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Research Article

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Recent Oil Price Shocks: Causes, Consequences and the Future Imperatives for Nigeria

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Abstract

The paper examined the recent oil price shocks that bedeviled the international oil market during the periods 2014Q3 and 2017Q2. Qualitative content analysis and review methods were employed by the paper to analyze the causes of the shock, and its consequences on the Nigerian economy. Based on the theoretical arguments, the paper presents both demand and supply driven factors that led to the shock, its positive and negative consequences as well as the future imperatives for Nigeria to manage the risk or impact of the shock. Therefore, the paper recommends strong commitment and cooperation by Nigeria with other oil producing countries in the international market toward stable oil price through aligning supply of and demand for oil in the international market. There is also the need for Nigeria to look inward and strive toward economic diversification through seeking more options other than relying heavily on the oil for the bulk of its revenue. Development in agricultural and industrial sectors is a key to achieving inclusiveness and sustained development that can withstand global shocks.

Keywords: Oil price shock; Demand forces; Supply factors; Future Imperatives; Diversification

Introduction

Crude oil price in the global market has been stable and above $100 per barrel between the years 2012 and 2013, suddenly, it fell drastically to $38 per barrel in the third quarter of 2014 and continued to decline up to the end of 2015, making a new record low to $28 per barrel in January 2016 [1]. The fluctuations in the oil market tend to have an effect on the global and individual economies because it is a very important input (energy source) in the production process. A number of factors according to Aleksandrova caused the recent slump in oil prices, which was considered by expert as the biggest since the 1980s [2]. "Sharp decline in the global market activities due to downward trend in crude oil demand, European Union (EU) debt crises and the slow recovery of the EU economy, appreciation of the US dollar and oil price reaction to a variety of geopolitical and economic phenomena". However, the fluctuation in oil price was initially motivated by compression of demand driven market equilibriums; but later fueled by a mixture of supply and financial forces. Market contractions are expected to continue because of slow supply reaction in the market. From the beginning of 2016Q4 demand forces have reduced as global output growth also decelerated, largely because of the global market crises. "But oil prices are likely to remain volatile, arising from low stocks, limited spare capacity, supply disruptions, and uncertainty over exploiting new reserves and the development of non-oil sources".

Over five decades of political independence, four decades of oil exportation, and three decades of bitter experience of economic downturn, resulting from slump in oil price, Nigeria is yet to learn from her mistakes as it still depends on crude oil for over 90 percent of its export and about 85% of its revenue. Nigeria's reliance on oil, and the generation of economic rent through government contracts, has brought about severe economic distortions especially when the price of oil slump in the global market. This is often manifested in the form of fiscal deficits, low level of output, high rate of unemployment, high price for basic commodities and low investment portfolios as witnessed in the economy during the recession between 2015 and 2017. To this end, Nigeria is left with no option than to look inward and develop other sources of revenue that can sustain the economy because the global oil market is often characterized by shocks in terms of price movement and as observed Yep that "low oil prices are here to stay for a long period of time" [3]. It is against this background that the paper seeks to identify the root causes and consequences of the recent oil price shock and identifies the future imperatives for Nigeria on how to reduce the impact of the shock and be able to withstand the future occurrence. Consequently, the paper is schemed into five sections including this introduction, section two presents the causes of oil price slump, section three discuss on the consequences of oil price shock and the Nigeria's experience, section four highlights the future imperatives for Nigeria, and section five presents conclusion and recommendations.

Causes of the Recent Oil Price Shocks

Robert perceived oil price to be "the spot price of a barrel of benchmark crude oil, a reference price for buyers and sellers of crude oil such as West Texas Intermediate (WTI), Brent ICE, Dubai Crude, OPEC Reference Basket, Tapis Crude, Bonny Light, Urals oil, Isthmus and Western Canadian Select (WCS)" [4]. Variation in the price of oil is determined by its specific gravity, Sulphur content, and location i.e. proximity to tidewater and/or refineries. Heavy, sour crude oils lacking tidewater access like the WCS are less expensive than light, sweet oils such as WTI Beyond the theoretical and traditional movements of supply and demand force, crude oil price is influenced by other forces notably the geopolitical factors: major oil reserves that yield lower cost are located in some sensitive locations of the world; The benchmark prices for crude oil are set in relation to three market traded benchmarks (WTI, Brent and Dubai) quoted at discounts to the prices.

