

## Economic Implications of Petroleum Policies in Nigeria: An Overview

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### Abstract

*The Nigerian petroleum industry has been having major transformations since the discovery of crude oil in Nigeria in 1956. These transformations were no doubt due to observed lapses in administration of the petroleum industry. The lapses were often accompanied by policy implementation problems that lead to social, economic, and political issues on the specific benefits of petroleum policies in Nigeria. The argument has been that there are no recorded economic benefits from petroleum policies in Nigeria. In this presentation, we attempt to enumerate such benefits by examining some implications of the various petroleum policies. Our approach was basically descriptive in nature. Available time-series data on relevant variables were critically examined to ascertain the economic implications of the various petroleum policies. Our findings reveal three major economic implications: first is observed rapid expansion of the number of economic actors in the Nigerian petroleum industry; secondly, we observed rapid development of the transport system; and, thirdly, there were improvements in the gross domestic product (GDP), foreign direct investment, and employment levels. Some negative implications of the petroleum policies were also observed, especially in relation to consumption-related policies. A case in point was the fuel subsidy which had generated economic problems ranging from scarcity of petroleum products to loss of man-hours. There were also confusions on the actual beneficiaries of the said subsidy in Nigeria. The analysis also indicate that a major cause of these problems was ineffective administration of petroleum policies in Nigeria. For some ways forward, the paper proposes the following strategies for administration of the petroleum strategies in Nigeria. First is application of a disaggregated approach to policy formulation and implementation. Stakeholders should be allowed to be fully involved. Second is a total deregulation of the petroleum subsector, with the aim of minimizing free-market distortions. Third, we recommend strong emphasis on alternative sources of energy, given recent developments in the global market economy. The proposed emphasis on liquefaction of the Nigerian natural gas is a move in the right direction.*

### 1. Introduction

Petroleum, a very important source of energy and economic commodity in Nigeria, has had so many problematic issues since the 1980s. There is the issue of subsidy, the issue of scarcity, the issue of sharing of revenues accruing from petroleum, the fuel subsidy issue, which in December 2011 generated social and political problems that paralysed economic activities nationwide, the issue of probes in the downstream petroleum sub-sector, and recently, the issue of privatization and deregulation of the Nigerian Oil Industry. It appears these problematic issues may have arisen due to some unfavourable characteristics of petroleum policies in Nigeria. In this presentation, we examine critically the ongoing policies aimed at the development of petroleum industry and the way forward. The presentation is organised as follows: section 2 summarises some background information on the Nigerian petroleum industry; section 3 focuses on the contributions of petroleum industry to growth of the Nigerian economy; section 4 focuses on the petroleum policies in Nigeria; section 5 discusses the economic implications of the policies; and, in section 6, we conclude with some ways forward in the petroleum industry.

### 2. Some Background Information on the Nigerian Petroleum Industry

The history of petroleum industry in Nigeria reveals that oil was discovered in Nigeria in 1956 at Oloibiri in the Niger Delta. The discovery was made by Shell-BP. Nigeria joined the ranks of oil producers in 1958 when its first oil field came on stream producing 5,100 barrels per day. After 1960, exploration rights in onshore and offshore areas adjoining the Niger Delta were extended to other foreign companies.

In 1970, Nigeria was able to reap instant riches from its oil production. The country joined the Organisation of Petroleum Exporting Countries (OPEC) in 1971 and established the Nigerian National Petroleum Company (NNPC) in 1977, a state owned and controlled company which is a major player in both the upstream and downstream sectors. By the late 1960s and early 1970s, Nigeria had attained a production level of over 2 million barrels of crude oil per day. Although production figures dropped in the eighties due to economic slump, 2004 saw some improvements in oil production to a record level of 2.5 million barrels per day. Current development strategies aim at increasing production to more than 4 million barrels per day.

The Nigerian petroleum industry has been described as the largest among all industries in the country. This is probably due to the belief that petroleum is one of the major sources of energy worldwide. The size, international characteristic, and role assumed by the petroleum industry were noted to have originated from the notion that petroleum is versatile as it currently satisfies a wide variety of energy and related needs. Petroleum is the most vital source of energy, providing over 50 percent of all commercial energy consumption in the world. The revenues obtained from crude oil in Nigeria are of absolute advantage to expenditure commitments on various projects at the local, state, and federal levels. The Nigerian economy relies heavily on the revenue derived from petroleum products, as they provide 70 percent of government revenue and about 95 percent of foreign exchange earning. Apart from this, the contribution of petroleum to national development is many and varied; employment generation, foreign exchange earnings, income generation, industrialisation, and improvements in other economic variables. While the major investors in the petroleum industry are the international oil companies (IOCs), the principal legislation governing petroleum operations in Nigeria is the Petroleum Profit Tax Act (PPTA) of 2007. Its main fiscal instrument is the Petroleum Profit Tax (PPT). Under the PPT, the tax rate was set at 67.5 percent for the first five years of operations by the oil company and 85 percent thereafter.

