The Impact of Global Fall in Oil Prices on the Nigerian Crude Oil Revenue and Its Prices

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Abstract

Nigeria drives significant proportion of its total annual revenue from the riches of its oil sector. The sector remains the major foreign earner and revenue contributor to the country. This study examined The Impact of the Global Fall in Oil Price on the Nigerian Crude Oil Revenue and Prices. The aim of the study is to unveil the magnitude of the effect that the global fall in oil price had on the Nigerian crude oil revenue and prices. The study also ascertain the consequences of fall in the prices of crude oil in the international market to the Nigerian economy, as well as identifying the consensus of Nigerians on the effect of overdependence of the economy on crude oil exports as the major source of foreign exchange earnings and government revenue. Furthermore, the study gave some remedying menace. The study is historical in nature, where secondary data were collected from the use of statistical records maintained by the Nigerian National Petroleum Corporation (NNPC) and Central Bank of Nigeria (CBN). The data were analyzed using T-test, which was used to determine whether significant difference exist between oil revenue generated by Nigeria prior to the fall and during the fall of crude oil price in the global market. The finding revealed that the global fall in oil prices has a significant impact on the crude oil revenue and prices in Nigeria. It is recommended amongst others that the revenue and foreign exchange contributed by the oil industry should be channelled towards the growth and development of other sectors of the economy so that the danger faced by the country because of the total overdependence on oil would be reduced.
1. Introduction

1.1 Background of the Study

As we know, for the past three decades, crude oil has been the major source of revenue, energy and foreign exchange for the Nigerian economy. Oil, being the mainstay of the Nigerian economy, plays a vital role in shaping the economic and the political destiny of the country (Odularu 2009).

Since 1970’s the petroleum industry has continue to play a dominant role in the socio-economic development of the Nigerian society. Crude oil export provides the bulk of government revenue and most of the foreign exchange earnings. Oil revenue has been and still is the mainstay of the national economy and is likely to remain so for a long time to come. Figures from the central bank of Nigeria revealed that in 2006 out of the total revenue of #5,965.1 billion accrued to the country, crude oil contributed #5,287.6 billion. This is equivalent to 88.6% of the total revenue.

More importantly, crude oil for the last three decades has been the major source of revenue, energy and the foreign exchange for the Nigerian economy. In 2000 oil and gas export earnings accounted for about 98% and about 83% of federal government revenue. (Ibegbu 2008).

However due to the ongoing global fall in oil price, crude oil prices in the international market fell significantly from the all-time high at $141 per barrel by the end of July 2008 to $45 per barrel by the end of January 2009. This has forced the federal government to review the budget benchmark down ward from $65 to $45. This will reduced government expenditure and in turn affect the provisions of goods and services in the year 2015. But considering that a soaring oil price in the last sixteen years made no appreciable impact on the economy, some think that a fall in the price of crude oil could be a blessing in disguise to Nigeria. Government would be forced to look inwards and be more judicious in spending. As we operate a bubble economy, which cannot withstand pressure.

This is why the above study attempts to contribute to the ongoing debate on the likely impact on the global fall in oil prices on the Nigerian crude oil revenue and its prices between the periods – January 2013 to January 2015 (i.e. 24 months).

2. Objectives of the Study

This research seeks to examine the impact of the global financial meltdown on the Nigerian crude oil revenue and its prices. Therefore, the objectives are specified below:

i. To examine the extent to which the global financial meltdown affects Nigeria’s crude oil revenue and its prices.
To ascertain the consequences of fall in the prices of crude oil in the international market to the Nigerian economy.

iii. To identify the consensus of Nigerians on the effects of overdependence of the economy on crude oil exports as the major source of foreign exchange earnings and government revenue.

3. Statement of Hypothesis

In the course of this study, we are going to set up some hypotheses that are to be tested to justify our study. Thus, these hypotheses could be stated as:

Null Hypothesis: $H_0: B_0 = 0$ ------- (1)

Alternative Hypothesis: $H_1: B_1 = 0$ ------- (2)

Equation (1) $H_0: B_0 = 0$ implies that: the global financial meltdown has no significant impact on the Nigerian crude oil revenue and its prices.

Equation (2) $H_1: B_1 = 0$ implies that: the global financial meltdown has significant impact on the Nigerian crude oil revenue and its prices.

Thus, if the null hypothesis is correct, it means that the global financial meltdown does not have any significant impact on Nigeria’s crude oil revenue and its prices. Therefore, we accept null hypothesis.

On the other hand, if the alternative hypothesis is accepted, a conclusion will be reached that, the global financial crisis has a significant impact on the Nigeria’s crude oil revenue and its prices. Therefore, we reject the null hypothesis and conclude that the meltdown has really affected crude oil and its prices.

4. Research Methodology

In this point, the study is aimed at the method to be applied in conducting this research. This is frequently used to ensure the research accuracy via the collections of theories, concepts or ideas, specification of models where necessary, apriority expectations, etc. Basically it describes how methods and principles are used and interpreted.

