Nigeria's Petroleum Subsidy: In Whose Interest is it?

Emmanuel Olusegun Stober

Bucharest University of Economic Studies, Romania
E-mail: stober.emmanuel@gmail.com

Abstract   *Subsidy has been defined as any government intervention, in cash or kind, to private sector producers or consumers for which the government receives no equivalent compensation in return. Fuel subsidy has been a growing liability to Nigeria's budgets, in a systematic fashion for almost four decades, hence creating vested interest. The exponential growth of cost of fuel subsidy is due to the rising cost of crude oil in the international market, exchange rate volatility and the population growth of Nigeria which resulted in increased petroleum consumption; the combination of these three variables therefore made the cost of the fuel subsidy unsustainable. Understanding the current fuel subsidies magnitude is critical for advancing reform because it underscores the potential socio-economic benefits to be realized. In addition to the burden that fuel subsidy is placing on the national budget, keeping petroleum below the market value has discouraged additional investment in Nigeria's oil sector, because the visibility of recovering the investment under the artificially low price structure is uncertain.*

1. Introduction

With 5.1 trillion cubic meters of proven natural gas reserves and 26.8 billion cubic meters of export in 2014, Nigeria is not only Africa's biggest natural gas country, but also the world's 3rd largest producer. It is also 4th biggest crude oil exporting nation, having produced 2.1 million barrels per day in 2014, and the 8th in proven crude oil reserves (OPEC, 2015). However, in spite of these qualities, Nigeria does not have the capacity to meet its domestic demand for refined petroleum products, even as many businesses, not to mention the households rely on petroleum or diesel to generate their own electricity. Hence, this has called for the importation of oil products. In order to make energy and transportation affordable, Nigeria has been in a systematic fashion of fuel subsidy in the last 4 decades; however the sustainability of these schemes has created controversy.

In recent years, corruption and fluctuations of crude oil price in the international market have made subsidization a pressing issue. The federal government has committed to reforming the oil subsidies due to the increasing cost, but attempts to raise prices have been fiercely challenged by the citizens, who see cheap energy as their share in the national cake. Although government has promised and shown that

subsidy spending can be redirected to other productive sectors or programs like the YouWin program, the Subsidy Reinvestment and Empowerment Program (SURE-P) – Graduate Internship Scheme (GIS), and other poverty alleviation program of the previous administration, many citizens are still not convinced by the government's promises. This clearly shows that citizens have an important role to play in this debate, but, as in many countries, there is all too often little solid information on the exact costs and benefits of subsidies. This problem is especially pressing in Nigeria, where even basic transparency about the exact scale of spending is hard to find (IISD, 2012). Understanding the current magnitude of fuel subsidies is of great importance for advancing reform because it underscores the potential socio-economic benefits to be realized.

2. Literature review

Intuition suggests that domestic producers which compete against imports will benefit from a tariff. If the government places a tax on imports of the domestic product, the domestic price of the imported product will rise. Domestic producers can then expand their own production and sales, or raise the price they charge, or both. The tariff charged on imports to make them less competitive in the domestic market, should make domestic producers better off. It is also common knowledge that buyers of a good imported from abroad will be hurt by a tariff. Domestic consumers end up paying a higher price, or buying less of the product, or both (Pugel, 2010). In the case domestic producers do not have the capacity to meet domestic consumption, and the price of the imported product is too high for consumers to bear, government ends up taking the burden from its citizens by subsidizing the product.

