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## International Petroleum Price Volatility: An Appraisal of Impact on Petro-Dependent Developing Economies like Nigeria in an Era of Covid-19 Pandemic

**Eneasato, Onyekachi Benjamin**

Department of Political Science,  
Enugu State University of Science and Technology Enugu

### **Abstract**

*Petroleum or crude oil remains one of the major mineral resources that have contributed to the development of world economies. This contribution notwithstanding, it poses also great socio-economic challenge to petro-dependent developing economies like Nigeria as a result of unpredictable international oil price volatility. Worsened by the phenomenon of price volatility is the sudden outbreak of the corona virus pandemic, which has locked down and crippled many national economies, especially those of petro dependent developing economies. What are the causes and how does oil price volatility affect the stability of countries whose fiscal health is tied to oil prices? Adopting the qualitative approach of content analysis, it has been argued that these negative outcomes are not inevitable since they can be avoided or at least minimized when good governance, public accountability and transparent resource management, willingness of countries to transform oil revenues into positive development outcome are prevalent. To cushion the effects of oil price volatility certain measures need be put in place; namely, effort should be made to delink public expenditure from happenings in the international oil market by diversifying the revenue base from oil. Again, it has become more urgent now than ever before for the government to seriously consider the use of tax handle in the effort to boost the nation's revenue base. Also, there should be more commitment by the government towards boosting of the Agriculture and solid minerals sectors as alternative sustainable revenue sources rather than the near total dependence on petroleum as its presented obtainable.*

**Keywords:** Covid-19 pandemic, Developing Economy, Nigeria Volatility, Petroleum Prices, Petro-Dependency,

### **Introduction**

The discovery of crude oil in Nigeria is one of the greatest things to happen to the country one may say. But evidently, rather than been a blessing, it is causing more problems. The huge revenue generated from oil by Nigeria though has been used to finance developmental projects like infrastructures such as roads, railways, hospitals, airports, educational projects etc.; Nigeria has not succeeded in using this enormous revenue to resuscitate the near dead power sector and even refineries are moribund while the country continues to import refined petroleum products. Nigeria is the sixth largest oil producer in the world, but instead of seeing good infrastructure

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like good schools, roads, stable power supply, modern transport, technological advancement as are found in Saudi Arabia, United Arab Emirates etc., all we see are terribly bad schools, dysfunctional power sector, dead end hospitals, inferior infrastructures, ever rising unemployment rate and rising systemic and entrenched corruption in low and high places. Nigeria is underdeveloped despite the huge money it generates from oil. Oil revenue is also responsible for the large scale of political violence and ethnic rivalry resulting from leadership struggle in Nigeria because citizens know there is extremely high reward for political office holders made possible by oil money. Politicians devise all means to get into public offices so as to share from the national cake.

The most disturbing of the developmental issues regarding Nigeria's oil is the worrisome overdependence on oil revenue and the neglect of agriculture and other sectors of the economy like manufacturing and solid mineral mining. In the light of the above, Nigerian leaders have failed to realize that oil can dry up; a scenario which no doubt challenges our sense of reasoning per chance it happens. Thus the question; how will Nigeria finance infrastructural and other developmental projects if that happened in the future? Nigeria does not even have a good oil reserve compared to a country like the United States of America with large oil reserve. As a result of global warming and the need for countries to explore alternative sources of energy (like solar, wind etc), less importance is gradually being attached to oil because of its carbon emission (a major cause of global warming and pollution). This means that oil may become less relevant to the economic survival of nations in the future; a situation that will deal serious blow on petro dependent economies like Nigeria in the event that it occurs. It is not in doubt that such event will no doubt result in dwindling price of oil in the international market thus signal economic danger to national revenue.