Given the nature of this research, the method adopted is designed to capture the aims and objectives of the study. Secondary data obtain from CBN Statistical Bulletin of crude oil in the international market (Dependent Variable), would be used for Regression, T-Test, Standard Error, Correlation Co-efficient (R) and Correction Co-efficient (R2).

5. Population and Sample

The population size of this research work covered the crude oil export revenue data and its prices, in the Nigerian National Petroleum Corporation (NNPC). These data are available either in CBN statistical bulletin or NNPC websites.
The sample size used in this research work is collected from the monthly data of the CBN statistical bulletin, covering a period of 25 months. (i.e. N = 25), this will enable us to avoid committing type I or type ii error.

6. Source of Data

This research work will depend specifically on secondary data, the publication of CBN Statistical Bulletin, and using estimation technique of Ordinary Least Square (OLS) method of repression.

The monthly data covered the period of 25 months starting from Jan 2013 to Jan 2015. Text books, Newspapers, Journals, internet materials etc are consulted and would be used for this research work. The monthly data would be analyzed to examine the linkage between crude oil revenue (exports) and the price of crude oil in the international market.

7. Method of Data Analysis

Ordinary Least Squire (OLS) method is adopted in this research work, because it is most appropriate in view of test for fitness and simplicity in understanding. Emphasis will be made on simple regression analysis and also using descriptive statistics of percentage bar charts and line graphs to establish whether or not the degree of correlation between dependent variable (crude oil revenue) and explanatory variable (price of crude oil) is significant.

8. Apriority Expectation

Since the price of crude oil is assumed in Nigeria to exact influence on the total crude oil revenue generated by the federal government as a result of sales of crude oil in the international market. Therefore, the co-efficient of oil prices in relation to the crude oil revenue should be positive and greater than zero (B>0) that:

\[ Y \text{ (crude oil revenue)} = f(X) \text{ crude oil prices} \]

9. Research Question

The study intends to ask the following questions:
i. What are the effects of the global financial meltdown on the Nigerian crude oil revenue and its prices in the world market?
ii. What would happen to the Nigerian economy if the oil prices in the global market continue to fall below $45?
iii. What are the dangers inherent in a mono-cultural economy like Nigeria’s, which solely depends on the oil sector?

10. Scope and Limitation

This research work aims at covering precisely the oil sector. Therefore, only data relating to crude oil export revenue and its prices from June 2007 to May 2009 are collected from CBN statistical bulletin.
One of the limitations of this research work is in the area of secondary data collection which could not reflect a large number of years under its consideration. This may affect the result because the larger the size is the more accurate the result will be.

Again due to the fact that, the secondary data used is collected by the government agencies, there is the likelihood that, it could be adjusted to suit political or self-interest.

Despite all the above limitations, the research work is aimed at capturing its objectives, via providing an insight and adding to existing knowledge.

11. Historical Development of Crude Oil in Nigeria

The development of oil (Petroleum Industry) in Nigeria began in the first decade of this century. It started with the exploration activities by the German Bitumen Corporation. In 1937, an oil prospecting license was given to Shell D’Arcy exploration parties. In 1955 Mobil exploration Nigeria incorporated obtained concession over the whole of the former northern region of the country. This company carried out some geology work, drilled three deep well in the former western region and abandoned the concession in 1961. However, oil was discovered in Nigeria in 1956 at Oloibiri in the Niger Delta after half a century of exploration. The discovery was made by Shell-BP, at the time the sole concessionaire. Nigeria joined the ranks of oil producers in 1958 when its first oil field came on stream producing 5,100 bpd. After 1960, exploration rights in onshore and offshore areas adjoining the Niger Delta were extended to other foreign companies. In 1965 the EA field was discovered by Shell in shallow water southeast of Warri. In 1970, the end of the Biafran war coincided with the rise in the world oil price, and Nigeria was able to reap instant riches from its oil production. Nigeria joined the Organization 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 [Blair 1976, pp. 98-120].

12. Literature Review

12.1 The Contribution of Oil Sector in the Economic Growth and Development of the Nigerian Economy

Following the discovery of crude oil by Shell D’Arcy Petroleum, pioneer production began in 1958 from the company’s oil field in Oloibiri in the Eastern Niger Delta. By the late sixties and early seventies, Nigeria had attained a production level of over 2 million barrels of crude oil a day. Although production figures dropped in the eighties due to economic slump, 2004 saw a total rejuvenation of oil production to a record level of 2.5 million barrels per day. Current development strategies are aimed at increasing production to 4 million barrels per day.

Petroleum production and export play a dominant role in Nigeria's economy and account for about 90% of her gross earnings. This dominant role has pushed agriculture, the
traditional mainstay of the economy, from the early fifties and sixties, to the background. While the discovery of oil in the eastern and mid-western regions of the Niger Delta pleased hopeful Nigerians, giving them an early indication soon after independent economic development was within reach, at the same time it signalled a danger of grave consequence: oil revenues fuelled already existing ethnic and political tension and actually "burned" the country. This tension reached its peak with the civil war that lasted from 1967 to 1970. As the war commenced, the literature reflected the hostility, the impact, and fate of the oil industry.