On the discourse of oil price variations, there are two competing views dominating the trends in the global oil market. One extreme, are

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those with the opinion that "the market has undergone operational changes and that low oil prices will feature for a quite long period of time", on the other extreme, are those who stressed that "the fluctuation represents another cycle and oil prices will adjust to market equilibrium sooner rather than later" [5]. These two spectrums structural versus cyclical explain the inherent degree of uncertainty bedeviling the oil market. A critical survey of literature shows that "most major oil price fluctuations dating back to 1973 are largely explained by shifts in the demand for crude oil" [3]. When global economy expand, the demand for crude oil follow suit. Most of the authors believed that "the price of oil has also increased over times due to greater demand for stocks (or inventories) of crude oil to guard against future shortages in the oil market" [2]. Historically, inventory demand stood high in times of instability and geopolitical tension especially in the Middle East, low spare capacity in oil production, and expected global growth in output (*Ibid*).

Political events and risks have strongly influenced crude oil price. Historically, "the OPEC's 1973 embargo in reaction to the Yom Kippur War and the 1979 Iranian Revolution is a clear example" [6]. Market analysts and economic experts have had very limited tools to analyze such political happenings compared to what is accessible on economic facets of crude oil price formation. The Political Risk for Oil Export (PRIX) index was developed in an attempt to fill-in this gap with a metric on political factors and conforming export movements from world's 20 largest oil exporters. "Fluctuation in oil price is not a new phenomenon and thus, a dominant feature in the oil market during the last two decades" [7]. Moreover, oil price shocks are predominantly the results from variations in either demand or supply side of the global market. "These changes have been drawn from the supply side disturbances such as OPEC supply quotas political upheavals in the oil-rich Middle East and activities of militant groups in the Niger Delta region of Nigeria" [8].

Nevertheless, the shock witnessed in the last quarter of 2014 has been the most astonishing since the 1980s [1]. The market has also been characterized with unpredictable price movement since the 1970s. Tadesse *et al.* highlights "political and economic decisions in the oil industry as causes of oil price movements" [9]. While many writers concentrate on the economic forces of oil price formation [9-13]. further opines that, "the day-to-day variations in the prices of oil may be determined by market forces, but sharp variations are essentially motivated by political factors, an example of which is the politically motivated civil strives and unrests in the Middle East from where the bulk of crude oil supply emanate".

Consequences of the Shock

The recent slump in the price of oil posed serious consequences on both global and domestic economies. These are classified in to positive and negative consequences for simplicity and logical explanations.

Positive consequences

Friedman presents the following as positive consequences of the recent oil price movement in the international market;

- "Fall in oil prices reduces the overall energy costs, as prices of related energy products are forced down and oil-powered electricity becomes cheaper to produce". This is an incentive especially for the energy-intensive sectors to produce at lower cost, maximize revenue and profit, and create more favorable environment for more portfolios and employment.
- Oil as a key input for many sectors notably industrial, manufacturing, transportation and agricultural sectors, the fall in its prices directly impacts on the prices of wide-ranging finished or semi-finished inputs. Moreover, "lower oil prices and declining inflation more generally, increase real disposable income and raise consumption level. The channels operate with different fortes and lags subjected to the source of the oil price change, its trend, and the oil-intensity of countries".
- For United States, the standard simulation models pointed to a clear proportionate change from decreasing oil price. "This could also be a source of forecasting further improvements in the labor markets and rising consumer confidence"
- In the same vein, Brazil, India, Turkey and South Africa benefitted from the slump in the price of oil as reflected in their inflation rates and reduction in their current account deficit considered to be the major source of concern for the countries when it comes to vulnerability [14]. "The clear-cut impact will depend on the oil-intensity of consumption and production, the extent to which global price falloffs are transmitted into local ones, the flexibility of domestic economies to respond to falling oil prices as well as the policy response in the countries" (*Ibid*).
- The slump in oil price has caused a short-term reduction in the rate of inflation globally. Although, the drop in general price level is quite evident in the high-income countries, but the impact varied significantly across countries, this reflect the significance of oil in consumer's basket, exchange rate formations, monetary policy stance, the size of petroleum subsidies and other price guidelines [15,16].

