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## THE IMPACT OF DEREGULATION OF THE DOWNSTREAM OIL SECTOR ON THE STRUCTURE OF GOVERNMENT BUDGET IN NIGERIA

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### ABSTRACT

*This study examined the impact of deregulation of downstream oil sector on the structure of government budget in Nigeria using time series data from 2003 to 2015. The main focus is on the relationship between changes in oil prices as a result of deregulation and government revenue and expenditure. The main instrument of the data analyses is the ordinary least square (OLS) Regression Model. The findings of the result can be summarized as follows; downstream sector deregulation through increase in petroleum product prices has significant negative effect on government revenues in Nigeria; also, downstream sector deregulation through increase in petroleum product prices has significant positive effect on government expenditure in Nigeria; lastly, the study found that subsidy has negative effect on government revenue and a positive effect on government expenditure. Thus, the study concludes that the introduction of the downstream sector deregulation reduces government expenditure and increases revenue, as it allows the prices of the petroleum products to fully reflect their market conditions.*

**KEYWORDS:** *Deregulation, Downstream oil sector, Government Budget, Regression Model*

### INTRODUCTION

Crude oil is the mainstay of many economies both developed and emerging ones that have been endowed with such natural resource. Crude oil which is the raw material for the production of petroleum products such as fuel, gasoline, kerosene, light oil and other energy sources are indispensable for human sustenance and industrial production. Nigeria is one of the economies that have been endowed with oil resources which form her bedrock for sustainable economic growth and stability. Thus, crude oil is the mainstay of the Nigerian economy and this has made Nigeria to neglect every other sectors of the economy especially agriculture. Thus, Nigeria is said to be mono-

economy as there is over concentration on oil as main source of foreign exchange reserve. Hence, crude oil is of immense importance to the growth and development of Nigeria economy. Ogbeifun (2009) supports this assertion by stating that the petroleum industry is strategic to national development and growth in Nigeria. Oil and gas constitute about 90% of Nigeria's foreign exchange earnings and 83% of its gross domestic product (GDP).

Adewumi and Adenugba (2010) noted that Nigeria is one of the World's largest producers of crude oil, ranking the 10th largest producer and the 6th largest exporter among Organization of Petroleum Exporting Countries (OPEC) member nations. The economy is starkly dominated by the

petroleum industry since the oil boom of the 1970s, (Okunroumu 2004). Consequently, its economic growth and development is largely dependents on the production and consumption of petroleum products for industrial development and human sustenance. Sequel to all these and others, the issues of oil and its contribution to the economic growth of Nigeria cannot be overemphasized. Hence, everybody is interested. The individuals, the government and corporations are very much interested. Hence, the subjects of crude oil are of immense interest to each of Nigeria's over 160 million citizens. This has been attributed to the huge amount of money that the government spends to subsidize petroleum consumption in the country, (Akinmutumi 2011). Nigeria has in the past spent a whopping amount of money in billions for the past 20 year on subsidy, until government deregulation policy of gradual withdrawal of subsidy. This gradual subsidy withdrawal and the total withdrawal this year 2016 which pushed the official bump price for fuel to ₦145 per liter has been a source of worry and concern to Nigerians because of its far reaching implications for industry and Nigerian masses. It leads to product price increases and has generated industrial, social, political, religious and general economic upheavals in the country. The situation is becoming worst everyday, things are falling apart, the centre cannot hold and nobody is at easy- the government, individuals and corporate bodies alike.

Suffice is to note and explain that Nigerian oil industry is divided into three sub-sectors; the upstream, the mid-stream and the downstream sectors, (NNPC, 2012). The upstream is where crude oil and gas production takes place at both onshore and offshore. The mid-stream oil sector deals with storage, distribution and trading of crude oil, (Sabiu and Reza, 2014). The downstream sector deals with petroleum products refined, distribution and retail services. Unfortunately, that is where the problem lies. The most problematic among the sectors over the years has been the downstream sector which is the distribution arm and the link to the final consumers, (Ojoku, 1992).