### ***3. Contributions of Petroleum Industry to Growth of the Nigerian Economy***

The contributions of the petroleum industry to growth and development of the Nigerian economy can be enumerated in terms of the industry's impacts on the economic variables responsible for economic growth in Nigeria. The contributions of petroleum industry can also be analysed in terms of its share of revenue generation in the Nigerian economy. The petroleum industry has contributed immensely in both foreign exchange reserves and government revenues. It has been observed that the government share of crude oil revenue as a result of various joint venture agreements with the international oil producing companies is roughly 70 percent of revenues accruing from crude oil transactions. Table 3.1 below summarises the contributions of oil earnings to revenue generation in Nigeria.

**Table 3.1: Oil Earnings and Non-Oil Earnings in Nigeria, 1990 – 2008**  
(N millions)

<b>Year</b>	<b>TOTAL</b>	<b>Oil Revenues</b>	<b>Percent (%) Share</b>	<b>Non-Oil Revenues</b>	<b>Percent (%) Share</b>
1990	98,102.40	71,887.10	73.28	26,215.30	26.72
1991	100,991.60	82,666.40	81.85	18,325.20	18.15
1992	190,453.20	164,078.10	86.15	26,375.10	23.85
1993	192,769.40	162,102.40	84.09	30,667.00	25.01
1994	201,910.80	160,192.40	79.34	41,718.40	28.66
1995	459,987.30	324,547.60	70.56	135,439.70	29.44
1996	523,597.00	408,283.00	78.07	114,814.00	21.93
1997	582,811.10	416,811.10	73.23	166,000.00	26.77
1998	463,608.80	324,311.30	69.95	139,297.60	30.05
1999	946,187.90	724,422.50	76.56	224,765.40	23.44
2000	1,906,159.70	1,591,675.80	83.50	314,483.90	16.50
2001	2,231,600.00	1,707,562.80	76.52	903,462.30	23.48
2002	1,731,837.50	1,230,851.20	71.07	500,986.30	28.93
2003	2,575,095.90	2,074,280.60	80.55	500,815.30	19.45
2004	3,920,500.00	3,354,600.00	85.57	565,700.00	14.43
2005	5,547,500.00	4,762,400.00	85.85	785,100.00	14.15
2006	5,965,101.90	5,287,566.90	95.01	677,535.00	4.99
2007	5,715,600.00	4,462,910.00	78.08	1,200,800.00	21.92
2008	7,866,590.10	6,530,610.10	83.02	1,335,960.00	16.98

**Source:** CBN Statistical Bulletin, 50 Years Special Anniversary Edition, December, 2008

On the average, it is clear, from table 3.1, that the petroleum industry accounts for more than 75 percent of federal government revenues. Statistics also show that this industry is responsible for about 30 percent of real gross domestic product (GDP) in Nigeria. As can be observed from table 3.2 below however, the petroleum industry's share in real GDP has not been stable. Beginning from the year 2000, we observe some sharp decreases in the contributions of the industry to real income.

**Table 3.2: Contributions of the Nigerian Petroleum Industry to Real GDP, 2000 – 2008  
(Percent)**

2000	2001	2002	2003	2004	2005	2006	2007	2007
32	31	24	28	26	24	22	20	18

**Source:** Constructed from the CBN Statistical Bulletin, December 2008, pp.117 – 118.

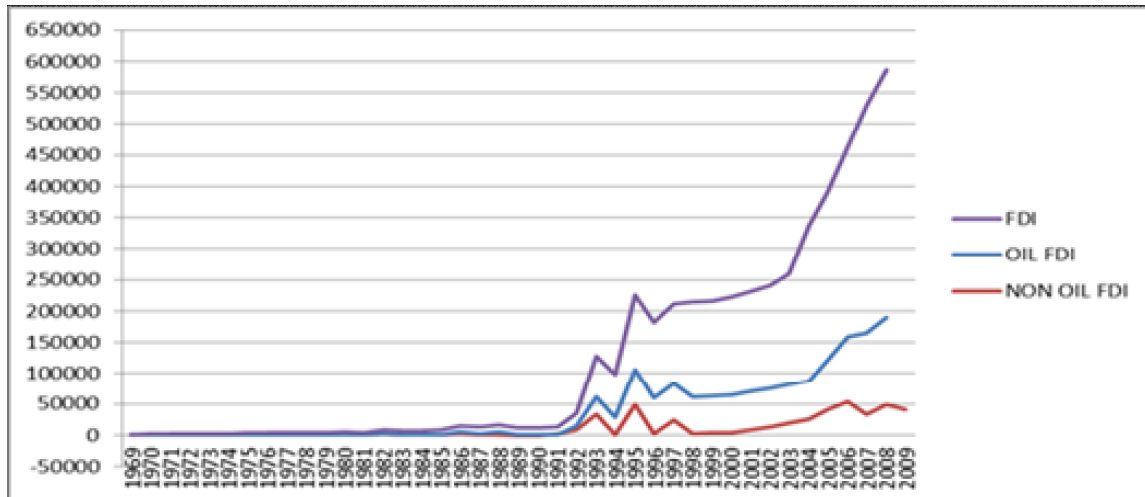
The petroleum industry can also contribute significantly to growth and development of the Nigerian economy through foreign direct investment (FDI). Foreign direct investment (FDI) has been referred to as real investment interactions of the rest of the world with a given domestic economy. Whether these interactions encourage or discourage economic growth depends on the area of strength of the economy concerned and purpose of the investment. The world Bank (1996) looks at Foreign Direct Investments (FDIs) as investments made with the aim of acquiring a long term management interest (usually 10% of voting stock) in a business enterprise operating in a country. Such investments may take the form of either “greenfield” investment (also referred to as “mortar and brick” investment) or merger and acquisition (M&A), involving the acquisition of existing interest rather than new investment.