Negative consequences

The following are negative consequences resulted from the recent oil price shocks as adapted from OPEC (2016);

- **Shortfalls in investment:** Sudden changes in oil price increase uncertainty level in the market, which can further contract investment portfolios and consumption of durable goods. This could be to the reason why returns from an irretrievable physical investment projects depend solely on the crude price. "Increased uncertainty about the future price of oil could cause firms to delay investment and reduce capital expenditures consequently affect employment level".
- Similarly, "rising uncertainty of future oil price can also lead to more precautionary demand of crude oil, with second-order impacts on market activities" [17].
- **Crisis legacies:** financial exposures are often linked to uncertainties, rapid growth in household debt, high rate of unemployment, and slow phase of long-term growth potential may raise household's confidence and corporations to save part of their real income gains from dwindling oil prices, rather than investment or consumption.
- **Monetary policy ineffectiveness:** Monetary policy relaxing as a result of demand driven decrease in oil prices as seen in the past is unlikely to feature. "Specifically, policy interest rates of major central banks already at or near the zero lower bound, the room for additional monetary policy easing is limited should declining oil prices lead to a persistent undershooting of inflation expectations".

- **Declining investment in the crude oil sector:** sudden decrease in oil price is associated with increasing uncertainty, which further cause investments in new projects of oil exploration and development to change abruptly. "Leveraged and higher production and investments cost in shale oil (United States), tar sands (Canada), deep sea oil fields (Brazil, Mexico), and oil in the Arctic zone could be particularly sensitive to sudden changes in prices". Nevertheless, "planned new oil exploration and development, especially in East and Southern Africa (e.g. in Kenya, Uganda, Zambia), are also likely to be undermined".
- **Sharp adjustments for exporters:** The sudden drop in oil prices is draining both private and public sectors balance sheets among major oil exporters, "causing in some cases sharp slowdown and revenue shortfalls with significant cross-border spillovers".
- **Varying connections between oil and economic activities**: "The effect of oil prices on economic activities has significantly declined since the mid-1980s as a result of the falling oil-intensity of GDP, increasing labor market flexibility, and better-anchored inflation expectations".

Nigeria's experience

Nigeria's macroeconomic environment is worst hit by the slump in oil price as reflected in wide fiscal deficit due to revenue shortfall and crises in other macro variables as opined by the National Bureau of Statistics-NBS (2016).

- **Exports:** The trade statistics published by the NBS in the late 2014 shows that "74.4% of Nigeria's exports in 2014 were crude oil. 23 Mineral products all together accounted for 91.4% of its total exports. The value of Nigeria's exports was 3,854 billion naira in the fourth quarter of 2016, which was a decrease of 843.4 billion naira or 18% from the preceding quarter".
- **Foreign reserve and fiscal Stan:** Slump in oil prices led to shortfalls in export revenues and deplete Nigeria's foreign exchange reserves, it further worsen the fiscal position and exerted downward pressure on the exchange rate of naira. Moreover, global financial markets have become more worried about Nigeria's ability to defend the naira, and this in turn has led to a self-fulfilling cycle of capital flight [18,19]. "From January 2014 Nigeria's foreign reserves dropped by 30% to a new record low of $33.5 billion on 19 January 2015, down from $42.2. Nigeria's exchange rate depreciates by 22% over the end of March 2015".
- **Inflation rate:** Price statistics from NBS show that "the Composite 12-Month Average Change (%) of inflation and Composite Year-on Change (%) in Nigeria have both decreased steadily since mid-2014". Data on the year-on-year inflation rates exhibited a downward trend towards the end 2016 and thereafter go up in slow phase despite the large depreciation in naira value. However, differentiating food inflation from non-food items, indices show that non-food inflation dropped by 0.25% in 2016. This therefore suggests that, aggregate price increase persisted partly due to the fall in oil price.
- **Inflow of capital:** A capital inflow "consists of two main investment types: and foreign direct investment (FDI) and portfolio investment. Nigeria saw capital inflows of $4,499.74 million in the last quarter of 2015. This represents a decline of 31.2% or $2.0 billion from its 2015 third quarter level of $6.5 billion". The main reason that causes the fall in the inflows of capital is ascribed to twofold; "first, future oil profits are expected to decline due to the global fall in oil prices, which makes new investments into the oil and gas sector less attractive; second, investors' confidence is low as they become anxious about the forthcoming presidential election". The inflow fell by 61% i.e. from $3.1 billion to $2.0 billion together with reduction in the value of equity. "FDI into the economy, on the other hand, still increased from $545 million in the third quarter of 2014 to $769 million in the 4th quarter of 2014 representing an increase of $224 million or 41.20%.
- **Policy response:** The government resorted to both fiscal and monetary policies simultaneously to react to the slump in oil price. "On 25 November 2014, the Central Bank of Nigeria (CBN) devalued and tightened monetary policy in an attempt to manage the impact of oil price shock and portfolio outflows as well as to mitigate political risk perceptions from foreign investors. The official exchange rate band increases from USD NGN 155+/-3% to USD NGN 168+/-5%, whilst the interest rate increased by 1 percentage point to 13%". In addition to these, the Central Bank of Nigeria (CBN) raised cash reserve requirements on private sector deposits from 15% to 20%; "the result is likely to be a withdrawal of about 500 billion naira in liquidity from the banking system". The CBN recognizes that liquidity also affects exchange rate movements and portfolio outflows as well. However, "genuine concerns remain as to whether the CBN can credibly defend the naira should oil price fall even further".