However, in an attempt to ensure stability in the international price of crude oil, some major oil producing countries of the world came together to establish the Organization of Petroleum Exporting Countries (OPEC), in the year 1976. Despite the formation of OPEC, a major disadvantage confronting petro-dependent countries remains the volatility in the prices of oil and the attendant macroeconomics implication. The price of oil has experienced great fluctuations since the 1970s. The price of oil which has stayed between \$2.50 and \$3.0 per barrel since 1948 quadrupled from \$3 per barrel in 1972 to \$12 per barrel by the end of 1974, and from \$14 per barrel in 1978 to \$35 per barrel in 1981. The price of oil however plummeted between \$10 per barrel in the year 1986, but surged again to between \$18 and \$23 in the 90s. it oscillated between \$17 per barrel and \$26 at different times in the year 2002 and about \$53 per barrel by Oct. 2004 and rose to \$60 by 2005 (Philip & Akintoye, 2006). During the summer of 2007, the price of one barrel of crude oil jumped to above \$70 and even crossed \$145 mark in July, 2008. The price staggered between \$61.73 per barrel in October, 2009 and remained at an average of \$75 per barrel till August, 2010 (Hassan & Zahid, 2011). Between 2011 and 2020, the price of crude oil has remained volatile and seemingly unstable culminating in the outbreak of the corona virus pandemic, which saw it crashing to its lowest ebb resulting from the attendant measures to stem the tide of the spread of the virus, thereby throwing many petroleum exporting developing

countries like Nigeria into state of economic stagnation, indebtedness, borrowing and budget deficits.

Evidently, in recent times Oil price shock plays a crucial role in macroeconomic performance of developing countries like Nigeria because of its impact on the country's publicly generated revenue and foreign exchange reserves. This indeed gives cause for serious concern and calls attention to urgent need for economic diversification. It is therefore, to the above extent that this paper focuses on international petroleum price volatility: an appraisal of impacts on petro-dependent developing economies like Nigeria in an era of Covid-19 Pandemic.

### **Statement of Research Problem**

Crude oil is arguably one of the single most important driving forces of the global economy (at least for now), and changes in its price has significant effects on economic growth and welfare around the world especially in petro-dependent developing countries. Economists have, on many occasions, warned that there are dangers for petro dependent countries such as Nigeria with about 200 million people to rely on oil as the mainstay of its economy. No nation has ever become great by exporting raw materials and importing finished goods. More worrisome is the dependence of the federating units on statutory allocations for the running of the governments at those levels, while there are numerous other unexploited revenue sources. This is indeed discouraging. With respect to Nigeria, crude oil which is mainly produced in the Niger Delta region contributes about 75 percent to Nigeria's total government revenue and over 96 percent of the country's total export earnings (CBN, 2012).

It is evident that over the decades the Federal Government of Nigeria Annual Appropriation is unarguably tied to oil price benchmark, which has always proved unstable resulting in external borrowings most of the time. In the present time, the outbreak of the Covid-19 Pandemic has exposed the weakness of a petro dependent economy. The pandemic unexpected as it were has exposed the deficiencies in the health sector requiring enormous funds to cushion in a time the price of petroleum crashed to its lowest ebb. It therefore, implies that cautious policies must always be in place to justify the extraction, exploitation and exploration of such natural resources. In the light of the above, it is justifiable to undertake a study that focuses on volatility of international petroleum prices with intent to appraising its impact on petro-dependent developing economies like Nigeria in an era of Covid-19 pandemic. The results from this research will, therefore, be resourceful for policy formulation towards sustainable socio-economic development of Nigeria in particular and developing countries in general.

### **Objectives of the Study**

The main objective of this study was to appraise the impact of international petroleum price volatility on petro-dependent developing economies like Nigeria in an era of Covid-19 pandemic. In specifics the following shall form the springboard of the study;

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1. To identify some of the causal factors of international petroleum price volatility;
2. To ascertain the impact and challenges of international petroleum price volatility on petro-dependent developing economies especially Nigeria in era of Covid-19 Pandemic
3. To suggest measures for cushioning the impact of international petroleum price volatility on petro-dependent developing economies.

## **Methodology**

The study adopted qualitative method of data collection. In view of this, data were generated from secondary source materials. Qualitative research emphasizes words, rather than quantification in the collection and analysis of data. Furthermore, it predominantly emphasizes a deductive approach to the relationship between theory and research; in which the emphasis is placed on capturing inferences from a general field into particular situations. Also, qualitative research entails a perspective of social concepts as an increasingly shifting sphere based on individual contributions. Data were sourced through relevant text materials and historical documents. These include: texts, journals, online articles, Magazines, Archives and the likes. Data was analyzed using content analysis.