Nigeria survived the war, and was able to recover mainly of the huge revenues from oil in the 1970s. For some three years an oil boom followed, and the country was awash with money. Indeed, there was money for virtually all the items in its developmental plan. The literature of the postwar years shifted to the analysis of the world oil boom and bust, collectively known as the "oil shock." Starting in 1973 the world experienced an oil shock that rippled through Nigeria until the mid-1980s. This oil shock was initially positive for the country, but with mismanagement and military rule, it became all economic disaster. The larger middle class produced by the oil boom of the 1970s gradually became disenchanted in the 1980s, and rebellious in the 1990s. The enormous impact of the oil shock could not escape scholarly attention. For almost twenty years (1970s-1990s), the virtual obsession was to analyze the consequences of oil on Nigeria, using different models and theories. A set of radical-oriented writers were concerned with the nationalization that took place during the oil shock as well as the linkages between oil and an activist foreign policy. Regarding the latter, the emphasis was on OPEC, Nigeria's strategic alliance formation within Africa, the vigorous efforts to establish the Economic Community of West African States (ECOWAS), and the country's attempts to use oil as a political weapon, especially in the liberation of South Africa from apartheid.

If many had hoped that oil would turn Nigeria into an industrial power and a prosperous country based on a large middle class, they were to be disappointed when a formally rich country became a debtor nation by the 1980s. The suddenness of the economic difficulties of the 1980s "bust years" had an adverse effect on class relations and the oil workers who understood the dynamics of the industry. As if to capture the labor crisis, writings on oil workers during this period covered many interrelated issues, notably working conditions, strikes, and state labor relations. To be sure, labor issues were not new in the 1980s, since the left-oriented scholars had made a point of exposing labor relations in the colonial era. What was new after 1980 was the focus on oil workers, unions, and class conflict [OPEC annual report 1983].

The Nigerian oil sector can be categorized into three main sub-sectors, namely, upstream, downstream and gas. The most problematic over the years has been the downstream sector,
which is the distribution arm and connection with final consumers of refined petroleum products in the domestic economy. The incessant crisis in supply of products culminated in the decision by Government in 2003 to deregulate the downstream sub-sector. However, the manner of its implementation has been controversial because it ignores the economic realities in Nigeria.

Oil production by the joint venture (JV) companies accounts for about 95% of Nigeria’s crude oil production. Shell, which operates the largest joint venture in Nigeria, with 55% Government interest (through the Nigerian National Petroleum Corporation, NNPC), produces about 50% of Nigeria’s crude oil. Exxon Mobil, Chevron Texaco, ENI/Agip and TotalfinaElf operate the other JV’s, in which the NNPC has 60% stake. The over-dependence on oil has created vulnerability to the vagaries of the international market, as observed in the preceding section that show the contribution of oil to some macro-economic variables.

In particular, the place of oil in the mind of the average Nigerian has become more profound since the deregulation of the downstream segment of the Nigerian oil industry in 2003. The contradiction is more glaring now with the recent rise in crude oil prices at the global markets, which meant more external earnings for Nigeria, but also increased the expense burden on imported refined petroleum products! It is such contradictions that make the Nigerian economy appear strange at times, as policies seem to ignore what appears obvious to do. As such, policies designed to address the deficiencies and defects in the structure end up being poorly articulated and/or implemented because of regional, political or rent-seeking selfish interests.

Obviously, it is the same rent-seekers that continually sabotage the reinvigoration of the domestic refineries, making Nigeria to depend on importation of refined products to meet the domestic need. At present, Nigeria has four refineries, with a combined installed refining capacity of 445,000 barrels per day (bpd). These four refineries are:

1. The first Port Harcourt Refinery was commissioned in 1965 with an installed capacity of 35,000 bpd and later expanded to 60,000 bpd.
2. The Warri Refinery was commissioned in 1978 with an installed refining capacity 100,000 bpd, and upgraded to 125,000 bpd in 1986.
3. The Kaduna Refinery was commissioned in 1980 with an installed refining capacity of 100,000 bpd, and upgraded to 110,000 bpd in 1986.
4. The second Port Harcourt Refinery was commissioned in 1989 with 150,000 bpd processing capacity, and designed to fulfill the dual role of supplying the domestic market and exporting its surplus.
The combined capacities of these refineries exceed the domestic consumption of refined products, chief of which is premium motor spirit (gasoline), whose demand is estimated at 33 million liters daily. The refineries are however, operating far below their installed capacities, as they were more or less abandoned during the military era, skipping the routine and mandatory turnaround maintenance that made products importation inevitable. Importation notwithstanding, there have been persistent product shortages that gave strength to the argument for deregulation of the downstream oil sub-sector in Nigeria.

