

Oil Pricing Factors and Nigerian Economic Development

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ABSTRACT

This paper attempts to appraise oil pricing factors and its impact on economic indicators. Oil prices have been changing since the end of World War II. It examines the impact of oil and gas fluctuations on macroeconomic indicators of Nigeria.

The study is exploratory in nature based on extensive review of relevant studies done earlier and views of the various aspects of oil pricing factors and economic indicators have been discussed to arrive at concluding remarks. The data for the study was secondarily sourced from library research, e – books and other on line materials (Journals and articles).

This study concludes that, positive oil prices has a direct relationship with GDP because as oil price rises GDP also rises but there has been no significant effect on the Nigeria economy as a whole since the level on unemployment is still very high we hereby recommend the diversification of the economy in order to minimize its negative consequence on the Nigerian economy.

INTRODUCTION

Within Nigerian, oil featured prominently in the politics within and between the various tiers of the federal government. Though oil was known to be discovered in Oloibiri a state today known to be called Bayelsa In 1956 . The principle for controlling and sharing the oil wealth between the oil producing and non-oil producing part of the country has resulted to issues pondering on inter-ethnic relations and distribution of power in a multi ethnic federation. A good example is the case of escalating violence in the Niger delta region of Nigeria where control of oil is assuming the dimension of an incipient insurgency which has resulted to fall outs in disputed over sharing of oil revenues.

The bulk of Nigerian crude oil is sold unrefined and when refined, the products tarring. Government has been the custodian of petroleum and its products in Nigeria. Though, this brought a temporary growth in the economy, the price instability of the crude oil in the world market has led to the downfall of Nigerians economy in various sectors, such as the production, manufacturing and services sectors.

According to Katrina, (2005) she itemise the major factors affecting oil prices to be global supply and demand, restrictive legislation, political unrest, production, financial market weather, speculative buying, changing value of dollar and NON OECD demand.

This study is prompted by fewness of studies on the impact of oil factors on economic growth of oil-exporting countries like Nigeria, unlike studies on oil-importing countries (Olomola & Adejumo, 2006). Besides, the study attempts to query into the general

conclusions of many recent studies that oil price fluctuations/market disequilibria have no impact on the Nigerian economy (Ikla, 2012; Chuku, Effiong & Sam, 2010; Olomola & Adejumo, 2006).

Problem of the study

Compared to previous episodes of price declines during the past thirty years, the fall in oil prices in the second half of 2014 qualifies as a significant event. Between 1984-2013, five other episodes of oil price declines of 30 per cent or more in a six-month period occurred, coinciding with major changes in the global economy and oil markets: an increase in the supply of oil and change in OPEC policy (1985-86); U.S. recessions (1990–91 and 2001); the Asian crisis (1997–98); and the global financial crisis (2007–09).

Offshore fields, including the North Sea and Alaska. After Saudi Arabia changed policy in December 1985 to increase its market share, the price of oil declined by 61 per cent, from \$24.68 to \$9.62 per barrel between January-July 1986. Following this episode, low oil prices prevailed for more than fifteen years.

There are particularly interesting parallels between the recent episode and the collapse in oil prices in 1985-86. After the sharp increase in oil prices in the 1970s, technological developments made possible to reduce the intensity of oil consumption and to extract oil from various sources.

As for any storable commodity, underlying demand and supply conditions for oil determine the long-run trend in prices, while in the short-run movements in market sentiment and expectations (in some cases driven by geopolitical developments and OPEC decisions) exert an influence too. Relevant events included geopolitical conflicts in some oil -producing regions, OPEC announcements, and the appreciation of the U.S. dollar. Long-term developments in supply and demand have also played important roles in driving the recent decline in oil in the past and also presently.

In Nigeria, oil revenues have led to huge investments in capital and infrastructure in the 1970s and 1980s but productivity declined and per capita GDP remained at about the same level as 1965. In other words, accumulated oil wealth over a 35 year period of some \$350 billion did not raise the standard of living but worsened the distribution of income in Nigeria. The upward adjustments of petroleum products have resulted in inflation, high cost of living, and inequitable distribution of income in Nigeria. Between 1978 and 2007, the various Nigerian regimes increased fuel prices a total number of 18 times. Most of the increase occurred in the 1990-2007 period when petroleum products prices were adjusted upwards sometimes twice in one year. One major problem this has caused was the instability of the prices of goods and services in the country. Whenever there is an increase in prices of oil products, it affects transportation, cost of good and other services.