Future Imperatives for Nigeria

Over the years, Nigeria has been exposed to oil price shock, a situation that greatly adds to the level of uncertainties in government's revenue and expenditure. Unlike advanced countries, where taxes are the main source of financing government's spending, which is complemented by borrowing, in a developing country like Nigeria, the revenue form oil export, not the taxes, is the main source of government revenue and spending. Therefore, whenever there is sudden slump in the price of oil, the government cannot accurately project its revenues. This has always been the serious concern and challenge that prompted policy makers and economic analysts to ask why is oil price shock still poses serious threat to Nigerian economy despite several years of experience from the menace? What are the missing links in the efforts put forth by government to drastically reduce the negative impact of oil price shock? These and other macroeconomic questions need urgent attention if economic stability and welfare of the masses are at the heart of policy thrust of the government.

Based on the forgoing, aligning policy with action is an urgency of now, and the paper suggests the following as future imperatives for Nigeria to withstand future sudden movements in oil price.

Economic diversification

Nigerian economy is mono-cultural in structural driven by revenues from the sales of oil in the international market. Economic diversification entails seeking more available options and potentials for economic self-sufficiency and sustainable development. Moreover, it provides protection from external shocks and reduces over reliance on oil or any particular sector of the economy. Above all, national output and productivity are likely to increase as well as employment rate, this is from the perspective that more industries and their players would be back to life and give their partial contribution of output to the country's GDP and reducing the heavy reliance on oil.

Investment in Infrastructure

Investment in infrastructure creates a multiplier effect across industries/sectors. Investing in a particular industry for capital projects also lead to spending in another industry for the purchase of inputs and consequently, the transportation sector benefits, communication, food and beverages, automobile, petroleum and the list goes on in a cyclical manner. Through this medium, production capacity is improved, job opportunities, rising income to households and employees, which they would plough back into the economy for their consumption. From this view, investment in infrastructure will lead to the following advantages;

- Improvement in participation and performances (inclusiveness).
- The private sector will feature the participation of new investors.
- Business activities have the potentials of expansion.
- There would be opportunities for wealth creation in the sector.
- Expanding employment opportunities.
- Income growth and elevated consumption.
- Reduction in poverty rate.

Incentives to small and medium scale enterprises (SMEs)

Small and medium scale businesses in the real sector continue to face challenges in accessing long-term and affordable loans due to over-dependence on the oil sector. To address this situation, the government needs to put greater commitments to enhance the capacity of small businesses especially in the agricultural and industrial sectors. Though, in its 2017 fiscal framework, "the Federal government set aside the sum of N15 billion for the recapitalization of the Bank of Industry and the Bank of Agriculture. In addition, the Development Bank of Nigeria will soon start operations with US$1.3 billion focused exclusively on Small and Medium-Sized Enterprises". The recapitalization of these institutions will create avenue for the SMEs as "agents of employment creation and poverty reduction" to strive in the recovery process and sustain growth. At the onset, many Nigerians will exploit their potential to earn a living thereby, reducing economic hardship and raising their standard of living.

