study combined both historical and survey research designs. This is in order to fill the gap observed from the review of literatures which disclosed that majority of the previous researchers used only historical, secondary data. The historical data were sourced from states Chambers of Commerce, Industry, Mines and Agriculture, Manufacturers Association of Nigeria, Central Bank of Nigeria Annual Reports and CIA World Fact Book. The Survey covered marketing and production managers of 40 manufacturing firms. A sample size of **100** marketing executives and production managers of the 40 manufacturing outfits in the five states was used. The convenience sampling method which is one of the non-probability techniques, (Ezejelue,Ogwo and Nkanebe, 2008; Anyanwu ,2003; Alugbuo, 2005) was used. Accessibility and convenience were considered in reaching the respondents.The questionnaire was used for this.

Collected data were analyzed using descriptive and inferential statistics. Key Performance Indices (patronage, turnover, profitability, market share, customer loyalty and customer satisfaction) of the manufacturing industry in the zone were measured using generated primary data from the managers and the effect of the performance on GDP ascertained. The study covered 1999 to 2011, the years when the road network in the zone reached the peak of its deplorable state. Stated hypotheses were tested using two techniques: Hypothesis one and two were tested using the ***SPSS paired samples t test of difference at 0.05 level*** of significance while hypotheses three, four and five were tested using the ***SPSS Pearson Product Correlation Coefficient***.

Decision Rule: Reject the null hypotheses if calculated t value is greater than the critical value of t at the appropriate degree of freedom and where the p-value (sig-2 tailed) is less ***than 0.05***. Otherwise***, Accept***.

Analysis of Primary Data

Out of the 100 copies of the questionnaire sent to the marketing and production heads of the companies selected for the study, 94 copies, representing 94% were retrieved and used, while 6 copies, representing 6% were not retrieved.

Table 1: **Major Problems Facing Manufacturing Firms as Identified by Respondents**

Problem	Frequency	Percentage	Status
Security	53	13.73	Significant
Power	94	24.35	Significant
Transportation	94	24.35	Significant
Government policies	38	9.84	Fairly significant
Finance	94	24.35	Significant
Sources of Raw materials	8	2.07	Insignificant
Foreign competitors	5	1.30	Insignificant
Total votes	**386**	**100.00**	

Table two shows the list of key problems facing manufacturing firms. The researcher adopted a bench mark of 47 on frequency side or 12% as the significant point. The table indicates that power, transportation and finance were listed by all the respondents as among the key problems facing their firms, that is 94 (24%) each. Security challenges and government policies followed with 53(14%) and 38(10%) respectively while raw materials sources and foreign competitors got 8(2%) and 5(1%) respectively.

Table 2: Analysis of Responses on key Research Statements

S/N	Comment	SA	A	D	SD	Mean	Status
1	With improved road infrastructure, manufacturing sector profitability improves	40	32	14	8	3.11	A
2	There is a strong relationship between customer loyalty/satisfaction and improved road network	51	30	7	6	3.34	A
3	Turnover and market share in Nigeria Manufacturing firms suffer because of poor road infrastructure.	76	18	__	_	3.80	SA
4	National consumption and investment can improve with improvement in road infrastructure.	45	33	10	6	3.23	A
5	There is a link between road infrastructure and standard of living.	62	28	4	__	3.62	SA
	Total	**274**	**141**	**35**	**20**		
		58%	**30%**	**7%**	**4%**		

The table shows that a cumulative total of 274 (58%), 141 (30%), 35 (7%) and 20 (4%) voted for strongly agree, agree, disagree and strongly disagree respectively on the key statements made. The researcher adopted the 4-point rating scale in calculating the mean scores. That is,(SA=4,A=3,D=2,SD=1). From the mean values, items number 3 and 5 have approximate scores of 4 points which represent significant outcome.