In Nigeria, political and economic decisions in the oil industry are some of the major causes of oil price movements though many writers focus on the economic factors, Giraud (1995), reports that the day-to-day prices of oil may be determined by free market forces, but sharp shifts in price level 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. Hamilton (2009) asserts that supply disruptions are a significant factor of oil price volatility.

The Objectives of the study

The objective of this study is to examine impact of oil pricing factors on Nigerian economic development given that Nigeria is a monoculture economy.

Scope of the Study

The scope of this study is limited to the Nigerian economy.

Theoretical framework

The Nigerian oil sector can be categorized into three main sub-sectors, namely, upstream, downstream and gas. The most problematic over the years has been the downstream sector, which is the distribution arm and connection with final consumers of refined petroleum products in the domestic economy. Nigeria has four refineries, with a combined installed refining capacity of 445,000 barrels per day (bpd).

These four refineries are:

1. The first Port Harcourt Refinery was commissioned in 1965 with an installed capacity of 35,000 bpd and later expanded to 60,000 bpd.
2. The Warri Refinery was commissioned in 1978 with an installed refining capacity 100,000 bpd, and upgraded to 125,000 bpd in 1986.
3. The Kaduna Refinery was commissioned in 1980 with an installed refining capacity of 100,000 bpd, and upgraded to 110,000 bpd in 1986.
4. The second Port Harcourt Refinery was commissioned in 1989 with 150,000 bpd processing capacity, and designed to fulfil the dual role of supplying the domestic market and exporting its surplus.

The incessant crisis in supply of products culminated in the decision by Government in 2003 to deregulate the downstream sub-sector. However, the manner of its implementation has been controversial because it ignores the economic realities in Nigeria. Oil production by the joint venture (JV) companies accounts for about 95 % of Nigeria's crude oil production. Shell, which operates the largest joint venture in Nigeria Prior to the discovery of crude oil in commercial quantity in 1956 (Adedipe, 2004; Odularu, 2007), the Nigerian economy was stable and steadily growing.

The pleasant situation continued into the 1960s when agriculture played a dominant role in her economy in terms of contribution to GDP and foreign exchange earnings (Kwanashie, Ajilima & Garba, 1998).

The impact of crude oil on Nigerian economy has been double-edged. It has benefited the country in some ways, and has in many other ways turned out to be a curse (Ogwumike & Ogunleye, 2008). In a different spin on the discussion, Hess (2000) observes that oil price shocks led to lower real gross domestic product (GDP) prior to the 1980s.

Globally, Crude prices have been very volatile since 1999. Spikes from March 1999 are because of the following factors: (i) OPEC restricted crude oil production and there is greater cooperation among its members; (ii) Asian growing oil demand signifying recovery from crisis; and (iii) shrinking non-OPEC production.

The world market responded accordingly with sharp increase in prices, with crude oil prices increasing and exceeding US\$30/b towards the end of 2000. OPEC then tried to maintain prices at a range between US\$22/b and US\$28/b by increasing or reducing production, and with increases in output by non-OPEC producers, particularly Russia. The September 11 2001 incident sent crude oil prices plummeting, despite earlier production increases by non-OPEC producers and reduction of quotas by OPEC member countries. Soon afterwards, prices moved to the US\$25/b range. In 2004, prices moved above this range, with the Brent crude hovering above US\$40/b per barrel during the year.

Factors contributing to the increase can be isolated as follows: the continued fall in the US dollar and following political tension in the Middle East, the high demand for crude oil by China and uncertainty about the future of yukos, the Russian oil producer. The falling of the US dollar against other major currencies contributed to increasing fuel prices. Sometimes the changes in the crude oil prices does not translate to changes in domestic end

user prices of oil products, because of the dynamics of domestic demand and supply, domestic policies such as subsidy and price regulations. Hence, fluctuations in crude oil prices may not have much impact in the domestic economy through the domestic end user prices.

The banking crisis that erupted in September 2008, following more than a year of less acute financial turmoil, has substantially reinforced the cyclical downturn that was already under way. Following the insolvency of a large number of banks and financial institutions in the United States, Europe, the level of technological development in developing world, and financial conditions have become much tighter. These have affected oil prices overtime. In Nigeria most of these factors (external) are major obstacle leading to price fluctuation of oil.