Many authors have acknowledged the fact that a noticeable feature of globalization today is a conscious encouragement of cross-border investments, especially by transnational corporations (TNCs) and other entrepreneurs. Developing countries such as Nigeria aim at attracting foreign direct investments, since this is an important element in economic development strategies (Asiedu, 2001; Sjöholm, 1999; and Obwona, 2001, 2004).

The recent efforts by Nigeria and other African countries to improve their business climate stems from the desire to attract foreign direct investments. As a matter of fact, Funke and Nsouli (2003) note that one of the pillars on which the New Partnership for Africa's Development (NEPAD) was launched was to increase available capital to US\$64 billion through a combination of reforms, resource mobilization and an environment conducive for foreign direct investment.

A major problem with Africa's efforts to attract foreign direct investments is that the existing pattern of foreign direct investment appears to have been skewed toward extractive industries, implying that the differential rate of flow of foreign direct investment into sub-Saharan African countries has been attributed to availability of natural resources, though the size of the local market may also be a factor (Morriset 2000; Asiedu, 2001). In addition, the linkage between economic development and foreign direct investment has not been practically established. The empirical linkage between FDI and economic growth in Nigeria, for example, is yet unclear, despite numerous studies that have examined the influence of FDI on Nigeria's economic growth with varying outcomes (Oseghale and Amonkhienan, 1987; Odozi, 1995; Oyinlola, 1995; Adelegan, 2000; Akinlo, 2004). It has been noted that the impact of FDI on economic growth is more contentious in empirical than theoretical studies. Nevertheless, economists argue that foreign direct investment has a positive impact on economic growth and can lead to an enlarged market size, which in-turn may attract further foreign direct investment.

The issue has been that the Nigerian government over the years has over concentrated on indigenous industrialization, neglecting the positive impact of foreign direct investment in the economy. This resulted in a decline in both private and foreign Investments, and has therefore slowed down growth in all sectors of the economy. Summarizing the trend in foreign direct investment in Nigeria, figure 3.1 below show that majority of recorded foreign direct investments are accounted for by the petroleum industry. The figure indicates recent rapid increases in the share of the petroleum industry in foreign direct investment. In section 4, we examine critically the petroleum policies in Nigeria over the past decades.

**Figure 3.1: Foreign Direct Investment in Nigeria (1969 – 2009)**

Source: Adapted from Ekperiware (2011), Journal of Emerging Trends in Economics and Mgmt Sciences, vol.2, no. 4, page 337.

#### 4. Petroleum Policies in Nigeria

Petroleum policies in Nigeria reflects the basic goals of its membership in the Organisation of Petroleum Exporting Countries (OPEC). The principal objectives of OPEC were (Olorunfemi, 1982):

- 1) the coordination and unification of the petroleum policies of member countries and the determination of the best means of safeguarding their interests individually and collectively;
- 2) devising ways and means of ensuring the stabilization of prices in international oil markets, with a view to eliminating harmful and unnecessary fluctuations; and,
- 3) ensuring a steady income to the oil producing countries and also ensuring an efficient, economic, and regular supply of petroleum to consuming nations and a fair return on capital to those investing in the petroleum industry.

Though Nigeria appears to have been leading in OPEC's decisions on reduction of oil production as a necessary policy against persistent instability in the price of oil in the international oil market, the country stresses on policies that increase its proven oil reserves which has been rapidly depleted, as well as domestic consumption of refined petroleum products.

As regards increases in the proven oil reserves, the Federal government and relevant authorities in the oil industry have articulated strategic policies aimed at expanding the nation's oil base. A notable policy to this effect is the Federal government's privatization policy, allowing individuals the right to private ownership of oil exploration activities and oil wells. Special incentives have been provided to indigenous entrepreneurs willing to participate in upstream exploration activities. Such incentives were in the form of allocation of acreages in the nation's oil basins to indigenous investors. It is assumed that Nigerians in the Oil Industry can perform credibly well in both downstream and upstream oil exploration activities.