This is why policy-makers often justify subsidies that they contribute to economic growth, and reduce poverty. However, subsidies are not often the most resourceful tool at promoting these objectives. In reality, political incentive is the main drive behind subsidies. In order for government to get the support of its people, it offers subsidies which are a very noticeable way to show its support. This is mostly important in Nigeria, since it lacks the administrative capacity to offer social and economic incentive through other policy instruments.
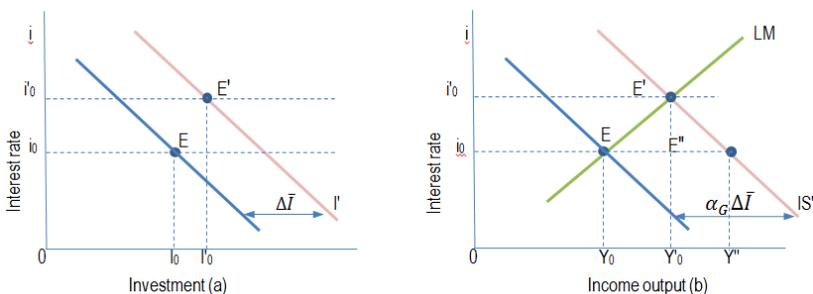
Nigeria is not the only country that is involved in subsidy. In Czech & Slovak Republics, subsidies have held back economic restructuring and hindered innovation, resulting in high energy intensity and low energy efficiency. Iran's subsidies cause inefficient energy use, and are a major burden on public finances, resulting in poor energy-sector performance. Meanwhile in Chile, the elimination of coal subsidies in 1995 was economically beneficial. However, removing remaining oil subsidies would incur short-term economic costs (UNEP, 2004). Subsidies studies to date also include Canada (Sawyer and Stiebert, 2010), China (Zhang and

Qin, 2015), India (Clarke, 2015), Indonesia (Braithwaite *et al.*, 2010), Malaysia (Bridel and Lontoh, 2014), Norway (Aarsnes and Lindgren, 2012), Russia (Lunden, Fjaertoft, and Sigra Group, 2014; Gerasimchuk, 2012), Brazil (De Oliveira and Laan, 2010), Poland (Suwala, 2010), Ghana, Senegal and France (Laan *et al.,* 2010).

2.1. The multiplier effect of subsidy

If a government must subsidize its economy, it should be subsidizing investment and not consumption – exporting jobs and importing poverty. We know that both income tax cut and increase in government spending raise the interest rate and reduce investment spending. However, it is possible for government to raise investment spending through an investment subsidy, as Figure1 reveals. The United State government has sometimes subsidized investment through investment tax credit, whereby a firm's tax payments are reduced when it increases its investment spending. During the time of Bill Clinton as president, he proposed an investment tax credit in the 1993 fiscal package.

An investment subsidy shifts the investment schedule in diagram (a) of figure 1. At each interest rate, firms now plan to invest more. With investment spending higher, aggregate demand increases.

Where: $\alpha_G = \dfrac{1}{1-c(1-t)}$

Figure 1. An investment subsidy shifts the investment schedule

The income tax rate (t) is part of the multiplier. Thus both government spending and the tax rate affect the IS schedule. In diagram (b), the IS schedule shifts by the amount of the multiplier times the increase in autonomous investment due to the subsidy. The new equilibrium is at point E', where goods and money markets are again in balance. But note now that although interest rate has risen, we see, in panel (a), that investment is higher. Investment is at the level I'0, up from I0; the

interest rate growth diminishes but does not inverse the impact of the investment subsidy. This is a case in which both consumption, induced by higher income, and investment rise as a result of expansionary fiscal policy.

When we compare E' to E, on diagram (b) we can see that increased government spending raise both income and interest rate. The interest rates are unchanged from the equilibrium in the goods market between point E' and E''. Point E'' corresponds to the equilibrium when we neglected the impact of interest rates on the economy. In comparing E' and E'', the adjustment of interest rates became clear and their impact on aggregate demand diminish the expansionary effect of increased government spending. Income rises only to Y'0 rather than to Y'' because the rise in the interest rate from i0 to i' reduces the level of investment spending. It reveals that the increase in government spending crowds out investment, thereby reducing private investment.