Table 3: **Rating 0f the Impact of the Performance of the Manufacturing Sector on Some Macro Variables**

S/N	Item	Very high	High	Low	Very Low	Mean	Status
1	Increase in GDP	62	26	6	-	3.56	Very high
2	Improvement in standard of living	38	51	4	1	3.35	High
3	Employment Creation	73	2	-	-	3.17	High
4	Improved Investment expenditure	49	37	5	3	3.41	High
5	Healthy Competition	66	20	6	2	3.60	Very high
6	Growth in Technology	58	35	1	-	3.61	Very high
7	Opportunities for exportation	64	23	7	-	3.59	Very high
8	Enhanced GDP	34	39	15	6	3.07	High
9	Chances for Internationalization of local firms	42	40	10	2	3.30	High
10	Enhanced human resources through training	25	36	16	17	2.73	High

The above table shows respondents' rating of the impact of the performance of the manufacturing sector on select macro indexes. The mean values show the performance of the manufacturing sector has very high impact on GDP, competition, technological growth and exportation opportunities. Its impact on standard of living, employment creation, investment, balance of payment, internationalization and human development were rated high.

Table 4: **Responses on the Link between Road Transport and the Manufacturing Sector.**

S/N	Comments	True	False	Mean	Status
1.	The state of road network in the south east has enhanced the growth of the manufacturing sector	13	81	1.14	False
2.	Cost of production is heavily Influenced by the nature of road network	94	-	2	True
3.	Customer satisfaction is at risk if the road network remains poor	72	22	1.76	True
4.	The contribution of the manufacturing sector to the GDP of the nation is influenced by the state of road infrastructure	69	25	1.74	True
5.	The quality of road infrastructure can influence the productivity of manufacturing firms	86	8	1.92	True

The table above shows responses on the link between transport infrastructure and the manufacturing sector. Among the key statements made only item one was rated false, while others were rated true.

Test of Hypothesis 1

H_0: The quality of road transport infrastructure does not significantly influence the Manufacturing Capacity Utilization in Nigeria.

To test this, the manufacturing capacity utilization in Nigeria was grouped into two. 1981 to 1996 represents period of good quality road transport infrastructure while 1997 to 2011 represents period of low quality of road transport infrastructure. The SPSS paired samples t test was applied on the data on table 6.

Result: The SPSS output shows that t= -1.173, df=15 and P-value (sig.2 tailed)=0.259. See Appendix C. Also, at 0.05 level of significance and df=15, the value of t is 2.132.
Interpretation: This means that t cal is less than t cri (-1.173≤2.132) and the p-value is greater than 0.05 (0.259≥0.05).

Decision: since t cal (-1.173) is less than t cri (2.132) at df=15 and p-value=0.259 is greater than Alpha=0.05, we therefore Reject the alternative hypothesis and accept the null hypothesis. This implies that the quality of road transport infrastructure does not significantly influence manufacturing capacity utilization in Nigeria.

Test of Hypothesis 2

Ho: The quality of road transport infrastructure does not significantly influence the Manufacturing Production Index in Nigeria.
To test this, the manufacturing production index in Nigeria was grouped into two. 1981 to 1996 represents period of good quality road transport infrastructure while 1997 to 2011 represents period of low quality of road transport infrastructure. The SPSS paired samples t test was applied on the data on table 6 which is reproduced below.
Result: The SPSS output shows that t= 4.680, df=14 and P-value (sig.2 tailed)=0.000. See appendix D. Also, at 0.05 level of significance and df=14, the value of t is 2.145.
Interpretation: This means that t cal is greater than t cri (4.680≥2.132) and the p-value is less than 0.05 (0.000≤0.05).

Decision: since t cal (4.680) is greater than t cri (2.145) at df=14 and p-value=0.000 is less than Alpha=0.05, we therefore Reject the null hypothesis and accept the alternative hypothesis. This implies that the quality of road infrastructure has significant influence on Manufacturing Production Index in Nigeria.

Test of Hypothesis 3

H_0: The transport and the manufacturing sectors in Nigeria have not made significant positive contributions to the growth of GDP.