Other notable production-related petroleum policy of the Federal Government include: *first*, the introduction of *non-price incentives* to prospective oil explorers. These non-price incentives have been enumerated as (Economic and Business Review, EBR, 1992): (i) Exploration Incentives; (ii) Petroleum Profit Tax Modification; (iii) Royalty Rate Modification; (iv) Enhanced Annual Allowances; and, (v) Investment Tax Credit Royalty. Under these incentives, costs of unsuccessful wells were tax deductible in order to encourage further exploration drilling. Tangible costs of items for successful exploration wells were capitalized. All exploration drilling costs were to be expensed or tax deductible.

The *second* policy was the approval of *investment tax credit*. Companies that obtain any asset for the purposes of petroleum projects were to enjoy investment tax credits on such assets for the accounting period in which the asset was first used.

At present, it is difficult to locate an official documentation on the extent to which these incentives have encouraged production and increased the oil reserve base in Nigeria. Available information can only confirm a large increase in the number of private companies in the petroleum industry. A few of these companies were documented as follows (Olorunfemi, 1982):

1. Shell Petroleum Development Company of Nigeria.
2. Nigerian National Petroleum Corporation (NNPC).
3. Golf Oil Company.
4. Mobile Oil Company.
5. Nigerian Agip Oil Company.
6. Elf (Nig) Ltd.
7. Texaco Overseas Petroleum Company.
8. Pan Ocean (Nig) Ltd.
9. Ashland Oil Company (Nig) Ltd.
10. Tenneco Oil Company (Nig) Ltd.
11. Niger Oil Resource Ltd.
12. Japan Petroleum Company (Nig) Ltd.

Apart from production-related petroleum policies, the Nigerian government has instituted some consumption-related policies, the most outstanding of which is the *fuel subsidy*. The policy goal here is to encourage domestic private consumption of petroleum products. This policy requires the Federal government to pay certain percent of the marginal cost of producing petroleum products in an effort to ensure uninterrupted distribution of such products, as well as effective transportation network. The policy recognises the important distributive role of the transportation system in a developing economy. Lower unit costs of petroleum products were expected to enhance the movement of people and goods in commercial activities.

According to the Major Oil Marketers Association of Nigeria (MOMAN), 2012, about 90 percent of petroleum consumed in Nigeria is imported due to inadequate and limited local production. The importation has been made by the NNPC, MOMAN, Depot and Petroleum Marketers Association (DAPPMA) and other independent marketers under permits issued by Petroleum Product Pricing Regulatory Agency (PPPRA). The difference between the higher cost of imported PMS as ascertained by PPPRA and the then lower regulatory pump price of N65 per litre was the subsidy repaid to importers after being subjected to audit by government appointed auditors. For instance, as of December 2011, the total cost of PMS imported product is as presented in table 4.1 below:

**Table 4.1: An Analysis of the Cost of PMS Imported Product**

Description	PMS (N/Litre)
Total Cost of Imported PMS (A)	141.38
Regulated Pump Price (B)	65.00
Subsidy Claim (A – B)	76.38

**Source:** MOMAN, Subsidy Facts, January 2012..

By implication, table 3 indicates that the federal government of Nigeria repairs PMS importer the amount of N76.38 for every one litre of PMS consumed in the country. Nigerians can appreciate the economic reasoning suggesting indigenous production of PMS through domestic refineries.

With these few facts, economists can begin to have some rethinks on the economic benefits of petroleum subsidy in Nigeria. In recent times, there were major arguments on the major beneficiaries of petroleum subsidy as industrialists as well as actors in the informal petroleum product markets have been accused of having significant benefits in the petroleum subsidies. It is an economist belief that fuel subsidy can only be logical in a socialist economic system in which the government plays a significant role in the production and distribution of goods and services. It may not be feasible in a capitalist system in which private participation in the production and distribution process supersedes that of the central authority. A policy subsidising the consumption and purchase of petroleum products is likely therefore, to defy what is expected of a privatized competitive system. Such policy would contradict the country's expectations from its privatization policies in the petroleum industry. In the following section, we briefly examine the economic implications of the petroleum policies in Nigeria. Such implications will reveal some economic utilities of petroleum policies in Nigeria and suggest some ways forward.

### 5. Economic Implications of the Petroleum Policies

Theoretically, fiscal policies impact on the development of an economy either directly or indirectly. The direct impact is usually on the aggregate demand function, while such policies indirectly impact on development through their effects on the endogenous variables of consumption and production functions. Using a firm's production function  $Y = AK^aL^b$ , where  $Y$  represents output,  $A$  represents the technological coefficient,  $K$  represents capital input,  $L$  represents labour input, and  $a$  and  $b$  are the input elasticities, for example, an exercise tax would affect the firm's productivity through its effect on the production technology. The indirect effect on consumption would be through price effects. In this presentation, we draw from this theoretical background and examine the impact of petroleum policies on the economic welfare of Nigerians.

