

Oil Subsidy Management and Performance of the Nigerian Economy

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Abstract

The study adopted the *ex-post facto* research design. Secondary data was sourced from Petroleum Products Pricing Regulatory Agency (PPPRA) and the Central Bank of Nigeria Statistical Bulletin for the period 2006 to 2015. Regression statistic was used to test the hypothesis formulated. The result revealed payment of subsidy had positive and significant impact on gross domestic product of Nigeria for the period 2006 to 2015 (coefficient of Log OPS = 0.3420, t-value = 2.133, p-value 0.045 < 0.05). This may not be unconnected with the use of such funds in productive sectors of the Nigerian economy. However, since government is insisting on the removal, the removal of subsidies should not be done in phases as it has never worked in any country and there is a strong likelihood that it may not work in Nigeria as well.

Keyword: Oil, Subsidy, Management, Nigerian Economy, Gross Domestic Product (GDP), Nigerian National Petroleum Company (NNPC), Petroleum Products Pricing Regulatory Agency (PPPRA).

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1.0 Introduction

Nigeria is a country that is blessed with abundant mineral resources especially in terms of crude Oil, Nigeria possesses abundant crude oil deposit and is ranked the 14th largest producer of crude oil and the 10th largest in proven reserves (DFID, 2012) and is equally ranked the world's 8th largest in proven natural Gas Reserves. However, this ranking in both crude oil and natural gas has not translated into fuel independency and its by-products.

The history of the Petroleum Industry in Nigeria reveals that oil was discovered in 1956 at Oloibiri in the Niger Delta and 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 (Onyemaechi, 2012), since then the country has been increasing its oil production. The country has 4 refineries with combined installed production capacity of 445,000 barrels per day, adequate to meet its domestic needs with a surplus for export as at the time the refineries were built. However, despite the proven oil reserves, the refineries have not been producing at full capacity.

For instance in 1970, Nigeria was able to reap instant riches from its oil production thereby joining the Organisation of Petroleum Exporting Countries (OPEC) in 1971. In 1977, the Nigerian National Petroleum Company (NNPC) was established as a State Owned and controlled company which is a major player in both the upstream, midstream and downstream Oil and Gas sector. By the late 1960s and early 1970s, Nigeria attained a production level of over 2 million barrels of crude oil per day. Although production figures dropped in the 1980s due to economic slump, 2004 saw some improvements in oil production to a record level high of 2.5 million barrels per day (Onyemaechi, 2012).

The country is largely a net importer of fuel and other petroleum products such as Petrol (PMS), Kerosene (HHK), Diesel (AGO) and Aviation Kerosene (ATK), (DFID, 2012). The huge demand for these products and inadequate supply has led to successive Governments in Nigeria attempting to subsidize the product for the benefit of its Citizenry. An examination of fuel pump prices in Nigeria shows that since 1978 when oil price was N0.5k per litre under General Obasanjo as Head of State, there has been a gradual increase in petroleum products price. Currently, under President Muhammadu Buhari current regime, the pump price of petrol is N145.00k per litre.

Table 1 presents history of fuel pump prices in Nigeria from 1978 to 2016.

Table 1: History of Fuel price Hike in Nigeria

Year	Price (N)	Regime
1978	0.5	Obasanjo
1982	0.20	Shagari
1984	0.20	Shagari
1984	0.20	Muhammadu Buhari
1985	0.20	Muhammadu Buhari
1986	0.395	IBB
1987	0.395	IBB
1988	0.395	IBB
1989	0.395	IBB
1990	0.60	IBB
1991	0.70	IBB
1992	3.25	IBB
1993	11.00	IBB
1994	11.00	Abacha
1995	11.00	Abacha
1996	11.00	Abacha
1997	11.00	Abacha
1998	11.00	Abacha/Abdusalami
1999	20.00	Abdulsalami/Obasanjo
2000	22.00	Obasanjo
2001	26.00	Obasanjo
2002	30.00	Obasanjo
2003	40.00	Obasanjo
2004	55.00	Obasanjo
2005	60.00	Obasanjo
2006	65.00	Obasanjo
2007	70.00	Obasanjo/ Yar'adua
2008	65.00	Yar'adua
2009	65.00	Yar'adua
2010	65.00	Yar'adua/ Jonathan
2011	65.00	Jonathan
2012	120.00	Jonathan
2013*	120.00	Jonathan
2014*	120.00	Jonathan
2015*	145.00	Jonathan/ Buhari
2016*	145.00	Buhari