12.2 Problems Undermining the Production and Export of Crude Oil in Nigeria

Furthermore, the oil sector has been plagued by various problems which undermined its optimal development over the years. In general terms, the oil sector of the Nigerian economy in the 1990ies faced (and still faces some of) the following problems:

Public control and bureaucracy

The Nigerian National Petroleum Corporation (NNPC) is controlled by the Ministry of petroleum Resources. It lacks autonomy, as a result of which decision taking is often bureaucratic and unnecessarily delayed. Therefore, the operation of the NNPC is characterized by inefficiency, especially in refinery operations, distribution and marketing.

Poor funding of investments

Frequent delays in the payment of cash calls to the joint venture operators have tended to discourage increase in the level of investment by the oil companies. Insufficiency of funds has also constrained adequate equipment maintenance and efficient refinery operations by the NNPC. The Federal Government’s delays in the payment of cash calls for its JV operations in the upstream sub-sector, focusing more on maintenance rather than growth.

Communal Disturbances

There had been frequent communal disturbances which disrupts crude production as oil communities’ clamor for higher stake in oil operations.

Smuggling and diversion of petroleum products

There are reported cases of massive smuggling of petroleum products across the borders in quest for foreign exchange and to take undue advantage of the lower domestic prices vis-a-vis neighboring countries prices.

Fraudulent domestic marketing practices

Some marketers hoard products in periods of scarcity in order to sell in the black market at higher prices.

Products adulteration

This is encouraged largely by price differential of some products and the proliferation of illegal sales outlets where some adulterations occur. Others are:

2.5.7 Relatively low level of investments in the sector, compared to its potentials.
2.5.8 High technical cost of production, due to low level of domestic technological development.

2.5.9 Restrictions imposed by crises and production disruptions caused by host communities.

2.5.10 Environmental degradation due to the flaring of associated gas.

Also, oil industry is described as central to the nation’s economy as it affects the most vital sector of the system. It is so vital, so critical and a key sector that could aptly be described as the head of the Nation’s economy which determined its fate.

Nigeria, going by the world’s economic meltdown, is not isolated. It is important to stress that the global economy is inter-related. No country is isolated. What affect one country directly or indirectly affects the others.

12.3 Effects of Crude Oil Exports on Agriculture

Agriculture is concerned basically with the husbandry of crops and animals for food and other purposes. It is the foundation upon which the development of stable human communities such as rural and urban communities has depended in many parts of the world. In the pre-independence era, the contribution of the agricultural sector to the Gross Domestic product (GDP) surpassed every other sector in the economy. On attainment of political independence in 1960, the trend was still very much the same. During 1964-1965, agriculture accounted for 55% of GDP and employed 70% of the adult work force (Malton, 1981). In 1970, agricultural export crops like cocoa, groundnut, cotton, rubber, palm oil, palm kernel, etc, account for an average of between 65-75% of Nigeria’s foreign exchange earnings and provide the most important source of revenue for the federal as well as state governments through export product and sales taxes (Ekundare, 1973).

However, the 1967–70 Civil War in Nigeria coincided with the oil boom era, which resulted in extensive exploration and export of petroleum and its products. This led Nigeria to neglect its strong agriculture and light manufacturing bases in favour of an unhealthy dependence on oil for more than 97% of export earnings and 80% federal revenue (United States Department of State, 2005). Oil dependency and the allure generated great wealth through government contracts, but the increased foreign exchange earnings of the country since 1970 has had some adverse effects on Nigeria’s potential earnings from non-oil export trade. It has discouraged the production of a number of export items, which are the traditional source of Nigeria’s export earnings before the advent of oil. 1386 Sci. Res. Essays

The agricultural sector has suffered from years of poor management, inconsistent and poorly implanted government policy and lack of basic infrastructure. Presently, it accounts for 40.6% of GDP and 65% of employment in the country; Nigeria is no longer a major exporter of cocoa, groundnut, rubber and palm products. Cocoa production mostly from obsolete varieties and over-aged trees is stagnant at around 150,000 tonnes annually, 25 years ago...
cocoa production was 300,000 tonnes. There has been a similar decline in groundnut, palm oil and the other major export crops (United States Department of State, 2005). The share of agricultural products in total exports has plummeted from over 70% in 1960 to less than 2%. The decline was largely due to the phenomenal rise of oil shipments, but also reflected the fall in the output of products like cocoa, palm oil rubber and groundnuts, of which Nigeria was once a leading world producer.

Although Nigeria has substantial oil wealth it is one of world’s poorest nations, with more than 70% of the population living in poverty. Nigeria’s economy is heavily dependent on oil sector revenues, which account for nearly 80% of government revenues. The intensification of oil export since the early 1960s have led to deprivation, violence, socio-economic and socio-cultural neglect in all ramifications in the region as shown in this research. The effect of oil extraction on peasant agriculture, basis of sustenance of a significant number of the people in the country has as over bearing influence on the economy. In view of all these, it is imperative to know the major determinants of agricultural output of five major agricultural export commodities: cocoa, cotton, groundnut, palm-oil and palm kernel. Also to determine the trend and establish the relationship between output of agricultural export crops, agriculture contribution to GDP, value of agricultural imports, value of oil imports and exports and quantity of oil production.