As enumerated earlier, one of the *major petroleum policies in Nigeria is the privatization of both downstream and upstream oil exploration activities*. This is often classified as a production-related petroleum policy. The economic merit of such policy can be traced to specific goals of private optimisation of outputs and minimisation of costs. We can recall that the basic tenets of optimisation principles are profit maximisation and producing at the least possible costs. Observing the depletable nature and scarcity of oil as a natural resource, we might as well assume that privatization of oil exploration activities could be the best that could happen to the petroleum industry and the Nigerian economy as a whole. The commercialisation/privatisation of NNPC in 1992, for example, led to an increase in Nigeria's oil reserve to 17.8 billion barrels from a previous estimate of 16 billion barrels (The Financial Post, 1992).

An observable economic problem of privatization is the possibility of not giving enough price incentives to individual explorers. If a petroleum policy regulates the unit price of petroleum products in such a way that it becomes so low that the revenue derived from it is not commensurate to financial investments, one would expect, a priori, a future retrenchment of efforts to increase the available oil reserve base. A very low unit oil price is likely to further increase the depletion rate of available reserves as investors divert their capital investment projects to more profitable and revenue maximising projects. These observations would suggest a privatization policy that is completely based on the free market equilibrium behaviour. This would ensure maximum economic benefits from petroleum-related privatisation policies.

Another production-related petroleum policy of the federal government is that of the non-price incentives, including enhanced annual allowances, and investment tax credit royalty. These incentives were aimed at encouraging further exploration drilling. By implication, these would create employment opportunities to a large number of Nigerians. Issues of environmental hazards have however, discouraged investors in the drilling activities. There was also the issue of insecurity especially among the foreign investors. It thus becomes an issue of trade off between employment opportunity, an important economic benefit, and social instability.

The production-related policies appear to be laudable development policies in Nigeria. Looking at the effectiveness of these policies, we observe some progresses. Between 2006 and 2008 according to the available data, for instance, the GDP at constant (1990) Prices increased from N595.8 billion in 2006 to N634.3, N672.2, N719.0, and N775.5 in 2007, 2008, 2009 and 2010 respectively, showing an annual growth rate of 6.03 %, 6.45 %, 5.98%, 6.96%, and 7.87% in that order (see table 5.1 below). But production in the petroleum industry was not impressive for the reference period. Output in crude petroleum and natural gas subsector, at 1990 prices, decreased consistently from a level of N130.2 billion in 2006 to N124.3 and N116.6 in 2007 and 2008 and increased slightly to N117.1 billion and N123.0 billion in 2009 and 2010. On the same token, the contribution of petroleum industry decreased from about 22 percent in 2006 to as low as about 16 percent.

**Table 5.1: Macroeconomic Indicators (2006 – 2010)**

Year	External Reserves (\$million)	Contributions to Real GDP (%)	Oil Production Level at Constant Prices (N billion)	Oil Sector Growth (%)	Inflation Rate (%)	GDP Growth (%)
2006	42,298.11	21.85	130,193.52	-4.51	8.50	6.03
2007	51,333.15	19.60	124,285.12	-4.54	6.60	6.45
2008	53,000.36	17.35	116,594.57	-6.19	15.10	5.98
2009	42,470.00	16.29	117,121.37	0.45	13.90	6.96
2010	32,339.25	15.85	122,957.88	4.98	12.70	7.87

**Source:** National Bureau of Statistics (NBS), Review of the Nigerian Economy, 2010.

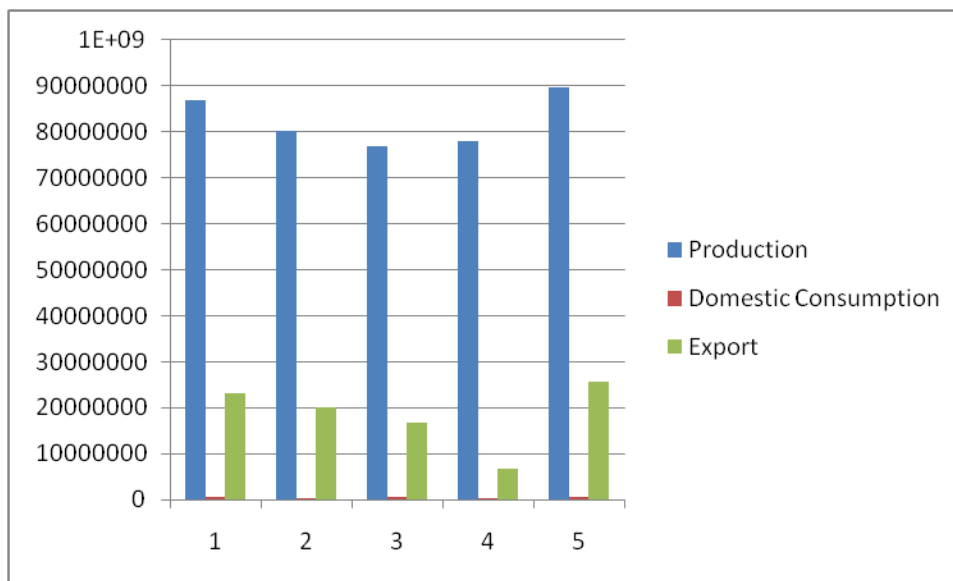
An observed gap between production and domestic consumption of processed crude oil in Nigeria (see tables 5.2, 5.3, and figures 5.1, 5.2 below) raises some questions on the effectiveness of consumption-related petroleum policies in Nigeria. This gap would imply some problems in administration of the petroleum industry. This would also imply the exportation of a large proportion of processed crude oil in Nigeria.