However, having explained the components of the three oil sector in Nigeria, the focus of our study should be on the downstream sector as it has significant impacts on the lives of all Nigerians and the economy at large. The downstream sector is characterized by incessant crises in supply of products due to frequent break downs of Nigeria's four refineries as a result of neglect, skipping the routine turn around maintenances, general inefficiencies in managing the refineries and outright sabotage. Today in Nigeria we are not talking about frequent breakdown and the stuff as Ojoku enumerated, but the macro issues now are heart-

breaking which include but are not limited to total abandonment of our refineries, exporting the crude oil and importing the refined product (fuel) and sharing of our oil fields and oil wells to the political juggernauts.

Consequently, there are shortages of supply of the products which causes scarcity of the products at retail outlet. This situation is worrisome as it breeds black market, product hoarding, diversion and pipelines vandalism with its associated incessant death of the culprits.

Many economic analysts are of the opinion that for the downstream sector to satisfy the yearnings and aspirations of the citizenry the oil sector should be deregulated. Deregulation reform which is the act of partial or complete removal of fuel subsidy is widely accepted by many countries, both emerging and developed economies. For example, the inception of deregulation reform was initiated in the United States of America, while the United Kingdom and other developed economies followed suit in the early 1980s, (Winston, 1998; Morgan, 2004). Developing countries were not left out in the adoption and implementation of deregulation reform. To buttress this assertion, Healey, (1990) opined that the deregulation reform was also copied by many emerging economies in the 1990s leading to a wide range of labour and capital. This was the scenario that prevailed throughout the early 21st century, until the global economic and financial crisis which led to the reduction of many countries' economic growth and disruption of deregulation reform, (Wolff, Wagner, Kozluk and Nicolette, 2009).

Nigerian government has spent so much yearly in subsidizing the importation of the products for onward sale at higher rates to the Nigerian populace. In effect, petroleum subsidy has moved from being an implicit subsidy to explicit cost, which has increased significantly over the years, especially with rising share of imports in domestic supply. Considering the huge amounts spent overtime in subsidizing the consumption of petroleum products in Nigeria, the government decided to fully deregulate the retail price of petroleum having removed the subsidies on diesel and kerosene earlier. This would allow the prices of the petroleum products to fully reflect their market conditions, culminating in the deregulation of the downstream oil sector, (Ayodele, Obafemi and Ebong 2013). The advocates of this argued that fuel subsidy removal was a step in the right direction it would help eliminate incentives for corruption and excess profiteering by an unpatriotic cabal in the petroleum sub sector. It will equally eliminate capital flight and build Nigeria's foreign reserve in order to position the economy for speedy growth and global competitiveness (Ering and Akpan, 2012).

## PROBLEM IDENTIFICATION

Over the years, the relationship between petroleum downstream deregulation and the structure of government budget has been an issue of debate in Nigeria. Many have asserted that there is no direct relationship between deregulation of downstream oil sector and government budget in Nigeria. Scanty studies exist that relate downstream deregulation to expenditure and revenue pattern of government. Thus, the study adds to existing literature by evaluating the relationship between the current downstream oil sector deregulation and budget structure in Nigeria. Furthermore, in Nigeria, there had never be a regime that has come without fuel pump price increase caused by either partial or complete removal of fuel subsidy and it has continued to generate a lot of controversies among scholars in the literatures. To support this assertion, (Kelly, 1997) and Udo, (2016), noted that the controversial views on the impact of deregulation of the downstream oil on government revenue and expenditure has been an issue of sustained interest for decades but with lack of consensus in the results as the results varied. Hence, the nature of the impact is inconclusive. For example, some authors agreed that the deregulation of the downstream oil sector impacts negatively on the structure of government budget. Others disagreed and argued that it impacts positively and significantly on the dependent variables. This argument has not been empirically settled in Nigeria, thus, the essence of this study to fill the gap.