2.2. Identifying Leakages

A framework for capturing and quantifying the type of environmental, economic and social effects of subsidy reform is revealed in Figure 2. Implementation of the framework will begin with a fiscal "incidence analysis". This involves identifying the ultimate recipients, sectors or groups – of the subsidy under investigation, and assessing how subsidy reform would affect prices, the quantity of energy produced/consumed and incomes – the composition and level of production in the economy (UNEP, 2004).
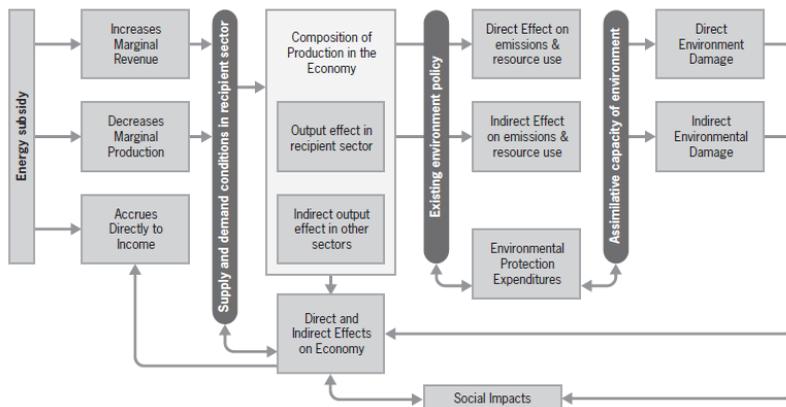

Figure 2. Social, Economic and Environmental Impact of Energy Subsidies
Source: Adapted from (UNEP, 2004)

The challenges for phasing out subsidies seem obvious, when taking into account the severe economic effect this could have on developing economies, where the majority of the population is considered to be relatively poor. Modelled simulations of the economic consequences of such a policy for OPEC's Member Countries have shown a notable negative impact in the short-to-medium term, particularly when taking into account that, in many of these countries, the low prices of fossil fuels reflect the lower costs of production and that price increases would artificially burden, in many cases, populations that are already relatively poor (Spitzy, 2012). Fuel Subsidies for importing countries have unintended consequences, even if the justifications are to alleviate energy poverty, national resource income redistribution, or to promote economic development. However, getting rid of subsidies is a triple-win solution, by empowering the domestic industry, creating jobs and saving government revenues.

Scholars have also argued that petroleum subsidies are not benefiting the poor, the IEA's (WEO, 2011) estimates that only 8% of the $409 billion spent on fossil-fuel subsidies in 2010 was distributed to the poorest 20% of the population, demonstrating that they are an inefficient means of assisting the poor; especial when other direct forms of welfare support would cost much less.

3. Empirical Analysis

The Nigerian government subsidizes petroleum by paying marketers the difference between the market price called the Expected Open Market Price (EOMP) and the government approved retail price for PMS (gasoline).

3.1. Components of PMS Pricing and Subsidy per Litre

Total landing costs, (including insurance, freight cost and wharf landing charges) + Distribution Margin = Expected Open Market Price (EOMP)   (1)

EOMP – Government Approved Retail Price = Subsidy   (2)

The price difference between the EOMP and government approved retail price is not constant: the EOMP follows the international oil market prices fluctuations, while the government retail approved price remains constant. An increase in the international market oil prices has a direct effect on the cost of subsidy. Naira - Dollar exchange rates also impact the final pump price. Therefore, the subsidy makes the cost of petroleum in Nigeria lower than any neighbouring country, the lowest in West Africa, and also smaller than the world average price (see figure 3).

Table 1. The Petroleum Products Pricing Regulatory Agency's Product Pricing Template –PMS