Public Private Partnerships (PPPs)

The public sector most strongly believes that it could not deliver independently on "its economic agenda without a serious partnership with the private sector". In line with the above, Nigeria's Vice President Osinbajo who is the chairman National Economic Council (NEC) emphasizes on the role of the private sector in economic management when he stated that "Our entire budget size for 2016 is something in the order of just over N6trillion, and we will perhaps be moving to about N7 trillion in the 2017 budget. However, N7 trillion is surely not the kind of money. It does sound like a fair amount of money, but certainly, it is not the kind that can really make a huge difference in the N90trillion economy". "So, the real issue is that the contribution of the Federal Government is supportive, the Federal Government can only make some catalytic contributions in terms of infrastructure and some incentives for the private sector. The real contribution is going to come from the private sector and that is why these partnerships are important to us, and what we are looking at is some game-changing type of projects that will stimulate the economy to generate more income, output and employment through the private sector." At a time of gloomy economic performance characterized by economic contraction, and weak fiscal transmission, the budget will assume greater prominence as a fiscal policy roadmap.

Conclusion and Recommendations

The sudden slump in oil price between 2014 and 2017 that bedeviled the international oil market hit hard the oil exporting economies. Nigeria as a mono-cultural economy relied heavily on oil revenues to finance development. The price shock is caused by both endogenous and exogenous factors within the framework of demand and supply forces in the international oil market. However, the effects of the shock are explained in terms of positive and negative consequences, and for Nigeria, the experience is remarkably a negative one considering the instability it causes in the macroeconomic environment that led to revenue short fall, low output, low income and investment. Therefore, it become imperative for government to take urgent actions in the light of economic diversification, infrastructural development, and public and private partnership to contend the shock and withstand its future occurrence.

References

1. Organisation of Petroleum Exporting Countries-OPEC (2016) World Oil Outlook (WOO). Publication of the OPEC.
2. Aleksandrova S (2016) Impact of oil price on oil exporting countries in the Caucasus and Central Asia. Economic Alternative 4: 477-486.
3. Yep E (2015) Falling Oil Spells Boon for Most of Asia's Economies. Wall Street Journal 17: 106-113.
4. Robert M (2006) Oil in the 21st century: issues, challenges and opportunities. Organization of Petroleum Exporting Countries. Oxford University Press, p: 351.
5. Friedman N (2015) Oil Glut Sparks Latest Dilemma: Where to put it all as storage tanks near capacity, some predict spillover will send crude prices even lower. Wall Street Journal 6: 23-30.
6. Plante M, Traum N (2012) Time-varying oil price volatility and macroeconomic aggregates. Federal Reserve Bank of Dallas Working Paper.
7. Ibrahim MH (2015) Oil and food prices in Malaysia: A nonlinear ARDL analysis. Agricultural and Food Economics 3: 28-35.
8. Bunhan R (2015) India's economy on the rise as oil price drops. The National Business.
9. Tadasse G, Algieri B, Kalkuhl M, Von BJ (2016) Drivers and triggers of international food price spikes and volatility. Springer International Publishing pp: 59-82.
10. Kilian L, Alessandro R, Nikola S (2009) Oil shocks and external balances. Journal of International Economics 77: 181-194.
11. Davies G (2014) The Fed and ECB differ sharply on the oil shock. Financial Times.
12. George J (2015) Quantifying political risk. Oil Gas Finan J 3: 123-131.
13. Arezki R, Blanchard O (2015) Seven questions about the recent oil price slump. International Monetary Fund (IMF).
14. Agarwal M (2015) The benefits of falling oil prices for India. Reuters.
15. Wambugu CK, Ngang'a J (2017) Relationship between oil price, exchange rate and maize price in Kenya. Int J Financ 1: 88-107.
16. Wong SK, Shamsudin NM (2017) Impact of crude oil price, exchange rate and real GDP on Malaysia's food price fluctuations: Symmetric or asymmetric? Int J Econ Manage 11: 259-273.
17. Central Bank of Nigeria (2015) The Movement in Reserves (30-Day Moving Average with effect from November 2011).
18. Hamilton JD (2008) Oil and the macro economy since World War II. J Polit Eco 91: 228-248.
19. Hou Z, Granoff D, Granoff I, Keane J, Kennan J, et al. (2014) The development implications of the fracking revolution. ODI Working Paper. London: Overseas Development Institute.