## OBJECTIVES OF THE STUDY

Our study tries to know how the deregulation of the downstream oil sector affects the structure of government budget (revenues and expenditures of the government). Hence, the broad objective of this study is to investigate the effects of downstream oil sector deregulation on the structure of government budget in Nigeria. Specific objectives are;

1. To examine the effect of subsidy on government revenues and expenditure in Nigeria
2. To assess the nature of relationship between changes in domestic oil prices and government revenues and expenditures in Nigeria.
3. To ascertain the impact of global oil price on government revenues and expenditures in Nigeria.

Based on the stated objectives above, the study hypothesized that deregulation of the downstream oil sector has no significant and positive effect on the budget structure of Nigeria. Secondly, that subsidy has no significant and positive effect on

government revenues in Nigeria. The paper finally hypothesized that there is no significant and positive effect of global oil price on the government expenditures in Nigeria. The remaining sections of this work are organized as follows; section two provides the review of related literatures, the methodologies adopted for the study were presented in section three, section four covers the result of the data analysis, while sections five covers the summary of findings, conclusion and recommendations.

## CONCEPTUAL FRAMEWORK

Government budget is an itemized accounting of the payments received by government and payment made by government over a period of time. It is all about government revenue and expenditure. In Nigeria, this is contingent on the revenue from oil. Budget is a forecast by a government of its expenditures and revenues for a specific period of time, usual a year. Revenue is all about national income generated from profit on government activities, mainly from oil in the case of Nigeria as a mono-economy. Government expenditure reflects government decision on national activity deemed most appropriate to have carried out by the various levels of government or government. Our study tries to know how the deregulation of the downstream oil sector affects the structure of government budget (revenues and expenditures of the government). Most of the developing countries in which Nigeria is one of them that have adopted the deregulation of their downstream oil sectors based their actions on the aim of achieving a growing economy with an increasing demand for petroleum products. In support of this assertion Nwokeji, (2007) noted that most developing countries including Nigeria copied the reform to meet the supply needs which has remained a big challenge due to frequent breakdown of the refineries, pipe line vandalism and over-reliance on importation of refined products.

Prior to 1960's the downstream oil and gas sector initially was market driven by the demand and supply mechanism determining petroleum products prices, (Funsho, (2004). During that period the distribution and marketing of petroleum products were controlled by the multinational oil and gas companies. The situation remained like that until the government in 1983 decided to harmonize petroleum products by way of maintaining uniform pricing to encourage even distribution of products nationwide, (Christopher and Adepoju, 2012). To achieve the uniform price policy, government in 1983 established the Petroleum Equalization Fund (PEF).

Hence, the government participation in the downstream oil and gas sector culminated to a regulated regime but regrettably the consequences of such policy shift are not farfetched. The notable

consequences include, acute scarcity of the products, long queues, exorbitant prices, hoarding to create scarcity, smuggling, incomplete meter gauge, adulteration, under funding and monopolistic practices culminated by hoarding, (Oluwole, 2004). These and others have been the main features of the supply and distribution process of the downstream oil and gas industry in Nigeria. The unhealthy development degenerated into poor performance of the nation's refineries, which resulted to over dependence on importation of refined products and the resultant effect is the reduction in the nation's foreign exchange reserve. This reduction in the nation's foreign exchange reserve has negative effects on the revenues and expenditure of the government. Hence, necessity demanded that government had to come up with deregulation reform which was geared towards reviving the ailing downstream sector and the overall performance of the economy measured by gross domestic product (GDP).

## REVIEW OF RELATED LITERATURES

### Theoretical Review:-

There are many contending theories composing as possible explanatory framework of the effects of the deregulation on the growth of economy. But the theoretical framework for this study is based on the following theories; the neoliberal theory, special interest theory and the public interest theory. The neoliberal school of thought is based on the doctrine of competition and profit motive founded on free market pricing and freedom from the interfering hands of state regulation. This theory believes that the dividend of deregulation could be derived from the market system and competition like productivity, effectiveness and efficiency. The proponents of this theory hypothesized that privatization would strengthen market forces with some degree of deregulation, economic liberalization and relaxation of wage and price controls, (Ugorji, 1995).