Impact of Oil Pricing Factors on Growth (Nigerian Economy)

Ibrahim (2007) identifies weak linkage between the oil industry and other sectors in Nigeria. He blames this on the low level of technological development in the country. This results in limited growth of the downstream sector. As a result, the avenues through which downstream oil sector could have forward and backward linkages with other sectors are thus limited. Consequently, growth differential in oil and non-oil sectors is inevitable, and may explain backward development of the economy. Supporting this view, Ibrahim (2007), while reporting Fadil (1985), posits that when oil is not economically integrated with the rest of the economy, oil revenues tend to be divorced from the circular flow of income in the domestic economy. It would thus have no impact on growth and development.

Other impacts of oil price shocks on economic growth and performance of an oil exporting countries like Nigeria is the Dutch Disease Syndrome. Windfalls from sharp surge in oil price cannot sweep through a developing economy that is yet to be diversified and large enough to absorb the inflow without causing inflation. Resource pull effect and spending effect result when large inflow from oil export hits a less diversified economy (Mieiro and Ramos, 2010). The booming export sector (trading internationally) experiences rise in marginal productivity and thus pay factors employed relatively more than other sectors do. As a result, factor inputs/resources are pulled to the booming sector (oil/export sector) at the expense of other tradable sectors (agriculture and manufacturing) and the non-tradable sector. This results in direct de-industrialisation of the economy.

Runl (2010) asserted that people say Nigeria is dominated by oil and they are right because Nigeria seems to be exporting nothing but oil. The government revenues are so dependent on oil, which has been managed quite protectively. But it's still extremely undesirable that internally generated revenue are such a small part of Nigeria's revenue because essentially, it means that all the revenues of the government is just coming down from heaven. It's like a gift and it is easy to waste a gift. The author noted that Nigeria is poor because of oil.

Siddy (1999) asserted that the causes of price instability is attributed to scarcity caused by refinery maintenance and rehabilitation problem, low capacity utilization, supply, and demand inequality. The political change that Nigeria went through, which turned over the administration and endured a lingering economic down turn is enough reason to cause price instability of oil products in Nigeria.

The author opined that trailing oil products prices down to crude oil prices has revealed that the instability in the prices of oil products was due to cost of refining, storing, transporting distributing and inefficiencies in the process.

Ewa and Agu (2003) shared their view that the dominance of petroleum in Nigerian economy has led to instability in the economy, which as a result makes price instability of oil products to be more prevalent in Nigeria than other countries. The author observed that smuggling is attractive and profitable due to price differential. This act of smuggling oil products from

Nigeria to her neighbouring countries is one of the factors which made price instability of oil products to be prevalent in Nigeria.

Review of Empirical Literature

There are many studies, on the impact of oil price on aggregate economic activity. One of the early studies was by Hamilton (1983) who reported that several post-war recessions in the US were preceded by oil price shocks. Other researchers who investigated this relationship include Ayadi *et al* (2000), Bernanke *et al* (1997), Bohi (1989), Brown and Yücel (2001), Burbidge and Harrison (1984), Khan and Hampton (1990) and Giser and Goodwin (1986). Hooker (1999) notes that, in spite of the considerable attention of researchers on the presumed macroeconomic consequences of oil price, there is no consensus as to the transmission mechanism.

Giraud (1995), states that the day-to-day prices of oil may be determined by free market forces, but sharp shifts in price level are essentially motivated by political factors, an example of which is the politically motivated civil strifes and unrests in the Middle East from where the bulk of crude oil supply emanate. Hamilton (2009) agrees with Mabro (1991) that supply disruptions are a significant factor of oil price volatility. He points out that politically-induced historical oil shock events such as the Yom Kippur War in 1973, Iranian Revolution in 1978, Iraq's invasion of Iran in 1980, and Iraq's invasion of Kuwait in 1990 have all spiked up oil prices despite increased production from non-OPEC countries to compensate for decline in OPEC's production. For example, the 1980 and 1990 events resulted in jump in oil price by 25% and 75% respectively (Hamilton, 2009). The hikes dissipate after the events, only to emerge with another event, thus creating shocks and disequilibria.