To test this hypothesis, the data on table 9 were used and Pearson Product Correlation applied.
Result: The output of the SPSS computation shows the value of **Rxy = -0.280**. See appendix E. This shows that there is a negative correlation between the cumulative contributions of the

transport and the manufacturing sectors and Nigeria's GDP growth between 1999 and 2011. The test of significance shows the value of t as – 8.60. From tables, the value of t at 0.05 level of significance and df (13-2 = 11) = **1.796.**This shows that the test is not significant.

Decision: since the value of t cal is greater than the critical value of t, we therefore **reject Ha** and **accept Ho** that the transport and the manufacturing sectors in Nigeria have not made significant positive contributions to the growth of GDP. This means that the cumulative contributions of the transport and the manufacturing sectors between 1999 and 2011 are insignificant when compared with the total GDP.

Test of Hypothesis 4

H_0: Budgetary allocation to the transport sector has not significantly influenced the sector's contribution to GDP

To test this hypothesis, the data on tables 7 and 8 as reproduced below were used and Pearson Product Correlation applied.

The output of the SPSS computation shows the value of **Rxy = 0.81.** This shows that there is a strong positive correlation between the annual budgetary allocation to the transport sector and the sector's contribution to GDP. To test for significance, the t test shows a value of 1.62. This shows that the test is not significant.

Decision: Since the critical value of t (1.796) is greater than t cal (1.62). We therefore **reject Ha** and **accept Ho** that budgetary allocation to the transport sector has not significantly influenced the sector's contribution GDP. This result implies that the transport sector makes positive contributions but the contributions are not significant enough. This is because; the link between budgetary allocation/utilization to the economic sectors and GDP growth rate has not been given quality attention.

Test of Hypothesis 5

H_o: Budgetary allocation to the transport sector has not significantly impacted on the performance of the manufacturing sector.

To test this hypothesis, the data on tables 8 and 9 as reproduced below were used and Pearson Product Correlations applied.

The output of SPSS computation shows the value of Rxy = - 4.86.

This shows that there is a negative correlation between budgetary allocation to the transport sector and the performance of the manufacturing sector in Nigeria. For test for significance, the t-test value was - 6.57.This shows that the test is not significant.

Decision: Since the calculated value of t is less than the critical value, we therefore reject Ha and accept Ho that budgetary allocation to the transport sector has not significantly impacted on the marketing performance of the manufacturing sector. This indicates that with improved allocation to the transport sector, all things being equal, the manufacturing sector will perform better.

Summary of Findings

Based on the analysis of both primary and secondary data collected, the following major findings were made:

1. Our findings reveal that quality of road infrastructure influences the performance of the manufacturing sector. However, the study shows that the quality of road transport in Nigeria does not significantly influence the manufacturing capacity utilization of the country. The test of hypothesis one revealed this. This is in line with the findings of Alvaro et al. (2009). On the other hand it was revealed that the quality of road transport in Nigeria significantly influences the manufacturing production index of the country. Our test of hypothesis two shows this while the findings of (Deepika 2002; Wing et al. 2008; Gafar 2009) validate it.

2. The data on table ten as well as our test of hypothesis three revealed that the cumulative contributions of the transport and manufacturing sectors to the growth of GDP in Nigeria have remained largely insignificant when compared with the total annual GDP for the years. Our study shows that there is a very strong relationship between the performance of the manufacturing sector of Nigeria economy (in terms of Manufacturing Production Index and Manufacturing Capacity Utilization) and the growth in gross domestic product. The CBN data on table 6 shows that the higher the manufacturing production index and capacity utilization, the higher the GDP for the year. The analysis of primary data on table 5 item one which measures the link between manufacturing sector and GDP supports this. However, the tested hypothesis revealed that the sector has not contributed significantly to the growth of Nigeria economy. This is supported by the findings of (Gado, 2012), (Amakon, 2012) (Wikipedia, 2013), and MAN (2012).