Source: Modified Table Adapted from Professor Bolaji Aluko and Ike Okwuobi who provided the Naira –to dollar exchange rates for the years 1978-2012

*Modified

The above table shows the pump prices of fuel and how it has been on the increase since 1978. Harsh economic realities and frequent world oil price fluctuations prompted the introduction of subsidies in Nigeria's energy sector in the mid 1980s (Akov, 2015). The need for these subsidies by government becomes imperative given the economic realities in the country. However, subsidy comes with a cause as funds which would have been used for the development of the economy have been diverted to payment of subsidy. No wonder successive governments in Nigeria have attempted to remove these subsidies.

It is therefore against the forgoing that this study examines oil subsidy management in Nigeria and performance of the Nigerian economy. The paper is divided into four. Section one is introduction. In section two, the paper reviewed related literature on oil price subsidy. In section three, the methodology adopted was *ex-post facto* research design. In section four, data was presented and analysed, while section five, the paper covers conclusion and recommendation.

2.0 Review of Literature

A subsidy by definition is any measure that keeps prices consumers pay for a good or product below market levels for consumers or for producers above market (DFID, 2012). Subsidies can take different forms. Some subsidies have a direct impact on price, these include grants, tax reductions and exemptions or price controls. Others affect prices or costs indirectly, such as regulations that skew the market in favour of a particular area, government-sponsored technology, or research and development (R&D). There are many write-ups on oil subsidies in Nigeria, amongst them are the likes of Ering and Akpan (2012) who examined the politics of fuel subsidy removal in Nigeria. According to them, the descriptive nature of the study necessitated the extensive use of desk research. The study argues strongly that the policy derives its instrumentality from the theory of development racism, which only benefits the rulers of the country and multinational companies and not the citizen. This explains the massive protests by the Nigeria Labour Congress, Civil Liberty Organisations and the masses of Nigeria that usually accompanied fuel subsidy removal or pump price increase. They thus recommended that for the smooth operation of the petroleum sub-sector, government must always engage the people in policies that will affect them. They also recommended for the building of more refineries in order to make the products more available to the people and at an affordable pump price. This could be done through private/public partnership.

Onyishi, Eme and Emeh (2012) were of the view that a flip over from the economy is the issue of fuel subsidy removal, which many Nigerians felt very touchy about. Nigerians are disappointed that despite their disapproval of the plan, government has continued to promote it. They posit that there has been a vociferous and voluble attempt in trying to convince Nigerians to buy into the subsidy removal with the claim that the economy may crash if subsidy is not removed. It was thus against the forgoing that they examined the implications of subsidy removal on the economy in general and the populace in particular. They concluded that the protests which have met with the hike in fuel prices were to be expected. In fact, it would have been odd if it had not taken place. Such an astronomical increase in the price of most essential commodities cannot just pass as if though nothing happened. The protesters who appear to be unimpressed by the government's official line clearly represent the gut feeling of the majority. They appear to be even less impressed with the committee on subsidy reinvestment and empowerment programme. Nigerians have rejected the "subsidy" removal because they are wary of policies which do not attempt to increase their purchasing power in the country.

Onyemaechi (2012) attempted to enumerate such benefits by examining some implications of the various petroleum policies. His 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 it is the observed rapid expansion of the number of economic actors in the Nigerian Petroleum Industry; secondly, the 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 as 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-hour. There was also confusion on the actual beneficiaries of the said subsidy in Nigeria. The analysis also indicates that a major cause of these problems was ineffective administration of petroleum policies in Nigeria. The study recommended strategies for administration of the petroleum strategies in Nigeria. First is the application of a disaggregated approach to policy formulation and implementation by allowing Stakeholders to be fully involved. Second is a total deregulation of the petroleum subsector, with the aim of minimizing free-market distortions. Thirdly, he recommended 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.