		PMS	
		Based on Average Platts' Prices for 29th October, 2015	
		Average Exchange Rate of the NGN ₦ to US$ for 29th October, 2015	
		PMS	
	Cost Elements:	$/MT	Naira/Liter
1	C + F	507.72	74.59
2	Trader's Margin	10	1.47
3	Lightering Expenses (SVH)	27.87	4.09
4	NPA	5.25	0.77
5	Financing (SVH)	4.89	0.72
6	Jetty Depot Thru' Put Charge	5.45	0.8
7	Storage Charge	20.42	3
8	Landing Cost	581.6	85.44
9	Distribution Margins:		
10	Retailers	31.31	4.6
11	Transporters	20.35	2.99
12	Dealers	11.91	1.75
13	Bridging Fund	39.82	5.85
14	Marine Transport Average (MTA)	1.02	0.15
15	Admin Charge	1.02	0.15
16	Subtotal Margins	105.44	15.49
17	Highway Maintenance	0	0
18	Government Tax	0	0
19	Import Tax	0	0
20	Fuel Tax	0	0
21	Subtotal Taxes	0	0
22	Total Cost	687.04	100.93
23	** Ex-Depot (for collection)	528.64	77.66
24	** Under/Over Recovery	94.82	13.93
25	Retail Price	592.22	87
Expected Open Market Price (OMP) (Naira/litre) is Landing cost +Margins			100.93
* C+F price is Offshore Nigeria			
Conversion Rate (MT to Liters): 1341			
Exchange Rate (₦ to $): 197			

*Official Ex-Depot is exclusive of Bridging Fund, Marine Transport Average (MTA) & Administrative charge.

**Ex-Depot includes Bridging Fund, MTA & Administrative charge.
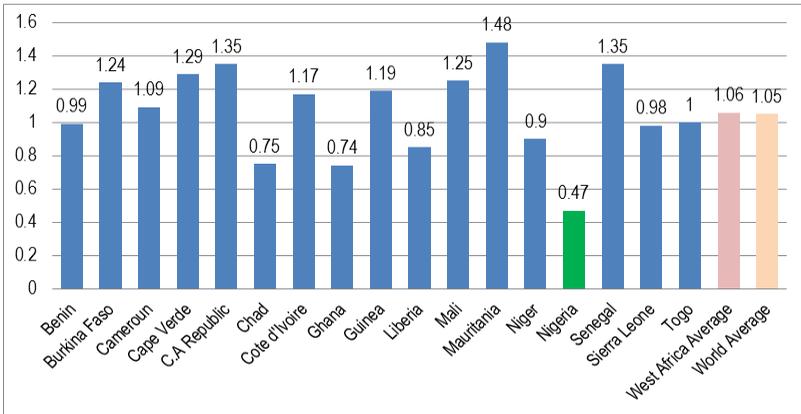
Source: (PPPRA, 2015)

Figure 3. Petroleum prices, liter, USD (26 October, 2015).

Source: (GlobalPetrolPrices.com, 2015)

The differences in prices across countries are due to the various taxes and subsidies. All countries have access to the same petroleum prices of international markets but then decide to impose different taxes. Figure 4 shows the annual official price movement of petroleum per liter in naira. It should be noted that in June 2007, the price increased from ₦65 to ₦70 per litre, but due to nation-wide strike action, it was later reduced to ₦65. Nigeria's economy was shut down in January 2012 as a result of subsidy removal that raised the price by 117% from ₦65 to ₦141 per liter.
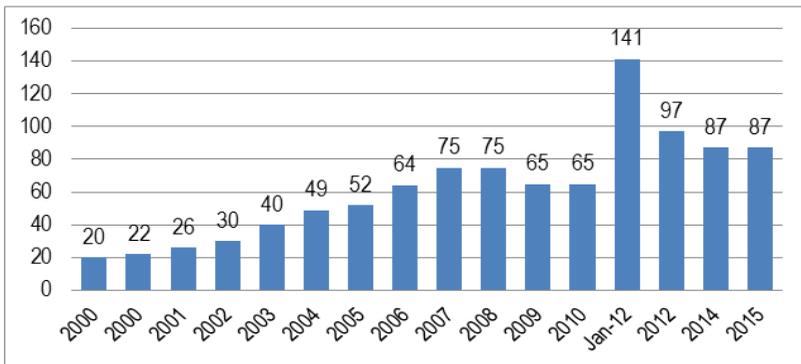

Figure 4. Petroleum Price in Nigeria from 1999-2015 (₦ per liter).

Source: Budget Office (Nigeria)

The price increase was not welcomed by the Nigeria Labor Congress and Trade Union Congress who immediately issued indefinite nationwide strike and mass demonstration that lasted for 10days unless the removal of fuel subsidy policy was reversed. During this protest called "Occupied Nigeria" that was intended to re-enact the protest in Egypt, angry protesters took to the streets, formed human barricades along motorways to block major roads in many cities.