3. There is a strong positive relationship between budgetary allocation to the transport sector in Nigeria and the sector's contribution to sustainable economic growth. The study however, revealed that though the relationship is positive, the level of significance is still very weak (insignificant). The CBN statistical data on table 9 shows the nature of this link. That is, the transport sector in Nigeria has not performed up to expectations in its contributions to the GDP growth of the nation over the years. The performance however is better than that of the manufacturing sector but less than such emerging sectors as tourism and telecommunication. This finding also validates the findings of (Oladunjoye, 2012) Njimate *et al* (2012) and (Smith 1994).

4. The study equally shows that federal government annual budgetary allocation to the transport sector, which invariably affects the quality and quantity of road infrastructure, has negative effect on the performance of the manufacturing sector, all things being equal. The findings of Njoku(2009, NACCIMA 2012; Ikpechukwu and Ureal 2012) validate this.

5. The state of road infrastructure affects the marketing performance (sales and profitability) of manufacturing firms in the south eastern Nigeria in particular and the gross domestic product of the nation at large. This finding followed the rating of road infrastructure as very important to manufacturing firms by 92% of the respondents. Findings reveal that the state of road infrastructure in the south east has not improved the marketing performance (sales and profitability) of the manufacturing sector. This was revealed from the analysis of responses on table 3 items one and 3 which show the link between road infrastructure and profitability/sales of manufacturing firms. Again, the literature review equally showed

that the Nigerian road sector performed better in years when budgetary allocation to it was high. The findings of (Sumaila, 2008) and (Research Digest 2012) validate this.

Conclusion

In the developed world, provision of basic infrastructural facilities is no longer a debatable matter as government and political leaders no longer compete using such promises as part of their key points. In the developing World of Africa and Nigeria in particular, the reverse has remained the case. The neglect of road infrastructure in the country has crippled the performance of other sectors especially the manufacturing sector and this has continued to impact negatively on the growth of the GDP of the nation. There is the need for a rethink on road transport infrastructure in the country.

Recommendations

Based on the findings of the study, the following recommendations are made:

1. The attention and recognition which the President Goodluck Jonathan administration started to give the transport sector towards the end of his tenure should be maintained. This is in terms of improved budgetary allocation to the sector, strict supervision of road contracts awarded and sanctioning defaulters, massive road rehabilitation, rail sector reform and the dredging of River Niger as well as efforts to link Nigeria with other neighbouring countries by road. This recommendation is made in view of the position of the transport sector and its multiplier effect on the performance of other sectors and the GDP of the nation. Moreover, effort should be made to ensure effective and efficient utilization of budgeted fund in the provision and maintenance of transport infrastructure.

2. The manufacturing sector should be given adequate attention also in other areas such as power, security, regulatory policies and finance; especially in this period of devastating foreign exchange rate. This is because power, finance and policies were identified as critical issues hindering the progress of the sector by most of the managers interviewed. When these problems are tackled, idle capacity utilization will be a thing of the past as all available factor resources will be optimally employed to improve productivity.

3. Local, state and federal governments as well as private bodies (companies, institutions, churches, world organizations etc) should see the provision of road infrastructure as the duty of all. The investment made in the provision of transport infrastructure will be of benefit to us all.

4. State governments in the eastern part of the nation should not neglect the manufacturing sector irrespective of the amount of oil resources in their land. Efforts should be made to give back to them through adequate infrastructural provision as they pay their taxes and other levies.

5. Periodic re-orientation of present and intending political office holders on the sensitive position of basic infrastructures to the growth of the nation (GDP, standard of living, life expectancy etc) is urgently recommended.

References

Adiola,D (2012) "Nigerian Railway Service and Standard of Living of the People",***The Punch*****, August 7.**

Agbonifoh, B.A, Ogwo,O.E, Nnolim,D.A and Nkamnebe, D.A (2007),***Marketing in Nigeria :Concepts, Principles and Decisions*****,2nd** ed, Aba: Afritowers Books.

Alugbuo,C.C (2005),***Guide to Project Writing,*** Owerri: Totan Press.

Alvaro, E, Luis, J.G and Jorge, P (2009) "Accessing the Impact of Infrastructure on Firm Productivity in Africa 1999-2005" ***Economic Series.***

Amakon, U. (2012). "Manufacturing Exports in Sub-Sahara African Economy: An Econometric Test", ***American International Journal of Contemporary Research*** **vol.2 No.4.**

Anyaele, J. U (2003), ***Principles of Economics***, Lagos: Long Man Publishers.