**Table 5.2: Petroleum Statistics, 2006 – 2010**

Year	Production (Millions Barrel)	Domestic Consumption-Crude Processed (Tonnes)	Export Barrel (Millions)
2006	869,458,687	5,902,109	230,561,370
2007	803,000,709	2,590,779	200,626,784
2008	768,745,932	5,353,263	166,461,005
2009	780,347,940	2,419,578	66,865,814
2010	896,043,406	4,741,416	257,333,705

Source: National Bureau of Statistics, 2010

**Figure 5.1: Petroleum Statistics**



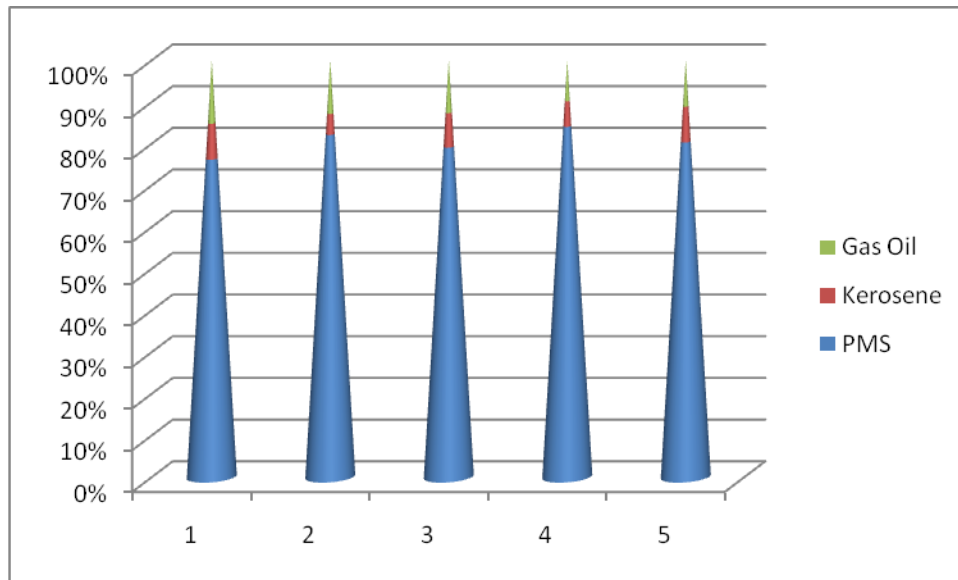
**Table 5.3: Domestic Consumption of Petroleum Products**

Year	PMS	Kerosene	Gas Oil/Diesel	TOTAL
2006	8,306,985	926,391	1,649,749	10,883,125
2007	8,859,802	535,098	1,384,956	10,779,856
2008	9,500,382	979,285	1,517,521	11,997,188
2009	9,891,226	713,214	1,155,773	11,760,215
2010	6,353,518	668,548	879,368	7,901,434

Source: National Bureau of Statistics, 2010.



**Figure 5.2: Domestic Consumption of Petroleum Products**



**Source:** Constructed from table 5.3

The economic benefit from large proportion of exported petroleum products is yet to be identified. Nevertheless, in the following discussions, we examine the economic implications of consumption-related petroleum policies in Nigeria. Of interest here is the famous petroleum/fuel subsidy.

Fuel subsidies were aimed at encouraging domestic private consumption of petroleum products. As noted earlier, the policy on fuel subsidy requires the federal government of Nigeria to pay certain percent of the marginal cost of producing petroleum product in an effort to ensure uninterrupted distribution of such products and to also guarantee effective transportation network. The policy recognises the important distributive role of the transport system. Lower unit price of petroleum products were to enhance the movement of people, goods, and commercial activities. Such petroleum price was also expected to reduce logistic problems in the country’s industrialization process, encourage private domestic investment, and improve the rate of youth employment.

Traditionally, the transport sub-sector in Nigeria is made up of four major modes: Air, Road, Water, and Rail. In addition, due to the observed rapid growth in the petroleum industry, pipelines and conveyors became a new mode of transportation. The most significant of these transportation modes is the road transport mode. This mode has been witnessing significant increases in the number of vehicles registered, as exemplified by table 5.4 below.