13. Cause of the Global Fall in Oil Prices

The oil price has fallen by more than 40% since June, when it was $115 a barrel. It is now below $70. This comes after nearly five years of stability. At a meeting in Vienna on November 27th the Organisation of Petroleum Exporting Countries, which controls nearly 40% of the world market, failed to reach agreement on production curbs, sending the price tumbling. Also hard hit are oil-exporting countries such as Russia (where the rouble has hit record lows), Nigeria, Iran and Venezuela. Why is the price of oil falling?

The oil price is partly determined by actual supply and demand, and partly by expectation. Demand for energy is closely related to economic activity. It also spikes in the winter in the northern hemisphere, and during summers in countries which use air conditioning. Supply can be affected by weather (which prevents tankers loading) and by geopolitical upsets. If producers think the price is staying high, they invest, which after a lag boosts supply. Similarly, low prices lead to an investment drought. OPEC’s decisions shape expectations: if it curbs supply sharply, it can send prices spiking. Saudi Arabia produces nearly 10m barrels a day—a third of the OPEC total.

Four things are now affecting the picture. Demand is low because of weak economic activity, increased efficiency, and a growing switch away from oil to other fuels. Second,
turmoil in Iraq and Libya—two big oil producers with nearly 4m barrels a day combined—has not affected their output. The market is more sanguine about geopolitical risk. Thirdly, America has become the world’s largest oil producer. Though it does not export crude oil, it now imports much less, creating a lot of spare supply. Finally, the Saudis and their Gulf allies have decided not to sacrifice their own market share to restore the price. They could curb production sharply, but the main benefits would go to countries they detest such as Iran and Russia. Saudi Arabia can tolerate lower oil prices quite easily. It has $900 billion in reserves. Its own oil costs very little (around $5-6 per barrel) to get out of the ground.

The main effect of this is on the riskiest and most vulnerable bits of the oil industry. These include American frackers who have borrowed heavily on the expectation of continuing high prices. They also include Western oil companies with high-cost projects involving drilling in deep water or in the Arctic, or dealing with maturing and increasingly expensive fields such as the North Sea. But the greatest pain is in countries where the regimes are dependent on a high oil price to pay for costly foreign adventures and expensive social programmes. These include Russia (which is already hit by Western sanctions following its meddling in Ukraine) and Iran (which is paying to keep the Assad regime afloat in Syria). Optimists think economic pain may make these countries more amenable to international pressure. Pessimists fear that when cornered, they may lash out in desperation.

Furthermore, the Economist magazine report that Oil-producing countries whose budgets depend on high prices are in particular trouble. The rouble tumbled this week as Russia’s prospects darkened further. Nigeria has been forced to raise interest rates and devalue the naira. Venezuela looks ever closer to defaulting on its debt. The spectre of defaults and the speed and scale of the price plunge have unnerved financial markets. But the overall economic effect of cheaper oil is clearly positive.

According to Ikenna Ifedobi in his article titled : The falling price of Crude Oil, and the impact on developing economies like Nigeria he said “Approximately forty years after the OPEC stranglehold on western Economies, in what was to nations like Nigeria an “oil Boom”, a real threat has emerged that may forever loosen the grip of the paling Cartel. In what may be a historical payback for the 70s oil boom, Shale oil: an equally ‘clean’ alternative has driven global oil prices into a price ravine.’’

The short and long term implications are not quite the same as the previous seasons of, and reasons for, booms and slumps. Why? Well for starters, new technologies like horizontal drilling and hydraulic fracturing or “fracking” has provided alternatives for heavy Oil purchasers like USA to be less dependent on imported Oil. While previous underlying causes for global oil price fluctuation may have been incidental, as in the case of regional conflicts, or even seasonal: like the 2008 economic recession in the US, the looming reality is that this
price slump may be the beginning of a permanent decline in the importance of Africa’s crude oil. In the short run Shale Oil may reduce the relevance of Sub-Saharan oil, and in the long run new sources of energy would be more prevalent as can be seen today by the encouragement of hybrid engines in cars. Ultimately, African governments may witness a reduction in Revenue and an economic paradigm shift that may not be too comfortable. For a one dimensional economy like Nigeria, the implications are quite far reaching. Nigeria is a good case study because 90 percent of her foreign exchange earnings come from the sale of crude oil. Its annual federal budget is created based on projections made on oil prices and quantity of oil sold.- See more at: http://www.vanguardngr.com

Another Newspaper called the Guardian also reports that: Nigeria’s reference crude, the Bonny Light, is currently trading at about 62 dollars per barrel. It is noteworthy that crude oil is not just the principal export commodity of the country, but indeed all aspects of the nation’s economy rely on the commodity as the major source of revenue. The annual budgets, which define the direction that the country, is based on crude oil price benchmarks.