Anyanwu, A (2003) ***Marketing Management***, Benin: Barloz Publishers

Aschauer, D.A (1989) "Is Public Expenditure Productive?" ***Journal of Monetary Economics***

Baker,M.J (19996), ***Marketing: An Introductory Text,*** **6th ed,** London: Macmillan Press.

Banister, D. and Berechman, Y (2001), "Transport Infrastructure and Promotion of Economic Growth" ***Journal of Transport Geography*** **vol. 9.**

Brassington, F and Pettitt, S (1997), ***Principles of Marketing,*** London: Pitman Publishing

David, L. (2001) ***The Dictionary of Transportation and Logistics***: London: Kogan Press.

Deepika, G (2002) "Impact of Infrastructure on Productivity: Case of Indian Registered Manufacturing" ***Centre for Development Economics, July.***

Edo, E.S (2013) "Crude Oil Discovery and Exploitation: The Bane of Manufacturing Sector Development in an Oil-rich Country, Nigeria"**,** ***OPEC Energy Review*** **vol. 37 issue 1.**

Enusea, A. (1996) "Improving the Performance of the Nigerian Manufacturing Sub-sector: Selected Issues and Social Proposals; ***Nigerian Journal of Economic Studies*** **vol. 36.**

Etzel, M.J; Bruce, J.W and Stanton, W.J (2001) ***Marketing,*** 12th ed. New York MCGraw Hill Irwin.

Ezejelue, A.C. Ogwo,O.E and Nkamnebe, A.D (2008), ***Basic Principles in Managing Research Projects,*** Aba: Afritower Ltd**.**

Gado, N. D (2012) "The Transportation of Nigeria's Industrial Sector: Some Explanatory Variable'' ***International Journal of Human Resource Studies*** **vol.2 No.4.**

Gafer, T.I and Saad, B.A (2009) "An Empirical Analysis of the Effect of Infrastructure on Industrialization in Nigeria, 1980-2005" ***Journal of International Economic Review.***

Gramlic ,E.M (1994). "Infrastructural Investment: A Review Eassey**",** ***Journal of Economic Investment*** **Vol. 32.**

Ikpechukwu, N. and Ureal, I. (2012) "The Impact of the Quality of Transport Infrastructure on the Nigerian Economy" ***Journal of Economics and Social Development*** **Vol. 3 No 10.**

Kotler, P and Keller, K. (2007) ***Marketing Management,*** 12th ed New Delhi: Prentice Hall of India.

Loto, M.A (2012) "Global Economic Downturn and the Manufacturing Sector Performance in the Nigerian Economy: ***Journal of Emerging trends in Economic and Management Sciences*** Vol. No. 3.

Memedovic, O. Ojala, O. Rodigue, J.P and Namala, J. (2010). "Fuelling the Global Value Chains: What Role for Logistics Capabilities?" ***Journal of Technological Learning, Innovation and Development,*** vol. 1 No. 3.

Ndibe, P (2012) "Nigeria Railway Corporation Targets 20,000 Passengers Per Day in Lagos,***www.ask.com***, *Retrieved 11/11/12.*

Njimante, G.F and Mbohjim, O.M (2012) "The Effects of Traffic Congestion on Economic Growth in an Urban Centre of Cameroon**: *International Journal of Infrastructural Research.***

Njoku, I. (2009) "Evaluation of Transport Infrastructural Development in Nigeria and Its Effect on National Economy", ***MSC Thesis FUTO.***

Nwaimo, C. E, (2008), ***Basic Principles of Economics***. Owerri: Supreme Publishers.

Ogbonna, B.M (2000) "Theories of Economic Growth and Development" in ***Managerial Economics: Principles and Practice,*** B Chima Onuoha ed. Port Harcourt: Educational Books and Investment Ltd.