Special interest theory was propounded by Stigler Weitzman and it postulates that a number of factors may give birth to deregulation. Examples of such factor are; a decrease in the cost of consumers must incur in order to inform them regarding the effect of regulation on them. For instance, price comparisons between regulated and non-regulated goods can assist consumers in estimating the effect of regulation on the prices they pay on those goods. Again, as product substitutes increase between regulated and non-regulated products, this would reduce profits and hence the urge to lobby for regulation induced price increases. Substitution may also occur between regulated and unregulated industries or between regulated and unregulated

controls. Finally a change in industry structure can reduce either the incentive or the ability to lobby for regulation.

Proponents of the public interest theory believe that deregulation would occur if the market deficiency which compelled regulation in the first place were to disappear. An example is a change in technology which could eliminate a natural monopoly. They claim that deregulation would occur if a regulatory regime which had been perceived to be in the public interest was defective. They equally believe that it may turn out that, the cost of the regulatory apparatus is greater than the loss resulting from the market imperfection it was designed to correct. When this happens, it may become obvious only with experience that entry restrictions are relatively costly ways to enforce standards, (Posner, 1974).

### Brief Empirical Review:-

The study of the relationship between the deregulation of the downstream oil sector and the structure of government budget vis-à-vis economic growth has created a lot of interest among researchers and policy makers for centuries. The wide global interest has led to many empirical works to attempt to furnish several economic questions particularly about the effect of the deregulation of the downstream oil sector on the government revenues and expenditure variables. Sequels to this, there have been numerous studies on the subject matter which this study tried to review. Some of them include the empirical study of Bash (2015) on the impact of fluctuations in crude oil prices on the Jordanian Public Budget for the period of 1995-2013. The result revealed that a drop in the price of crude oil have negative and significant effect on the Jordanian government budget and reverse is the case when there is increases in the crude oil prices.

Another important study is the one carried out by Ezie and Beida (2014) which empirically studied the deregulation of downstream oil sector and optimal petroleum pricing in Nigeria. Their study employed a Log Linear Error Correction Model (LLCM) to determine how petroleum profit tax, custom and excise duties and crude oil production have impacted on petroleum pricing) in Nigeria. Unit root test was carried out on each of the variables to determine their level of stationarity. The result revealed that with deregulation of the downstream oil sector, the amount of levies on importation of petroleum products would hike the price of domestic sales of the products like fuel, kerosene etc. This is an indicative that deregulation discouraged the importation of refined fuel and as such encouraged foreign direct investment in the oil and gas sector, hence improved revenues for the government. Again,

the result showed that the quantity of crude oil production in Nigeria has been far below the optimal capacity and has contributed positively to petroleum pricing increase over the years in Nigeria, hence increased revenues.

Auwal and Mamman (2012) empirically investigated the impact of the petroleum products supply and domestic prices on the domestic distribution in Nigeria in the light of the ultimate deregulation policy, using monthly data covering 2005 to 2010. They employ Vector Auto-regression (VAR) model and Ordinary Least Square (OLS) estimation to determine the interdependence and the impact of the variables on one another. The results reveal that, there is non-zero coefficient between the variables; hence, the independent variables are responsible for the variations in petroleum products distributed. More so, there is lagged and dynamic long run equilibrium which causes the prices of domestically refined petroleum products to remain insensitive to the quantity distributed, while the imported quantity, though, with a low coefficient and weak correlation, remains the key mode of supply that is currently sustaining the economy. This is an indicative that enough petroleum products is not refined locally, rather the imported quantity is currently sustaining the economy, hence high price of the products because of importation cost.

Sabiu and Reza (2014) empirically assessed the effect of deregulation of downstream oil sector on two macroeconomic variables - GDP and Unemployment in Nigeria, employing the vector auto

regression model using variance decomposition, impulse response function and granger causality tests. Their result found evidence that changes in oil price due to deregulation is the major source of variation in government revenues via GDP and unemployment in Nigeria. More so, their result showed that there is significant and positive impact of oil price changes on government revenues.