## **Theoretical Framework**

Natural scientists and ecological economists have made effort at developing some theories that attempt to capture the role of oil price volatility on economic growth, thereby incorporating linkage between energy resources, its availability, volatility and economic growth (Oriakhi and Iyoha, 2013). Theories on oil price volatility are basically divided into two. They are theories explaining the channels through which oil price volatility impacts on macro-economy and theories explaining the causes of volatility in the international oil market. This study recognizing the importance of both relies on the resource curse theory or model as its theoretical framework. Before the late 1980s, it was generally believed that natural resource abundance was an advantage to developing economies. For instance, in the 1950s, geographer Norton Ginsburg argued that ‘the possession of a sizable and diversified natural resource endowment is a major advantage to any country embarking upon a period of rapid economic growth’ (Karl, 2005). Mainstream economists such as Jacob Viner and Arthur Lewis also expressed the same view about natural resource abundance (Karl, 1999). Similarly, in the 1960s, the development theorist Walter Rostow argued that abundance of natural resources would enable developing countries in their transition from underdevelopment to industrial ‘take-off’, just as such resources had done for countries like Australia, United States and Britain (Cramsey, 2008). In support of the same view, in the 1970s and 1980s, neoliberal economists such as Bela Balassa, Anne Krueger, and P. J. Drake argued that natural resources could facilitate a country’s ‘industrial development by providing domestic markets and investible funds’ (Karl, 2005).

However, during the 1950s and 1960s, few radical and structuralist economists challenged this common view about natural resources abundance and economic growth (Alexeev and Conrad, 2008). However, they were in a minority. Nevertheless, from the late 1980s, many theorists have presented evidence to suggest that natural resource abundance – or at least an abundance of particular types of natural resource – is in fact a curse for developing countries. Many of them have argued that natural resource abundance increases the chances that developing countries will experience poor economic growth, high levels of poverty, authoritarian rule and civil war. The overall weight of evidence so far is clearly in favour of the resource curse hypothesis (Rosser, 2006). The emergence of this argument has led to considerable debate about the causes of the resource curse. Specifically, some of the theorists argued that countries exporting natural resource suffered from declining terms of trade, volatile export earnings, an enclave economic structure as well as the so-called ‘Dutch disease’. ‘Dutch disease’ refers to a condition whereby a resource boom leads to appreciation of the real exchange rate and in turn damages manufacturing and other tradable sectors (Michael, 1999). According to Cramsey (2008), there appears to be strong evidence supporting the resource curse hypothesis or what scholars have referred to as the *paradox of plenty*, which is used to explain why countries rich in a particular natural resource are among “the most economically troubled, the most authoritarian, and the most conflict-ridden in the world”( Karl, 2005).

Yet despite this trend, some theorists have challenged the assumptions and predictions of the resource curse hypothesis made by Sachs and Warner and numerous others. These oppositions are from different scholars, but most of them maintain the same message. Basically, opponents of the resource curse hypothesis disagree with the proxy measures used by the proponents of the resource curse including “conceptual disagreements over the correct measure of resource abundance, as well as appropriate statistical technique for measuring its impact” (Lederman and Maloney, 2007). The opponents of the resource curse hypothesis assert that the hypothesis should not be considered as fact, despite the evidence and empirical studies that have surfaced, arguing in its favour. According to Madrick (2004), Gavin Wright, an economic historian, argues that “if exploited wisely, resource abundance can be turned into a growth industry that provides a solid and even long-term foundation for economic growth.” Lederman and Maloney (2007) argue that this perspective is also crucial when looking at the economic and social development of oil-abundant states, because it potentially changes the paradigm under which development strategies and policies will be implemented.

On the other hand, other theorists argue that whether resource abundance might result in a blessing or a curse depends on what kinds of institutions are in place: good or bad. For instance, Mehlum, Moene and Torvik (2006a, 2006b), Eric-Ng (2006), and (Smit, 2008) theoretically and empirically argue that natural resource abundant countries include both growth losers and growth winners, and that the major difference between the successful cases and the cases of failure lies in the quality of their institutions. This research agrees with these later theorists that institutional

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differences, rather than existence or non-existence of natural resource abundance, largely determine the growth or development level of any economy.