Ogwo,O.E (2013) "Logistics Decisions" ***Unpublished Ph.D Lecture Note*.**

Okonji, I.N. (2013) "Oil Discovery Changed the Mentality of Nigerians, Reduces the Country's Productivity**"** ***African Spotlight***, May 19.

Okpara,G.S (2012), ***Contemporary Marketing, Topical and Tropicalised***, 2nd ed, Owerri: Avan Global Press.

Oladunjoye, P. (2012) "Nigerian Manufacturing Sector Outlook" ***Daily Independence*, Saturday December 29.**

Olakunori, O.K, (2006***), Transportation Management,*** Enugu: Giovanni Publishers

Onah,J.O and Thomas, M.J (2004),***Marketing Management: Strategies and Cases,*** Enugu: IDS.

Onolemene, M. (2013) "Nigeria 20 Years Behind in Road Development**"** ***Nigeria Intel*, Feb 26.**

Osagie, C. (2011) "Nigeria: Manufacturing Sector Contribution to GDP Drops to 4.1 Percent". ***This Day***, September 12.

Rasheed, B (2012) "Nigeria Railway Moves 14000 Passengers Daily in Lagos, ***The Punch***, *August 13.*

Rodrigue, J.P and Nottenboom T. (2013) "Transportation and Economic Development" ***The Journal of Geography of Transportation.***

Smith, T. (1994) "The Impact of Highway Infrastructure on Economic Performance, *Spring* Vol. 57 No.4.

Sumaila, A.F. (2013) "Building Sustainable Policy Framework for Transport Development: A Review of National Transport Policy in Nigeria", ***International Journal of Development and Sustainability*** vol. 2 No.2.

Wing, I.S, Anderson, W.P and Lakshamanan, T.R (2008) "The Broader Benefits of Transport Infrastructure" ***Centre for Transport Studies, Boston.***

CBN Statistical Bulletin 2003, 2009, 2010 and 2011

CIA World Fact Book 2009, 2010, 2011.

CAC Report, 2012.

MAN Report, 2009, 2010, 2011 and 2012.

Research Digest (2012) "GDP and Infrastructure Provision"

www.webfinance.com, 2012.

www.wikipedia.com, 2010, 2011, 2012.

Appendixes

Table 5: **Nigeria's GDP and the Manufacturing Sector.**

Year	Total GDP	Manufacturing GDP	Percentage of Manufacturing GDP	Capacity utilization %	Manufacturing index
1981	-	-	-	73.3	132.8
1982	-	-	-	63.6	447.0
1983	-	-	-	49.7	319.0
1984	-	-	-	43.0	280.8
1985	-	-	-	38.3	336.6
1986	-	-	-	38.3	323.5
1987	-	-	-	40.4	477.2
1988	-	-	-	42.4	488.1
1989	-	-	-	43.8	483.4
1990	267550	14702	5.50	40.3	162.9
1991	365379	160728	4.40	42	178
1992	271366	15357	5.66	38.1	145.5
1993	274833	14788	5.38	37.2	145.5
1994	275451	14591	5.30	30.4	144.2
1995	281407	13836	4.92	29.29	139.2
1996	293745	13953	4.75	32.46	138.7
1997	302022	14010	4.64	30.4	144.2
1998	310890	13046	4.20	32.4	133.1
1999	312183	13495	4.32	34.6	137.7
2000	329178	13595	4.13	36.1	138.2
2001	356994	14395	4.03	42.7	146.3
2002	433204	16439	3.79	54.9	148.8
2003	477203	17370	3.64	55.7	148.0
2004	527576	19437	3.68	54.8	145.7
2005	561931	21305	3.79	53.3	145.8
2006	595822	21306	3.58	53.30	145.7
2007	634257	25536	4.03	53.38	89.7
2008	672203	27807	4.14	53.84	91.1
2009	718977	29991	4.17	58.92	92.4
2010	775526	32281	4.16	52.12	93.7
2011	235461	NA	4.28	56.20	NA
2012	261853	NA	5.01	NA	NA

Source: CBN Statistical Bulletin, (2010) and National Bureau of Statistics.