Adelowokan and Osoba (2015) empirically carried out a study on Oil Revenue, Government Expenditure and Poverty Rate in Nigeria, employing a multiple regression model through the OLS techniques. The result revealed that there is significant and positive relationship between oil revenues and government expenditure vis-à-vis poverty rate in Nigeria. This is an indicative that increases in oil revenues will empower government to spend more on the citizens thereby reducing the level of poverty.

**METHODOLOGY**

The study will follow a simple econometric linear specification of the multivariate time series function using the partial adjustment approach to estimating given parameters of a model. In so doing, the Ordinary Least Square Regression (OLSR) was adopted, using time series data from 2003 to 2015.

**Model Specification:-**

To examine the impact of deregulation of downstream oil sector on the structure of government budget in Nigeria this study adopted and modified the model framework of Brooks (2014) as shown thus:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \dots \beta_n + e \dots\dots\dots 1$$

The model is expressed as capturing deregulation by domestic price per a liter of fuel, fuel consumption, global price of oil and federal government expenditure on subsidy; while proxy for the structure

of government budget is captured by oil revenues and expenditures components. The revenues model is specified as;

$$REV = f(PPLFU, FUCONS, GLOILP, SUBSIDY) \dots\dots\dots 2.$$

The equation is transformed to;

$$REV_t = \beta_0 + \beta_1DPLFUL_t + \beta_2FUCONS_t + \beta_3GLOILP_t + \beta_4SUBSIDY_t + \mu_t \dots\dots\dots 3$$

Here government revenue (a proxy for structure of government budget) is the dependent variable, while domestic price of fuel (a proxy for downstream sector

deregulation) is the independent variable alongside fuel consumption, global oil price and government expenditure on fuel subsidy.

And for the expenditure model it is specified as;

$$EXP = f(DPLFUL, FULCONS, GLOILP, SUBSIDY) \dots\dots\dots 4$$

The equation is transformed to;

$$EXP = \beta_0 + \beta_1PPLFU_t + \beta_2FUCONS_t + \beta_3GLOILP_t + \beta_4SUBSIDY_t + \mu_t \dots\dots\dots 5$$

Here government aggregate public expenditure (a proxy for structure of government budget) is the dependent variable, while domestic price of fuel, oil consumption, global oil price and government expenditure on subsidy (proxies for downstream sector deregulation) are the independent variables.

**Where:**

- REV = Revenue
- EXP = Expenditure
- DPLFUL = Domestic Price of fuel per liter
- FULCONS = Fuel Consumption
- GLOILP = Global Oil Price
- SUBSIDY = Subsidy.
- $\beta_0$  = the constant term
- $\beta_s$  = the parameters to be estimated
- $\mu$  =error term

**PRESENTATIONS AND ANALYSIS OF DATA**

**Table 1 Regression Results showing the effect of Deregulation on Government Revenue**

Dependent Variable REV			
Variables	Coefficient	T-statistics	Probability
Constant	14679.42	1.3739	0.1800
FULCON	0.0107	0.8506	0.4020
GLOILP	-69.9420	-0.7495	0.4596
DPLFUL	-44.5537	7.4835	0.0087
SUBSIDY	-0.5399	-6.4328	0.0011
R-squared = 0.78		Durbin-Watson 2.0111	
Adj R-Squared = 0.68		F-proba. = 0.0003	
F-Statistics = 1.4196			

Source: Authors' Computation

The result revealed that three out of the four variables are explanatory variables and they include global oil price (GLOILP), domestic price per liter of fuel (DPLFUL) and subsidy (SUBSIDY). These independent variables affect

government revenue significantly, some positively and some negatively as can be seen in the sub-heading; discussion of the regression result.