While the 2014 budget was based on 78 dollars per barrel, the 2015 has been predicated at 65 dollars per barrel. According to Dr Ngozi Okonjo-Iweala, the Minister of Finance and Coordinating Minister of the Economy, the fall in oil prices have led to new austerity measures.

The minister said the country would begin to feel the negative impact of the fall in global oil prices, cautioning that the country would need to brace up for tougher times ahead by reviewing its expenditures and building economic buffers through budgets based on modest oil prices.

She said that the decline in crude oil prices had assumed a disturbing dimension.

“Without a doubt, this slowdown in global economic activities, coupled with the end in the quantitative easing in the U. S., will affect the sub-Saharan African economy, in addition to regions’ other specific challenges.

“As we all know, many countries on the continent depend on commodity exports as their main sources of revenue.

“Nigeria and other countries on the African continent must step back and learn the lessons of the ongoing economic transformation.

“The Federal Government has set up a strong stabilisation policy, but the most important being that we must be able to sustain the drive”.

www.ngrguardiannews.com
14. Data Presentation and Analysis

World oil demand growth for 2014 was kept broadly unchanged from December and January 2015 MOMR at level of 0.96 mb/d, with total oil demand anticipated to reach 91.15 mb/d in 2015, world oil demand is projected to grow at a marginally higher 20 tb/b over January report by MOMR, supported by an upward revision of 15 tb/d recorded in OECD Americas. As a result, 2015 total oil demand growth currently stands at 1.17 mb/d with total oil consumption projected to reach 92.32 mb/d

Table 1: Shows the Total World Oil Demand

<table>
<thead>
<tr>
<th>Region</th>
<th>2014</th>
<th>1Q15</th>
<th>2Q15</th>
<th>3Q15</th>
<th>4Q15</th>
<th>2015</th>
<th>Growth</th>
<th>%</th>
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<td>Americas</td>
<td>24.18</td>
<td>24.09</td>
<td>23.94</td>
<td>24.58</td>
<td>24.93</td>
<td>24.39</td>
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<tr>
<td>of which US</td>
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<td>18.35</td>
<td>18.16</td>
<td>18.70</td>
<td>20.08</td>
<td>19.59</td>
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<tr>
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<td>13.31</td>
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<td>Asia Pacific</td>
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<td>8.76</td>
<td>7.57</td>
<td>7.56</td>
<td>8.20</td>
<td>8.02</td>
<td>-0.12</td>
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<td>44.88</td>
<td>45.78</td>
<td>46.41</td>
<td>45.71</td>
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<td>-0.03</td>
</tr>
<tr>
<td>Other Asia</td>
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<td>11.32</td>
<td>11.63</td>
<td>11.62</td>
<td>11.57</td>
<td>11.53</td>
<td>0.25</td>
<td>2.24</td>
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<tr>
<td>of which Indir</td>
<td>3.79</td>
<td>3.86</td>
<td>3.91</td>
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<td>3.99</td>
<td>3.90</td>
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<td>FSU</td>
<td>4.54</td>
<td>4.43</td>
<td>4.27</td>
<td>4.67</td>
<td>4.95</td>
<td>4.68</td>
<td>0.04</td>
<td>0.88</td>
</tr>
<tr>
<td>Other Europe</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
<td>0.65</td>
<td>0.73</td>
<td>0.65</td>
<td>0.01</td>
<td>1.06</td>
</tr>
<tr>
<td>China</td>
<td>10.46</td>
<td>10.39</td>
<td>10.87</td>
<td>10.63</td>
<td>11.17</td>
<td>10.77</td>
<td>0.31</td>
<td>2.94</td>
</tr>
<tr>
<td>Total &quot;Other regions&quot;</td>
<td>15.65</td>
<td>15.46</td>
<td>15.75</td>
<td>15.95</td>
<td>16.85</td>
<td>16.01</td>
<td>0.35</td>
<td>2.26</td>
</tr>
<tr>
<td>Total world</td>
<td>91.15</td>
<td>91.36</td>
<td>91.18</td>
<td>92.96</td>
<td>93.76</td>
<td>92.32</td>
<td>1.17</td>
<td>1.28</td>
</tr>
<tr>
<td>Previous estimate</td>
<td>91.15</td>
<td>91.33</td>
<td>91.17</td>
<td>92.92</td>
<td>93.76</td>
<td>92.30</td>
<td>1.15</td>
<td>1.26</td>
</tr>
<tr>
<td>Revision</td>
<td>0.00</td>
<td>0.03</td>
<td>0.01</td>
<td>0.04</td>
<td>0.00</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
</tr>
</tbody>
</table>

Source: MOMR 2015

OPEC crude oil production

According to secondary sources, total OPEC crude oil production in January 2015 averaged 30.15 mb/d, a decrease of 53 tb/d over the previous month. Crude oil output decreased mostly from Iraq and Libya, while production showed an increase in Angola, Saudi Arabia, Kuwait and the UAE. According to secondary sources, OPEC crude oil production, not including Iraq, stood at 26.80 mb/d in January, up by 226 tb/d over the previous month.

www.globalbizresearch.org
The basic principle in econometrics is to test whether relationship exists between two or more variables and also to determine the degree or extent at which one variable impact the other. This study will test for the relationship between oil revenue and its prices in the international market so as to see whether or not the global financial meltdown impacted on the Nigerian oil sector.