Table 6: Manufacturing Sector's GDP and GDP Growth Rate

Year	Manufacturing Contribution to GDP	Manufacturing Growth Rate	GDP Growth Rate
1999	4.32	NA	2.7
2000	4.13	NA	3.5
2001	4.03	NA	3.5
2002	3.79	NA	3.0
2003	3.64	9.00	7.1
2004	3.68	NA	6.2
2005	3.79	NA	6.9
2006	3.58	9.4	5.3
2007	4.03	9.6	6.4
2008	4.14	8.9	5.3
2009	4.17	7.9	5.6
2010	4.16	7.4	5.4
2011	4.29	5.4	7.2
2012	-	-	7.1

Source: CIA World Fact Book and CBN Statistical Bulletin

Table 7: **Nigeria's Transport Sector and GDP**

Year	Contribution to GDP ₦000	Percentage Contribution to GDP
1990	853791	3.14
1991	9405.09	3.12
1992	16947.34	3.16
1993	22089.19	3.21
1994	22089.19	3.20
1995	28928.15	3.18
1996	61527.63	3.59
1997	97066.74	4.01
1998	112359.10	3.78
1999	101227.84	3.36
2000	111335.72	3.92
2001	185318.89	3.08
2002	165529.17	3.31
2003	206257.26	3.23
2004	195792.21	4.33
2005	279506.29	5.54
2006	140870	2.36
2007	157580	2.48
2008	156500	3.33
2009	154960	2.16
2010	162850	2.10
2011	172230	5.50

SOURCE: CBN Statistical Bulletin (201

Table 8: Nigerian Budgetary Allocation to Transport Sector 1999-2011;

Year	Transport Allocation	Total Budget	% of Transport
1999	-	-	-
2000	3034.68	461600	0.66
2001	33933.40	579300	5.86
2002	29387.12	696800	4.2
2003	22698.99	984300	2.31
2004	8072.25	1110643	7.26
2005	8041.51	1321229	6.08
2006	9772.31	1390101	7.03
2007	32160.92	1589269	1.52
2008	67385.5	2117362	3.18
2009	90027.93	2127971	4.23
2010	42406.03	3109378	1.36
2011	13103.12	3314513	3.95

SOURCE: CBN Statistical Bulletin (2011)

Table 9: Transport and Manufacturing Sectors GDP Growth Rates

Year	TGDP	MGDP	Cumulative TGDP + MGDP	Growth of TGDP & MGDP	Nigeria GDP Growth Rate
1999	3.36	4.32	7.68	-	2.7
2000	3.92	4.13	8.05	0.37	3.5
2001	3.08	4.03	7.1	-0.95	3.5
2002	3.31	3.79	7.1	0.00	3.0
2003	3.23	3.64	6.87	-0.23	7.1
2004	4.33	3.68	8.01	1.14	6.2
2005	5.54	3.79	9.33	1.32	6.9
2006	4.01	3.58	7.59	-1.74	5.3
2007	3.78	4.03	7.81	0.22	6.4
2008	2.36	4.14	6.50	-1.31	5.3
2009	2.45	4.17	6.65	0.15	5.6
2010	3.10	4.16	7.26	0.61	5.4
2011	5.50	4.28	9.78	2.52	7.2

SOURCE: CBN Statistical Bulletin (2011)

Note: TGDP= Transport sector GDP

MGDP= Manufacturing GDP

Table 10: Structure of Road Ownership in Nigeria

	Federal	State	Local	Total	Percentage
Paved Main Roads	2650	10, 400	__	36, 900	19%
Unpaved Main Roads	5600	20, 100	__	25, 700	13%
Urban Roads	__	__	21, 900	21, 900	11%
Main Rural	__	__	72, 800	72, 500	38%

Roads					
Village Access Roads	__	__	35, 900	35, 900	19%
Total	32, 100	30, 500	130, 600	193, 200	100%
Percentage	17%	16%	67%	100%	

Source: CBN Statistical Bulletin (2003).