**Table 2. Regression Results showing the effect of Deregulation on Government Expenditure Estimated Results**

Dependent Variable: EXP			
Variables	Coefficient	T-statistics	Probability
Constant	1.5373	1.0388	0.3067
DPLFUL	3.35E-06	2.8227	0.0079
GLOILP	0.0298	0.2283	0.8209
FULCON	-0.0089	-0.1772	0.8605
SUBSIDY	0.6157	4.0582	0.0003
R-squared = 0.69		Durbin-Watson	1.58
Adj R-Squared = 0.59			
F-Statistics = 4.168		F-proba. = 0.005	

Source: Authors' Computation

**DISCUSSION OF THE REGRESSION RESULTS**

From the result shown in **table .1** on the effect of deregulation on oil revenue, the three explanatory variables of interest – global oil price (GLOILP), domestic price per liter of fuel (DPLFUL) and subsidy (SUBSIDY) affect government revenue significantly but not positively. It can be deduced that a unit or 1% increase in DPLFUL will decrease government revenue by 44 units; while reverse would be the case with a decrease. This implies that for oil exporting country like Nigeria, an increase in domestic oil price is expected to generate increase in black market thereby reducing government revenue and output in the economy. Equally, the result showed that global oil price impacts significantly and negatively on government revenue. A unit drop in the international price of oil produces a 69% decrease in government revenue and a contrary will produce an increase. Subsidy also impact on revenue negatively as a unit increase in subsidy will decrease revenue by 0.54 units. Furthermore, this negative impact of subsidy on revenue can be explained by the fact that by withdrawing fuel subsidy in the domestic market, more money will be saved by the government and more production and thus increase in output in the economy. This observed negative relationship is in total agreement with the findings in the study of Hamilton (2005), which revealed that there is a negative relationship between increased oil prices and output in an economy. But our result is in contrast with the findings of Aliyu (2009) who found a positive relationship between oil price increases and government revenues vis-à-vis real GDP growth in Nigeria.

Equally, from the result in **table 2**, it can be established that domestic price of fuel and subsidy as explanatory variables have positive effect on government expenditure significantly. It can be inferred that a unit increase in domestic fuel price will increase government expenditure by 3.35 units, and vice versa. The implication of this, is that for the Nigerian economy, an increase in domestic oil price when deregulation is fully implemented is expected to decrease government expenditure but the result found the opposite, an increase in DPLFUL leads to an increase in government expenditure, this outcome is unexpected. This is not in consistent with our apriori expectation.

The result equally revealed that subsidy has a positive effect on government expenditure, as a unit increase in subsidy produces an increase in government expenditure by 0.62 units. Furthermore, the result shows that subsidy removal brings a reduction in government expenditure and vice versa. This outcome does not have enough empirical review and cannot be compared with previous findings, but it supports the assertion of proponents of full scale deregulation that removal of fuel subsidy will reduce government expenditure.

Fuel consumption (FULCONS) as a control variable, it produces a reduction in government expenditures as indicated by the estimated coefficient of minus sign of -0.0089 and an insignificant increase of 0.0107 (less than 1%) in the government revenues. This is an indicative that a unit drop in fuel consumption will cause more than 100% decrease in government expenditure, hence full consumption has



negative impact on government expenditure. In the contrary, a unit increase in fuel consumption produces less than 1% increase in government revenues hence; fuel consumption has positive but not significant impact on the structure of government budget in Nigeria. This finding is in line with the results in the empirical work of Bash, (2015) which revealed that deregulation of downstream oil sector impacts positively but not significant on the structure of government budget.

### **SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS**

This study analyses the effect of deregulation of downstream oil sector on the structure of government budget in Nigeria using a dataset covering a 12-year period (2003 to 2015). The Ordinary Least Square (OLS) Regression represents the econometric method of estimation in this work. The aim is to assess the nature of relationship between changes in oil prices as a result of deregulation of downstream oil sector and government revenues and expenditures. The findings of the result can be summarized as shown:

1. Deregulation of downstream oil sector has significant but negative effect on the structure of government budget in Nigeria.
2. Increase in domestic fuel price has significant and negative effect on government revenue but significant and positive effect on government expenditure in Nigeria.
3. Subsidy has significant negative effect on government revenue and a significant but positive effect on government expenditure.
4. Global oil price impacts significantly and negatively on government revenue as unit drop in the international price of oil produces a 69% decrease in government revenue.