Akinyemi et al (2013) examined the existence of a long run effect of fuel subsidy reform on environmental quality in Nigeria for the period of 1970-2012 using the Johansen and the Engle-Granger two step co-integration procedure techniques. The study developed a three case scenario including *i*) a case of subsidy payment, *ii*) a case of effective subsidy and, *iii*) a case of no subsidy payment. Findings from the study supported evidence of a long run sustainable equilibrium model. Also, their estimation results showed that the first and the last case scenario do not significantly influence environmental quality. This implies that subsidy payment in Nigeria does not enhance access and consumption of liquid fuel. On the other hand, the interaction of sound regulatory framework with subsidy payment (the case of effective subsidy) significantly exerts a responsive influence on environmental quality.

Tayo, Elegbeleye, Chukwuedozie and Idowu (2014) critically reviewed the social and psychological effects of fuel subsidy removal on the Nigerian family. The result shows that phasing out fuel subsidy will reduce indiscriminate fuel consumption which will lead to reduction in carbon emission, and money saved could be channelled towards infrastructural development, revitalising the local refineries among other factors that will transform the Nigerian economy. However, the strong and transparent institutional framework that could transform the money saved from subsidy removal to economic growth is very weak in Nigeria. The Nigerian government should ensure that policies that will improve the welfare of the low income citizens, strong institutional framework and improved refinery technology are enforced before fuel subsidy is totally phased out. There is the need to meet the short term plan before the long term plan can be actualized.

Lawal (2014) examined the various regimes of petroleum products price increases, subsidy payments and its effectiveness or otherwise in stimulating investments in the industry in Nigeria and made recommendations on how to attract private investments. The study used secondary data collected from the Nigerian National Petroleum Corporation (NNPC), Central Bank of Nigeria (CBN), Petroleum Products Pricing Regulatory Agency (PPPRA), and Government records. Google alert and social network sites were established to generate real time primary data which was supplemented with data obtained using structured questionnaire and interview. The study revealed that subsidy removal had not generated investment in the downstream of the petroleum subsector, rather, it had generated violent reactions from the people. Investors who got licences for the construction of new refineries failed to take off for various reasons amongst many is the non-deregulation of the sector. Although, deregulation would have immediate negative effects on real household incomes and savings. Negative reactions can be mitigated with adequate palliative measures and effective education and public enlightenment. On the short run, the prices of petroleum products would go up significantly but would drop when the products of the new refineries are released into the market and price competition sets in. The study went beyond subsidy removal and conducted empirical study on its effectiveness or otherwise on investment generation and proffer alternative solutions. Lawal (2014) revealed that subsidy removal did not stimulate investment.

Sani (2014) evaluated the impact of fuel subsidy removal on small scale business, in Nigeria using Lagos, Enugu and Kano as case study. The study used the chi-square distribution analysis to estimate the effect. The study found that fuel subsidy removal had a negative impact on the performance of small scale businesses in Nigeria at the 5% level of significant. It also reveals that fuel is a very important input in the development of small scale businesses in Nigeria. The study therefore concluded that the removal of fuel subsidies has a significantly negative impact on small scale businesses. The removal of fuel subsidy had significantly affected their level of stock, sales, operation cost and ultimately their profit level negatively, and recommended amongst others that federal government should provide some form of market protection for small scale businesses, so that their owners are not adversely affected by the deregulation of the petroleum industry.

Soile, Tsaku and Yar'Adua (2014) examined the impact of subsidy removal on transport sector development in Nigeria using the co-integration and error-correction models. The result showed that subsidy had a positive and significant relationship with transport sector which implies that removing gasoline subsidies can increase the operational cost of transportation sector and reduce the Gross Domestic Product (GDP) of the country. The study recommended that comprehensive, well-planned, well-communicated and transparent reform strategy gives the best chance of success. Develop alternative sources of energy for domestic and vehicular use so as to reduce the local demand and price of gasoline. The main policy action here is to liberalise product importation and unbundle the underutilized PPMC pipelines and storage systems so that all importers (and not just NNPC) can use them for open access throughput for discharge and onward distribution to other parts of the country. Competition will be enhanced thereby curtailing the cartel-like and profiteering built into the current imports.