### **Causal Factors of International Petroleum Price Volatility**

An interesting issue in the discourse on international petroleum price volatility is the causal factors. Osije (1983) posits that oil prices like any other commodity are subjected to changes consequent upon the interactions between demand and supply. Ademan (2000) notes that between 1948 and 1970 the nominal price of oil gyrated between \$2.50 and \$3 per barrel, and that between 1998 and March 2000, international oil price rose from \$10 to \$31 per barrel, and further rose to \$37 in September 2000 before nose diving to less than \$18 per barrel in November 2001. To the extent, several other scholars including Rolle, and Uffie, (2015), have proffered several factors as the cause of oil price volatility. Some of the factors adduced by the writers are: reduction in the productive capacity of oil, the slow rate of discovery of new oil wells and the dearth of infrastructural investment in the oil sector in most oil producing countries (Ebrahim et al. 2014; Konrad, 2012); inelastic nature of the demand and supply of oil (Ebrahim et al; 2014); fixation of price by collusion in OPEC cartel, political unrest in the oil rich middle East (Adelman, 2000). Geographical uncertainties, supply constraints, high refinery utilization and high demand growth (Sajah and Kakali, 2010; Kesicki, 2009).

It is further argued that higher oil prices will better the lot of net-oil exporting countries while worsen the state of net-oil importing countries and vice-versa (Golub, 1983; Ayadi, 2005). Nigeria however maintains peculiar position being both oil exporter and importer. Nigeria exports crude oil and imports refined petroleum (Duncan, 2008; Oriakhi and Iyoha, 2013). Since Nigeria both exports crude oil and imports refined petroleum, its case seems more problematic and apparently complicated. Consequently, the outbreak of Covid-19 pandemic became a major causal factor of oil price volatility. While COVID-19 caused a severe supply shock that raised unemployment and poverty, there are sizeable demand feedback loops. Aside from the loss of human lives, inaction also risks massive disruptions in supply and demand, and illiquidity in the financial sector. In other words, the COVID-19 shock led to household and corporate bankruptcies, with lasting scars on the economy and society. The disruptions are complicated by ongoing discontent in Nigeria and a number of other developing countries, where the streets have been full of protests demanding for #ENDSARS, better governance and an end to corruption.

In contrast, the oil price collapse is a commodity 'terms-of-trade' shock that affects the economy through reduced export receipts and revenues in government coffers. The shock is expected to be persistent and lead to widening twin deficits (in a country's current balance and its government budget) and increased debt if there is no fiscal consolidation. Hence no conclusive statement can be made on the impact of oil price volatility on Nigeria's macroeconomic performance especially in an era of Covid-19 pandemic, as the issue is far from been settled thereby giving credence to this study as imperative.

## **Impact and Challenges of Petroleum Price Volatility on Petro-Dependent Developing Economies in Era of Covid-19 Pandemic**

There is no doubting the fact that developing economies especially those petro dependent countries in the Middle East and Africa are faced with dual shock resulting from the COVID-19 pandemic and volatility in international oil prices. Most developing economies are unfortunately petro-dependent and are so to say vulnerable to international oil price instability, which has further been complicated by the outbreak of the corona virus pandemic. The novel corona virus, which Chinese authorities first reported to the World Health Organization (WHO) on 31 December 2019, has spread globally. The virus has as at mid October 2020, infected more than 40 million people globally, causing over 1 million deaths, although more than 32 million infected individuals have recovered and discharged (<https://www.worldometers.info/coronavirus/>). This indeed poses serious challenge to the economies of most third world countries that largely depend on petroleum exports (Rabah, 2020). The rapid rise in domestic infections across countries disrupted production and trade. Almost all countries of the world including Nigeria have also reported infections and subsequently imposed preventive measures to curtail further spread in the form of restrictions in movement of persons and total lockdown (Tandon et al. 2020).