### **RECOMMENDATIONS**

Based on the findings, the paper advocates a policy that will guarantee long term domestic oil price stability in the country which can ensure stability in the macroeconomic environment via improved oil revenues. To achieve this, the government should push for greater accountability and good governance to ensure a more transparent policy that will respond to the problems of the downstream oil sector in Nigeria. Thus, the study concludes that the deregulation of the petroleum downstream sector will reduce government expenditure and increase revenue, thus, it will change the structure of government budget in Nigeria.

### **REFERENCES**

1. Abu, I. N. and O. C. Chidi (2012), *Deregulation and Privatization of the Downstream Oil and Gas Industry in Nigeria: Curse or Blessing?* *International Journal of Business Administration*, 3 (1), 90-112
2. Adelowokan, O. A and Osoba, A.M (2015), *Oil Revenue, Government Expenditure and Poverty Rate in Nigeria. Global Journal of Management and Business Research: Economics and Commerce Volume 15 (10), 11-20.*
3. Ahuja, H.L., (2012). *Macroeconomics: Theory and Policy (18th Revised Edition)*, New Delhi:
4. Ravindra Printers Ltd
5. Akinmutumi, T. (2011), *Fuel subsidy to go: FG targets N500bn subsidy removal. National Mirror 20th June, 2011, 1-3.*
6. Ayodele, O. S., Obafemi, F. N., and Ebong, F. S (2013), *Deregulating the Downstream Sector of the Nigerian Petroleum Industry. British Journal of Economics, Finance and Management Sciences*, 8 (2), 122-140
7. Bash, M.H (2015), *Impact Of Fluctuations in Crude Oil Prices on the Jordanian Public Budget for the Period of 1995-2013. European Scientific Journal*, 11(19), 214-227.
8. Bobai, F. D (2012), *An Analysis of the Relationship between Petroleum Prices and Inflation in Nigeria. International Journal of Business and Commerce* 1(12), 01-07.
9. Ezie, O and Beida, O. J (2014), *Nigeria's Downstream Oil Sector Deregulation and Efficient Petroleum Pricing. International Journal of Social Sciences and Humanities Reviews* 4 (4), 84 - 93.
10. Ibrahim, S. S and Ibrahim, H. (2014), *Budgetary Allocation Dynamics and Its Impact on Poverty Spread among the Geopolitical Zones of Nigeria. American Journal of Economics*, 4(2), 124-129.
11. Kanu S.I, Ozurumba, B. A. and IHEMEJE, J. (2014), *Examining the Relationship between Federal Government of Nigeria's Revenue and Expenditure Profiles. Journal of Economics and Sustainable Development*, 5(4), 28-38.
12. Ogbonna, G. N and Ebimobowei, A. (2012), *Impact of Petroleum Revenue and the Economy of Nigeria. Current Research Journal of Economic Theory*, 4(2), 11-17.
13. Okpokpo, G. Ifelunini .I. & Osuyali .F. (2014). "Is globalization a potent driver of Economic growth?" - *Investigating the Nigerian Non-oil Exports, Asian Economic and Financial Review*, 4(6), 781-792.
14. Onwe, O. J (2012), *Economic Implications of Petroleum Policies in Nigeria: An Overview. American International Journal of Contemporary Research* 2(5), 60-61.

15. Sabiu, B. S and Reza, K (2014), *Effect of the Deregulation of Downstream Oil Sector on the Gross Domestic Product (GDP) and Employment in Nigeria. The Macro Theme Review* 3(3), 117-136.
16. Udo, B (2016), *Nigeria: Oil revenue down by N28.4 billion, as Federal, State governments shared N387.8 billion in December 2015. Premium-Times-Nigeria, 12th May 2014, 12-16*
17. *Wikipedia* (2011). <http://www.wikipedia.com>.