Akov (2015) was of the opinion that fuel subsidy patchwork in Nigeria has been fraught with elite manipulations and intrigues. Thus, Akov analysed the debilitating state of Nigeria's energy-dependent economy against the backdrop of unprecedented oil-generated opulence. The study relied on secondary data and it found out that rampant corruption in the nation's sprawling oil sector is hugely responsible for the intractable economic development slow-motion that has worsened the plight of ordinary Nigerians. While the country's refineries remain moribund, fuel subsidy has, instead created leeway for the criminally-minded elite to squander the commonwealth of the nation. Government has demonstrated little or no political will to stem the decay in the oil sector, as underlined by her reluctance to prosecute oil thieves, some of whom are directly or indirectly connected to the apparatus of the state. Unlike in Ghana where government engaged the people and introduced measures to cushion the harsh effects of fuel subsidy phase-out on the poor, in Nigeria, government has often increased the cost of petrol before ever addressing its impacts on vulnerable groups. The study therefore recommends the revamping of the country's refineries, the strengthening of the fight against corruption and the establishment of a regulatory framework to protect citizens as necessary measures to help improve the poor state of Nigeria's economy and society.

3.0 Methodology

The study adopted the *ex-post facto* research design. For this study we used secondary data sourced from Petroleum Products Pricing Regulatory Agency (PPPRA) and the Central Bank of Nigeria Statistical Bulletin for the period 2006 to 2015. The choice of the 2006 is due largely to availability of data. The data consisted of the gross domestic product (GDP) of Nigeria and the total quantum of funds paid by the Federal government of Nigeria as subsidy guided by the perceived functional relationship between the variables, a link is forged between the two variables. The model is in line with the work of Akinyemi et al (2013). Thus, the functional relationship and the resultant models are specified below in line with the hypothesis stated. Thus for hypothesis the study states that oil price subsidy does not have any significant impact on Nigeria' gross domestic product. It was represented as:

$$\text{GDP} = a + b_1(\text{OPS}) + \mu \dots\dots\dots (1)$$

where,

GDP	=	Gross Domestic Product
OPS	=	Oil Price Subsidy
a	=	Model Constant
b	=	Coefficient of the independent variable
u	=	Error Term

However, transforming the above in log form, we have:

$$\text{LogGDP} = a + b_1(\text{logOPS}) + \mu \dots\dots\dots (2)$$

The hypothesis stated is tested by Regression model using E-view statistical software for the hypothesis. The signs and significance of the regression coefficients was relied upon in explaining the nature and influence of the independent and dependent variables as to determine both magnitude and direction of impact. The form of OLS Model implies that there is a one-way causation between the independent and dependent variables. The signs of the coefficient and the t-value were used to explain the direction and magnitude of impact of the independent variables on the dependent variables.

4.0 Presentation and Analysis of Data

Table 2 presents the total amount paid by the Federal Government as subsidy and the gross domestic product of Nigeria from 2006 to 2015.

Table 2: Amount paid by the Federal Government as Subsidy and the Gross Domestic Product of Nigeria from 2006 to 2015

Year	Total subsidy (₦) Billion	% Change *	GDP (₦)Billion	% Change *
2006	257,363.99	-	28,662.47	-
2007	271,507.34	5.50	32,995.38	15.12
2008	630,570.92	132.25	39,157.88	18.68
2009	469,308.47	-25.57	44,285.56	13.09
2010	667,083.20	42.14	54,612.26	23.32
2011	2,104,922.52	215.54	62,980.40	15.32
2012	1,354,787.22	-35.64	71,713.94	13.87
2013	1,315,626.49	-2.89	80,092.56	11.68
2014	1,217,353.96	-7.47	89,043.62	11.18
2015	336,235.39	-72.38	94,144.96	5.73