Some eight months later the number of infections and deaths are alarming. The virus has not only continued to claim lives, its continued spread confronts petro-dependent countries with both a negative supply shock and a negative demand shock (Baldwin & Weder di Mauro, 2020). In this context, the negative supply shock initially stems from a reduction in labour, which happens directly because workers are sidelined by the virus, and indirectly due to travel restrictions, quarantine efforts, and workers staying home to take care of sick family members or children. By the same token, supply has also been affected by a reduction in materials, capital, and intermediate inputs due to disruptions in transport and businesses in both developed and developing countries.

In view of the above, the negative demand shock is both global, regional, sub regional and national. Economic difficulties around the world and the disruption of global value chains reduced demand for goods and services, most notably oil and tourism. However, the spread of the virus to several European countries, the severity and speed of infections and the preventive health measures they enforced, had a much larger impact on petro-exporting developing economies. More so, regional demands also declined as a result of the abrupt reduction in regional business activity and as concerns about the infection reduced international travels. In addition, uncertainty about the spread of the virus and the level of aggregate demand adversely affected the region's investment and consumption levels. Collapsing oil prices further depressed demand in developing countries, where oil and gas is the most important sector in many economies.



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The negative supply and demand shocks associated with COVID-19 are expected to be relatively short-lived but dramatic, with widespread effects across many sectors and countries. In addition to the shock from COVID-19, the breakdown in negotiations between OPEC and its allies led to what will likely be a persistent collapse in oil prices. On 5 March 2020, OPEC proposed a 1.5 million barrel per day (mb/d) production cut for the second quarter of 2020, of which 1 mb/d would come from OPEC countries and 0.5 mb/d from non-OPEC but aligned producers, most prominently Russia. The following day, Russia rejected the proposal, prompting Saudi Arabia (the world's largest oil exporter) to boost production to 12.3 mb/d, its full capacity. Saudi Arabia also announced unprecedented discounts of almost 20% in key markets. The result was an immediate drop of more than 30% in prices and continuing declines since. The benchmark West Texas Intermediate (WTI) crude oil price reached a low of \$22.39 per barrel in the intraday session on 20 March 2020. This was less than half the price compared to at the beginning of the month (Arezki et al. 2020).

The COVID-19 and international oil price volatility are intertwined, yet distinct. On the one hand, the demand component of the oil shock is linked to the sharp reduction in oil consumption stemming from precautionary measures to stop the spread of the virus. This includes lockdowns, which have brought economies around the world to a standstill. The estimated 10% reduction in oil consumption from 2019 (about 10mb/d) is the result of reduced air and road travels (Rystad Energy, 2020). Indeed, the severity of the shock has triggered unprecedented domestic measures in advanced and developing countries, and the imperative of global coordination to eradicate the virus will hopefully prevail. The international financial institutions are critical to the effort of developing countries fighting COVID-19 (which have acute balance of payments or fiscal problems). These institutions (which can offer zero- to low-interest financing and long maturities) are best-equipped to help developing economies deal with the dual shock. The cost of inaction, both economic and social, would be large (Barrett, 2007).

Once the spread of the virus is stopped, the preventive measures at the root of the economic recession will be rolled back. The speed of that recovery will depend on how swiftly and decisively governments take measures to mitigate the economic and financial dislocations from the health crisis. But the supply component of the oil shock is likely to be persistent and drive oil prices lower for longer. The two shocks differ in their duration, but also their likely potential consequences and associated risks of inaction.

The above points notwithstanding, when assessing the impact of oil prices on the global economy, economists typically distinguish between supply- and demand-driven oil shocks. Demand-driven shocks are related to the evolution of global demand and are not expected to have an independent effect on the global economy. In contrast, the supply-driven oil shocks would normally be expected to give an independent boost to the global economy. There are several reasons why, in this case, they might not. Not least of all, the financial propagation effects of the collapse in oil prices have caused the markets for equities, bonds, and non-oil

commodities to tumble (Arezki, Yuting Fan, & Nguyen, 2020). For developing countries specifically, lower prices are generally good for oil-importing countries and bad for oil exporters.