**Table 5.4: Motor Vehicle Registration, 2006 – 2010**

Year	Govt. Motor Cars	Govt. Motor Cycles	Private Motor Cars	Private Motor Cycles	Commercial Motor Cars	Commercial Motor Cycles
2006	3,203	4,440	178,061	308,228	53,322	97,133
2007	4,311	770	204,887	284,206	51,901	66,792
2008	3,556	1,692	231,756	351,247	71,064	87,499
2009	3,354	487	252,126	343,888	90,937	87,043
2010	12,044	3,231	240,634	255,177	114,576	87,276

**Source:** FRSC, 2011.

Incremental activities in the road transport sub-system in Nigeria have been attributed to mostly on availability of roads, as well as affordability of fuel. The federal and state governments have recognised the economic significance of road transportation through its recent efforts to provide for motorable transportation routes (see figure 5.3 below).



**Figure 5.3: A Model Road Network in Nigeria**



**Source:** National Bureau of Statistics, Review of the Nigerian Economy, 2010

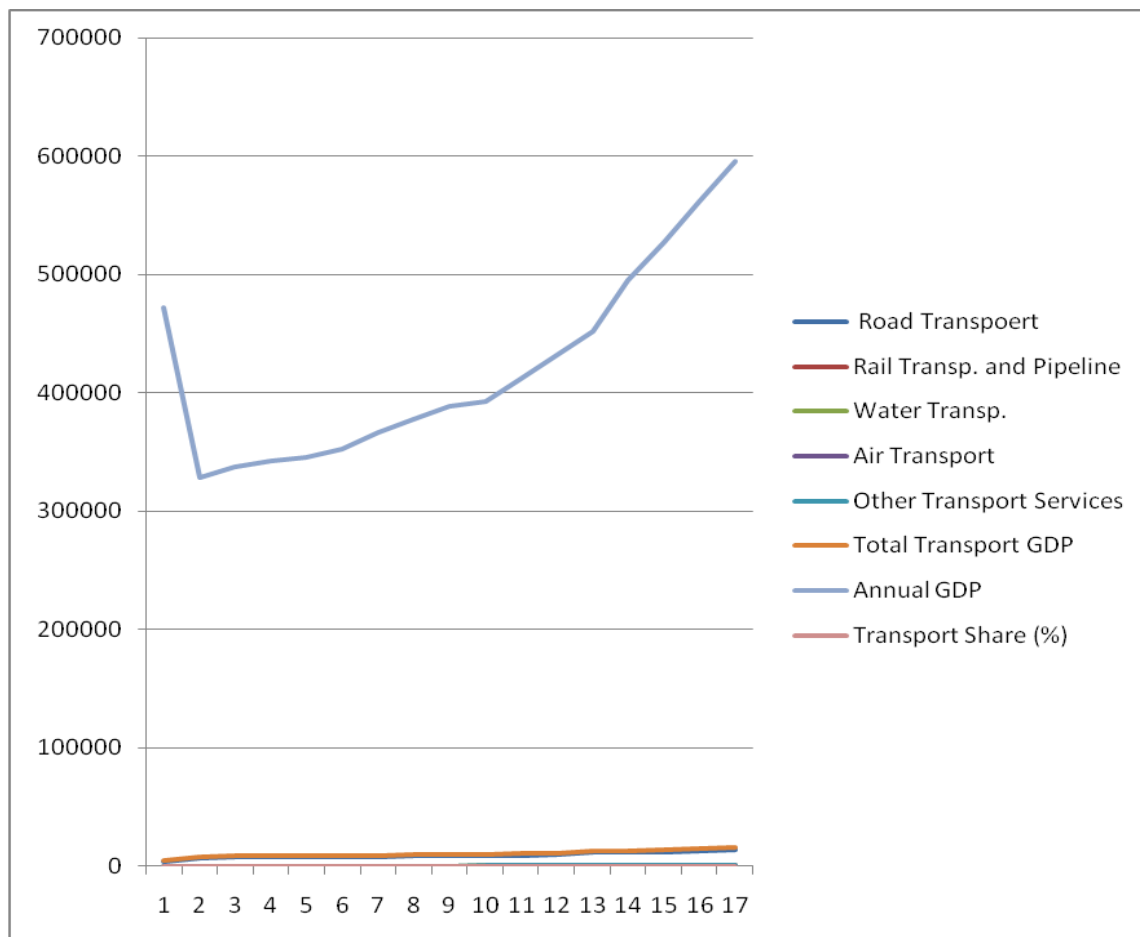
In table 5.5, we examine the performance of the transport industry in terms of its contributions to Gross Domestic Product, GDP. This may serve as a measure of the extent to which lower petroleum prices may have indirectly improved logistic problems in the Nigerian industrialization process. Table 5.5 and figure 5.4 indicate that the transport sub-sector in Nigeria has been making significant contributions to development of the Nigerian economy. According to the table the share of transport sub-sector in the Gross Domestic Product (GDP) stood at an average of 2.52 percent between 1990 and 2006. And, according to the National Bureau of Statistics (2011), in terms of the contributions of the transport sub-sector to the Gross National Product, its share stood at 2.67 percent, 2.68 percent, 2.71 percent, 2.70 percent, and 2.68 percent in 2006, 2007, 2008, 2009, and 2010 respectively. The Bureau argues that the growth of the transport sector can be attributed to expansion of the Nigerian economy.