Source: PPPRA/CBN 2016

*Author's Computation

As revealed from table 2, the Federal government of Nigeria paid ₦ 257, 363.99 billion naira in subsidy to NNPC and Oil Marketers in 2006 and this increased by 5.5% to ₦ 271, 507.34 billion in 2007. In 2008, government subsidy increased by 132.25% to ₦630, 570.92 billion. However, there was a decrease by 25.57% in 2009 to ₦469, 308.47 billion from the previous year's subsidy. In 2010 the total amount of subsidy paid was ₦ 667, 083.20 billion indicating an increase of 42.14% from 2009. In 2011, subsidy payment was ₦ 2,104,922.52 Trillion indicating an increase of 251.54%. There was a decrease of 35.64% in 2012 to ₦ 1, 354,787.22 Trillion from 2011 and this was further decreased by 2.89% to ₦ 1, 315,626.49 Trillion in 2013. In 2014, subsidy payment further decreased by 7.47% to ₦ 1, 217,353.96 Trillion and in 2015 a decrease of 72.38% was observed with 2015 total subsidy payment of ₦ 336, 236.39Billion. From 2006 to 2015, a grand total sum total of ₦3,831,217,015,938.72 Trillion was paid as subsidies for the period to both NNPC and Other Oil Marketing Companies in Nigeria.

For Gross Domestic Product, it was observed that in 2006, Nigerian GDP was ₦28, 662.47 billion and this increased by 15.12% to ₦32, 99.38 billion in 2007. In 2008, GDP further increased by 18.68% to ₦39, 157.88 billion. In 2009, although there was an increase by 13.09% it was less than the

previous year's growth. In 2010, GDP increased by 23.32% to ₦54, 612.26 billion. The increase was further sustained in 2011 when GDP grew by 15.32% to ₦62, 980.40 billion. In 2012, again GDP increased by 13.87% to ₦71, 713.94 billion and in 2013 it again increased by 11.68% to ₦80, 092.56 billion. Likewise in 2014, Nigeria's GDP grew by 11.18% to ₦80, 043.62 billion and in 2015 GDP was up by ₦5.73% to ₦94, 144.96 billion.

Table 3 presents the regression result of the hypothesis test. We hypothesized that oil price subsidy does not have any significant impact on Nigeria's Gross Domestic Product.

Table 3: Regression Result

Dependent Variable: LOGGDP Method: Least Squares Sample: 1 10 Included observations: 10				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGOPS	0.342086	0.160375	2.133043	0.0455
C	2.748150	0.936684	2.933912	0.0189
R-squared	0.362543	Mean dependent var		4.743400
Adjusted R-squared	0.282861	S.D. dependent var		0.183045
S.E. of regression	0.155010	Akaike info criterion		-0.713802
Sum squared resid	0.192224	Schwarz criterion		-0.653285
Log likelihood	5.569009	Hannan-Quinn criter.		-0.780189
F-statistic	4.549871	Durbin-Watson stat		0.496903
Prob (F-statistic)	0.045482			

Source: Researcher' E-View Result

From table 3 above, there is an indication that payment of subsidy have positive and significant impact on Gross Domestic Product of Nigeria for the period 2006 to 2015 (coefficient of LogOPS = 0.3420, t-value = 2.133, p-value 0.045 < 0.05). R-Square which measures the goodness of fit of the model was 36.35%. This was properly adjusted to 28.28%. The F-statistic which measures the overall goodness of the model was statistically significant since the probability of the f-statistic was 0.04 < 0.05). Thus, our null hypothesis is rejected while the alternate that oil price subsidy have positive and significant impact was accepted.

5.0 Conclusion and Recommendation

As observed from the findings of this study, oil subsidy had positive and significant impact on gross domestic product, thus, subsidy had assisted in the growth of the Nigerian economy. This may not be unconnected with the use of such funds in building Depot Storage Tank Farms and logistics thereby generating huge employment and local content development. However, since government is insisting on the total removal, the removal of subsidies should not just be done in phases as it has never proved to have worked in any country and there is a strong likelihood that it may not work in Nigeria as well. A partial removal will lead to partial results because investors will continue to be discouraged, the distortions and inefficiencies existing in the sector, such as smuggling and rent-seeking behaviour and over profiteering will continue to occur as such, gradual deregulation will imply that substantial amounts of money will continue to be spent on fuel subsidy through continued borrowing. This will imply that future generations would have to repay the debt being contracted. The optimal policy response therefore, is to remove it once-and-for-all.

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