Consequently, the negative impact of over dependence on oil revenue tends to crumble the economy rather than revitalizing it. In fact, heavy dependence on the export of natural resources has been shown to negatively affect a country's economic, social and political development. The major perceivable impact of over dependence on oil revenue includes among others; dependence on multinational oil corporations and their infrastructure resulting in infrastructural decay in both down and upstream sectors, neglect of the agricultural sector, leading to an impoverishment of the rural population. Hence, oil revenues tend to displace more stable and sustainable revenue flows for example, as a result of huge oil revenue flows; countries tend to de-emphasize income taxes as a source of government revenue. Besides, low tax ratios and high consumption expenditures (typically on imported goods) reinforce inflationary tendencies with regard to expenditure; no use is made of openings for diversifying the economy, enhancing infrastructure or expanding education systems. Volatility of oil prizes makes planning difficult, hampers growth, and aggravates investment conditions, income distribution and educational attainment as well as diminishing willingness of governments to pursuing reforms.

It has been argued that these negative outcomes are not inevitable since they can be avoided or at least minimized when good governance, public accountability and transparent resource management, willingness of countries to transform oil revenues into positive development outcome are prevalent. The government neglect of the agricultural sector which was the main stay of the economy before the discovery of oil was the major problem hindering the country economic progress. Although, government has made some effort at combating the syndrome of over dependence on oil revenue in Nigeria but the effort was not significant at all; giving their inconsistent policy and lack of implementation of agricultural and industrial policy in the country.

According to Igberaese (2013) the rapid expansion of the crude petroleum content found in the country has made the Nigerian economy one of the fastest growing economics among developing nations. More importantly, he notes that this was only a necessary condition but not a sufficient one for economic development. The impact of oil price swing affects both private and public sectors of the economy. In the private sector, a positive oil price shock will increase production costs and hence restrict output – with price increases at least partially passed on to consumers. Moreover, as prices for gasoline and electricity increase, households face higher costs of living, with the poor being particularly vulnerable. These impacts can have further significant knock-on effects and repercussions throughout the economy, affecting macro-indicators such as employment, trade balance, inflation and public accounts, as well as stock market prices and exchange rates. Thereby, the nature and extent of such knock-on effects depend on the structural characteristics of an economy; for instance, the more a country engages in oil trade, the more it is exposed to price volatility on global commodity markets.

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It need be noted that while a given oil price increase may be perceived positively by oil exporting countries and negatively by importers, an increase in oil price volatility (i.e. consecutive positive and negative oil price shocks) increases perceived price uncertainty for all countries – regardless of their trade balance. Such oil price volatility reduces planning horizons, causes firms to postpone investments, and may require expensive reallocation of resources. Formulating robust national budgets becomes more difficult, as importing countries face uncertainty regarding import costs and fuel subsidies levels, and exporters face volatile revenues. This may be a particularly profound problem in budget constrained developing countries, which rely on oil exports as a main source of public revenue. In order to protect firms and households against price volatility on international markets, particularly in developing countries, governments often allocate large parts of their budgets to subsidizing fuel. These subsidy systems not only expose governments to significant budgetary risks, but result in significant environmental costs, benefit mainly the wealthier, create disincentives for energy efficiency, and crowd out resources from education, health and other investments in development.

In view of the forgoing analysis, this paper submits that the oil boom in Nigeria did mostly bring negative consequences such as poverty, low level of human development, environmental degradation, social and political conflicts, and has not turned into a “blessing” so far, thus need for effective policy and actions to be implemented in order to make it otherwise.

Pre-Covid-19 pandemic, the Nigerian government had been grappling with weak recovery from the 2014 oil price shock, with GDP growth tapering around 2.3 percent in 2019. In February, the IMF revised the 2020 GDP growth rate from 2.5 percent to 2 percent, as a result of relatively low oil prices and limited fiscal space. By the same token, the country’s debt profile has been a source of concern for policymakers and development practitioners as the most recent estimate puts the debt service-to-revenue ratio at 60 percent, which has continued to worsen amid the steep decline in revenue associated with volatile oil prices in the international market. These constraining factors will aggravate the economic impact of oil price volatility in the era of COVID-19 outbreak and make it more difficult for the government to weather the impending crisis without resorting to more and more external borrowings (Chukwuka, & Ekeruche, (2020)).