From an economic point of view, Baumeister and Peerman (2009) explain that oil price shocks results from low price elasticity of demand and supply. The result of this is that large price variation is required to clear the market, that is, to restore the market to equilibrium. Hamilton (2008) and Fattouh (2007) agree that crude oil price elasticity is very low especially in the short run. This is due to technology lock-up; that is, it takes some time before energy-consuming appliances/capital stocks are replaced with more energy-efficient substitutes. According to Hunt *et al* (2001), an increase in oil prices can influence the economy through many channels, including the following. The first mechanism reflects the transfer of income from oil-importing to oil-exporting countries, which leads to a decrease in global demand in the oil-importing nations. The demand decrease in the oil-importing countries outweighs the increase in the oil-exporting countries because of an assumed low propensity to consume in the latter. Secondly, given the level of capital stock and assuming that wages are relatively inflexible in the short run, an increase in input costs of production will result in non-oil output being affected. Note that crude oil is a basic input in production and an increase in oil prices leads to an increase in production costs. The third channel is when workers and producers resist a decrease in their real wages and profit margins. This results in upward pressure on labour costs and prices.

The fourth channel is through the definition of core inflation. An increase in energy prices raises the consumer price index, leading to calls for action from the central bank. A tight monetary policy has dire consequences on economic output. Finally, the extent to which monetary authorities' reactions are inconsistent with announced policy objectives could erode their credibility.

Abel and Bernanke (2001) view the relationship between oil prices and the macro economic situation within the following transmission mechanism. They argue that increases in oil prices cause the general price level to rise. This is consistent with other theories that are focused on the production function. Oil is one of the major inputs in a production process. Thus, when the price of oil increases, firms respond by using less of the commodity, which

leads to a decrease in output. Davis and Haltiwanger (2001) examine the response of job creation and job losses to oil price within a vector auto regression (VAR) framework. They separate positive oil price from negative oil price. Their results indicate that oil price and monetary shocks cause larger responses in job losses than in job creation in nearly every industrial sector.

Keane and Prasad (1996) investigate the relationship between the real price of refined petroleum products and the macro-economy. Their results imply that oil price increases depress real wages for all workers. However, they find that the relative real wages of skilled workers rise with oil prices. They conclude that the short-run effect of an oil price increase on aggregate employment is negative. The long-run effect is positive.

Hooker (1996) notes that real growth in GDP prior to 1980 was negatively affected by oil price changes. The post-1980 relationship between oil prices, economic growth and inflation statistically disappeared. This is because the oil price changes had not brought about a statistically significant effect on real GDP growth, the rate of inflation, or unemployment since 1980. In a simulated model of the aggregate economy, Rotemberg and Woodford (1996) report results that imply that a ten per cent innovation in the price of oil reduce output by 2.5 per cent some 15 to 18 months later. Jimenez-Rodriguez (2004) argues that the general view is that oil prices and economic downturns are negatively correlated in the US. However, the relationship becomes weaker when data from the 1980s are examined. She revisits the issue raised in the literature, which indicates that the linear specification is not a correct one for modelling the aforementioned relationship between oil prices and GDP growth. Several researchers, including Mork (1989), Lee *et al* (1995), Hamilton (1996, 2003) and Hooker (1996, 1999), have addressed the issue of non-linearity in the aforementioned relationship.

METHODOLOGY

The methodology adopted in this study purely is an exploratory one. It is based on prior literature of other researchers to make it inference and does not involves data gathering and data analysis

FINDINGS

From the above literature reviewed it was found out that, in Nigeria, oil prices are affected by both internal and external factors. Oil price significantly affects economic growth at all level in terms of revenue/ income when high and oil shocks negatively affects the economy, destabilizes government operation which might negatively affect other government activities. Secondly, in Nigeria since GDP and Unemployment are driven by external factors there seems to be a linear relationship between GDP and crude oil prices but however, there have been no relationship between employment and crude oil prices as previous crude oil prices has not brought about commensurate level of employment in the country.

Conclusion, Recommendation and Contribution to knowledge

This paper concluded from the findings that crude oil prices have significant influence on three key macroeconomic variables in Nigeria- GDP; money supply and unemployment. This constitutes serious implication for macro-economic management of the country because; money supply is a major macroeconomic policy instrument, while GDP and unemployment are key macroeconomic policy targets. If these key macroeconomic variables are influenced by volatility, almost unpredictable exogenous variable like crude oil prices, then the economy becomes highly vulnerable to unpredictable external shocks. The way to minimize this is to diversify the economy so as to make it less oil dependent because persistent increase in oil prices in Nigeria has not lead proportional economic development.

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