**Chart 1: Shows Nigeria Crude Oil Production**

Source: Ycharts.com

15. Data Presentation

The data collected over the months under consideration (Jan 2013-Jan 2015) indicates that price of crude oil assume positive relationship with its revenue generated. In Jan 2013 crude oil revenue stood at $186,900 million and price was $105.04. Since then, both the revenue and prices keep on fluctuating up and down with 2 to 3 dollars up or down. From August 2014 crude oil revenue fell below $175.08, while its prices fell to just $100 per barrel. The
decline continues until its eventual fall in January 2015, which showed that crude oil revenue fell to $92.05 million and the price decline to $47.45 per barrel. The table below explained the above scenario thus:

<table>
<thead>
<tr>
<th>Month</th>
<th>Oil Revenue $m/d</th>
<th>Oil Price $/b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan-2013</td>
<td>186.9</td>
<td>105.04</td>
</tr>
<tr>
<td>Feb-2013</td>
<td>191.6</td>
<td>107.66</td>
</tr>
<tr>
<td>Mar-2013</td>
<td>179.5</td>
<td>102.6</td>
</tr>
<tr>
<td>Apr-2013</td>
<td>178.9</td>
<td>98.85</td>
</tr>
<tr>
<td>May-2013</td>
<td>158.9</td>
<td>99.35</td>
</tr>
<tr>
<td>June-2013</td>
<td>157.5</td>
<td>99.74</td>
</tr>
<tr>
<td>July-2013</td>
<td>184.1</td>
<td>105.21</td>
</tr>
<tr>
<td>Aug-2013</td>
<td>198.8</td>
<td>108.06</td>
</tr>
<tr>
<td>Sep-2013</td>
<td>200.1</td>
<td>108.78</td>
</tr>
<tr>
<td>Oct-2013</td>
<td>187.7</td>
<td>105.46</td>
</tr>
<tr>
<td>Nov-2013</td>
<td>166.1</td>
<td>102.58</td>
</tr>
<tr>
<td>Dec-2013</td>
<td>175.1</td>
<td>105.49</td>
</tr>
<tr>
<td>Jan-2014</td>
<td>188.1</td>
<td>102.25</td>
</tr>
<tr>
<td>Feb-2014</td>
<td>191.8</td>
<td>104.82</td>
</tr>
<tr>
<td>March-2014</td>
<td>183.1</td>
<td>104.04</td>
</tr>
<tr>
<td>April-2014</td>
<td>185.7</td>
<td>104.94</td>
</tr>
<tr>
<td>May-2014</td>
<td>198.7</td>
<td>105.73</td>
</tr>
<tr>
<td>June-2014</td>
<td>185.3</td>
<td>108.37</td>
</tr>
<tr>
<td>July-2014</td>
<td>169.4</td>
<td>105.22</td>
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<tr>
<td>Aug-2014</td>
<td>175.0</td>
<td>100.05</td>
</tr>
<tr>
<td>Sep-2014</td>
<td>158.2</td>
<td>95.89</td>
</tr>
<tr>
<td>Oct-2014</td>
<td>148.1</td>
<td>86.13</td>
</tr>
<tr>
<td>Nov-2014</td>
<td>147.7</td>
<td>76.96</td>
</tr>
<tr>
<td>Dec-2014</td>
<td>114.4</td>
<td>60.55</td>
</tr>
<tr>
<td>Jan-2015</td>
<td>92.0</td>
<td>47.45</td>
</tr>
</tbody>
</table>

Sources: CBN Website, Ycharts.com, indexmundi.com and MOMR

16. Data Analysis

Regression

Summary:

Linear regression \( Y_2 = 3.376 + 0.5501Y_1 \)

Major axis \( Y_2 = -0.5538 + 1.761 \) \( Y_1 \)

Standard major axis \( Y_2 = 4.863 + 1.706 \) \( Y_1 \)

Robust (Kendall, Thiel-Sen) \( Y_2 = 41.73 + 0.3391Y_1 \)

Column: 0 (entered) and 1 (entered)

Linear regression (Pearson) \( Y_2 = 3.376 + 0.550076 \) \( Y_1 \)

Explained sum of squares: 4834, unexplained SS: 656.8

F: 176.6308, P: 0.0000

Coefficient of determination 88.04%
Standard error of the regression coefficient 0.0422796 (95% confidence limits 0.462614 ~ 0.637538), P = 1.0000

Test whether the intercept is zero: t = 0.4591 (P = 0.3252)