The government subsidy intervention has been a deadweight loss to the country; Table 2 reveals the petroleum imports and subsidy cost in Nigeria from 2006–2011).

Table 2. The petroleum imports and subsidy cost in Nigeria from 2006–2011)

Years	PMS Import (Billion liter)	Subsidy Cost (₦ Billion)	Average subside (₦ per liter)	Average EOMP (₦ per liter)
2006	9.3	151.9	16.3	74.94
2007	10.2	188	18.4	88.44
*2008	11.3	*256.3	*22.7	98.57
2009	14.4	421.5	29.3	91.39
2010	15.7	673	42.7	111.67
2011	21.9	**1300	59.3	145.8

Source: PPPRA

Note that (* 2008: figures) only show petroleum payments from January 2008–July 2008. Other records from the Petroleum Products Pricing Regulatory Agency (PPPRA) took petroleum and diesel 2008 subsidy payments together, making it challenging to determine the amount paid for individual product. The subsidy payment for petroleum and diesel in 2008 is summed up to ₦630.5 billion ($3.9 billion).

The figure with (**) was reviewed upward to ₦2.19 trillion ($13.6 billion) by the Ministry of Finance after arrears were paid in 2012 for consumption in 2011. The 2012 subsidy payment was ₦950 billion ($5.99billion) and ₦ 832 billion ($5.8 billion) in 2013 (WEO, 2014; IISD, 2012).

The cost of the petroleum subsidy has continued to grow exponentially up to 2014. This is due to the rising cost of crude oil in the international market, exchange rate volatility and the population growth of Nigeria which resulted in increased petroleum consumption; the combination of these three variables therefore made the cost of the fuel subsidy unsustainable. The price of crude oil increased from $24.36 per barrel in 2002 to $96.24 in 2014 (OPEC, 2015) over the same period Nigeria's population grew from 129.25 million to 177.48 million (World Bank, 2015). By 2011,

the petroleum subsidy accounted for 30% of the federal government's expenditure, representing about 4% of GDP and 118% of the capital budget (Budget Office, 2012).

Petroleum subsidy continues to crowd-out other development spending. By comparison, the total allocation for education including Universal Basic Education Commission (UBEC) is ₦422.99 billion ($2.55billion) and ₦262.74 billion ($1.58 billion) for health care (Budget Office, 2014). Although infant mortality has decreased by 44% from 123 to 69 per 1,000 live births in the last 20 years (World Bank, 2015), nonetheless it still remains unacceptably high. The $8 billion from the petroleum subsidy as reported by government, could address some of these issues. In addition to the burden that fuel subsidy is placing on the national budget, keeping petroleum below the market value has discouraged additional investment in Nigeria's oil sector. This is especially problematic given that the sector is the lifeblood of the economy. As of 2005, 18 refinery licenses had been issued to private companies. However, not one refinery has been built till date because the visibility of recovering their investment under the artificially low price structure is unclear.

3.2. Investment and employment generation

Considering profitability and employment creation, the Petroleum Industry Bill (PIB) would have opened up the sector but this has been impossible due to vested interest. The bill began in 2007 following the recommendations of a Presidential Committee set up to carry out oil and gas sector reforms in Nigeria. The reforms were anticipated to form the basis of the nation's ambition to develop into one of the most industrialized countries in the world by the year 2020. For Nigeria to attain this big dream, it was envisaged that the country's major source of revenue must be re-positioned for greater efficiency, openness, and competition built on corporate governance as obtained in other resource-rich nations. The proposed bill was thus aimed to strengthen the ability of indigenous companies in the oil and gas sector to compete with multinational oil firms in the search and acquisition of hydrocarbons in Nigeria. The measure was also intended to reduce exploitation in the sector to the barest minimum, reducing government participation in the sector and deregulating the petroleum sector. It also involves improving environmental regulation and other salient provisions (NEITI, 2015). The non-passage of the bill gives the multinational players and their cronies the leeway to continue business as usual – by operating without a clear framework governing the sector. Meanwhile, according to the Group Managing Director of the Nigeria National Petroleum Corporation (NNPC), Dr. Emmanuel Kachikwu, Nigeria loses $15 billion (about ₦3.3 trillion) annually as a result of its non-passage because no investor is willing to invest in an uncertain environment.