**Table 5.5: Transport Share of Gross Domestic Product at 1990 Constant Basic Prices, 1990 – 2006 (N<sup>3</sup> million)**

Year	Road Transport	Rail Transp. and Pipeline	Water Transp.	Air Transport	Other Transport Services	Total Transport GDP	Annual GDP	Transport Share (%)
1990	3887	60	281	249	184	4661	472649	1.00
1991	7202	47	282	252	187	7970	328645	2.40
1992	7634	32	256	247	199	8370	337289	2.50
1993	8016	27	290	209	219	8759	342541	2.60
1994	8136	1.3	261	186	249	8833	345229	2.60
1995	8218	0.9	274	189	289	8971	352646	2.50
1996	8382	1.0	283	195	332	9192	367218	2.50
1997	8633	1.1	290	197	382	9451	377831	2.50
1998	8935	1.2	294	200	459	9889	388468	2.60
1999	9203	1.2	299	206	551	10260	393107	2.60
2000	9489	1.3	306	214	595	10605	412332	2.60
2001	9897	1.4	313	222	654	11087	431783	2.60
2002	11741	1.4	288	265	762	13057	451786	2.90
2003	11880	1.5	287	284	762	13214	495007	2.70
2004	12581	1.6	304	301	807	13994	527576	2.70
2005	13386	1.7	322	318	855	14882	561931	2.70
2006	14320	1.8	341	342	907	15911	595822	2.70

Source: Central Bank of Nigeria, Statistical Bulletin, 2007

**Figure 5.4: Contributions of the Nigerian Transport Sub-Sector to GDP**



Another major contribution of the transport sub-sector in Nigeria is in the area of employment generation. As at 31<sup>st</sup> December 2007, the total working population was estimated at 54,030,000, and by sectoral disaggregation, agriculture had the highest number of employees of 31,277,767 followed by education with 10,443,999 employees. The third major employer was the transport industry with 1,107,615 employees (NBS, 2010).

Given the various economic contributions of the transport sub-sector, the major consumer of petroleum products, there is no doubt that the Nigerian fuel subsidy policies have impacted positively in development of the economy. Our analysis has however, implied indirect effects of the petroleum policies in Nigeria. But notwithstanding, petroleum policies in Nigeria have exposed the country to effective strategies of global economic management.

## **6. Conclusion and Ways Forward**

This paper recognises the belief that the Nigerian petroleum sub-sector has had several transformations since the discovery of crude oil in 1956, and the oil boom of the 1970s. These transformations were as a result of lapses in the management of the petroleum industry. Against this background, the paper was aimed at examining the present and past states of the petroleum industry with a view to identifying the various petroleum policies and their implications for effective development of the Nigerian economy. We recognise the belief that petroleum is an important source of energy for the households and industries. The interest was on the social, political, and economic issues that have become the order of the day in recent times, despite the numerous petroleum policies of the federal government. The prevailing issues were, among others, the issue of frequent fuel scarcity, the issue of revenue sharing, the issue of probes of the oil distribution sub-sector, and the fuel subsidy issue.

With these issues in the background, the paper attempted to examine the effectiveness of the Nigerian petroleum policies, and how these policies may have impacted on the development of the Nigerian economy. Our analysis of available information shows that Nigeria has had two major petroleum policies in the past: first is the production-related policies aimed at increasing the oil reserve base and production of petroleum products. The second is the consumption-related policies aimed at effective distribution of petroleum products in the country.

Our analysis however, could not identify direct economic benefits of the Nigerian petroleum policies, but we were able to identify three major implications: first is expansion of the number of economic actors in the petroleum industry, as there were significant increases in participants of the downstream oil exploration activities; secondly, there were rapid development of the Nigerian transport system; third is the expansion of economic activities through increases in the gross domestic product, foreign direct investment, and employment generation.

On the negative side, the consumption-related policies appear to have done more harm than good. The fuel subsidy, for instance, had generated economic problems ranging from scarcity of petroleum products to loss of man-hours due to labour unrest and related problems. There were also other observed economic costs. There were confusions among social activists, economists, and politicians on the actual beneficiaries of fuel subsidy in Nigeria. Annual government expenditures on fuel subsidies have been enormous.

For the way forward, we suggest the following strategies in the administration of petroleum policies in Nigeria:

1. A disaggregated approach to policy formulation and implementation in the petroleum sub-sector. This would suggest involvement of all stakeholders in both the introduction and implementation of petroleum policies.
2. A total deregulation of the petroleum sub-sector. This would minimise free-market distortions and encourage competitive tendencies.
3. Emphasis on alternative sources of energy, such as gas, solar, and hydraulic sources. The proposed liquification of the Nigerian natural gas is a way forward. If effectively implemented, the liquefied natural gas (LNG) project has many economic advantages. LNG has minimal transportation cost. It is, most importantly, a potential source of foreign-exchange reserve.

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