More so, the flight to safety has already caused record capital outflows from emerging economies, triggering large currency depreciations against lead currencies and widening spreads. In countries with a high exposure to foreign debt, be it private or public, these trends put enormous pressure on their debt sustainability, by undermining future access to refinancing outstanding external debt obligations while driving up their value in foreign currency. This comes against a background of a systematic build-up of financial and debt vulnerabilities in many developing countries over the past decade. Total developing country debt stocks stood at 193 per cent of their combined GDP at the end of 2018, the highest on record, compared to just over 100 per cent in 2008 (United Nations Conference on Trade and Development, 2020).

## **Cushioning the Impact of International Petroleum Price Volatility on Petro-Dependent Developing Economies**

In the light of the reality that stares the world in the face, the COVID-19 pandemic, is indeed a wake-up call to national governments, political leaders, policymakers and economists as well as the unusual and unprecedented nature of the crisis requires a more integrated response spanning several sectors—including the health, finance, and trade sectors—is required to address structural issues that make the country less resilient to shocks and limit its range of policy responses. This has become more exigent now than ever due to the second wave of the Covid-19 pandemic, as its effects will be far reaching and economically more devastating. In the long term, tougher decisions need to be made, including but not limited to diversifying the country's revenue base away from oil exports and improving investments in the health care sector in ensuring that the economy is able to recover quickly from difficult conditions in the future.

More so, oil-exporting countries at a time like this will have to rely on flexible exchange rates to manage the current situation and conduct much-needed reforms in private-sector development and broader economic transformation. Among net oil importers (such as Lebanon, Jordan and Egypt) a recession will worsen already high levels of public debt. Nigeria is caught in the middle as both exporter and importer, which makes her case seemingly worse. In the immediate the government will need to cut cost of governance to ease out funds to deal with the pandemic in a more transparent manner. Difficult as it may seem the government should also consider a downwards review of the salaries and allowances of certain officers of state such as president and vice president, senators and members of the house of representatives, governors and their deputies and ministers etc. this should be considered a sacrifice by these class of political office holders to help provide a safety net and social security for the teeming unemployed and poverty stricken population in an era of oil price shock and covid-19 pandemic.

### **Recommendations**

The under listed recommendations are considered germane for policy:

1. Effort should be made to delink public expenditure from happenings in the international oil market. This can be achieved by diversifying the revenue base from oil.
2. It has become more urgent now than ever before for the government to seriously consider the use of tax handle in the effort to boost the nation's revenue base.
3. There should be more commitment by the government towards boosting of the Agriculture and solid minerals sectors as alternative sustainable revenue sources.

### **Conclusion**

Attempt has been made to examine both the causal factors and impact of international oil price volatility on petro-dependent developing economies such as Nigeria in an era of Covid-19 pandemic. A number of causal factors of instability in international petroleum price despite

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OPEC efforts at ensuring stability have been highlighted. The scenario is made worse by the outbreak of the covid-19 pandemic, which is still ravaging the world. It is worthy of note that, oil price volatility especially in an era of Covid-19 has significantly impacted adversely on all economies of the world more especially petro dependent developing economies. The case of Nigeria speaks volumes as it has impacted on revenue and public expenditure and the macroeconomic variables resulting in rising budget deficit and borrowings. On the whole, Nigeria's economy was found vulnerable to upheavals in the international oil market and frequent shocks in oil prices was found culpable for Nigeria's macro-economic instability and worsening recession.

While it must be stated clearly that there is no offense in dependence on crude oil, nevertheless, the design and adherence to a roadmap that will ensure that the proceeds are judiciously used for development is key as could be seen in the case of United Arab Emirates, which has transformed its infrastructure using revenue from crude oil. This is where the government must create the enabling environment by passing and assenting to the petroleum industry bill (PIB) that has spent over 20 years in the National Assembly. This raises the moral question of our preparedness to transform the industry for it to deliver maximum value for the Nigerian citizens. Further, there is need to begin to save and invest part of the revenues accruing from rising price of oil in the global market. Again nations like the United Arab Emirates, Saudi Arabia and Norway have shown that a country and its people can be transformed when earnings from the oil and gas industry is well invested and utilized. To the above extent the study will help open a policy avenue to hedge the Nigeria's economy from upheavals in the international oil market, achieve macroeconomic stability, fiscal sustainability and contain the macro-fiscal risk associated with unplanned changes in both quality and quantity of public expenditure.

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