With the special fiscal incentives contained in the PIB to encourage the establishment of new refineries around the country, Nigeria has no reason importing petroleum and hence exporting jobs, but rent seekers will not let this become reality

3.3. Findings from Probes on Administration of Subsidies

The implicit risk of fraud in subsidy regimes has become quite evident given the 2012 reports of the fuel subsidy probe conducted by the Federal House of Representatives Ad-Hoc committee. The committee was headed by the Hon. Farouk Lawan who was cut on camera receiving bribe of $3million from Femi Otedola, the Chairman of Forte Oil Plc, one of the firms the committee was probing. Consequently, the report was compromises while his case keeps pending in court to date. The Federal House of Representatives Ad-Hoc committee, like the Presidential Verification Committee on Subsidy Administration 2011 and the Ribadu Committee (Petroleum Revenue Special Task Force) 2012 was appointed to investigate the subsidies regime, as the federal government argued that it cannot continue to make vast payments into "the seemingly bottomless pit" of petroleum subsidies.

The report found a high contempt for the constitutional requirements and stipulated procedures for petroleum product suppliers, leading to an enormous abuse of the subsidy funds between 2009 and 2011. Contrary to the official figure of ₦1.3 trillion (about $8.1 billion), the committee established a subsidy payment of ₦2.5 trillion (about $15.5 billion) on December 31, 2011, amounting to more than 900% over the ₦245 billion ($1.52 billion) that had been budgeted for petroleum subsidies for the year. On submission, the House committee investigation found that the NNPC, the state-owned oil company, and its agencies "allegedly increased the subsidy payable to its suppliers and marketers, including those who did not supply any products" (House of Representatives, 2012). The PPPRA reported 14.8 billion liters as the annual petroleum consumption in 2011, but records showed that particular marketers had collected over ₦230 billion (approximately $1.4 billion) of subsidies on a petroleum volume of 3.3 billion liters that were not supplied. In another event, the Accountant-general that served during 2009 was found to have made payments of equal installments of ₦999 million ($6.2 million) a record 128 times within 24 hours on January 12 and 13, 2009, totaling ₦127.87 billion ($0.8 billion). Within this period, only 36 marketers were participants under the petroleum scheme, each with different petroleum product import and supply capacities. This makes the logic of equal payments inconceivable, even if there were 128 marketers (IISD, 2012).

4. Conclusions

The level of fuel consumption will serve as barometer to determine who is benefitting from government's subsidy, the greater the consumption, the higher the

benefit. The rich for example can afford two to three cars which consume quite a substantial litres of petroleum per week, thus they are the ones who benefit from the subsidy every time they fuel their vehicles. In contrast, the fuel consumed by the middle income class that can manage to afford buying small cars is insignificant not to mention the poor majorities that only depend on the public transport system with low petroleum consumption per capita. Consequently, they cannot be considered as benefiting from the subsidy due to the relatively small fuel consumption. Those benefitting most from the current government subsidy are the petroleum marketers and neighbouring countries where the products are smuggled into.

The government intervention has already led to a deadweight loss; even the consumer surplus and the producer surplus are weighed unequally. There is a net loss from government policies that shifted the surplus from one group to another. The deadweight loss is large and it is a form of economic inefficiency on the part of the government that must be taken into account when policies are designed and implemented.

Subsidy removal would create better market incentives for the old Nigerian refineries to be fixed and work at full capacity. Local and foreign investors will build the required refineries once the downstream oil sector is deregulated. The deregulation will create a competitive market and petroleum price will be determined by the market forces. This will lead to a permanent solution to the persistent problems of poor functioning refineries, and fuel scarcity.

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