Slope main axis 1.76098, slope minor axis: -0.567866
H: 0.00243957
D: 852.659, eigenvalues: 873.511, 20.8519
95% confidence limits for slope: 1.57442, and: 1.98313
Standard major axis regression 1.70574
C05 5.203372e+03, C05 eqfreq: 1.300843e+05
Axis for C-alpha: 12.2033, 78.984
And for 95% equal frequency: 2.44067, 15.7968
(95% confidence region ellips in red, 95% equal frequency ellips in greenish)
(If correlation was assumed: Pearson correlation coefficient: 0.9383)

The co-efficient tells us the relationship between the dependent and independent variable and the contribution of the dependent to the independent variable. We can now deduced that there is a relationship between oil price and oil revenue and that any fall or rise of global oil price will definitely make an impact on the oil revenue.

17. Interpretation of the Result

Based on the prior expectation, there should assume a positive relationship between crude oil revenue and its prices. This is simply because the oil sector in Nigeria serves as the main stay of the Nigerian economy since 1956 when the federal government discovered oil. It neglected the strong agricultural and manufacturing sector which resulted in operating a mono-cultural economic system.

The co-efficient of the oil prices shows a positive relationship to crude oil revenue and this conforms to the prior expectation that crude oil revenue increases as the oil prices increases.

Thus, the findings of the study enable us to justify that the global financial meltdown has significant impact on the crude oil revenue and its prices in Nigeria. They are positively related to each other. Furthermore, a little change in the price of oil creates a high sensitivity to the crude oil revenue and hence it is empirically established based on the parameter indicators that, the oil sector is the main stay of the Nigerian economy.

18. Conclusion

From the above, it is obvious that, oil sector is the pillar of the growth and development of the Nigerian economy, therefore, Federal Government should consider this global meltdown as an opportunity for the country to reposition its economy from its over dependent
on oil. Since records have shown that, the country recorded a short fall in oil revenue from an average of $2.2 billion monthly, recorded in 2008, to about $1 billion in January 2009, over 50% reduction. Babalola, (2009).

19. Recommendations

1. In view of the current global fall in oil prices, it is now necessary for Nigeria to diversify its sources of foreign exchange earnings, so as not to remain almost dependent on crude oil for economic survival. One of the areas where this diversification can take place is the petroleum industry itself, through the development of condensates, liquefied natural gas and exports of condensate refined petroleum and and petro-chemicals. This is because the global fall in oil prices offered a unique opportunity for the country to reposition the economy from it’s over dependence on oil.

2. In order to diversify the Nigerian economy, the need to reposition the non-oil tax revenue as one of the sources of sustainable revenue for the national development cannot be over underestimated. This stresses the need to continue with the on-going tax reform initiatives in all tears of government. For effective tax reform, collaboration within the Federal, State and Local Government is critical.

3. Federal government should wisely use excess crude oil account (ECA) in this time of crisis. The funds should be used to fund development or critical infrastructure for long term growth and development.

4. Further changes in derivation formula (allocation of oil revenues) should be avoided as it has in the past not just shorten planning horizons but also been the reason for social interest in the Niger Delta region and the literal states. (Saotome, Principle, Equatorial Guinea).

5. Establishing of better transparency is the key issue which ought to be put in place, as the country has a reputation of one of the world’s corrupt countries. Herry, (2005). This reputation is partly based on oil related scandals that occur when Nigeria was under the military rule. Therefore, if transparency is achieved it would not only attract new investors but boost the non-oil sector revenue generation.

6. Another most important recommendation of this study is that government should implement policies that would encourage the private sector to participate actively in the oil sector.

7. Nigeria in the near future most makes a conscious effort to ensure that private sectors engage increasingly in the development of technology appropriate for the Nigerian environment.
8. Another recommendation is that the revenue and foreign exchange contributed by the oil industry should be channelled towards the growth and development of other sectors of the economy so that the danger faced the country because of the total overdependence on oil would be reduced. When the oil sector are well developed and they contribute massive revenue or the Federal Government then Nigeria would be free to a large extend from the intervention of the international community into the working of our economy. Nigeria would now be an independent country free from foreign intervention and able to make economic decisions channelled towards economic growth and development.

9. Government should also concentrate on regulating the industry instead of controlling the industry. If government regulates, this would substantially improve the present low refinery operating efficiency and bring them to comparable level with what is obtained in developed nations while payment failures in depot operations will be reduced to the barest minimum.

10. Government should drastically reduce imports to encourage inward look that would enhance self-sufficiency in production. A reduction in import would encourage our domestic consumers to buy local goods and services and this would encourage producers to produce more and as such this would go a long way to encourage economic growth.

11. Finally this thesis neither can claim to have suggested an easy way out of the current global financial crisis nor to have presented inclusive answers to the many questions it has raised. However, evidence at hand strongly suggests that Islamic finance is well endowed to deliver noteworthy contributions towards a more healthy and stable international economy.

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